User's Guide

Workbench 3.0

AMIGA

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Welcome

The Commodore®Amiga® line of personal computers offers a unique combination of versatility, computing power, and usability.

The Amiga's Workbench™ Graphical User Interface (GUI) allows you to control the Amiga by using a mouse to select graphic symbols in the form of icons, or small pictures, and list-like menus. The Workbench is easy to learn and use because these icons and menus are displayed automatically. You do not have to memorize a long list of commands to accomplish a task.

Multitasking is the ability of the Amiga to run several independent programs at one time. Because the Amiga was designed from the start as a multitasking system with a GUI, it is fast and easy to switch between tasks (programs) when you need to. Not only can programs run at the same time on the Amiga, but they can also share information and computer resources, allowing you to do more work without requiring additional software and memory.

The Workbench and multitasking are features common to all Amigas, from the single floppy models to the most advanced workstation-level machines that are used for three-dimensional graphics, multimedia, and video production.

This manual describes the Amiga Workbench software, its components, and how to use it.

Using This Manual

This manual provides operational instructions and reference material for using your Amiga Workbench. If you have never used an Amiga before, read the entire manual to become familiar with the general operations of your Amiga and the Workbench system. Once you learn the basics, this document can serve as a reference tool. If you are already familiar with the Amiga, be sure to read through the manual for new information that you may not know.

Chapter 1. Before You Start: This chapter provides instructions for things you need to do and information you need to know before you start using your Amiga, including installation procedures.

Chapter 2. Basic Operations: This chapter describes starting your Amiga, creating and managing disks and files, and using your mouse and keyboard.

Chapter 3. Fundamentals of Workbench: This chapter describes the elements that comprise the Workbench environment, including screens, windows, menus, icons, gadgets, and requesters.

Chapter 4. Workbench: This chapter provides an overview of the Amiga Workbench system, including descriptions of the Workbench programs and the environment.

Chapter 5. Preferences: This chapter details the information needed to set your Amiga to work with monitors, printers, and other peripherals and how to "customize" your individual Workbench environment.

Chapter 6. Localization: This chapter describes the localization options available on the Amiga Workbench including language, date, time and numeric format.

Chapter 7. CrossDOS: This chapter describes CrossDOS, which allows you to read and write MS-DOS formatted disks on your Amiga.

Chapter 8. Fonts: This chapter explains how to install and use both bitmap and outline fonts on the Amiga.

Chapter 9. Printers: This chapter describes printers and printer options for producing the output that best suits your needs and equipment.

Chapter 10. Other Amiga Programs: This chapter explains the programs in the Tools and Commodities drawers.

Chapter 11. ED Editor: This chapter explains how to use the ED text editor to create and edit text files.

Appendix A. Troubleshooting: This appendix provides solutions to common problems that can occur.

Appendix B. Screen Display Modes: This appendix provides a listing of monitor display modes that can be used with your Amiga.

Appendix C. Special Boot Menu Options: This appendix provides information on special boot options.

Documentation Conventions

The following conventions are used in this manual:

KEYWORDS   Keywords are displayed in all uppercase letters, however, the arguments are not case-sensitive.

<n>   Angle brackets enclose variable information that you must supply. In place of <n>, substitute the value, text, or option desired. Do not enter the angle brackets when entering the variable.

Courier   Text appearing in the Courier font represents information displayed on your screen.

Key1 + Key2 Key combinations displayed with a + (plus) sign connecting them indicate pressing the keys simultaneously. For example, to open an icon, hold down the Right Amiga key and, while holding it down, press O.

Key1, Key2   Key combinations displayed with a comma
              separating them indicate pressing the keys in
              sequence. For example, to open a file in ED, press
              the Esc key, followed by the O key, and then
              followed by the P key.

Amiga keys   Two keys on the Amiga keyboard used for special
              functions. The left Amiga key is to the left of the
              space bar and is marked with a large solid A. The
              right Amiga key is to the right of the space bar and
              is an outlined A.

Related Documentation

AmigaDOS™ User's Guide

ARexx User's Guide

Chapter 1
Before You Start

Before you start using your Amiga, there are a few things you should know and must do. This chapter provides you with instructions for:

- Choosing a language for processing
- Installing the complete Workbench software
- Installing languages
- Getting started

Choosing a Language for Processing

If you wish to interact with the Workbench in any language other than English, you must select your preferred language after you initially boot the system or following successful software installation. We recommend that you load all of the languages that you may want to use for processing during the installation. However, if your language is not available, you can install it at a later time. For instructions on selecting a language for Amiga Workbench processing, see Chapter 6 in this manual.

Software Installation

If your Amiga has a hard disk, you must install software on it:

- if your system is not preloaded.
- if you have a software upgrade.
- if you reformat your hard disk.

Workbench software comes preinstalled on most Amiga hard drive models. If you are not certain your system is preloaded, consult your dealer.

Once your software is installed, if your system does not have all the languages that you want to use, you can install any of them without running a full installation.

Installing System Software

The following procedures describe how to install your system software:

1. Insert the Amiga Install disk into any floppy disk drive.

2. Boot your system (turn it off and on again).

3. Moving your mouse on a flat surface, place the tip of the pointer onto the icon labelled Install and quickly press (click) the left mouse button twice. A window containing drawer icons is displayed on the screen.

4. Using your mouse, move the tip of the pointer onto the icon for the Install drawer and quickly press the left mouse button twice. A window containing icons representing the various languages is displayed on the screen.

5. Using your mouse, move the tip of the pointer onto the icon for the language that you want to use for the installation and quickly press the left mouse button twice. This selects a language for the installation process only.

    If you choose any language other than English, a message asking you to insert the Locale disk is displayed. Remove the Install disk from the floppy disk drive and insert the Locale disk. A message prompts you to reinsert the Install disk after Locale has been read. Clicking on the Help button displays help in your chosen language.

6. Select an installation mode from the Install window by clicking the left mouse button once on the button to the left of your choice. Then click the left mouse button once on the Proceed With Install button.

7. The next screen asks you if you wish to install the complete software or update the languages available on your system. Press the left mouse button once on your choice.

8. The next screen asks you if you wish to install your software in the System drawer. Press the left mouse button once on Yes to install to the default drawer or press the left mouse button once on No to make your own choice.

9. The Installer starts loading the software from the disks. Follow the instructions on the screen, inserting disks as requested.

    When you are asked to select printer drivers,languages, and keymaps to be installed, click once on each corresponding box to make your selections and then click once on the Proceed button.

10. When the Installation is complete, remove the Install floppy, and reboot your system. Select Proceed to reboot or manually reboot.

11. To use Workbench in any language other than English, you must select your preferred language in the Locale Preferences Editor. See Chapter 6 for instructions and information on choosing a language for processing.

Getting Started

Once your software, printer drivers, and languages are all loaded
and selected, if you have never used an Amiga before, it is helpful to
read through this manual, concentrating on Chapters 2 through 4 to
learn basic operational information about the Amiga and the
Workbench.

The following table indicates where you would find information to
do the following tasks:

Task	Where to find it
Booting/rebooting your system	Chapter 2
Using your mouse	Chapter 2
Managing disks and files	Chapter 2
Learning the parts of the Workbench	Chapter 3
Making backup copies	Chapter 3
Formatting disks	Chapter 3
Using Workbench	Chapter 4
Opening a Shell window	Chapter 4
Customizing Workbench	Chapter 5
Localizing your Workbench environment	Chapter 6
Using CrossDOS	Chapter 7
Choosing fonts	Chapter 8
Setting up printers and printing	Chapter 9
Using Workbench tools	Chapter 10
Text editing	Chapter 11
Trouble shooting	Appendix A
Choosing a display mode	Appendix B
Freeing memory for large games	Appendix C

Chapter 2
Basic Operations

Before using your Amiga, you should familiarize yourself with the basic Amiga system concepts and techniques provided in this chapter. These include:

- Booting your system
- Using the mouse
- Handling disks and using disk drives
- Creating and accessing files and directories

Booting/Rebooting Your System

Booting powers on your computer and loads the operating system information from a disk to the computer's memory. Each time the Amiga is booted, the system must find the Amiga system software on a bootable hard disk or floppy disk inserted into a disk drive. If there are no bootable disks when the system is powered on, an animated screen requests that you insert a bootable disk into a floppy drive.

Rebooting resets your computer without turning off the power. This process terminates any active programs and removes any data stored in the Amiga's memory.

Each time the Amiga is booted or rebooted, the following events occur:

1. The Amiga executes a script file called the Startup-sequence.

2. The Startup-sequence executes a file called User-startup, if it exists.

3. The Amiga Workbench screen appears.

4. Workbench runs any programs whose icons are in the
    WBStartup drawer.

The Startup-sequence file contains AmigaDOS commands that load
the Amiga software and handle various hardware and software
setup tasks. Do not alter this file; altering the Startup-sequence file
can prevent the Amiga from booting properly. If you want to
customize your system configuration, you can create a User-startup
file that loads when the system is booted or rebooted. You can also
customize you system startup by placing program icons in the
WBStartup drawer. This automatically starts these programs when
you boot or reboot.

To reboot your system:

1. Be sure that all disk activity has stopped and that all floppy disk
    drive and hard disk drive lights are unlit.

2. If you are rebooting from a floppy disk drive, insert a copy of the
    Workbench disk into a floppy disk drive.

3. Simultaneously hold down the Ctrl (Control), left Amiga, and
    right Amiga keys and then release them.

The Workbench screen illustrated in Figure 2-1 appears following a
successful reboot.
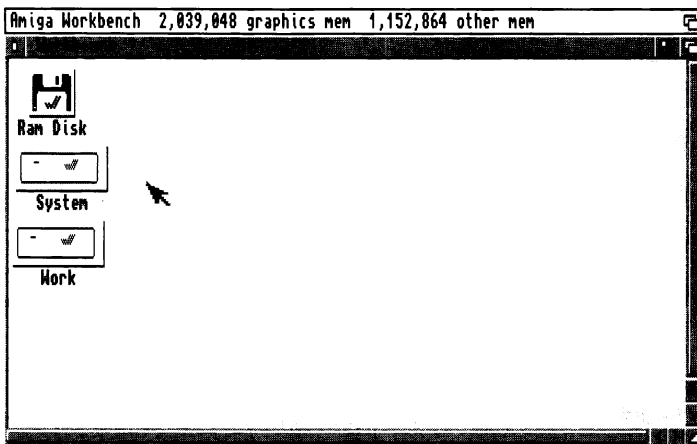
Figure 2-1. Workbench Screen

Special Boot Options

Extra memory used for maintaining devices can cause floppy-based games from running. See Appendix C for information about how to avoid this problem.

Using the Mouse

The Amiga comes equipped with a mouse, illustrated in Figure 2-2, used to communicate with the system through the pointer. The pointer is an image of an arrow on your screen that is manipulated by moving the mouse. Positioning the mouse so that the pointer is located on an icon, window, menu, or screen and pressing the mouse buttons tells the Amiga what to do.
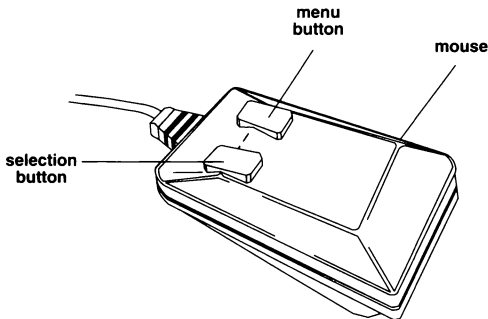
Figure 2-2. Amiga Mouse

Moving the Mouse

Hold the mouse on a flat surface with the cable extending away from you so that the mouse box rests under the palm of your hand with the buttons under your fingertips. The button on the left is the selection button and the button on the right is the menu button.

When using the mouse,

Pointing   means moving the mouse so that the tip of the
                            pointer is positioned over an object on the screen.
                            The pointer moves in the same direction you move
                            the mouse. The mouse can be lifted and
                            repositioned at any time. Lifting the mouse does
                            not move the pointer.

Clicking   means pressing and releasing the selection button.

Double-Clicking   means clicking the selection button twice in rapid
                            succession. Double-clicking on an icon causes a
                            window to appear or a program to start.

Holding Down   means pressing the mouse button until your action
                            is completed.

Dragging   means moving screens, windows, and icons by
                            holding down the selection button and moving the
                            mouse.

Selection Button

The left mouse button is the selection button, used for selecting
screens, windows, and icons for processing. This button is also used
to move, or drag, items on the screen.

Each of these mouse techniques is described in the following
sections.

Selecting an Icon or Window

Windows are rectangular areas on the screen that can accept or
display information. Icons are images in windows that represent
disks, drawers, projects, or tools.

To work with an icon or window you must first select it. Once an
icon is selected, you can make a copy of it, change its name, or
delete it.

All icons are surrounded by a box. When an icon is not selected, the box appears raised above the screen or window surface. When you select an icon, the box appears to sink into the screen or window surface. Icons also change color or shape when selected. For example, drawer icons change from a closed drawer to an open drawer when selected.

To select an icon:

1. Point to the icon, making sure the pointer tip is within the icon's box.

2. Click the selection button. The icon changes to show that it is selected.

If you click the selection button while the pointer is elsewhere on the screen or window, the icon is deselected and returns to its original appearance.

Select a window by clicking the selection button while the pointer is inside the window, but not over an icon.

When a window is selected, the frame surrounding the window changes color. Only one window can be selected at a time. The selected window is the one that accepts your mouse and keyboard input.

Selecting Multiple Icons

You can select several icons at one time. When multiple icons are selected, you can treat them as a single entity, deleting, moving, or copying the entire group in one operation.

The two methods for selecting multiple icons using the mouse are drag selection and extended selection.

Drag selection uses the mouse to draw a box around all of the icons that you wish to select, as follows:

1. Move the pointer just outside of the outermost icon to be included in the box. That point is one corner of the box. Make sure it is not on an icon or gadget.

2. Hold down the selection button and move the mouse to draw a dotted box as it moves.

3. When the box encloses all the icons to be selected, release the
    mouse button. All of these icons are now selected.

The extended selection method is for selecting icons that are not in
a group that can be enclosed in a box, as follows:

1. Select the first icon.

2. Hold down Shift.

3. While holding down Shift, select each of the other icons.

4. Release Shift. All of the chosen icons remain selected until you
    select a different icon or click within a Workbench window while
    not holding down Shift.

Opening a Window

Double-clicking on an icon opens a window or starts a program.
Adjust the time allotted for a double-click with the Input
Preferences editor, explained in Chapter 5.

Dragging an Icon

To drag an icon:

1. Point to the icon.

2. Hold down the selection button and move the mouse. An image
    of the selected icon moves with the pointer.

3. Release the selection button when the icon is in position.

If you selected several icons, you can drag all of them at once. Hold
down Shift, point to one of the icons, hold down the selection button,
and move the mouse. All the selected icons move as you move the
mouse.

Dragging a Window

When several windows are open on the Workbench screen, they
may overlap each other. Rearrange the windows on the screen by
dragging them, to show the information presented in all the
windows.

To drag a window:

1. Point to the title bar, but make sure the pointer is not over any of the gadgets at either end.

2. Hold down the selection button and move the mouse. An outline of the window appears and moves across the screen.

3. Drag the outline into position and then release the selection button. The window appears in the new location.

Dragging a Screen

Screens are areas of the display on which windows are opened. It is possible to have more than one screen open at a time. If your Workbench screen, a terminal program screen, and a text editor screen are open all at the same time, you can see parts of each screen by dragging them into view.

To drag a screen:

1. Point to the screen's title bar.

2. Hold down the selection button.

3. Move the mouse down.

To expose a screen, you can drag any screens that are in front of it down. If a screen is larger than a monitor's display area, you can drag it up or down or side to side so that you can see all areas of the screen.

To drag a screen when its title bar is covered by windows or not on the visible part of the display, hold down the left Amiga key and then the selection button. This lets you "grab" the screen and drag it, regardless of the mouse pointer position.

Copy by Dragging

Copy a drawer, project, or tool to another disk by dragging the icon over the other disk's icon or into the other disk's window. The original icon stays on the original disk and a copy is created in the destination disk's window.

You cannot make a copy of an icon on the same disk with this method. To copy something onto the same disk, select its icon, and then use the Copy menu item. For more information, see the menus discussion in Chapter 3.

You can copy several icons at once using drag selection or extended selection. When the icons to be copied are selected:

1. Hold down Shift.

2. Point to one of the selected icons and then drag it over the other disk's icon or into the other disk's window. As you drag one icon, the rest follow.

3. Release the selection button to copy the icons.

Note   When drag-copying several icons, be sure the tip of the pointer is over the icon or window to which you are copying when you release the selection button.

Menu Button

The right mouse button is the menu button, which is used to display the menu bar and menus and to choose items from them. Menu bars appear across the top of the screen, containing any menu headings available. The menu button can also be used to cancel operations being performed by the selection button, such as drag selection.

Cancelling an Operation

Cancel the operation being performed with the selection button by clicking the menu button while still holding down the selection button. The following operations can be cancelled: selecting, dragging, drag selection, and changing the size of a window.

Cancel selection of button-type gadgets by moving the pointer off the gadget button before releasing the selection button.

Using the Amiga Without a Mouse

All mouse actions can also be done using the keyboard. Certain key combinations allow use of the keyboard to move the pointer, select icons, and choose menu items. Keyboard shortcuts appear in the menu boxes for some options. For a full description of these key functions, see the hardware manual for your Amiga model.

Using Disk Drives

Disk drives are devices from which information is retrieved or to which information is written or stored. An Amiga can have one or more hard disk drives, as well as floppy disk drives, depending on the model. Each disk drive has a device name, such as DF0: for the internal floppy drive. (Additional floppy drives are designated DF1:, DF2:, and DF3:.) A disk icon is displayed on the Workbench screen for each disk inserted in a drive and for each hard disk partition.

The device name and the volume name are two ways of identifying a given disk. For most purposes use either name to refer to the disk when entering a path or within a file requester. Although the device name is generally shorter and faster to enter, the volume name is more specific. For example, if you have a floppy disk in device DF0: with a volume name of Mydisk, you can reference it as either DF0: or Mydisk:. If you reference Mydisk: and it is not currently in DF0:, the Amiga asks you to insert Mydisk in any drive.

Each drive has an indicator light that is lit when the device is in use, either reading or writing data.

Caution   **Never reboot or turn off your Amiga when any of the disk lights are lit or you risk damaging the drive and/or the files on the disk.**

Never remove a floppy disk from a floppy disk drive when the light is lit or you risk damaging the drive and/or the files on the disk.

Inserting Floppy Disks

The standard 3.5-inch floppy disk can be inserted only one way.
Insert the disk into the disk drive with the label side facing up and
the metal end with the indicator arrow entering first.

Using Floppy Disks

Floppy disks must be write-enabled and formatted before
information can be written on them. To write-enable a floppy disk,
turn the disk to its back side and push the plastic tab in the upper
left corner down to cover the hole. Conversely, to write-protect a
floppy disk, push the plastic tab up, uncovering the hole. Figure 2-3
illustrates the write-enable/protect tab on a floppy disk. Formatting
floppy disks is described in Chapter 3.
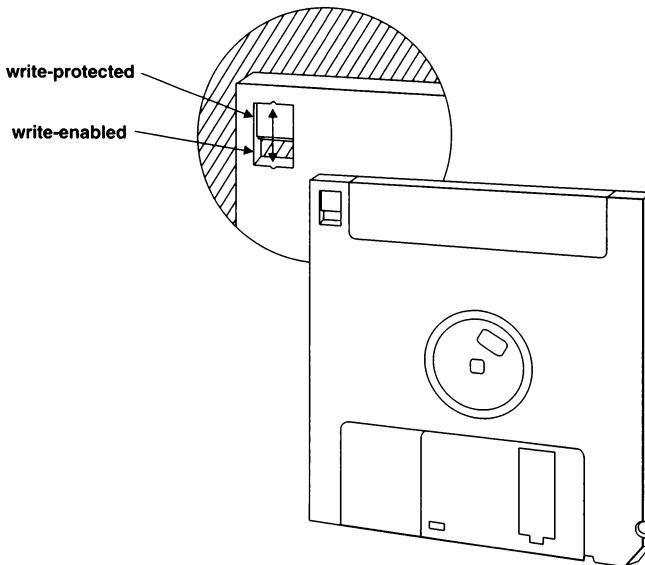
Figure 2-3. Write Protecting/Enabling Floppy Disks

The disk from which information is copied is referred to as the source disk (FROM disk). The disk to which the information is copied is referred to as the destination disk (TO disk). The source disk should always be write-protected to avoid accidental erasure. The destination disk can be a blank disk or a previously used disk whose contents are no longer needed. This disk must be write-enabled to accept the information from the source disk.

Using the Ram Disk

The Ram Disk icon represents RAM:, an area of the Amiga's internal memory that is set up as a file storage device like a disk. Files, directories, and entire floppy disks (available memory permitting) can be copied to RAM: for temporary storage. The Ram Disk serves as a work area that the system can quickly access.

The size of RAM: is dynamic. It is never any larger than necessary to hold its contents. Therefore, it is always 100% full. Its maximum size is limited by the amount of free memory.

The primary advantage of RAM: is speed. Since it is electronic rather than mechanical, storage and retrieval are almost instantaneous. The disadvantage of RAM: is that data stored in RAM: does not survive when the computer is powered down or rebooted. You must save to floppy disk or to hard disk anything in the Ram Disk that you want to use again.

Applications commonly use RAM: to store temporary files created when the program runs or for backup files created when the program is exited. RAM: can also be used as storage for experimental script files, as a destination for testing command output, and when the creation of a file on an actual disk is too slow, risky, or inconvenient.

Be careful when using RAM: for storing important files. If the Amiga loses power, has a software failure, or you reboot, everything stored in RAM: is lost. Be sure when working with RAM: to regularly back up any important files on a floppy disk.

Note   You cannot copy a disk to RAM: by dragging the
              source disk icon over the Ram Disk icon. To copy a
              disk to RAM:, open the Ram Disk icon and drag the
              floppy disk icon into the Ram Disk window. This
              creates a drawer with the name and contents of the
              floppy disk.

Backup Disks

Backup disks ensure against a loss of data in the event of damage,
corruption, or accidental erasure of the original disk. We
recommend that you make backup copies of important disks and
files, following the licensing agreements provided with your
applications software. Making and distributing unlicensed copies of
disks is a copyright violation known as software piracy. Store your
original disks in a safe place and use your backup disks for
everyday purposes.

Managing Your Files

Organizing Information on Disks

Information should be stored on disk in a logical manner to allow
easy access to your files. The Amiga Workbench organizes
information into a hierarchical system of drawers.

A drawer, or a directory in AmigaDOS, is a container for items that
are related. These items can be files and even other drawers.

On any disk you can create multiple drawers containing multiple
files, as available disk space allows. Workbench also allows the
creation of drawers within drawers, "subdrawers" or subdirectories,
for further file management. Create as many drawers and
"subdrawers" on your disk as needed.

A drawer icon is displayed in the disk window for each drawer created on a particular disk. Each drawer window contains the icons of the files and subdrawers that exist in it.

Paths

A path is a complete description of the location of a particular file on a disk. When a program requests the name of a file for retrieval, specify the file's path, including the volume or device name and all the drawers that lead to that file.

The method for specifying paths varies from program to program. Most programs use a file requester with a scrolling list, in which the disk name, any drawer names, and the file name are displayed. Click on the appropriate names to specify the path. However, for some programs you may have to type in the complete path name.

To enter a complete path:

1. Type the name of the disk followed by a colon. This name is the volume name of the disk, such as Mydisk:. You can substitute the disk's device name, such as DF0:, in place of the disk name. However, if you enter the device name rather than the volume name, be sure the correct disk is in that device.

    ```
    Diskname:
    ```

2. For a file that is not in a drawer, specify the file name after the colon following the disk name.

    ```
    Diskname:filename
    ```

3. For a file in a drawer, after the colon following the disk name specify the drawer name followed by a slash (/) followed by the file name.

    ```
    Diskname:drawername/filename
    ```

4. If there are more drawers in the path, each drawer must be specified followed by a slash.

    ```
    Diskname:drawername/subdrawername/filename
    ```

Note   File and drawer names containing spaces can cause recognition problems. We recommend that you avoid using spaces in file or drawer names. If you have trouble referencing a name that contains a space, enclose the entire path in double quotation marks.

File and Drawer Names

The following rules apply for naming files and drawers:

- Names can be up to 31 characters long.
- Colons (:) and slashes (/) are not allowed within a name. These characters are reserved for path statements. However, other non-alphabetic characters may be used.
- The use of spaces before or after names should be avoided due to the possibility of confusion.
- Upper and lower case differences (capitalization) are preserved and displayed by the Amiga. However, the system is case-insensitive: upper and lower case are considered the same.
- Duplicate file names are not allowed within the same drawer. If you save a file with the same name as an existing file in a drawer, it overwrites the original file in that drawer.
- Two files with the same name can exist in separate drawers or within different paths.

Trashcan

The Trashcan is a special drawer in each volume for storing files that you no longer need and may wish to delete. Discard icons or pseudo-icons for the files to be deleted by dragging them into the Trashcan. If the icon to be discarded is a drawer, its associated files are also moved to the Trashcan.

Choosing Empty Trash from the Icons menu deletes the icons and all of their associated files from the Trashcan. Before choosing Empty Trash, you can still recover any of the Trashcan's contents by opening its window and dragging the icons back out.

Using Application Software

Applications are software programs, such as databases, video and
sound programs, word processing programs, recreational programs,
and educational programs that are available for use on your Amiga.
Most Amiga programs use windows, menus, and gadgets in ways
very similar to the Workbench programs on your system disks.
However, you should always read the documentation that comes
with your applications for directions on using unfamiliar menu
items and gadgets.

Chapter 3

Fundamentals of the Workbench

This chapter describes the elements of the Amiga Workbench including:

- Screens
- Menus
- Windows
- Gadgets
- Icons
- Requesters

Screens

A screen is one of the key features of the Amiga's display system. The screen is an area of the monitor display with a given display mode and set of properties, including the resolution, size, and number of colors. Different display modes are used for different purposes and present different memory and processing loads on the system. (For more display mode information, see Appendix B.) A screen is always the full width of the monitor display. All windows open within a screen. Figure 3-1 shows the Workbench screen.
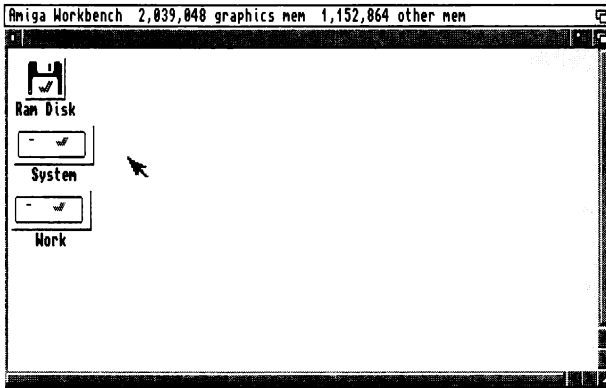
Figure 3-1. Workbench Screen

Using Screens

Several screens can be open at the same time. New screens normally open on top of other screens, covering them. View and access screens that are covered by others by dragging the frontmost screen down or using gadgets or keyboard shortcuts to arrange them. When working with screens, remember these helpful hints:

- Use left Amiga+M to page through open screens.
- Use left Amiga+N to bring the Workbench screen to the front, regardless of how many other screens are open.
- Items cannot be dragged between screens, although the mouse pointer moves freely from screen to screen.
- Only one window on one screen at a time can accept keyboard or mouse input.
- Most screens have a title bar that you can use to move it. Screens that do not may still respond to mouse clicks in the depth and close gadget areas. A screen with no title bar can be dragged using the qualifier key set in the IControl Preferences editor, described in Chapter 5.
- A screen cannot be dragged so that the bottom of the screen rises above the bottom of the monitor display.

Menus

Menus are lists of command options displayed on a screen by holding down the menu button. These commands control the actions of the program in the currently selected window. Most Amiga programs have menus for some or all of their functions. For example, you can rename a disk or copy a file by choosing items from the Workbench menus.

Using Menus

Menus vary from program to program; however, the steps used in choosing menu items are the same for all Amiga software.

A program's window must be selected to see its menus. Click in a window to select it. Hold down the menu button to display the menu bar as illustrated in Figure 3-2, which contains a list of headings. Hold down the menu button while pointing to the different menu headings to show the available items listed beneath each. To choose a particular item, release the menu button when the pointer touches it.
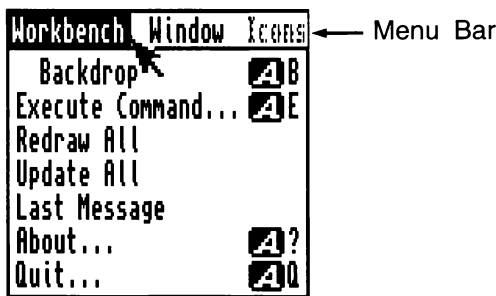
Figure 3-2. Menu Bar

Some menu items have submenus, which are additional related options that appear to the right of the menu item when it is selected. The symbol » after the item name indicates a submenu. If a menu has submenus, select one of the submenu options.

To execute several menu options at once, hold down the menu
button and, using the selection button, click on the menu options of
your choice.

Ghosted Menu Items

If a menu item is not available for a particular operation, it is
"ghosted" or displayed less distinctly than the others, as illustrated
in Figure 3-3.

Figure 3-3. Ghosted versus Available Menu Items

Menu Symbols and Shortcuts

In addition to the » symbol for indicating submenus, other symbols
may appear on the menu:

- An ellipsis (...) follows the name of menu items that open a
  requester.
- The Amiga key symbol followed by a letter indicates that
  holding down the right Amiga key and pressing that letter is a
  keyboard shortcut for activating that menu item.
- A checkmark indicates that the option is currently selected.

Tools Menu

The Tools Menu initially contains only ResetWB for resetting the Workbench. Other Amiga applications and utilities can add items to the Tools menu. Consult the documentation that came with your application software for information on adding items to the Tools menu.

Windows

Windows are areas on a screen that display and accept information. When you first boot the Amiga, the Workbench window is displayed on the Workbench screen after you double-click on the System drawer icon, as illustrated in Figure 3-4. Many of the Workbench icons create windows when selected.
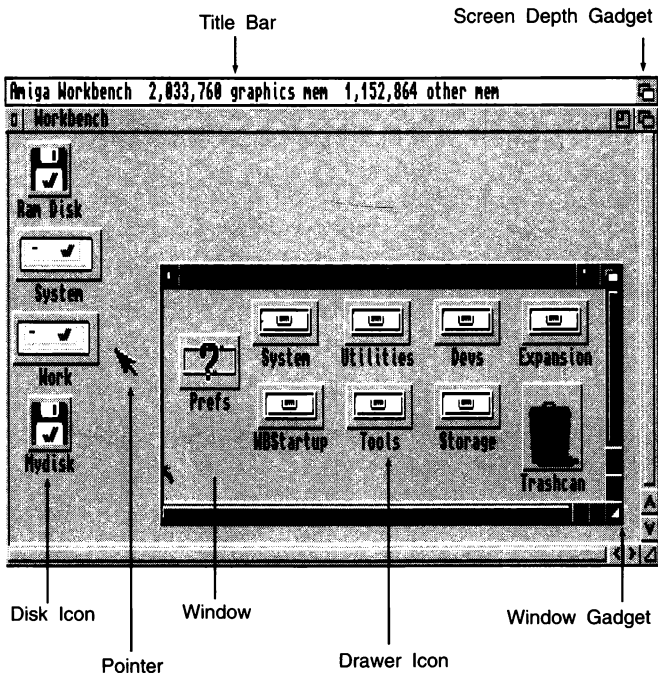
Figure 3-4. Workbench Window

Working with Windows

A new window appears on the front of the screen when you open a disk or drawer icon. Unlike screens, windows usually cover only a portion of the display area. Although several windows can be open on a screen at one time, only the selected window can accept information. The selected window's border or frame is a different color than the other windows on the screen.

To select a window, click the selection button anywhere inside the window or its title bar. To deselect a window, click anywhere outside the selected window.

Several open windows on one screen often overlap one another. To see particular windows, arrange them using the gadgets in the window's border; as explained on page 3-9.   Windows can also be manipulated using the Window menu.

Window Menu

The Window menu is only available when a Workbench window is selected. The Window menu allows you to create new drawers, select the contents of the window, rearrange the contents, change how the contents are displayed, and close the window. The available window options are:

New Drawer   𝔸 *N*

To create a new drawer:

1.   Select the window in which you want to create the drawer.

2.   Choose New Drawer from the Window menu. The drawer is created and named "Unnamed1".

3.   A Rename requester prompts you to change the name of the drawer.

4.   Delete the existing name, enter a new name, and press Return or select OK. Selecting Cancel leaves the default name on the new drawer.

Open Parent

A window's parent is the window that contains its icon. The Workbench window is the parent of all windows. With the exception of the Workbench window, every window has a parent window.

Open Parent opens the selected window's parent or brings it to the front of the display if it is already open.

Close   ᵉ**K**

Close closes and removes the selected window from the screen.

Mouse shortcut: For many windows, you can select the close gadget in the upper left corner of the window.

Update

Update redraws the selected window, including any changes made to the contents through the Shell or the Execute Command menu item. Such changes are not reflected until the window is updated or reopened.

Select Contents   ᵉ**A**

Select Contents selects all of the icons in the current window.

Clean Up

Clean Up automatically arranges all the icons in the selected window so that they do not overlap. This arrangement is not saved until you use the Snapshot menu item described below.

Snapshot

Snapshot saves the arrangement and position of a window. It is commonly used following Clean Up. Snapshot has a submenu containing two items: Window and All.

Snapshot Window saves the position and size of the selected window, as well as the Show and View By settings described below. However, it does not save the position of the icons in the window.

Snapshot All saves the position and other settings of all the icons in the selected window, as well as the position and size of the window.

Show

Show controls the types of icons that are displayed on a window. Show has two submenu items: Only Icons and All Files.

Show Only Icons is the default Show mode, displaying only those files and drawers that have icons (.info files).

Show All Files provides a pseudo-icon for each file or drawer in the selected window that does not have a real icon. Pseudo-icons can be treated like any other icon, including manipulating them with the menu items in the Icon menu.

You may have to scroll in the window to see the new pseudo-icons.

View By

View By changes how the information in the window is displayed. View By has four submenu items: Icons, Name, Date, and Size.

View By Icons is the window's default mode.

Choosing View By Name, View By Date, or View By Size displays a window's contents in text form, including the size of the file, its attributes (whether it can be read, deleted, executed, or written), and its timestamp.

File and drawer names can be selected, opened, dragged, and manipulated just like icons.

View By Name sorts the file list in alphabetical order.

View By Date sorts the list in chronological order, with the most recently created file listed first.

View By Size sorts the list by size, listing the smallest file first.

Gadgets

Gadgets are programmed graphic images that may appear in a
window, requester, or screen. Like icons, gadgets often have a
raised three-dimensional appearance and when selected may appear
to sink into the screen. Like icons, they are selected with the
mouse.

Window Gadgets .

Window borders often contain several gadgets for moving windows,
changing their size, scrolling (moving) their contents, and closing
them. Figure 3-5 illustrates some typical window gadgets.
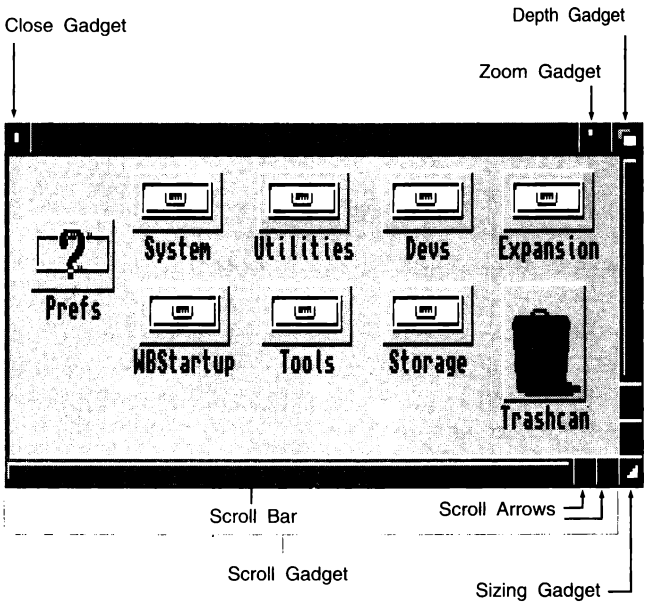
Figure 3-5. Window Gadgets

Windows can contain any of the following gadgets:

Text Gadget

A text gadget is a rectangular box within a requester or window for entering a file name, drawer name, or other text. More information on text requesters and text gadgets appears on page 3-29.

The following keyboard shortcuts can be used for editing text within a text gadget:

Del	Erases the character highlighted by the cursor
Backspace	Erases the character to the left of the cursor
Right Amiga+X	Erases all the text in the gadget
Right Amiga+Q	Retrieves the information that was in the gadget before the text was changed
Shift+left arrow	Moves the cursor to the beginning of the line
Shift+right arrow	Moves the cursor to the end of the line
Shift+Del	Erases the character highlighted by the cursor and all characters to the right of the cursor
Shift+Backspace	Erases all the characters to the left of the cursor

When you are finished entering the text, press Return to perform the action.

Title Bar

The title bar is a gadget that identifies each window or screen on the system. The title bar of a disk window also contains:

- the name of the disk
- the percentage of the disk that is full
- the number of free bytes available for storage in Kilobytes (K) or Megabytes (M)
- the number of bytes in use for existing data

Depth Gadget

The Depth gadget changes the position of a window or screen. Selecting the depth gadget on the front-most window on the screen moves it to the rear. Holding down Shift while selecting the depth gadget on any window sends it to the rear.

Selecting the depth gadget on any window other than the front moves it to the front. A window brought to the front with the depth gadget is automatically selected.

Zoom Gadget

The Zoom gadget provides a quick way to switch between two different window size/position settings. It is a toggle that, when selected, makes a large window small and a small window large.

Sizing Gadget

The Sizing gadget allows you to change the size of a window. To size a window:

1. Point to the sizing gadget.

2. Hold down the selection button and move the pointer. An outline of the window appears with its lower right corner following the pointer.

3. Release the selection button. The window is redrawn to the size indicated by the outline.

The sizing operation can be cancelled by pressing the menu button before releasing the selection button.

Scroll Gadgets

The Scroll gadgets move the area inside a window to show unexposed icons without changing the window's size. Use scroll gadgets after resizing a window or choosing Show All Files. Scroll boxes, scroll bars, and scroll arrows are all scroll gadgets.

Scroll bars are the highlighted rectangular areas inside the scroll boxes. They indicate how much of a window's contents is visible.

When the scroll bar completely fills a scroll box, all of the icons are visible. When the scroll bar fills half of the scroll box, only half of the window is visible.

To see the area of a window that is not visible:

1. Point at the scroll bar.

2. Hold down the selection button.

3. Drag the scroll bar to an empty area of the scroll box. The viewing area is redrawn to show the new position when you release the scroll bar.

Another method to move the scroll bar is:

1. Point to an empty area of the scroll box.

2. Click the selection button.

The scroll bar moves to the area where you pointed.

Scroll arrows are for scrolling continuously through the viewing area of a window. By pointing to a scroll arrow and holding down the selection button, you shift the viewing area in the direction of the arrow. Move the window contents one pixel at a time by holding down Shift while selecting a scroll arrow.

Close Gadget

Selecting the close gadget closes the window and clears it from the screen. If the last window of an application program is closed, the program is usually exited.

Action Gadgets

Action gadgets are found in requesters, Preferences editors, and other windows, usually at the bottom of the window. The most common action gadgets in Workbench windows include:

Save	Implements and saves any changes to program settings and closes the window.
Use	Implements changes to program settings without saving them and closes the window. Rebooting the Amiga returns to the default or previously saved changes.
Cancel	Cancels changes to program settings that you made in the window. The settings in effect prior to opening the window remain the same.
OK	Acknowledges and closes a requester.
Retry	Retries the current operation after you have attempted to correct what the requester indicates is wrong, such as a disk error or a write-protected disk.
Continue	Starts next step of operation.
Help	Displays help information.

Additional Gadgets

In addition to the gadgets described previously, there are several other types of standard gadgets used by Amiga programs. Always read your application documentation carefully for exact information about their use.

Check Box

Check boxes indicate if an option is turned on or off. When an option is on, the box contains a check mark. If the option is off, the box is empty. To change the check box setting, click on the box.

Cycle Gadget

Cycle gadgets contain lists of options. The displayed option is the selected option. Pointing to the cycle gadget and repeatedly clicking the selection button cycles through the list, showing the available options. Cycle backwards through the list by holding down Shift while selecting.

Radio Button

Radio buttons allow you to select one option from a fully displayed list. Each option in the list has a radio button next to it.

Selected radio buttons are highlighted and appear indented. Unselected radio buttons remain one color and appear raised above the screen.

Select a radio button by clicking on it. The previously selected option in the list is automatically deselected.

Scrolling List Gadgets

Scrolling list gadgets allow you to select from options displayed in a scrolling list.

A scrolling list shows all of the available choices when scrolled, rather than one option at a time. To select an option, click on it.

Scrolling list gadgets also contain scroll arrows and a scroll bar similar to window scroll gadgets.

If a text gadget appears under the scroll gadget, you can type in a choice not displayed in the scrolling list, such as a new file name for saving information.

Slider Gadget

Slider gadgets allow you to select a value within a given range. These are similar to scroll gadgets in that you drag a slider bar through a slider box to select a specific value.

The slider value shown next to the slider is the value associated with the current position of the slider bar.

To change the value, drag the slider bar. When the desired value is shown, release the selection button.

Icons

Icons are movable graphic representations of disks, drawers, files, and programs that you manipulate with the mouse.

The Workbench uses the following types of icons:

A disk icon represents any disk that is available or accessible by the Workbench. Disk icons appear only in the Workbench window.
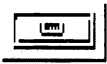
A drawer icon represents a directory, which is a subdivision of the disk storage area.

A tool icon represents a specific program, such as the Clock utility. When a tool icon opens, the program is started.

A project icon represents a file created or used by a tool, such as the Prefs Preset icons.

A project psuedo-icon represents a project file that does not have an icon.

A drawer pseudo-icon represents a directory that does not have an icon.

A tool pseudo-icon represents a tool file that does not have an icon.

The Trashcan represents a special drawer used to store unwanted items until you remove them from the disk.

Icons Menu

The Icons menu allows you to work with the icons on the screen.
An icon must be selected before the menu options illustrated in
Figure 3-6 become available.
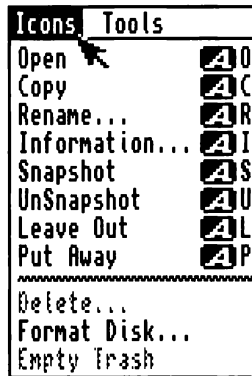
Figure 3-6. Icons Menu

Open   ⍨ O

Opening an icon makes a program or window available.

When you open a disk or drawer icon, a window displays the icons
contained on that disk or in that drawer. When an individual
project or tool is opened, the corresponding program starts.

Open an icon by selecting it and choosing Open.

Mouse Shortcut: Point to the icon and double-click the selection
button.

Copy   ⍨ C

Copy allows you to duplicate disks, drawers, programs, or files
within a window. To copy material to another window, use the
drag-copy method described in Chapter 2. Drag-copying is the
easiest method of copying a disk on a two-floppy system.

Use Copy for making backup copies of your disks.

To copy a drawer, project, or icon:

1. Select the icon.

2. Choose Copy from the Icons menu.

Copying disks on single-floppy disk drive systems entails a process known as swapping. Source and destination disks are swapped in the single drive as the system first reads information from the source disk and then writes it to the destination disk. The destination disk must be write-enabled, but need not be formatted since Copy formats the disk as it writes to it.

To copy a disk on a single-floppy disk drive system:

1. Insert the source disk into the Amiga's internal disk drive.

2. Select the source disk's icon.

3. Choose Copy from the Icons menu. Insert the Workbench disk, if necessary.

4. If the disk copy requires at least five swaps, a requester tells you how many swaps are needed. Closing any unnecessary windows or stopping any unwanted programs helps reduce the number of swaps.

5. Select the Continue gadget in the swap requester. During the disk copy, the icon for the disk being copied is unavailable and is labelled "BUSY".

6. Insert the source disk into the drive and select Continue. A horizontal bar gauge shows the percentage of the disk copy completed.

7. Insert the destination disk into the drive when prompted and select Continue to copy the information read in from the source disk. Swap the disks as often as requested. When the copy is finished, a "Disk Copy Finished" message appears.

8. Remove the destination disk from the drive and label it. The destination disk's icon is labelled with a copy_of_ prefix (for example, copy_of_DataDisk).

Rename   *A R*

Rename changes the name of an icon. It is used to remove the copy_of_ prefix from something you copied, as well as for changing the names of drawers, disks and files.

To rename an icon:

1. Select the icon.

2. Choose Rename from the Icons menu. A requester containing a text gadget displays the current name of the icon.

3. Delete the old name using Backspace or right Amiga+X and enter the new name. Do not use spaces before or after the new name. Because imbedded spaces are not visible, they can cause confusion if you have to type in the icon name again.

4. Press Return. The new name appears under the icon.

Information   *A I*

Information displays status information about the selected icon. Certain data can also be modified in the Information window. Figure 3-7 illustrates the Information window.
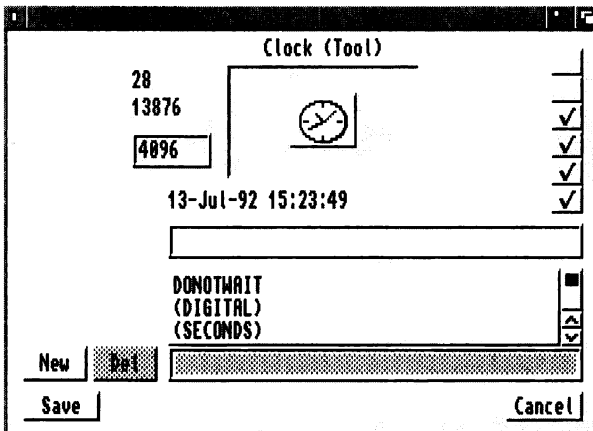
Figure 3-7. Icon Information Window

Although the contents of the window varies with the icon, the following information is always displayed:

name	The icon name and its type in parentheses (Volume, Drawer, Tool, Project, or Trashcan).
image	A picture of the icon.
size	The number of blocks and bytes that the disk, project, or tool fills.
stack	The amount of memory reserved as temporary storage for a specific tool.
last changed date	The date on which the icon was created or the last time it was changed (its timestamp).

For a disk icon, the window also shows whether a disk is write-enabled (Read/Write) or write-protected (Read Only).

For a drawer, trashcan, project, or tool, the following attributes can be selected by clicking on the attribute's check box.

Script	If the program is executed through the Shell, it runs as a script (a text file of AmigaDOS commands).
Archived	This attribute is set by backup programs to indicate that a file or directory has been archived (backed up).
Readable	Information in the file can be read.
Writable	Information can be written into the file. Unless Writable is selected, you cannot make changes to the file.
Executable	The tool program runs automatically when it is opened.
Deletable	The drawer, project, or tool can be erased from the disk. If not selected, the object is protected from deletion.

If the icon represents a project, there may be a Default Tool gadget. This specifies the path to the tool that created the project. When the project icon is opened, the default tool is also opened to work on the project.

If there is a Comments box, you can add a note of up to 79 characters by selecting the text gadget next to Comments, entering the text, and pressing Return.

The Tool Types box specifies different startup options for some programs or files. Icon Tool Types are described on page 3-26.

To save any changes made to the Information window, select the Save gadget in the lower left corner.

Snapshot   𝔸*S*

Snapshot saves the positions of all the currently selected icons. The next time you open the window, the icons that you selected appear in their saved positions. You can save the positions of several icons at one time by using drag selection or extended selection.

To save the position of an icon:

1.   Select the icon.

2.   Choose Snapshot.

UnSnapshot   𝔸*U*

UnSnapshot cancels the snapshot position of an icon. The next time you open the window, the icons are rearranged.

To rearrange the position of an icon:

1.   Select the icon.

2.   Choose UnSnapshot.

Leave Out   𝔸*L*

Leave Out moves an often-used icon out of its original window and into the Workbench window for faster access. The file represented by the icon remains in its original drawer on the disk; only the icon is moved. The icon remains in the Workbench window, even if the machine is rebooted. This menu item cannot be used with disks or the Trashcan.

To use Leave Out:

1. Select the icon.

2. Choose Leave Out.

The icon moves into the Workbench window.

Put Away   *A* *P*

Put Away returns an icon that was "left out" to its original drawer.

To use Put Away:

1. Select the icon.

2. Choose Put Away.

Delete

Delete erases files and their icons from your disks.

**Caution   Use Delete with caution; you cannot retrieve
             something that was deleted.**

To delete a file or drawer:

1. Select its icon. Use drag selection or extended selection to choose more than one icon to be deleted. Disks and the Trashcan cannot be removed with Delete.

2. Choose Delete from the Icons menu. Verify that you want to erase permanently the items listed in the window. Remember that if you delete a drawer, everything contained in it is also deleted.

3. Select the OK gadget. The icon and the entire file associated with it is erased from your disk. If you do not want to delete the icon, select the Cancel gadget.

Format Disk

Formatting a disk prepares it for storing information.

Caution   **Formatting erases all information on a disk. Be
              careful not to format disks that hold information that
              you do not want to lose, particularly your original
              system and software applications disks.**

Select the icon of the disk to be formatted and choose Format Disk
from the Icons menu. The Format window, illustrated in Figure
3-8, displays the current information about the disk. A text gadget
allows you to enter a new Volume name for the disk.

```
┌──────────────────────────────────────────────────┐
│                                                  ▢│
│  Current Information: Device 'DF0'                 │
│                       880K capacity               │
│                                                    │
│        New Volume Name: │Empty           │         │
│           Put Trashcan: ✓│                         │
│        Fast File System: __│                        │
│     International Mode: __│                         │
│       Directory Caching: __│                        │
│                                                    │
│      Format    │  Quick Format  │   Cancel    │    │
└──────────────────────────────────────────────────┘
```
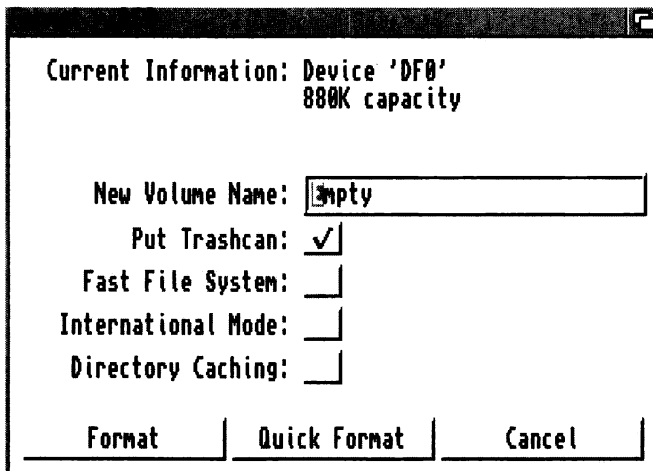
Figure 3-8. Format Window

Four items can be selected (checked) that allow you to put a
Trashcan on the disk, to use Fast File System (FFS) when writing to
the disk, to use International Mode, and to use Directory Caching.
Fast File System, International Mode, and Directory Caching can
only be specified for AmigaDOS disks. Disks created with the
Directory Caching option enabled can only be read by Amigas
running Workbench Release 3.0.

Selecting Fast File System allows the Amiga to fit more information on a disk and is faster than the standard file system. However, Fast File System disks are incompatible with Amiga Workbench software releases prior to 2.0 and should not be selected for disks that are also used on pre-Release 2 Amigas.

Selecting International Mode corrects a case-sensitivity problem associated with international characters. We recommend that you set this option on. However, International Mode is incompatible with Amiga Workbench software releases prior to 2.0 and should not be selected for disks that are also used on pre-Release 2 Amigas.

Selecting Directory Caching speeds up the opening of drawers, file requesters, and listings. This option is not set by default. Disks using Directory Caching are incompatible with Amiga Workbench software releases prior to 3.0 and should not be selected for disks that are also used on pre-Release 3 Amigas.

Quick Format is for reformatting a disk that was previously formatted. You cannot format a new blank disk with Quick Format. Choosing the Quick Format option is faster than formatting the entire disk; however, it does not detect any read/write errors on the disk that could be eliminated by a full format.

When the disk is formatted, if you did not change the name on the Format screen, it is labeled Empty. This name can be changed using the Rename item in the Icons menu.

Formatting Hard Disks

You must format your hard disk under the following conditions:

- if you install a new unformatted disk
- if you have a serious unrecoverable disk error
- if the disk is fragmented
- if you have repartitioned the disk
- if you purchase an operating system upgrade

Before reformatting your hard disk, be sure to back up all important information from the disk.

The Ram Disk cannot be formatted. If you accidentally select the Ram Disk for formatting, a requester reports that there is a format failure and requires you to select Cancel.

If you have more than one disk icon selected, more than one Format window opens when the Format Disk item is selected from the Icons menu. The Format windows open one on top of another so that only one Format window is initially visible. Drag the windows until all are visible. Be sure to check the Current Information field in the Format window for the intended Device and Volume names before allowing the format to continue.

Caution   Check the device and volume names carefully. If you accidentally reformat your hard disk instead of a floppy, you will erase all of your software files.

Formatting Floppy Disks

The Amiga does not recognize floppy disks that are not formatted; therefore, blank disks must be formatted before anything can be written on them. Disks can be formatted at any time, including while running one or more applications. Disks usually have to be formatted only once.

To determine if a floppy disk is formatted, insert it into a floppy drive and check the disk icon on the Workbench screen. If the Amiga cannot recognize the disk, four question marks (????) follow the drive designation in the icon's label.

To format a blank disk:

1. Write-enable the disk and insert it into a floppy drive.

2. Select its disk icon when it appears on the Workbench screen.

3. Holding down the menu button, point to the Icons menu, move the pointer to the Format Disk item, and release the button.

4. If you have a hard drive on your Amiga, skip to Step 7. If you do not have a hard drive on your Amiga, at the requester insert the Workbench disk into any drive.

5. When the Format program has been loaded from the Workbench disk, remove the disk from the drive.

6. At the requester, insert the blank disk and select the Continue gadget.

7. In the Format window, change the volume name of the disk from the default "Empty"; choose whether to put the Trashcan on the disk or to select FastFileSystem or set International Mode. Then select Format to continue.

8. A requester warning that all data will be lost if you continue the format appears on the screen. Select either Format or Cancel. If you are formatting a hard drive partition larger than 5 megabytes, a response to a second requester is required.

9. During the format a window is displayed that shows the percentage of disk that has been formatted. This window also has a Stop gadget that allows you to cancel the format at any time.

A disk that is partially formatted is not usable.

Empty Trash

Empty Trash deletes the contents of the Trashcan. To use the Trashcan, drag an icon over the Trashcan icon and release the selection button. The icon is then stored in the Trashcan drawer until you decide to permanently "throw it away" with Empty Trash.

To delete an icon with Empty Trash:

1. Drag the icon over the Trashcan and release the selection button. If you open the Trashcan, the icon appears in the Trashcan window.

2. Make sure the Trashcan icon is selected (the lid is displayed open) and choose Empty Trash from the Icons menu. The Trashcan contents are deleted.

An icon can be retrieved from the Trashcan as long as Empty Trash is not chosen. Retrieve an icon by opening the Trashcan window and dragging the icon into any window. You may wish to open the Trashcan window in Show All Files mode and verify its contents before choosing Empty Trash.

The following rules apply to the Trashcan:

- Icons can only be moved to a Trashcan on the same volume.
- Disks cannot be deleted using the Trashcan.
- The Trashcan cannot be moved into a drawer.
- The Trashcan cannot be deleted with the Delete menu item.

Icon Tool Types

Tool Types specify parameters used by a program. Tool Types are usually in the form of KEYWORD = argument. Case differences do not matter when entering the information. Do not use any spaces in a Tool Type entry.

Any changes you make to a program's Tool Types take effect the next time you run the program. Tool Types are found in an icon's Information window.

To use Tool Types:

1. Select the appropriate icon.

2. Choose Information from the Icons menu.

When the window appears, you can add, delete, or change Tool Types in the Tool Types field.

For convenience, Workbench programs usually have all their possible Tool Types already entered. The Tool Types that are optional or do not set default values are disabled or "commented". Commented Tool Types are enclosed in parentheses and are ignored when the icon is opened.

Uncommenting

Uncomment or make available Tool Types by removing the parentheses. Where there are angle-bracketed parameters in the Tool Type, the parameter and brackets must be replaced with an appropriate value or option.

Changing a Tool Type

1. Select the appropriate icon and choose Information from the Icons menu.

2. Select the Tool Type that you want to change from the list. It is copied to the text gadget below.

3. Edit the text in the text gadget and press Return.

4. Select the Save gadget. Be sure to make all your changes before selecting Save because it closes the Information window.

Adding a Tool Type

1. Select the appropriate icon and choose Information from the Icons menu.

2. Select the New gadget.

3. Type in the new Tool Type and press Return.

   Repeat Steps 2 and 3 for each additional Tool Type you want to add.

4. Select the Save gadget to save the new information. If you do not wish to save your changes, select Cancel or the window's close gadget.

Deleting a Tool Type

1. Select the appropriate icon and choose Information from the Icons menu.

2. Select the Tool Type to be deleted.

3. Select the Delete gadget.

   Repeat Steps 2 and 3 for each Tool Type you wish to delete.

4. Select the Save gadget to save the change. If you do not wish to save your changes, select Cancel or the window's close gadget.

Note   Commenting out Tool Types that you do not currently
              need rather than deleting them makes recalling them
              easier the next time you need them.

Requesters

Requesters are prompts that appear in small windows. You must
respond to a requester to continue. A requester always contains
text explaining what you must do to satisfy the request. Menu
items that generate requesters are followed by an ellipses (...).

Action Requesters

Action requesters require you to proceed with or cancel an operation
by clicking on the appropriate action gadget: OK, Continue, Retry,
or Cancel. Figure 3-9 illustrates an action requester window.
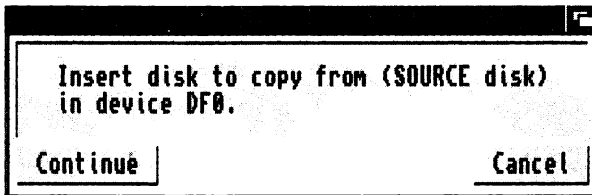
Figure 3-9. Action Requester

Keyboard shortcut: To proceed (OK, Continue, or Retry), press left
Amiga+V. To Cancel, press left Amiga+B.

Message Requesters

Message requesters inform you about something that occurred in
the system or a program. They require an acknowledgement by
clicking on a gadget.

Text Requester

Text requesters ask you to enter text into a text gadget, as illustrated in Figure 3-10. The text gadget is automatically selected and text is entered at the cursor position (the small highlighted box inside the text gadget).
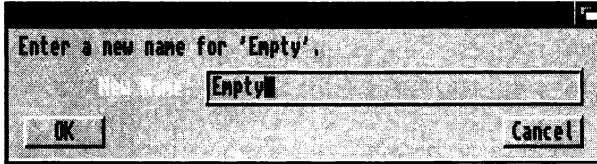
Figure 3-10. Text Requester

File Requesters

File requesters allow you to select or enter the name of a file that you want to open or save. Figure 3-11 illustrates a file requester window.
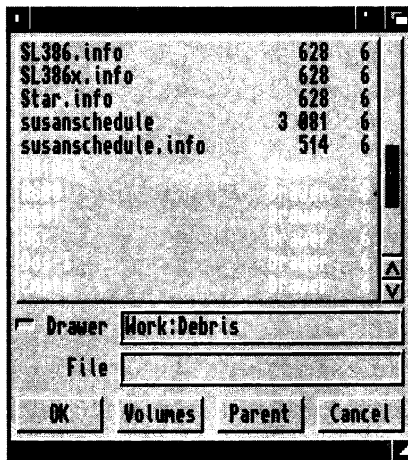
Figure 3-11. File Requester

A file requester contains a scrolling list of files and drawers, plus several other gadgets for locating your file. Read through the list by dragging the scroll bar up or down or selecting the scroll arrows. If your file is in a different drawer or on another disk, the gadgets in the requester allow you to look for that file.

Select the Volumes gadget to display a list of available floppy disks, hard disk partitions, and assigned directories. List the available files and drawers on a disk by clicking on the name. Click on drawer names to list their contents. In addition to the volume, drawer, and file names, the scrolling list displays file size in bytes, file and drawer timestamps, and volume use statistics. Use the sizing gadget to make the file requester wider for viewing this information.

Select the Parent gadget to list the current drawer's parent. Selecting Parent when the current drawer is the root of a particular volume is the same as selecting the Volumes gadget.

When you have selected the file that you want (or typed its name into the File gadget), select OK or press Return to load/save the file. In a Load or Open requester, the shortcut is to double-click on the filename. (In a Save requester, which is distinguished by the reversed colors on its scrolling list, you cannot save by double-clicking.)

An additional text gadget labelled Pattern allows the use of AmigaDOS pattern matching to control the list of files. Users familiar with AmigaDOS pattern matching can enter their own pattern statements.

The standard Amiga file requester has a Control menu with eight items. Last Name and Next Name move up and down through the listed names. (The up and down arrow keys or the right Amiga key shortcuts listed in the menu can move you through the list.) The current name appears in the File text gadget; a highlight bar appears in the list if the current name is a filename.

The Restore menu item recalls the scrolling list and text gadget contents that were displayed when the requester opened.

The Parent, Volumes, OK, and Cancel menu items have the same function as the corresponding gadgets.

The Delete menu item lets you delete files from the file requester. Select the filename or type the name into the File text gadget and choose Delete. A requester appears, requiring confirmation. Select OK to delete or Cancel to return to the file requester without deleting.

Font Requesters

Font requesters list the available fonts on the system. Figure 3-12 illustrates the font requester window.
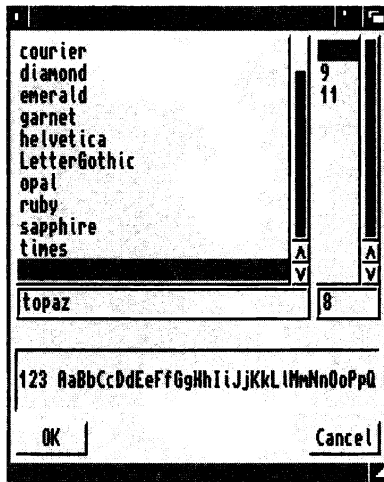
Figure 3-12. Font Requester

Fonts are sets of characters of the same design. Using font requesters, some applications allow you to choose the font, point size, attributes (plain, bold, italicized, or underlined), and colors for the text and/or background.

ScreenMode Requesters

ScreenMode requesters work similarly to the ScreenMode Preferences editor. Detailed ScreenMode information appears in Chapter 5.

Chapter 4
Workbench

This chapter describes the Amiga Workbench, an icon-based
environment that allows you to give instructions by manipulating
graphic symbols with a mouse rather than by typing in commands
at a keyboard. Included in this chapter are descriptions of the
following:

- The Workbench Screen
- The Workbench Window
- The Workbench Menu
- Workbench Programs

Workbench Screen

The Workbench screen, illustrated in Figure 4-1, is the primary
visual component of your system. Icons and other windows appear
on it.

The Workbench screen is identified by the Amiga Workbench title
bar located along the top border of the display. The Workbench
screen's title bar also displays the number of bytes of graphics
(Chip) memory and other (Fast) memory currently available for any
selected window, except an open Shell window.

The Amiga provides Preferences editors (described in Chapter 5)
that allow you to customize the Workbench screen. You can define
an extra-large "virtual" Workbench screen that is larger than the
viewable area with more space for windows.

Workbench Window

When you boot your Amiga, the Workbench window fills the Workbench screen. This window contains icons for any floppy disks inserted into floppy drives, the Ram Disk, and any other icons determined by your system's configuration.

Although the Workbench window appears and functions like an application window, it is an essential part of the Workbench screen.
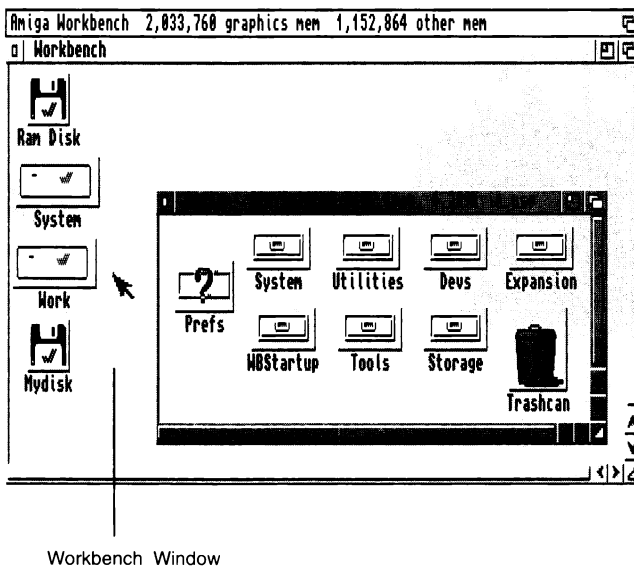
Workbench Window

Figure 4-1. Workbench Screen

Workbench Menu

The Workbench menu contains general Workbench options and options for windows opened on the Workbench screen. You can, for example, use the Workbench menu to update the screen display or see which version of the system software is in use.

On the Workbench menu you can select the following options:

Backdrop *A* **B**

The Backdrop menu item creates more room on the Workbench screen for displaying windows and icons. Backdrop switches between a normal window for your Workbench and a special borderless window that is always behind other windows opened on the Workbench.

Choosing Backdrop removes the Workbench window borders so that the disk icons appear to be on the Workbench screen without being enclosed in a window. To return to the normal Workbench window, choose Backdrop again. Backdrop is reset to off if you power off or reboot your computer. To save your Backdrop selection choose the Snapshot item in the Windows menu.

Execute Command *A* **E**

Note   This menu item is provided for users familiar with AmigaDOS.

The Execute Command executes (starts) an AmigaDOS command without opening a Shell window. Figure 4-2 illustrates an Execute Command requester.
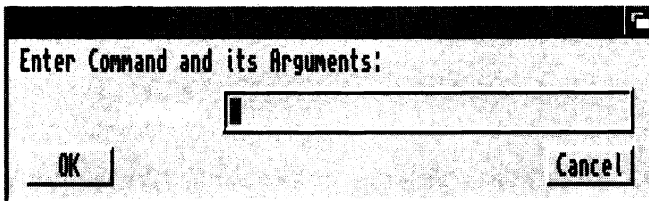
Figure 4-2. Execute Command Window

The command and all of its arguments should be entered in the requester.

A Workbench Output Window is automatically opened on the front of the screen when a command results in output and it remains there until you select its close gadget. The current directory for an Execute Command operation is RAM:.

Redraw All

Redraw All redraws all open Workbench windows on the Workbench screen and may be used in the event of a disturbance to the Workbench. If Redraw All does not restore the windows to their proper appearance, reboot the computer.

Update All

Update All reopens each open Workbench window, updating its appearance to show its current state.

Note   If you have several windows open and have been using the Shell or an application to change to the contents of a disk, the changes may not be reflected in its windows until you close the windows and reopen them or choose Update All.

Last Message

Last Message retrieves the last information or error message that appeared on the title bar.

About

About opens a requester showing the internal version number of the Workbench and Kickstart software, as well as copyright information. Select the OK gadget to close the requester.

Quit   𝔸 *Q*

Quit closes all Workbench operations, making additional RAM available if needed. The Workbench does not close if there are any programs running, including programs that do not open a window and programs that are in your WBStartup drawer.

The only windows that can remain open while using Quit are the disk, drawer, and Shell windows. Once you OK the Quit requester, a Shell window is your only link to the Amiga. You can use the Shell icon in the System drawer to open a Shell window before quitting the Workbench.

Return to the Workbench by typing LOADWB (load Workbench) at the Shell prompt and pressing Return. If there is no Shell window open, you must reboot to return to the Workbench.

The close gadget on the Workbench window is the same as choosing Quit.

Workbench Programs

The Workbench disk window contains a number of drawers that contain system and utility files.

These drawers are:

- System
- Utilities
- Devs/Storage
- WBStartup
- Expansion
- Tools

System Drawer

The System drawer contains programs that control system functions. Some offer access to Amiga accessory programs, such as AmigaDOS or ARexx.

FixFonts

FixFonts should be used after fonts are added to or deleted from your Fonts drawer.

For more information on fonts and FixFonts, see Chapter 8.

Format

Format a disk by opening the Format icon. The procedure follows the same steps as used with the Format Disk menu item, described in Chapter 3.

Intellifont

Intellifont manages the installation of Intellifont® outline fonts onto your Amiga. Intellifont and fonts are described in Chapter 8.

NoFastMem

Some very old programs may not run properly when memory other than graphics (chip) memory is present in the Amiga system. In this case, double-clicking on the NoFastMem icon forces the Amiga to use only the available graphics memory. The "other mem" display in the Workbench title bar drops to 0 (zero). The icon works like a toggle switch. To restore expansion (Fast) memory to the system, double-click on the NoFastMem icon again. NoFastMem does not open a window.

RexxMast

RexxMast is the interpreter for the optional ARexx programming language. To use RexxMast double-click on its icon. To run RexxMast each time you boot, drag the icon into WBStartup.

Shell

Shell opens an Amiga Shell window, which gives you complete access to the AmigaDOS command line environment.

Utilities Drawer

The Utilities drawer contains programs that are helpful, but not necessary for working with your Amiga.

Clock

Clock displays the time and date on your Workbench screen. It can also be used as an alarm clock to signal you at a specified time.

When you open the Clock icon, a window with a round (analog) clock face appears. If the time shown is incorrect, use the Time editor in the Prefs drawer, described in Chapter 5, to set the correct time.

Clock has two menus for changing the display and settings: Project and Settings.

The Project menu lets you choose the display mode for Clock or choose Quit to close the Clock. Analog is the default display mode; its window size can be changed. Digital, the numeric clock, displays a digital clock the height of the title bar. (Note that the Digital clock uses your screen font.).

The Settings menu lets you:

Display the Date	Displays the date beneath the analog clock. The date and time are alternately displayed on the digital clock. Date off is the default.
Display Seconds	Displays the time with a sweep second hand on the analog clock. The default setting shows no seconds. The Display Seconds item is not available on the digital clock.

Display a 24-Hour Clock	Displays the time in a 12 or 24 hour format, with or without seconds, for the digital clock only.
Set the Alarm	Allows you to set the time for the alarm to signal you. Because the signal is a short audible tone, you must have audio output on your Amiga to use this feature.

To set the alarm:

1. Choose the Set Alarm menu item.

2. Change the time setting by dragging the hour and minute sliders to the right to increase the value or the left to decrease the value until the correct time is displayed.

3. When the requester displays the desired alarm time, select the Use gadget. Select the Cancel gadget to restore the previous alarm setting and exit.

4. Choose the Alarm menu item to turn the alarm on.

The alarm remains on and beeps at the same time each day until you deselect Alarm or close the Clock. The Clock must be running for the alarm to work. The next time you open the Clock, the alarm must be reset.

The Settings menu also lets you save your settings with the Save Settings item.

Tool Types

Tool Types in the Clock icon's Information window allow you to save the menu, size, and position settings on the Clock. The acceptable Tool Types are:

DIGITAL	The clock opens in digital mode
24HOUR	The clock opens in 24-hour mode
SECONDS	The clock displays the seconds
DATE	The clock displays the date
LEFT= <n>	The clock opens <n> pixels from the left edge of the screen
TOP= <n>	The clock opens <n> pixels from the top of the screen

WIDTH= \<n\>	The clock is \<n\> pixels wide (disregarded if using a digital clock)
HEIGHT= \<n\>	The clock is \<n\> pixels high (disregarded if using a digital clock)
FORMAT= \<n\>	The digital clock is preset to the specified format; \<n\> = 0-5.

More

More displays ASCII files on the Workbench screen.

To move through the More Display, use the following key sequences:

|	
Space bar	Displays the next page.
Backspace	Displays the previous page.
Return	Displays the next line.
<	Displays the first page.
>	Displays the last page.
%n	Displays approximately n% into the file; if you enter %60, you are placed 60% into the file.
Ctrl+L	Updates the window (this is useful if you have made the More window larger).
/text	Performs a case-sensitive search for the text specified after the slash (/).
.text	Performs a case-insensitive search for the text specified after the period (.) That is, the system ignores upper and lower case in the search.
N	Finds the next occurrence of the previously searched for text.
H	Help (displays a list similar to this one).
Q	Exits the program.
Ctrl+C	Exits the program.
Shift+E	Allows you to edit the file using the editor set in ENV:editor.

When the last page of the display is reached, an End of File message is displayed at the bottom of the screen. Press the space bar to exit More.

More searches for text in any form. A case-insensitive search is one that searches for the text in upper or lower case. For example, the words More, MORE, more, and mOre are all the same in a case-insensitive search. A case-sensitive search is one that searches for the text exactly as it is entered. If you enter the text in upper case letters, More only looks for occurrences of the text that appear in upper case letters.

MultiView

MultiView lets you view files, including picture files, text files, AmigaGuide help files, sound files, and animated graphics files. For more information on the Data Types used by MultiView, see page 4-15. Figure 4-3 illustrates the MultiView window.
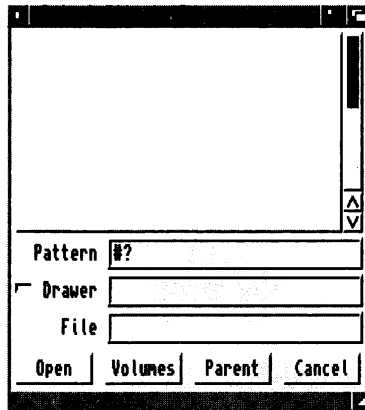
Figure 4-3. MultiView Window

Load files into MultiView using the file requester provided or drag icons onto MultiView. The following gadgets appear on the MultiView file requester:

Pattern	Searches for a file pattern
Drawer	Displays the drawer of the selected file
File	Displays the filename of the selected file
Open	Opens the selected file
Volumes	Displays the available volumes from which to select a file
Parent	Returns to the parent directory of the file or directory last viewed
Cancel	Cancels MultiView without opening a file

Move through the file you are viewing using the window gadgets, scroll bars, and sliders on the display window.

MultiView has four menus: Project, Edit, Windows, and Settings.

Project Menu

Open	Opens a MultiView file requester.
Save As	Saves object as ILBM or text files.
Print	Prints selected blocks or files.
About	Shows the MultiView release information and the type of document being viewed.
Quit	Quits Mulitview.

Edit

Mark	Turns on the block selection cursor and lets you select a block. (This is only available for picture files.)
Copy	Copies selected block to the Clipboard and deselects the block. If no block is selected, copies the whole file.
Select All	Selects the whole file.
Clear Selected	Clears the selected block or file without copying or printing.

Windows

Minimize	Makes the window as small as it can be.
Normal	Sizes the window to the contents size.
Maximize	Makes the window the same size as the screen.

Settings

Save As Defaults	Saves the size, position, and location of the window for future use

Tool Types

MultiView supports the following Tool Types:

CLIPBOARD	View the Clipboard instead of the file.
CLIPUNIT= \<number\>	Specify the Clipboard unit to use when using the CLIPBOARD keyword. The range is 0 to 255; the default is 0.
SCREEN	Indicate that you want the object to appear on its own screen, using the environment specified by the object. For example, if an ILBM was Low Res, then the screen would match.
PUBSCREEN= \<name\>	Indicate that you want the window to open on the named public screen.
FONTNAME= \<name\>	Font to use when viewing text objects. Note that the .font extension must be left off.
FONTSIZE= \<number\>	Font size in points to use when viewing text objects.
BOOKMARK	Go to the object and position specified by the bookmark.
BACKDROP	Indicate that the window should be a backdrop window.
WINDOW	Open the MultiView window without an object so that it can be placed in the WBStartup directory.

WBStartup Drawer

The WBStartup drawer is provided to hold icons for programs that you want opened at the time the Workbench is started. For example, you may want the Clock program running when you reboot or power on your Amiga. Drag the icon for each desired program into the WBStartup window. The WBStartup drawer is empty by default.

Tool Types

Programs in the WBStartup drawer can include the following Tool Types:

DONOTWAIT	Normally the Workbench waits for one program to finish before it opens the next. DONOTWAIT overrides this delay. DONOTWAIT does not take an argument.
WAIT= <seconds>	Specifies how many seconds the Workbench should wait before opening the next icon in the WBStartup drawer.
STARTPRI= <priority>	Assigns a priority to an icon so that it opens before or after other icons. By default, all icons have a priority of 0. The acceptable range is from -128 to +127; the higher the value, the higher the program's priority.

Expansion Drawer

The Expansion drawer is used to store software drivers for additional hardware devices that you install on your Amiga. If a hardware device uses the Expansion drawer, it is explained in the documentation packaged with that product. To activate the new device, drag the icon for the device's software driver into the Expansion drawer and then reboot your system to make the device available.

Devs Drawer/Storage Drawer

The Devs and Storage drawers both contain the following drawers:

- Data Types
- DOSDrivers
- Keymaps
- Monitors
- Printers

Note   Floppy disk only systems use a Storage disk instead of
            a Storage drawer.

The Devs drawer contains the device driver files for the devices that
are currently active on the system. The Storage drawer or disk
contains device driver files that are not currently in use, except the
Data Types. You can drag Data Types to store in the Data Types
drawer in Storage if you wish. Storing unused files in the Storage
drawer or disk can save disk space on your boot disk.

Moving From Storage

Moving from Storage moves device drivers out of the Storage
drawer or disk and into the Devs drawer.

To activate a monitor or DOSdriver:

1. Double-click on the icon. The file is then active during the
    current session only.

2. To activate the icon across sessions, drag it from the Storage
    drawer into the corresponding Devs drawer and reboot your
    system.

To activate a keymap:

1. Drag keymap files into the Devs drawer.

2. Select the appropriate Keyboard Type in the Input Preferences
    editor.

To activate a printer driver:

1. Drag printer files into the Devs drawer.

2. Select the appropriate Printer Type in the Printer Preferences editor.

Data Types

Data Types are software files used by tools, utilities, editors, and applications. They are used to describe file formats to the system, such as picture files, sound files, and text files. The following default Data Types are available on the Workbench:

8SVX	IFF sound files
AmigaGuide	Amiga Help files
FTXT	IFF text files
ILBM	Bitmap picture files

Adding Data Types from other applications into the Devs/Data Types drawer makes them available for use by the Workbench, as well as the application. Add new Data Types by dragging them into the Devs/Data Types drawer.

DOSDrivers

DOSDrivers are software devices that extend the capabilities of AmigaDOS.

Keymaps

Keymaps control the keyboard configuration. The default keymap should be changed to use the keymap for any other keyboard configuration. A list of corresponding keyboards and keymaps appears in Chapter 5.

Monitors

The Devs/Monitors drawer and the Storage/Monitors drawer contain icons for the available monitor types that you can use on your system.

Printers

The Devs/Printers drawer holds your printer drivers. On a floppy disk system Devs/Printers is initially empty. Activating a printer driver differs for floppy and hard disk systems.

For floppy disk systems, the Printers subdirectory of the Workbench disk is initially empty. To use a printer with your Amiga:

1. Open the Devs drawer on your Workbench disk.

2. Insert your Extras disk and open the Storage/Printers drawer.

3. Drag your printer's icon onto the Devs/Printers drawer icon. (For single floppy systems, follow the messages to change disks.)

4. Select the appropriate printer type from the Printer Preferences editor.

If you have a hard disk system, the printer drivers you selected during installation are in your Devs/Printers drawer and the rest are in the Storage/Printers drawer.

To make a printer driver available:

1. Open the Storage/Printers drawer.

2. Drag the icon into the Devs/Printers drawer.

3. Select the appropriate printer type from the Printer Preferences editor.
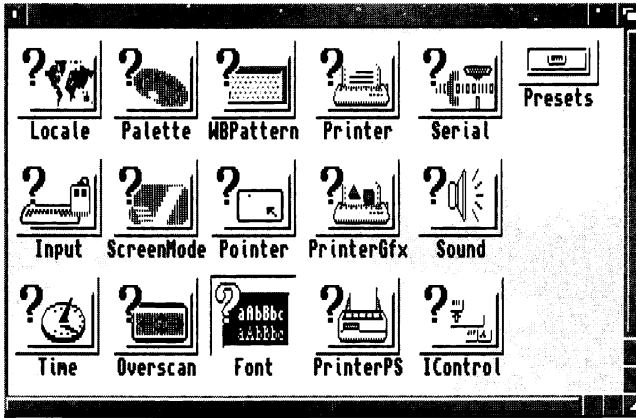
Chapter 5
Preferences

This chapter explains the Preferences editors found in the Prefs drawer. These editors allow you to customize your Amiga environment by:

- Setting your preferred language
- Setting the time and date
- Choosing a keyboard driver
- Changing the Workbench colors
- Changing the shape of the pointer
- Changing the size of the display area
- Specifying a printer and setting it up for graphic output
- Setting up a modem for use with the Amiga

Prefs Drawer

The Prefs drawer contains the icons for the Preferences editors and the Preset drawer. Figure 5-1 illustrates the Preferences editors window.

Figure 5-1. Preferences Window

The following editors are listed in the order in which they are
described in this chapter:

Locale	For selecting the language and locality
Time	For setting the time and date
Input	For changing the mouse speeds, key repeat speeds, and selecting keyboard type
ScreenMode	For choosing a different monitor display mode
Overscan	For adjusting the size of the display area for text and for graphics
Palette	For changing the Workbench colors
WBPattern	For selecting or creating background patterns for the Workbench windows and screen
Pointer	For changing the size, shape, and color of the mouse pointer and busy pointer
Font	For changing the fonts used in the different areas of the screen
Printer	For specifying the printer driver that matches your printer and for specifying options, such as paper size and margin width
PrinterGfx	For setting up your printer to print graphics
PrinterPS	For controlling output to a PostScript printer

Serial	For setting the specifications for the serial port, which is used to communicate through modems or networking systems
IControl	For choosing miscellaneous system options, such as the key used for screen drag
Sound	For determining the sound your Amiga produces for its "display beep"
Presets	For storing different Preferences editor configurations changed through the Project, Edit, and Settings menus

Editor Menus and Presets Drawer

With the exception of Time, each editor has three menus: Project, Edit, and Settings. These menus let you save and load Prefs preset files, which allow you to quickly change to different configurations. By default, these files are saved in the Presets drawer, although they can be saved elsewhere. If you save icons for the files (by selecting Create Icons?), you can activate the settings by opening the file's icon, rather than opening the actual editor.

Project Menu

The Project menu options let you save the editor settings to a specific file and open previously saved files.

Open	Loads the information from a specified preset file.
Save As	Specify the preset file in which to save the currently displayed settings. The requester provides a default file name in the Presets drawer. If you want to change it, type in the complete path to a different file and select OK.
Quit	Exits the editor without performing any changes. The same as Cancel gadget.

Edit Menu

The Edit menu options allow you to restore previously used settings or the default settings. The options are:

Reset to Default   Returns the editor settings to the default settings.

Last Saved   Returns the editor settings to the last settings you saved.

Restore   Returns the editor to the settings displayed when the editor first opened.

The WBPattern and Pointer Edit Menus have the following additional options:

Cut   Copies and clears the whole work area to the Clipboard.

Copy   Copies the whole work area to the Clipboard.

Paste   Replaces the whole work area with the last thing cut or copied.

Erase   Deletes everything in the work area.

Undo   Undoes the last action performed.

Load Image   Opens a file requester for entering the name of an image file to use as a background pattern or picture.

Reset to Defaults   Resets the WBPattern to default settings.

Last Saved   Returns the last saved image to the magnified view box.

Restore   Restores the magnified view box to its original state when the editor was opened.

Settings Menu

The Settings menu contains the Create Icons? item that allows you to save project icons representing your editor settings in the same drawer as your files. For example, if you save printer specifications to the SYS:Prefs/Presets/Printer.pre file, the icon for the file appears in the Presets window. Double-click on the icon to activate the file's settings.

Using the Presets Drawer

Open the Presets drawer and double-click on a file's project icon to use its settings. Or open the editor, choose the Open menu item, and enter the file's complete path. Select Use to use the settings until you reboot or open another editor file.

Locale Editor

The Locale editor lets you choose the languages with which you interact with the Amiga. The default setting is USA English; however, you can use the Locale editor to choose another language. See Chapter 6 for a full description of the Locale editor.

Time Editor

The Time editor lets you set the date and time on your system. Figure 5-2 illustrates the Time Preferences editor window.
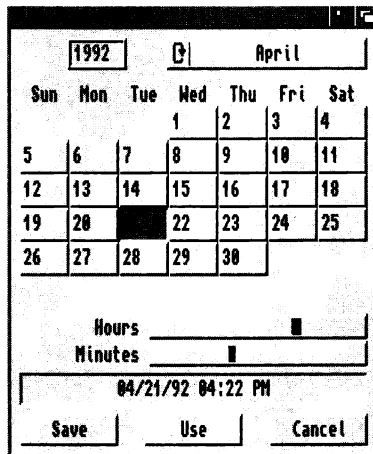
Figure 5-2. Time Preferences Editor Window

To set the date:

1. Click the cycle gadget in the upper right corner until the correct month is displayed.

2. Select the year text gadget, delete the incorrect year, and enter the correct year.

3. Select the correct day from the calendar display. The day is highlighted when selected.

To set the time:

1. Point to the slider bar in either the minute or hour slider.

2. Drag the bar to the right to increase the value and to the left to decrease the value. When the correct value is shown, release the selection button. Repeat these steps for the other slider.

Input Editor

The Input editor allows you to change the speed at which the mouse and keyboard operate and to select your keyboard type. Figure 5-3 illustrates the Input Preferences editor window.
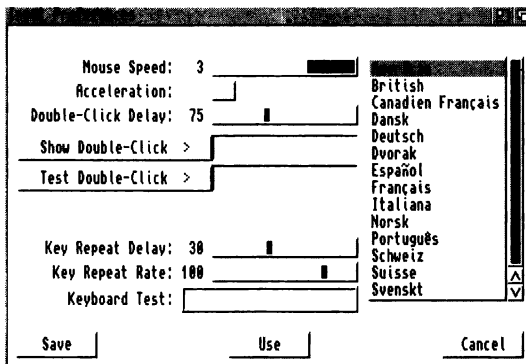
Figure 5-3. Input Preferences Editor Window

Mouse Speed

The Mouse Speed slider determines how fast the mouse pointer moves across the screen relative to mouse movement. The faster the pointer moves across the screen, the less surface space and effort is needed to move the mouse.

Choose from three mouse pointer speeds: 1, 2, and 3, where 1 is the slowest and 3 is the fastest. Set the mouse pointer speed by dragging the slider bar until the desired value is displayed. The mouse speed takes effect while you set it, allowing you to try each speed without exiting the editor. The default value is 3.

Acceleration

The Acceleration feature is used for moving the pointer quickly over large screen areas while retaining fine control for smaller movements. If acceleration is on, the pointer speed remains constant within a small area. However, as the pointer is moved further across the screen, its speed increases, moving it quickly over a large area of the screen.

Select the check box to turn acceleration on or off. The default value is off.

Double-Click Delay

The Double-Click Delay slider determines how fast the mouse registers a double-click of the selection button.

The range is from 1 to 200, with 1 being the least delay. The Show Double-Click gadget shows the amount of time for the selected value. The default value is 75.

Test your chosen speed by double-clicking in the Test Double-Click gadget. When the double-click takes place within the allotted time, a "Double-Clicked" message appears next to the gadget; if not, a "Too Slow" message appears.

Key Repeat Delay

Most of the keys on the keyboard automatically repeat when held down. Change the delay that occurs before the key repeats with the Key Repeat Delay slider.

The current setting is shown on the slider value. The range is from 1 to 75, with 1 being the least delay. To increase the delay, drag the slider bar to the right and to the left to decrease it. The default value is 30.

Key Repeat Rate

The Key Repeat Rate slider determines the rate at which the keys repeat after the initial key repeat delay.

The range is from 1 to 125, where 1 is the slowest. To increase the speed, drag the slider bar to the right and to the left to decrease it. The default value is 100.

Keyboard Test

The Keyboard Test gadget allows you to test the settings chosen for the key repeat delay, the key repeat rate, and the keyboard type.

Select the gadget and hold down one of the alphabetic keys on the keyboard. The Keyboard Test gadget shows the current key delay and key repeat rate.

Keyboard Type

The Keyboard Type list lets you select the appropriate keyboard type for your language.

The available keymaps and the corresponding keyboards are:

Keymap	Keyboard
cdn	French Canadian
ch1	Swiss French
ch2	Swiss German
d	German
dk	Danish
e	Spanish
f	French
gb	Great Britain
i	Italian
n	Norwegian
po	Portuguese

Keymap (cont'd)   Keyboard (cont'd)

s	Swedish
usa2	Dvorak

Choosing a particular keyboard type activates the corresponding keymap file in the Devs/Keymap drawer. Select your keyboard type in the Input Preferences editor and your keymap in the Devs/Keymap. If your corresponding keymap is not in the Devs/Keymap drawer, open the Storage/Keymap drawer and drag the correct icon into the Devs/Keymap drawer.

ScreenMode Editor

The ScreenMode editor, illustrated in Figure 5-4, lets you select the display mode for the Workbench screen. Since the modes have different properties and hardware requirements, review the descriptions provided here and in Appendix B to determine which modes are available on your system and best meet your needs.
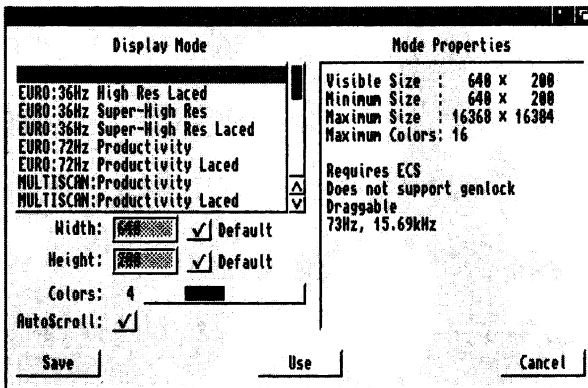
Figure 5-4.   ScreenMode Preferences Editor Window

The available display modes are listed on the left; the properties of the mode selected is displayed on the right.

Types of Displays

A display mode is defined by:

*   Resolution (horizontal and vertical dimensions in pixels)
*   Vertical and horizontal scan rates (measured by Hz and kHz)
*   Color palette (the largest number of colors that can be displayed on the screen at one time and the size of the palette from which the displayable colors can be chosen)

Most display modes have an interlace option. Interlacing doubles the vertical resolution to allow you to get twice as much information on the screen. It also makes the output of many display modes video-compatible. Interlaced screens may, however, flicker when used with certain monitors. Consult your monitor documentation to make sure that it supports interlacing before selecting this feature.

Some display modes have a Super-High Res option, which doubles the number of pixels displayable horizontally. While this increases the screen resolution, it reduces the number of colors available.

Using the ScreenMode Editor

The available display modes are shown in the Display Mode list. Scroll through the list to see all modes available. The available modes reflect the presence of the associated monitor files in Devs/Monitors.

Select a display mode from the list by clicking on it. The selected mode appears in the display box under the Display Mode list. Select Save to use the mode and save it as the default in future sessions. Select Use to use the mode for the current session only. Select Cancel to exit the editor without making any changes.

If you select Save or Use while an application or Shell window is open on the Workbench screen, a requester appears, asking you to close any open windows other than drawers. When you have closed the last open Shell or application window, the Workbench screen automatically resets to the new display mode.

Your chosen display mode pertains only to the Workbench screen. Applications opening their own screens supply documentation of the display modes they support.

Mode Properties

The Mode Properties display box lists information about the display mode selected. It displays screen sizes and maximum displayable colors for the selected display mode and other mode properties.

Screen sizes corresponding to the currently selected display mode are given in number of pixels. The first number represents the width of the screen; the second number represents the height.

Visible Size	The size of the text overscan area as determined by the Overscan settings.
Minimum Size	The smallest, or minimum, screen size supported by the selected display mode.
Maximum Size	The largest, or maximum, screen size supported by the selected display mode. The amount of Chip memory available may further restrict this size.
Maximum Colors	The maximum number of colors displayable on a screen in the selected display mode.

The possible mode properties that can be displayed include:

Interlaced	The display mode is interlaced.
ECS	Only available if your Amiga has the Enhanced Chip Set.
Supports Genlock	The display mode supports the use of video genlock equipment.
Draggable	The display mode supports a draggable Workbench screen. A draggable screen can be pulled down to reveal any other open screens behind it.

Width/Height

Use the Width and Height text gadgets to customize the size of your Workbench screen. Enter a number between, or equal to, the minimum and maximum width and height. Once the number is entered, that number remains constant no matter what display mode is selected until the corresponding Default gadget is selected.

Entering numbers larger than the maximum or smaller than the minimum do not increase or decrease the display mode size beyond the default setting.

The Default check box to the right of each gadget lets you select the default setting for the width and/or height. This equals the visible size.

All modes, except the A2024 modes, allow you to specify a Width and Height much larger than the visible size. This extra-large "virtual" Workbench screen lets you open larger and more non-overlapping windows than otherwise possible, limited only by available Chip memory.

Colors

The Colors slider gadget lets you select the number of colors that can be displayed on the screen. The fewer colors selected, the faster the screen can be redrawn and the less memory used.

AutoScroll

Selecting AutoScroll automatically scrolls the screen when the mouse reaches the edge of the screen's visible portion. This is useful when you have defined a Width and Height for the screen that is larger than the visible size.

Overscan Editor

The Overscan editor, illustrated in Figure 5-5, enlarges the size of your screen to use the normally extra space unused around the edges of the monitor screen, known as the overscan area.
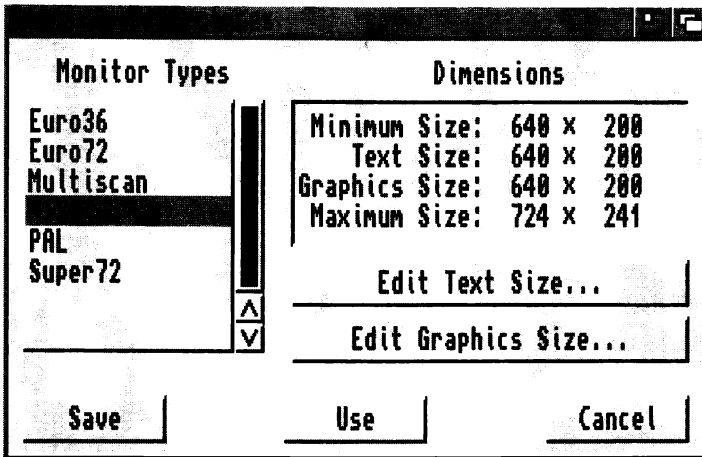
Figure 5-5. Overscan Preferences Editor Window

The MonitorTypes available reflect the presence of the associated monitor files in Devs/Monitors.

When you change the overscan values for a particular display group, all modes within that group are affected. To change the overscan values for a display group, point to the group in the scrolling list, and click the selection button. The selected group is highlighted in the scroll gadget.

Edit Text Size

The Edit Text Size gadget, illustrated in Figure 5-6, lets you adjust the area available for text display.

Use the handles to size
and place your Text overscan
area. It may be as big as
you like, but the whole area
should remain visible.

Current Position: (72, 23)
Current Size: 640 x 200

Use   Cancel
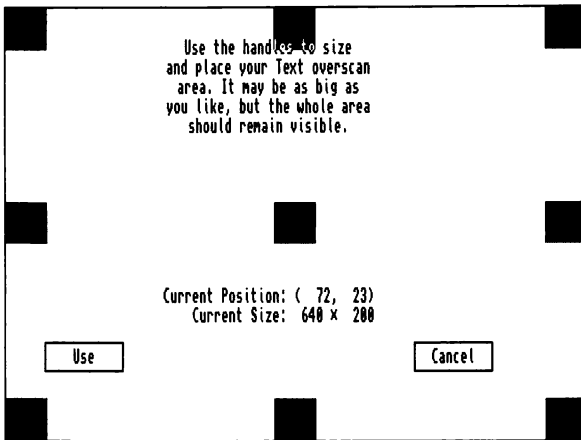
Figure 5-6. Edit Text Size Window

The black rectangles on the screen are handles and the line
connecting the handles represents the outermost area where text
can be displayed. Enlarge the overscan area by pointing to a
handle, holding down the selection button, and dragging the handle
to the edge of the screen. Only the active handle is visible on the
screen when you drag it.

Moving any part of the handle off the screen or out of the viewing
area overenlarges it, losing a portion of the visible text.

Use the center handle to position the screen. By dragging the
handle, you can shift the screen slightly to the right or left or up or
down to center the display area on your monitor screen.

To accept changes and return to the Overscan editor, select Use. To
exit the screen without accepting any changes and return to the
Overscan editor, select Cancel.

Edit Graphics Size

The Edit Graphics Size gadget lets you adjust the standard display
size with a screen similar to the Edit Text Size screen.

The handles and the lines connecting them represent the outermost area where images can be displayed. Use the mouse to drag the handles so that the line connecting them completely encompasses the screen. The resulting area should be slightly larger than the monitor screen. As with the Edit Text Size screen, use the center handle to position the screen. Only the active handle is displayed when you drag it.

To accept changes and return to the Overscan editor, select Use. To exit the screen without accepting any changes and return to the Overscan editor, select Cancel.

Dimensions

The different sizes of the overscan areas are displayed on the right of the Overscan window. The sizes are given in number of pixels, representing the width and the height of the screen.

For PAL or NTSC groups, the sizes correspond to the sizes for a standard High Res screen. If Multiscan is selected, the sizes for a non-interlaced Productivity screen are given. All other display modes in a group are affected proportionally.

The size categories are:

Minimum	The standard, non-overscan size of a screen
Text	The current Text Overscan size
Graphics	The Graphics Overscan size
Maximum	Maximum allowable size for any overscan area, text or graphics

Palette Editor

The Palette editor, illustrated in Figure 5-7, lets you change the
colors of the Workbench.
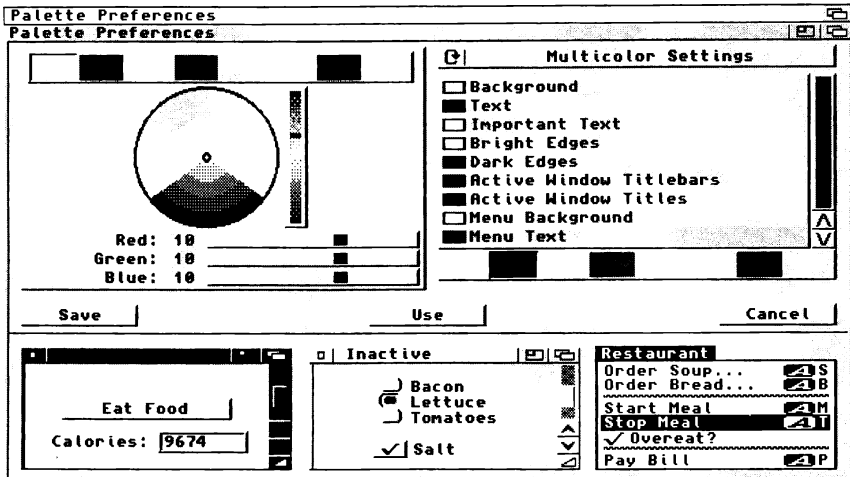
Figure 5-7. Palette Preferences Editor Window

The left side of the Palette Preferences editor window displays the
four and eight current Workbench colors in the selection gadget, a
color wheel with intensity indicator, and color sliders that can be
RGB (red, green, blue) or HSB (hue, saturation, brightness)
depending on your Slider Color Model menu selection. (RGB is the
default setting.)

The right side of the Palette Preferences editor window has a Color
Mode cycle gadget with two settings: Multicolor Settings and 4
Color Settings. The Multicolor Settings gadget is for setting eight
Workbench colors. The 4 Color Settings gadget is for setting four
Workbench colors. Both modes should be set to accommodate
editors and applications that use one setting or the other.

The Palette Preferences editor window displays the following nine items for which you can select specific colors:

- Background
- Text
- Important Text
- Bright Edges
- Dark Edges
- Active Window Titlebars
- Active Window Titles
- Menu Background
- Menu Text

Depending on the display mode set in the ScreenMode Preferences editor, the bottom of the Palette Preferences editor window displays a sample window that changes as you change color selections. If this does not appear on your Palette Preferences editor window, a Show Sample gadget is displayed instead. Clicking on this gadget displays the sample window showing your color selections.

To change a color in RGB mode:

1. Point to a color in the selection gadget and click the selection button.

2. Use the slider gadgets to change the selected color. The color in the display box and on the sample screen changes as the bar is dragged through the slider box.

Changing the black and white settings may affect the three-dimensional appearance of the screen. Be sure colors replacing black are darker than colors replacing white.

To change a color in HSB mode:

1. Point to a color in the selection gadget and click the selection button.

2. Use the slider gadgets to change the selected color. The color in the display box and on the sample screen changes as the bar is dragged through the slider box.

The Hue slider changes the basic color, the Saturation slider changes the amount of color, and the brightness slider changes the lightness or darkness of the color.

To change color using the color wheel:

1. Point to a color in the selection gadget and click the selection button.

2. Point to the color intensity indicator within the color wheel and hold down the selection button.

3. Moving the mouse pointer moves the indicator on the color wheel, changing the color in the display box and on the sample screen as the indicator moves. Release the selection button when you reach the color you want.

In addition to the standard Preferences menus, the Palette editor also has a Presets menu item in the Edit menu that contains predetermined color settings and a Settings menu item that lets you determine which Slider Color Model to use for changing your colors.

If you have a monochrome monitor or if you choose a color setting of 2 in the ScreenMode Preferences editor, the Palette Preferences editor only displays RGB color sliders.

WBPattern Editor

The WBPattern editor lets you change the background display of the screen and the Workbench and its windows. The WBPattern editor window is illustrated in Figure 5-8.
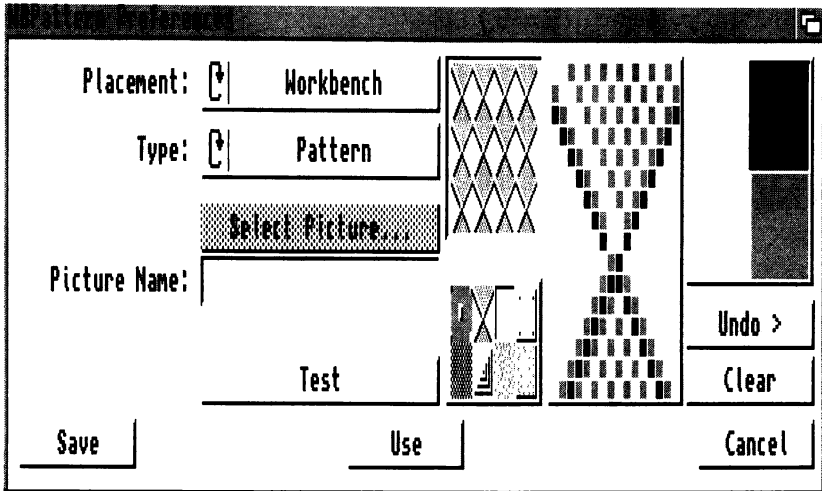
Figure 5-8. WBPattern Preferences Editor Window

The Placement cycle gadget lets you select Workbench, Windows, or Screen for displaying a background.

The Type cycle gadget lets you select either Pattern or Picture.

Applying Background Patterns

You can select an already existing pattern or create your own to fill any open areas of the window. The default is no pattern.

To choose a preset pattern:

1. Make a selection in the Placement cycle gadget: Workbench, Windows, or Screen.

2. Select Pattern from the Type: cycle gadget.

3. Select one of the patterns in the Presets gadget to show a sample in the display box above it.

4. You may optionally select the Test gadget to apply the pattern to the screen without exiting the editor.

To create a pattern:

1. Make a selection in the Placement cycle gadget: Workbench,
    Windows, or Screen.

2. Select Pattern from the Type: cycle gadget.

3. If there is a pattern in the magnified view box, select the Clear
    gadget to fill the magnified view box with the currently selected
    color as a background.

4. Select a color for drawing from the color selection gadget. Or
    select a pattern from the Presets gadget and use the mouse to
    edit it.

5. Point within the magnified view box to where you wish to draw
    and click the selection button.

    One pixel of the selected color appears where you position the
    mouse pointer. Holding down the selection button and moving
    the mouse fills in several pixels at once. Switch to another color
    by moving the pointer over the color selection gadget and
    selecting the next color.

    As the pattern is created in the magnified view, it also appears
    in the actual-size box. If you make a mistake while drawing,
    use the Undo gadget to erase the last action performed by the
    mouse.

6. When the pattern completes, select the Test gadget to see how it
    appears on the screen.

Applying Pictures

You can apply a picture or graphic file to the background of the
Workbench, Windows, or Screen. Pictures can be created in a paint
package or you can load digitized picture files into the editor.
Pictures are mapped to the colors of the screen.

To select an existing picture file:

1. Select Picture from the Type: cycle gadget.

2. Click on the Select Picture gadget.

3. In the file requester, enter the filename of the picture you wish
    to use.

4. Optionally select the Test gadget to apply the pattern to the
    screen without exiting the editor.

WBPattern Edit Menu

The WBPattern Edit menu has additional items that let you use
other drawing programs to create and edit patterns and to use
existing images from other sources. For example, you can use the
drawing capabilities of the IconEdit tool, described in Chapter 10, to
create a design and then load it into WBPattern.

Cut	Copies the contents of the magnified view to the Clipboard and clears the view to the background color.
Copy	Copies to the Clipboard without clearing the view.
Paste	Copies an IFF image from the Clipboard to the magnified view, replacing whatever is currently there. (Images larger than the 16 x 16 pixel view are cut off on the bottom and right sides.)
Erase	Clears the magnified view to the background color.
Undo	Operates the same as the Undo gadget, exchanging the contents of the Undo and magnified views.
Load Image	Opens a file requester for entering the name of an image file to use as a background pattern.
Reset to Defaults	Resets the WBPattern to default settings.
Last Saved	Returns the last saved image to the magnified view box.
Restore	Restores the magnified view box to its original state when the editor was opened.

When you Save or Use, all selected patterns or pictures are saved
and/or applied where designated. Selecting Cancel also cancels any
patterns or pictures applied with Test gadget.

Pointer Editor

The Pointer editor lets you change the color, size, and shape of the
mouse pointer and the busy pointer. Figure 5-9 illustrates the
Pointer editor window. A magnified view of the current pointer is
shown to the left. To the right are reduced copies of the pointer,
showing how it looks against the Workbench colors.
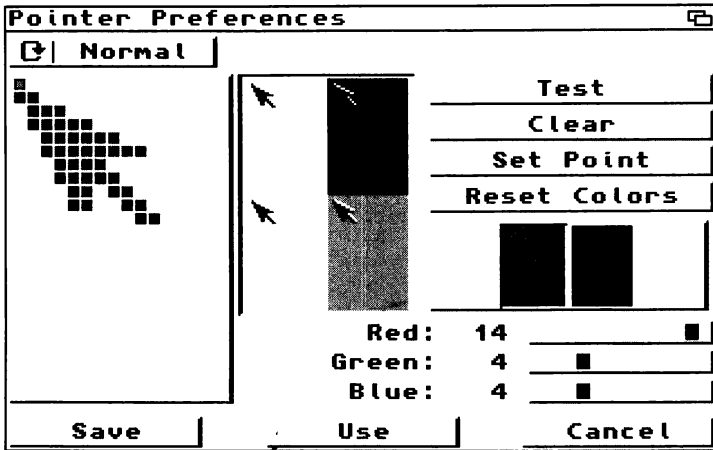
Figure 5-9. Pointer Preferences Editor Window

The Pointer cycle gadget above the magnified view box lets you
select either the mouse pointer or the busy pointer for editing.

The pointer has three changeable colors on an unchangeable
background. Areas using the background color are transparent.

To change the colors of the existing pointer:

1. Select a color from the color selection gadget.

2. Change the amounts of red, green, and blue in that color using
    the three color sliders.

To create a new pointer, you must draw it pixel by pixel:

1. Select the Clear gadget to erase the contents of the magnified
    view box.

2. Select the color with which to draw.

3. Point within the magnified view to position a pixel and click the selection button.

    Repeat Steps 1 through 3 until your design is complete.

4. Select the Set Point gadget to position the pointer's "hot spot".

5. Click on Use to use the pointer you created in this session or Save to use it across sessions.

The Test gadget lets you change the screen pointer to see how it looks without closing the editor. Selecting the Cancel gadget after changing the screen pointer with Test, produces a reminder that you changed the pointer and asks if it can discard the changes.

The Clear gadget erases the magnified view box. All pixels change to the background color for drawing a new pointer.

The Resolution cycle gadget lets you choose between High Res and Low Res settings. This is available only on Amigas with the AA chip set. Selecting High Res provides twice as many pixels to work with, giving you finer detail and more control over your drawing.

The Set Point gadget lets you choose where to put the pointer's point or "hot spot". In the magnified view, the point is indicated by a smaller square within one of the pixels. Select the Set Point gadget and click on the position where the hot spot is to be located.

The Reset Color gadget returns the last set of colors that were saved.

The Edit menu also has the same Cut, Copy, Paste, Erase, Undo, Load Image, Reset to Defaults, Last Saved, and Restore items as the WBPattern editor.

Font Editor

The Font editor changes fonts used on the Amiga.

For information on fonts and on using the Font Preferences editor, see Chapter 8.

Printer Editor

The Printer editor lets you specify the type of printer you are using, and the type of output you want. The Printer Preferences editor is described in detail in Chapter 9.

PrinterGfx Editor

The PrinterGfx editor supports extended printer graphics features. For example, PrinterGfx lets you determine your margins, select and correct the colors, set the dithering method, and scale your graphics. The PrinterGfx Preferences editor is described in Chapter 9.

PrinterPS Editor

The PrinterPS editor controls the features of PostScript printers. This editor only applies if you have a PostScript printer and if you choose PostScript in the Printer Preferences editor. The PrinterPS editor is described in Chapter 9.

Serial Editor

The Serial editor, illustrated in Figure 5-10, sets specifications for serial communication on your system.
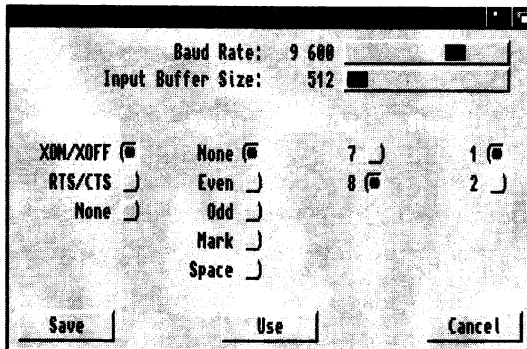
Figure 5-10. Serial Preferences Editor Window

Information sent and received through modems or networks must be in a form compatible with the device with which you are communicating. Refer to the documentation packages that came with your serial device to determine appropriate settings.

Baud Rate

The baud rate determines the number of bits transferred through the serial port each second. In serial communication, information is sent and received one bit at a time. Since characters are usually 10 bits (1 start bit, 8 data bits, 1 stop bit), dividing the baud rate by 10 approximates how many characters per second (cps) are transmitted.

The selected baud rate must match the rate of the device with which you are communicating. The larger the value, the faster the data is transferred. The available rates are: 110; 300; 1,200; 2,400; 4,800; 9,600; 19,200; and 31,250 baud. The current rate setting is shown to the left of the slider. The default setting is 9,600.

Input Buffer Size

The input buffer is an area of memory set aside for incomig information in serial communication. The available sizes are: 512; 1,024; 2,048; 4,096; 8,192; 16,384; 32,768; and 65,536 bytes. The current size is shown to the left of the slider. Use a larger buffer

when working with a high baud rate or when the Amiga is performing many tasks. The default setting is 512.

Handshaking

Handshaking controls the flow of information through the serial port and the attached device. The same handshaking method must be set for both the computer and the device to allow communication. The available choices are:

XON/XOFF	This is the most common method. Special characters called XON and XOFF are embedded in the data stream between the two devices to regulate the data flow.
RTS/CTS	Separate control lines called RTS (Request to Send) and CTS (Clear to Send) regulate the data flow. This method requires a properly wired serial cable.
None	Handshaking is shut off, allowing communication between devices without restriction or regulation. Use this option with caution.

Parity

Parity detects transmission errors by checking a bit of each character, called the parity bit, for its setting. The available parity settings are:

None	All bits are used for data. This should be used when Bits/Char is set to 8. No parity checking occurs.
Even	The total number of ON bits in each character should always be an even number.
Odd	The total number of ON bits in each character should always be an odd number.
Mark	The parity bit is always ON.
Space	The parity bit is always OFF.

Bits/Char

Bits per character specifies the number of bits that are sent through the serial port for each character and the number of bits expected for each character received.

This setting should correspond with the setting for parity. If parity is set to Even, Odd, Mark, or Space, set bits per character to 7 since some systems use the eighth bit of data for parity checking. If parity is set to None, set bits per character to 8.

Stop Bits

Stop bits are extra bits added at the end of a character to allow the computer to interpret spacing between words and indicate when a transmission ends. This applies to characters both sent and received through the serial port.

Slower processing computers usually require two stop bits. Computers that transfer information at 300 baud or faster generally require one stop bit. If you are using eight data bits, use only one stop bit or you may lose data during transmission.

If you have additional serial ports on your system, you can force the editor to support more than one unit by adding a UNIT command line option or putting a UNIT Tool Type in the program's icon.

IControl Editor

The IControl editor, illustrated in Figure 5-11, lets you change system settings, such as the screen drag qualifier key or resetting the text gadget filter.
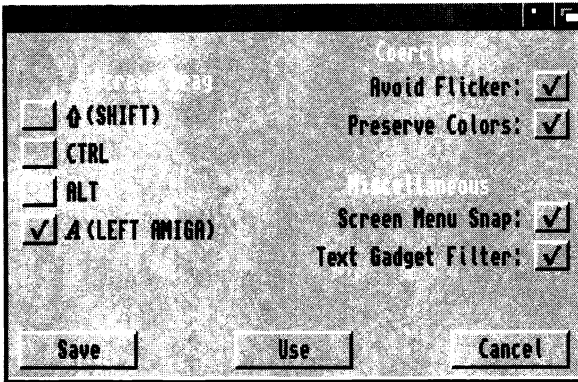
Figure 5-11. IControl Preferences Editor Window

Screen Drag

The Screen Drag gadget specifies other keys that can be used in addition to, or in place of, the left Amiga for dragging the Workbench screen. This is useful if, for example, an application uses left Amiga and the selection button for other functions.

The available keys are Shift, Ctrl, left Amiga, and Alt. To select a key, click on its check box.

If you select Ctrl, you must hold down Ctrl to drag the screen. If Ctrl and Shift are selected, you must hold down Ctrl and Shift to drag the screen.

Coercion

Note   Avoid Flicker and Preserve Colors are only applicable when Productivity mode is selected.

When a Productivity screen is displayed, your Multiscan monitor works at a higher frequency than if an alternate mode is displayed. When several screens are open, the front-most screen determines the frequency of the monitor. If you drag the front screen down so that a Productivity screen and a non-Productivity screen are both

visible, the back screen may be distorted since the monitor is still operating at the frequency determined by the front screen.

The Coercion gadgets control the effects of having multiple screens with different frequencies open at the same time. The Avoid Flicker option prevents a back screen from becoming interlaced. The Preserve Colors option keeps the screen's original colors intact. However, selecting these options may cause further distortion to the back screen. The default for both options is on.

Screen Menu Snap

Screen Menu Snap is provided for users who work with screens that are larger than the monitor's display area. Normally the Workbench menus appear at the top left corner of the screen. If the left-most side of the screen is not visible, Screen Menu Snap shifts the Workbench screen so that the menus are still accessible. The screen shifts only while the menu button is held down.

Text Gadget Filter

The Text Gadget Filter allows control characters to be recognized as such when entered into text gadgets. A control character is a key combination (usually Ctrl and an alphabetical key) that performs a certain function.

The standard control characters for text editing are:

Ctrl+M	Same as pressing Return
Ctrl+H	Deletes one character to the left of the cursor (same as Backspace)
Ctrl+X	Deletes the entire line
Ctrl+U	Deletes all characters to the left of the cursor
Ctrl+K	Deletes all characters from the cursor to the end of the line
Ctrl+A	Moves the cursor to the beginning of the line
Ctrl+Z	Moves the cursor to the end of the line

You can insert control characters into the text gadget whether filtering is turned on or not by pressing Ctrl+left Amiga along with

the desired alphabetical key. For example, to enter Ctrl+M into the text gadget, press Ctrl+left Amiga+M.

Note   In certain windows with several text gadgets, pressing Tab moves the cursor to the next text gadget. In these windows, even if the Text gadget filter is off, you must still press left Amiga+Tab to enter a Tab into the next gadget.

Mode Promotion

The Mode Promotion gadget is a software de-interlacer. This applies only to Amigas with the AA chip set. Selecting Mode Promotion turns off display flickering on non-interlaced VGA monitors. We recommend that you turn this option off for video output.

Sound Editor

The Sound editor lets you determine the type of sound and sound attributes produced by your Amiga. The Amiga can flash the screen and/or issue a beep to signal of an application prompt or error in processing. The Sound editor window is illustrated in Figure 5-12.
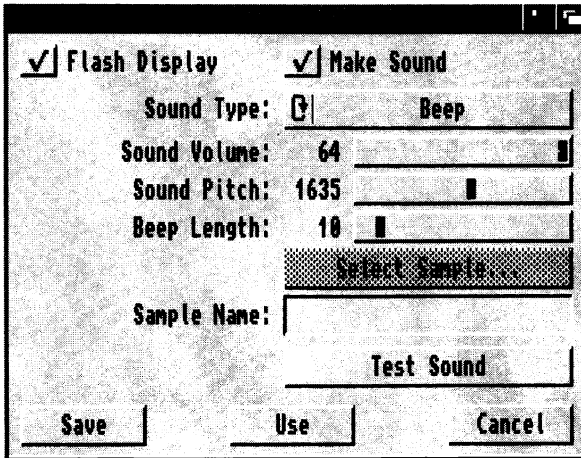
Figure 5-12. Sound Preferences Editor Window

You can choose Make Sound, Flash Display, or a combination of both. Do not turn both functions off at the same time since that disables all signaling capability, which could cause you to miss a prompt.

Choosing Flash Display alone causes the Amiga to signal a prompt or error by flashing the screen.

If you choose Make Sound, you have the following options:

Sound Type	Select Beep or Sampled Sound. The Beep is a simple tone. The Sample Sound Type is a standard IFF file sound sample that you can create yourself with a sound digitizer or load from a sample sound file, which can be a sound data type file..
Sound Volume	Set Volume between 1 for the quietest and 64 for the loudest.

Sound Pitch   Set Sound Pitch between 1 for the shortest and
                         3000 for the longest. For a beep the sound pitch is
                         the actual pitch (high or low sound); for sample
                         sounds it is the play back speed (the number of
                         samples played per second). Do not set the pitch
                         too low, especially with sampled sounds, since the
                         pitch level affects how long it takes to play the
                         sound.

Beep Length   Set Beep Length between 1 for the shortest duration
                         to 100 for the longest duration.

Select Sample   Use the Select Sample gadget with the file requester
                         to select the file name of the sample. Sound
                         accepts data type sound sample files. If you save
                         this sample setting, it must be available each time
                         you reboot, either on hard or floppy disk.

After you choose Beep (preloaded on your Amiga) or designate your
sample sound, you can test the sound to be sure it has all the
attributes that you want. The Save, Use, and Cancel gadgets do not
work while the sound is being tested.

Chapter 6
Localization

Using the Workbench localization features, you can display information in the language, date/time, and numeric format of your choice.

This chapter describes the following:

- The features that are localized
- The Locale Preferences editor, which controls the localization features

Localized Features

You can modify the following features:

text	Screen titles, window titles, menus, requesters, and messages are all presented in the language chosen in the Locale Preferences editor.
calculator	The keypad for the calculator reflects the keypad associated with your country and language selections. For example, a comma is used instead of a decimal point.
clock	The time format on the clock adapts to the local standards associated with your country and language selections.
date	The date format adapts to the local standards associated with your country and language selections.

time/date stamps   The time and date formats for directory listings reflect the local notation associated with your country and language selections.

numbers   Numbers are displayed in the format associated with the country and language selection. For example, the thousands separator can be a comma or a space.

Locale Preferences Editor

The Locale Preferences editor, illustrated in Figure 6-1, allows you to select your country, your time zone, and your preferred languages. When you install Workbench software on your hard disk, you choose the languages that you want available on your system. The default setting is English; however, you can use the Locale editor to choose from a variety of other languages.

Note   If you install your software on a hard drive, you can choose a language other than English for the installation process. However, as soon as the system reboots following the installation, the Workbench defaults to English. Use the Locale Preferences editor to select the language in which you want to work.

When you are installing your Workbench software, be sure to select all the languages that you intend to use. However, if you neglect to install a particular language, you can install the missing language from the Locale disk at a later time.
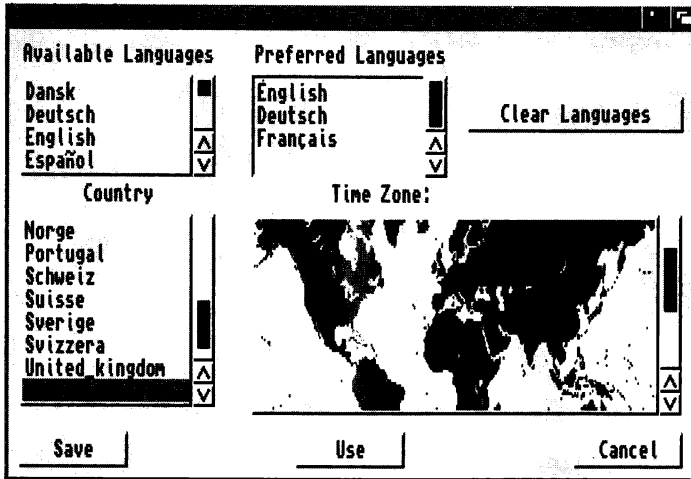
Figure 6-1. Locale Preferences Editor Window

The Available Languages box indicates the languages currently installed on your system. By clicking on the languages in the Available Languages box, you can specify a preference for the primary languages that you intend to use. Each language you click on appears in the Preferred Languages box.

Select the languages in order of preference from most preferred to least preferred. If your first choice of language is not listed first in the Preferred Languages box, select Clear Languages and start the selection process again. If there is nothing in the Preferred Language box, English is the default.

Applications that use the Amiga localization features reference the list of preferred languages to determine which language to use. If the application cannot provide the most preferred language, it goes down the list until it reaches a language it can provide. If it fails to find a language from the preferred list, it uses its default language.

To save and apply your Locale settings, select Save and reboot your system. To use changes made in the Locale settings for the current session only, select Use. If you select Use, all the screens and windows are displayed in your preferred language; however, the Workbench menus and title bar remain in the previous language.

The Country gadget allows you to select your country, which affects the way the time and date are formatted and the convention for numeric data.

The Country selection determines the following parameters:

- Country name
- Country code
- Telephone code
- Measuring system
- Combined and separate date and time
- Short combined and separate date and time
- Number format
- Positive monetary format
- Negative monetary format
- Small currency symbol
- International monetary symbol

To set the time zone, click on your location on the map. The Time Zone indicator tells you how many hours from GMT (Greenwich Mean Time) your zone is. Workbench does not use the time zone setting, but some applications may.

Select Cancel to exit the Locale Preferences Editor without making any changes.

Chapter 7
CrossDOS

CrossDOS lets you read from and write to MS-DOS formatted disks using your standard Amiga drives. This allows you to transfer information for text, font, database, and graphics files between Amiga and MS-DOS computers. While CrossDOS does not make it possible to run MS-DOS programs on your Amiga, it does allow you to work with MS-DOS disks and files using all the familiar Amiga methods.

This chapter describes the following:

- CrossDOS drivers
- Activating CrossDOS drivers
- Adding CrossDOS drivers
- Using CrossDOS
- The CrossDOS commodity

CrossDOS Drivers

The standard DOS drivers for CrossDOS are PC0: and PC1:, which correspond to DF0: and DF1:. These two drivers allow an Amiga floppy drive to read and write 720KB MS-DOS disks.

Activating CrossDOS Drivers

You can activate a CrossDOS driver whenever you boot by moving the PC0/PC1 icon to Devs/DOSDrivers. To temporarily activate a DOS driver, double-click on the icon in Storage/DOSDrivers. The DOS driver is activated until you reboot.

When you activate a CrossDOS driver, the Workbench displays two
icons for any disk inserted in the drive: one for PC0: or PC1: and
one for the corresponding DF0: or DF1: drive. For an MS-DOS disk
in DF0:, Workbench displays an icon with the disk's name and an
icon labelled DF0:????. For an Amiga disk, Workbench shows the
usual floppy icon and another labelled PC0:????.

Note   When you insert a disk into a CrossDOS drive, there is
            normally a brief delay between the appearance of the
            DFx: disk icon and the PCx: disk icon.

Adding CrossDOS Drivers

You can create additional DOS drivers if you have other drives with
which you wish to use CrossDOS.

To create a PC2 DOS driver for an external DF2: floppy drive:

1. Open Storage/DOSDrivers and drag the PC0 icon onto the
    Devs/DOSDrivers drawer.

2. Open the Devs/DOSDrivers drawer and select the PC0 icon.

3. Select Copy from the Icons menu.

4. Select Rename from the Icons menu. Change the name of the
    unit from "copy_of_PC0" to "PC2" and select OK.

5. Select Information from the Icons menu, change the UNIT Tool
    Type from UNIT=0 to UNIT=2, and press Return.

6. Select Save.

Using CrossDOS

Once a CrossDOS driver has been activated, you can work with MS-DOS disk directories and files in that drive just as you normally do on the Amiga. You can copy, move, rename, and delete using standard Workbench icon and menu techniques. You can load and save files on MS-DOS disks from any Amiga program by using the disk's volume name or the CrossDOS drive's device name (for example, MYDOSDISK: or PC0:). MS-DOS disks can be formatted the same way you format Amiga disks.

Names

File naming conventions for MS-DOS apply when accessing or creating file and directory names. Under MS-DOS, filenames can be no more than eight characters long with an optional three-character extension.

Invalid Characters

The following characters are not valid for MS-DOS names:

<	Left Angle Bracket
>	Right Angle Bracket
.	Period
"	Double Quote
I	Vertical Bar
+	Plus Sign
=	Equal Sign
;	Semicolon
,	Comma
\	Backslash
/	Slash
[	Left Bracket
]	Right Bracket
:	Colon

Although some of these characters are valid for AmigaDOS
filenames, avoid using them. The slash, backslash, left bracket,
right bracket, and colon characters in particular are reserved for
special use.

File Name ("Filename")

The file (or directory) name is limited to eight alphanumeric
characters. The characters can be specified as lower case, but are
converted to upper case automatically. The space character is
allowed between other alphanumeric characters, but it is not
recommended.

File Extension (".Ext")

The optional file (or directory) extension is limited to three
alphanumeric characters preceded by a dot (.). There can be only
one extension per file name. The characters can be specified as
lower case, but are converted to upper case automatically. The
space character is allowed between other alphanumeric characters,
but it is not recommended.

Workbench Extension (".info")

One exception to the three character extension is the Amiga
extension ".info". When the file name is read from the MS-DOS disk
by CrossDOS, a ".INF" extension is automatically expanded to
".info" to allow the file to be recognized by Workbench.
Subsequently, when a file is written to the MS-DOS disk with a
".info" extension, it is stored on the disk as ".INF".

The original file that has a Workbench ".info" file associated with it
must not have any other extensions in the name. Create files on the
MS-DOS disk with no file extension so that applications that
automatically create ".info" files work correctly.

Root Name Qualifier (:)

The colon (:) character is used as a root name qualifier to refer to the physical device name, the volume name of the disk, or the logical name of a directory path. For example:

```
PC0:FILENAME.EXT.
```

Volume Name ("Volume_Name")

A volume name under MS-DOS is limited to eleven alphanumeric characters with spaces allowed between characters. The characters can be specified as lower case, but are converted to upper case automatically.

The volume name is normally written to the disk during a format. Since the volume name is optional to MS-DOS, it may not appear in the root directory of the disk. When the volume name is not available, CrossDOS uses the boot block identification name and a creation date of January 1, 1980 as the volume information for AmigaDOS. For example,

```
IBM  3.1:FILENAME.EXT equals PC0:FILENAME.EXT.
```

Directory Name Qualifiers (/ or \ )

The directory name qualifiers can be the standard AmigaDOS slash (/) or MS-DOS backslash (\) characters. These characters are used to separate directory paths. For example,

```
PC0:SUBDIR/FILENAME
PC0:SUBDIR\SUBSUBDIR/FILENAME
```

Icons

Disks created on MS-DOS computers do not have icons. You can display pseudo-icons for files and directories on these disks by selecting the View All Files option, described in Chapter 3.

You can create real Amiga icons on MS-DOS disks in any of the following ways:

• dragging an Amiga icon into the disk's window

• saving a file to the disk with a program that creates icons when it saves

• creating a drawer on the disk with the New Drawer menu item

• creating an icon in IconEdit and saving it to the disk

MS-DOS converts the .info extension of the icon files to .INF, but CrossDOS still recognizes them as .info files. Under MS-DOS or other PC operating systems, these files are not recognized and icon information in them is meaningless.

Formatting Disks

Format disks as MS-DOS using the normal disk format procedure described in Chapter 3. Be sure, however, to select the MS-DOS disk's icon, volume name, or device name to format the disk as MS-DOS and not AmigaDOS. For example, to MS-DOS format a disk in the DF0:/PC0: drive select the PC0:???? icon and choose the Format Disk menu item.

CrossDOS Mount Files

Mount files are text files that contain lists of parameters and values needed to "mount" devices or make them available to the system. The PC0/PC1 DOS drivers are mount files for specific CrossDOS drives. By creating a mount file or altering that of an existing CrossDOS drive, you can make a new DOS driver that allows use of other devices with CrossDOS.

View an existing mount file such as PC0 by using the More text viewer. The file contains various pieces of technical information that describe the drive and certain settings that AmigaDOS uses to access it. Some of this information is specific to the drive and should be obtained from the manufacturer's documentation.

Use a text editor, such as ED, to create or edit CrossDOS mount files. You may want to edit an existing CrossDOS mount file, since much of the information stays the same for other types of drives.

The following example illustrates a mount file that could be used for
a drive, such as a removable media Syquest™ cartridge:

```
FileSystem  = L:CrossDOSFileSystem
Device  = scsi.device
Unit = 2
Flags   = 1
Surfaces     = 2
BlocksPerTrack = 34
LowCyl  = 0
HighCyl = 2096
Buffers = 5
BufMemType  = 1
StackSize   = 600
Priority    = 5
GlobVec = -1
DosType = 0x4D534800
```

CrossDOS Commodity

The CrossDOS commodity, illustrated in Figure 7-1, controls text
options for the active CrossDOS drives. The CrossDOS commodity
window shows the available drives and allows you to set Text
Filtering or Text Translation separately for each.
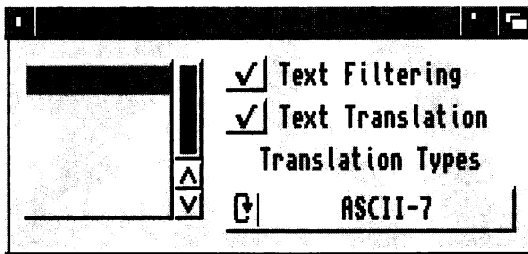
Figure 7-1. CrossDOS Commodity Window

The scrolling list on the left lists the device names of currently
mounted (active) CrossDOS drives. Select a drive to display its
setting.

The Text Filtering option filters carriage returns and end-of-file markers from MS-DOS files loaded through CrossDOS. MS-DOS text files normally have a carriage return (Ctrl+M) followed by a linefeed (Ctrl+J) at the end of a line. MS-DOS files may also have one or more end-of-file markers (Ctrl+Z) at the end of the file.

Amiga text files only need linefeeds and Amiga files do not use EOFs. Selecting the Text Filtering option adds carriage returns before linefeeds and places an EOF at the end of the text when you write to an MS-DOS disk.

The Text Translation option controls the translation between the Amiga and MS-DOS character sets where they differ. Some MS-DOS files set the high bit of certain ASCII characters in the file to give that character a special meaning. Selecting Text Translation with ASCII-7 in the Translation Types gadget makes the file conform to standard ASCII text. Text Translation only filters the high bit when reading the file from an MS-DOS disk. It does not set the high bit when writing the file to the MS-DOS disk.

There are two types of Text Translation: complete and file name only. For complete translation, select the Text Translation option and choose a selection in the cycle gadget. In this case, the file names, as well as the data in the files, are filtered. For file name only translation, do not select the Text Translation option. In this case, the file names only are filtered according to the Translation Type displayed in the gadget.

If you select the International (INTL) MS-DOS file system in the Translation Types cycle gadget, Text Translation attempts to preserve international characters (for example, ü, ç, ø). When transferring Danish text files, use the Dansk file system option.

Note   The Text Filtering and Translation options should be
              selected only to transfer text files with CrossDOS.
              Turn these options off when transferring font,
              graphics, or binary files to avoid altering their data.

Chapter 8

Fonts

A font or typeface is a graphic design applied to all numbers, characters of the alphabet, and symbols. Using fonts, you can change the appearance of the text on your screen or on your printed documents. Because fonts can have attributes applied to them, such as italic or bold, you can use fonts to add emphasis to your text or create a particular impression in your documents: informal, scholastic, journalistic, and so forth. This chapter describes using fonts on the Amiga, including:

- Fonts:
- Types of fonts
- Font requesters
- Font Preferences editor
- FixFonts
- Intellifont

Fonts

On the Amiga, fonts are stored in Fonts:, which may be a drawer or disk. On a hard drive system, the FONTS: directory is on the SYS: partition. For floppy-only systems, fonts are contained on your Fonts: disk. For those familiar with AmigaDOS, you can use the ASSIGN command to add disks or drawers to the FONTS: search path.

Types of Fonts

Two types of fonts are available on the Amiga: bitmap and outline. Bitmap fonts are defined as a pattern of dots that compose a character. Bitmap font files are stored on disk for each size. Outline font character shapes are defined mathematically to whatever size or resolution is needed and are only stored once.

Topaz, the Amiga's default font, is a bitmap font stored in ROM. Other bitmap fonts, such as Helvetica, Courier, and Times are included on your Amiga disks. You can, however, create or purchase additional bitmap and outline fonts.

When choosing a font, you also specify a point size. Points describe the height of a character. One point equals 1/72 of an inch. After you have selected a font, the available sizes for it are displayed in a scroll box in a font requester. Higher numbers represent larger fonts. The maximum size allowable is 124 points.

You can use available font sizes or enter a new size. The Amiga can scale both bitmap and outline fonts to a specified size. However, scaled bitmap fonts often appear distorted.

Using Bitmap Fonts

Although bitmap fonts produce acceptable screen displays, their resolution is usually too low for high quality printouts.

Bitmap scaling stretches or squeezes the bitmap pattern, causing scaled bitmap fonts to appear distorted. If you enter a size that is not listed for a bitmap font, try to double an available size or cut an available size in half to preserve the font's proportions. For example, to produce a font between an 18 and 24 point Helvetica, use 22 since it is twice the height of the existing 11 point font. Fonts can also be scaled with the Fonts Preferences editor described on page 8-5.

Some application programs include their own fonts, font management utilities, or font scaling technology. These may or may not use the Amiga's fonts and font technology. Read the application's manual carefully to learn how to produce the fonts you need.

Using Outline Fonts

Outline fonts are available on Amiga systems with Release 2 and
higher system software. The Amiga uses Agfa Compugraphic
Intellifont® technology that is managed through the Intellifont
utility, described in this chapter. Compugraphic fonts for MS-DOS
computers can be purchased and used on the Amiga.

Because of their large size and memory requirements, outline fonts
are best suited to expanded systems equipped with hard disks. You
can use them with floppy disk systems, but you may need to delete
items from the Workbench backup disk to make room for them.

Outline fonts can be printed at the highest resolution of your
printer, typically better than screen resolution. Outline fonts do not
have separate files for each point size; instead, outline fonts are
mathematically generated as required. As a result it can take
longer on the first try to access an outline font than a bitmap font.

Font Requester

A Font requester, shown Figure 8-1, allows you to change your font
and font sizes. The standard Amiga font requester is used by the
Font Preferences editor and by some applications.
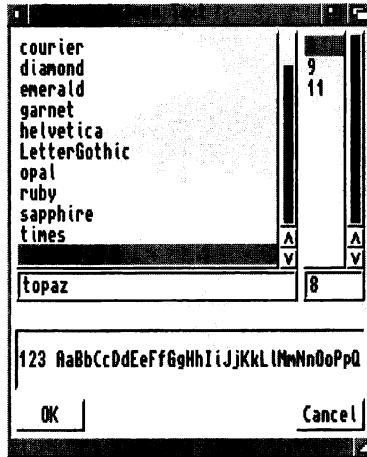
Figure 8-1. Font Requester Screen

The Amiga font requester window displays the available fonts and corresponding point sizes in adjacent scroll boxes. The name of the selected font and current point size are displayed in gadgets beneath the scroll boxes.

Underneath the text gadgets, a display box shows a sample of the selected font and its size. Tall fonts may not fit within the box. Drag the font requester's sizing gadget to the right to show more of the characters in the font.

Selecting a new font name in the requester does not change the current font size. If the newly selected font does not exist in the current size, it is scaled to that size. Remember that bitmap fonts can appear rough or distorted when scaled. For better quality, select one of the font's existing sizes. If the new font is an outline font, there is a delay while the new font is generated.

The Amiga font requester has a Control menu with six items. Last Font and Next Font move through the displayed font list. Restore recalls the font and size selected when the requester opened. Rescan Disk looks through the FONTS: search path again for newly added fonts. OK and Cancel are the same as the corresponding gadgets. Note that the keyboard shortcuts for these menu items do not work when one of the text gadgets is selected.

Select OK to use the displayed font or select Cancel to restore the original setting.

Font Preferences Editor

The Font Preferences editor, illustrated in Figure 8-2, allows you to choose the style and size of fonts that the Amiga uses for its user interface.

Note   Many applications choose their own fonts and are not affected by your choices in the Font editor.
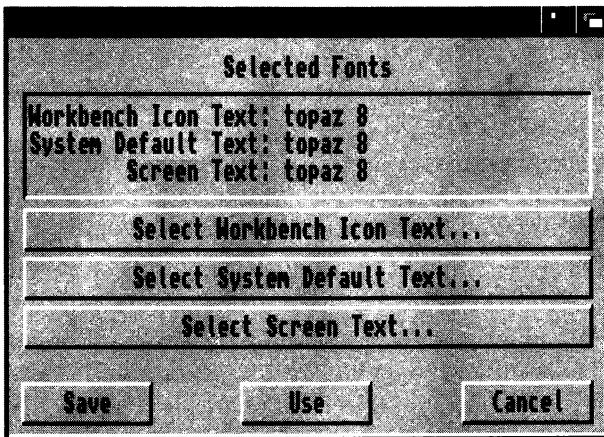
Figure 8-2. Font Preferences Editor Window

Selected Fonts Field

The Selected Fonts display shows the current font settings for each type of text on your display.

Font Selection Gadgets

The three gadgets in the middle of the Font editor window allow you to select the type of text to be changed.

Workbench Icon Text	The font used below icons in the Workbench windows. This is the only text for which colors can be specified.
System Default Text	The font that the Amiga uses to display information, such as the text in the Workbench Output Window and the View By Name mode.
Screen Text	The font appearing in menus, title bars, and most requesters.

You can only change the font for one type of text at a time. However, you can change the font for each type without exiting the Font editor.

Selecting Save or Use closes the Font editor; Save saves the changes across sessions and Use lets you use the changes for the current session only. Workbench automatically tries to reset to display the new font choices. You are requested to close any open project, tool, or Shell windows. Disk or drawer windows may remain open.

Note   Changing the Workbench Icon Text font forces a cleanup of the icons in all open windows. Select the Update All menu item to recall the previous positions.

Selecting the Cancel gadget closes the Font editor without making any changes.

Font Selection Requesters

The three Font selection requesters display the available fonts and point sizes, as well as the current font for the selected type of text.

All fonts can be used for Workbench text or Screen text. However, the font used for the System default text must be a nonproportional

font, such as Topaz or Courier. Nonproportional, or monospaced, font characters are all the same width.

Drag the scroll bar or use the scroll arrows to scroll through the names of the available fonts. Select a font by pointing to it and clicking the selection button.

The font requester for the Workbench Icon text lets you specify the color for the text or the text and field (background) with the Mode cycle gadget:

• Selecting Text in the Mode gadget displays the text in the color specified by the Text color selection gadget; the field is transparent.

• Selecting Text and Field lets you specify an opaque color for the field. This option makes the text legible, regardless of the background pattern.

• Change the color of the text or field by clicking in the color field next to the display button for both Text and Field. Be sure to select two different colors for the text and the field; if the text blends in with the field, the words will not be legible.

The number of available colors is determined by the current Workbench screen mode and the colors themselves are determined by the Palette editor. Workbench screen colors can only be changed within the Palette editor.

FixFonts

FixFonts is a utility for updating .font files after fonts have been added or deleted. Running FixFonts updates all the .font files to match the corresponding font drawers. Double-clicking on the FixFonts icon activates it without opening a window.

Intellifont

The Intellifont utility, which is in the System drawer on the Workbench disk, manages Intellifont® outline fonts on your Amiga. Intellifont installs new outline fonts on your system, specifies new

sizes for existing fonts, and deletes fonts that are no longer needed. Intellifont also allows you to create bitmap versions of any size outline font that can be used in applications that do not support outline fonts directly.

Intellifont can use Agfa Compugraphic fonts from MS-DOS FAIS disks, as well as font disks for the Amiga. Since standard Compugraphic FAIS disks are in MS-DOS format, CrossDOS, an Amiga Bridgeboard™, or other MS-DOS emulator must be used to convert the files to AmigaDOS format. When the fonts are properly installed, they are available to any application programs that can use them.

Installing Outline Fonts

Figure 8-3 illustrates the Intellifont window.
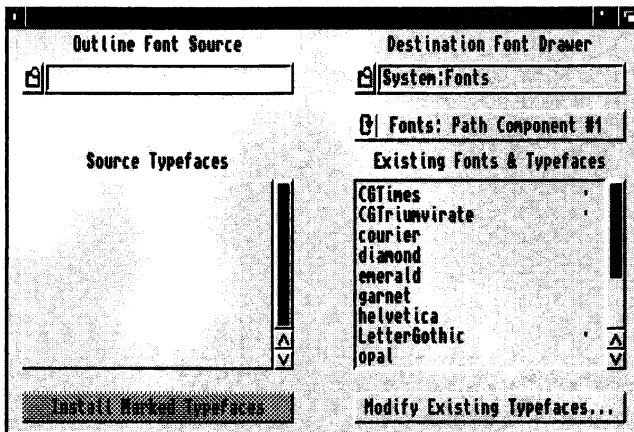
Figure 8-3. Intellifont Window

Note   On-line Help is available in Intellifont at all times by pressing the Help key. Click on the various items in the Intellifont window for an explanation of their function. Press Esc to exit Intellifont Help.

To install an outline font:

1. Enter the complete path to the fonts in the Outline Font Source text gadget or select the file folder gadget next to it to open a file requester. The path should end with the directory that contains the outline typeface .type files.

2. Select OK and the Source Typefaces scroll gadget displays the available outline fonts in that directory.

3. Verify that you want to install the fonts in the drawer displayed in the Destination Font Drawer text gadget. If you have more than one font directory set up in your FONTS: assign path, use the Fonts: Path Component cycle gadget to switch between them. A non-assigned directory can also be entered. (In this case, the cycle gadget displays Not in Fonts: Path.) The contents of the Destination Font Drawer are shown in the Existing Fonts and Typefaces scroll gadget. Outline fonts are indicated with a small bullet (•) on the right in the scroll window.

4. In the Source Typefaces display, click on each typeface to be installed. A plus sign (+) indicates selection.

5. Select the Install Marked Typefaces gadget to copy the typefaces to the Destination Font Drawer.

6. Select the Modify Existing Typefaces gadget to add or delete point sizes for any of the outlined fonts listed in the source typeface display.

Modifying Outline Fonts

Using the Modify Existing Typefaces window, you can create or remove point sizes and bitmap images for a typeface. The window, illustrated in Figure 8-4, lists the typefaces and sizes available in the drawer you selected on the Intellifont window.
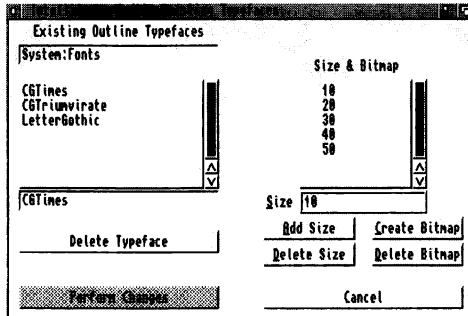
Figure 8-4. Modify Existing Typefaces Window

Click on the tyepface you want to modify. Use the gadget in the
lower half of the screen to:

Delete Typeface   Select one of the Existing Outline Typefaces.
                        The selected typeface moves to a display box.
                        Click on the Delete Typeface gadget.

Add Size   Enter a new size into the Size display box and
                        choose the Add Size gadget.

Delete Size   Select a size or enter one into the Size display
                        box and choose the Delete Size gadget.

Create Bitmap   Creates a bitmap for the size displayed in the
                        Size gadget. If you routinely use one size, create
                        a bitmap for it.

Delete Bitmap   Deletes the bitmap file for the size displayed. The
                        size is still available as an outline font.

Perform Changes   Saves your changes

Cancel   Returns to the original Intellifont window.

The Close gadget closes the Intellifont windows close and exits the
program.

Keyboard shortcut: Instead of selecting the gadgets previously
described, press the initial letter of the gadget (underlined on the
display).

Changing Environment Variables

Intellifont can use two environment variables to store specifications about your outline fonts: Intellifont and Diskfont. The Intellifont environment variable is used to create the list of sizes that are typically presented by applications in their font menus. The default sizes are 15, 30, 45, 60, and 75. Create the Intellifont variable if you frequently use other sizes. Use a text editor to create a file containing a list of sizes saved in ASCII format; the maximum number of sizes is 20. Save the file to SYS:Prefs/Env-Archive/Sys/Intellifont.

The Diskfont variable specifies the parameters used by the diskfont.library when it converts an outline typeface into an Amiga graphics font. The format of the variable is:

```
XDPI/N, YPDI/N, XDOTP/N, YDOTP/N
```

The XDPI and YDPI parameters adjust the aspect ratio, which by default is 1:1. If the fonts are to be used in the High Res display mode, adjust the aspect ratio by changing the XDPI value to 100 and the YDPI value to 50. Use a text editor to change the values and save the file to SYS:Prefs/Env-Archive/Sys/Diskfont. For example:

```
XDPI 100 YDPI 50
```

If XDPI is specified, YDPI must also be specified.

The XDOTP and YDOTP parameters control the dot size percentage (the space a dot fills in relation to the screen resolution). The default value for both XDOTP and YDOTP is 100 (a dot fills the same size as implied by the resolution) and should not need changing. If XDOTP is specified, YDOTP must also be specified.

Note   Very large or very small values of XDOTP or YDOTP are required before you can see a difference.

Chapter 9
Printers

This chapter describes how to set up your Amiga to communicate with a printer. It provides instructions on how to use:

- Printer drivers
- Printer Preferences editor
- PrinterGfx Preferences editor
- PrinterPS Preferences editor

To set up a printer, you must have the necessary printer driver in Devs/Printers and select the printer in the Printer Preferences editor. The PrinterGfx Preferences editor allows you to select optional printer graphics features. The PrinterPS Preferences editor allows you to set up and print using a PostScript printer.

Printer Drivers

A printer driver acts as a translator that enables the Amiga to communicate with a particular model of printer. Different printers require information in different formats. The printer driver takes the information from the Amiga and translates it into the proper format for the particular printer. The printer driver you select is used for both the text and graphic output.

A printer driver must be in the Devs/Printers drawer of the Amiga's boot volume for it to be available for use. Printer drivers are shipped in the Storage/Printers drawer on the Amiga Extras disk. If the printer driver you need is not in Devs/Printers, copy it from Storage/Printers.

The following are instructions for copying printer drivers on floppy-only systems:

1. Select the Workbench window and open the Devs drawer.

2. Insert the Extras disk into your disk drive and open its window.

3. Open the Storage drawer.

4. Open the Printers drawer in the Storage window. Scroll through the printer driver icons until you find the driver for your printer.

5. Drag the appropriate printer driver icon over the Printer drawer icon in the Workbench Devs window.

    On a single drive system, requesters ask you to swap the Workbench and Extras disks to complete the copy.

    On a dual floppy drive system, insert a disk in each drive and then copy from the Extras disk directly to the Workbench disk.

Printer Output Devices

The standard Amiga printer output device is PRT:, which is used by all Amiga printer drivers. You can bypass the Amiga printer driver by redirecting output to PAR: or SER:, which sends the output directly to the parallel or serial port. Redirecting to PAR: or SER: allows an application's printer driver to be used instead of the Amiga's printer driver.

Multiple Devices

On systems with more than one printer or with more than one parallel or serial port, use the UNIT Tool Type to select the output device you want to use.

Enabling the UNIT Tool Type for the Serial Preferences editor displays the Default Unit text gadget in that editor's window for designating your serial output device. Enter the serial port number to which the destination printer is attached and select Use. When the Printer Port is set to Serial in the Printer Preferences editor, print output is sent to that printer. (All parameters in the Serial editor must be set correctly for your serial printer to work.)

Enabling the UNIT Tool Type for the Printer Preferences editor displays the Device Unit text gadget in the editor's window. If you have serial or parallel hardware with multiple ports, each port has its own unit number. Refer to the hardware manufacturer's documentation for the proper unit number to use.

Printer Preferences Editor

The Printer Preferences editor lets you select a printer driver, the printer port, and various text options. Figure 9-1 illustrates the Printer Preferences editor window.
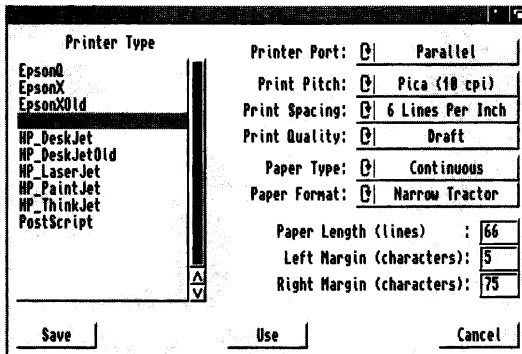
Figure 9-1. Printer Preferences Editor Window

The Printer Type scroll gadget displays a list of available printer drivers currently installed in the Devs/Printers drawer.

Select a printer driver by pointing to its name and clicking the selection button. The selected driver is shown in the display box underneath the scroll gadget.

Note   If you are setting up a PostScript printer using the
            Printer Preferences editor, the text and graphics
            settings made in the Printer Preferences and
            PrinterGfx Preferences editors are overridden.
            However, you must still select a Printer Port here.

If a driver for your printer is not in the Devs/Printers drawer or the
Storage/Printers drawer, select Generic. For many printers, this
allows you to print plain text without graphics or other type styles,
such as italics or boldface.

The Printer Preferences editor window contains the following
gadgets:

Printer Port

Specifies the Amiga port where the printer is attached: Serial or
Parallel.

Print Pitch

Specifies the pitch, which is the number of characters printed per
inch (cpi) horizontally. The higher the number, the narrower the
characters. Choose between Pica, Elite, and Fine.

Print Spacing

Specifies the number of lines of text that are printed in one vertical
inch of space. Select 6 lines per inch (lpi) or 8 lpi; the higher the
number, the less space between the lines.

Print Quality

Determines the quality of the printout. Selecting Draft produces
lower quality printouts with faster printing. Selecting Letter
produces higher quality printouts with slower printing.

Paper Type

Specifies the type of paper used. The options are Continuous (tractor feed paper) or Single (individual sheets).

Paper Format

Specifies the size of paper used. Selecting Custom as the paper size eliminates printing problems that occur with dot matrix printers. If Custom is selected, be sure to specify in the Paper Length gadget the correct number of lines that fit on the paper.

Paper Length

The total number of lines on the page, including top and bottom. For example, 11-inch paper with six lines to an inch is 66 lines to the page. To change the default value, select the gadget, delete the existing value, type in the new number, and press Return.

Left Margin

The width, in numbers of characters, from the left edge of the paper to the starting text position. The pitch of the type (number of characters in a horizontal inch) affects the size of the margin. For example, a one inch margin is equal to 10 when 10 pitch type is used. To change the default value, select the gadget, delete the existing value, type in the new number, and press Return.

Right Margin

The width, in numbers of characters, from the left edge of the paper to the position where the right margin is to begin. To change the default value, select the gadget, delete the existing value, type in the new number, and press Return.

PrinterGfx Preferences Editor

The PrinterGfx Preferences editor supports extended printer graphics features. Before using the PrinterGfx editor, be sure to select the printer driver for your printer with the Printer Preferences editor. Figure 9-2 illustrates the PrinterGfx Preferences editor window.

Note   If you are setting up a PostScript printer using the Printers Preferences editor, the text and graphics settings made in the Printer Preferences and PrinterGfx Preferences editors are overridden.
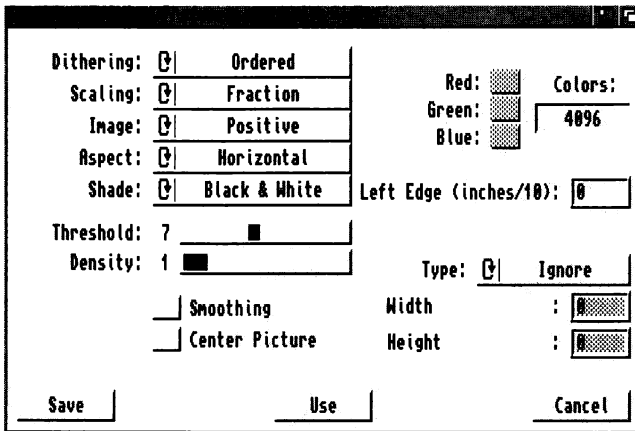
Figure 9-2. PrinterGfx Preferences Editor Window

The PrinterGfx Preferences editor contains the following gadgets:

Dithering

Dithering prints patterns of dots in different colors (or different densities) so that they appear as one color or as shades of grey. The available dithering options are:

Ordered   The standard type of dithering. Color intensities are formed using an ordered pattern of dots. The dots vary in color, but are of the same density and are printed in straight rows and columns.

Halftone   Color intensities are formed by varying the size and density of the dots.

Floyd-Steinberg   Color intensities are formed by a complex algorithmic formula. Floyd-Steinberg dithering yields smoother shading by distributing the intensities of each pixel throughout the dots comprising that pixel, as well as throughout neighboring dots.

Figure 9-3 illustrates the results of the different dithering methods; the pictures were generated on a 300 dot per inch printer.
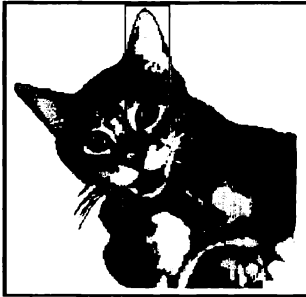
Ordered
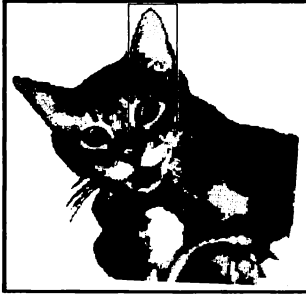
Halftone
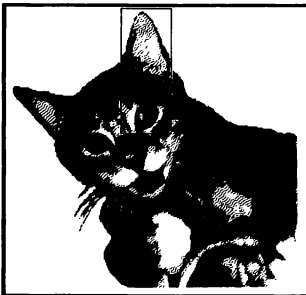
Floyd-Steinberg

Figure 9-3. Dithering Methods

Scaling

Scaling is the process of changing the size of an image. The actual size of the printout is determined by the Limits setting, described on page 9-11. The available Scaling options are:

Fraction	Closely matches the size you have set in Limits, possibly distorting the image. Pixels are enlarged or reduced as necessary. This option works best when printing pictures with extensive shading.
Integer	Prints every pixel on the screen as an even number of dots on the printout. (If a picture on the screen is 320 x 200, the printed picture is either 320 x 200, 640 x 400, or 960 x 600.) Select this option when printing a picture that contains thin vertical and horizontal lines (such as a grid) or text.

Image

Determines how an image is printed. This option affects only Black & White and grey scale printing. When set to Positive, the image is printed as it appears on the screen. When set to Negative, the image is reversed, similar to a photographic negative.

Aspect

Determines the direction on the paper the image is printed. When set to Horizontal (often called Portrait), the image is printed as it appears on the screen. When set to Vertical (often called Landscape), the image is printed sideways.

Shade

Allows you to select the colors to print. Not all printers support these options. The available options are:

Black & White	Colors are printed as either black or white, determined by the Threshold setting. Dithering has no effect.
Grey Scale 1	Colors are printed in varying shades of grey.

Grey Scale 2   This option supports a maximum of four shades of grey and is used for printing pictures designed using the A2024 monitor.

Color   Colors are printed as they appear on the screen. This can only be used with color printers.

Threshold

Determines the colors on the screen that are printed as black or as white. This setting is effective only in Black & White mode. Increasing the Threshold value causes more colors to be printed as black. Figure 9-4 shows the results of different Threshold settings.
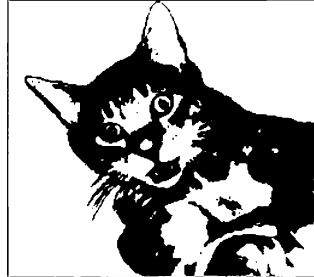
Threshold = 8   **Threshold = 13**

Figure 9-4. Threshold Settings

Density

Selects the graphics print density. The lower the density, the faster the image prints on those printers with multiple densities. When a higher density is selected, more dots create a sharper image. However, it takes longer for the image to print.

This option is not supported by every printer.

Smoothing

Used to smooth any diagonal lines that appear jagged. This option is best suited for use with programs that do graphic dumps of text. When smoothing is turned on, printing may be slower.

Floyd-Steinberg dithering cannot be used with Smoothing.

Center Picture

Horizontally centers the printed picture on the page. Any value entered for the Left Offset is ignored when Center Picture is on.

Color Correction

Matches the colors on your printout more closely to the colors on the screen. Color correction can be used on red, green, or blue or on a combination of colors.

Color correction reduces the number of printed colors. When color correct is not used, all the available colors displayed by the Amiga can be printed on a color printer. For each color that is chosen for correction, several shades of that color are lost. The number of colors that can be printed is shown in the Colors gadget to the right of the color correction boxes.

Left Edge

Determines the distance to shift, or offset, the printed picture. This is similar to setting up a left margin. The Center Picture option disables Left Edge.

To enter the value, select the Left Edge gadget, delete the current value, enter the correct value, and press Return. Choosing Use Metric System? in the Settings menu lets you specify the value in millimeters rather than tenths of inches.

Limits/Type

Interprets the Width and Height limits, depending on the Type setting. The available options are:

Ignore   Ignores Width and Height limits. The printed picture's size is the size requested by the application. The only restrictions are that its width cannot be greater than:

$$\frac{(\text{right margin - left margin}) + 1}{\text{characters per inch/mm}}$$

Height is usually restricted to the length of the paper.

Bounded   The printed picture's size is bounded by the Width and Height limits. For example, if the printed picture can be up to 4.0 x 5.0 inches, set Width to 40, Height to 50, and select Bounded. Width and Height are interpreted in tenths of inches by default or millimeters if Use Metric System? has been chosen in the Settings menu.

Absolute   The Width and Height limits are interpreted as absolute values. For example, if the printed picture should be exactly 4.0 x 5.0 inches, set Width to 40, Height to 50, and select Absolute. This distorts the picture as needed to fit. To use this option fraction scaling should also be selected. Choosing Use Metric System? in the Settings menu lets you specify the value in millimeters rather than tenths of inches.

You can, however, use Absolute to get a normal aspect ratio printout that is a specific width or a specific height, but not both. Set either the Width or Height limit to the desired dimension and set the other limit to zero. For example, if Width is set to 40 and Height to 0, then the printed picture is 4.0 inches wide and as tall as necessary for the correct aspect ratio. If both dimensions are set to zero, the printed picture is as wide as possible and as tall as necessary to retain the picture's proportion.

Pixels   The Width and Height limits are interpreted as pixels. If one of these values is set to zero, the same rules for the Absolute option apply. The printout is the width or height specified and as tall or as wide as necessary to retain proportion.

Multiply   The Width and Height limits are used to multiply the source
                    picture's width and height. For example, if you specified a
                    Width of 2 and a Height of 4, the printed picture is two times
                    the source picture's width in pixels and four times the
                    source picture's height.

Width/Height Lets you specify the dimensions of your printout. The value
                    is interpreted as increments of tenths of an inch or
                    millimeters, unless Pixels or Multiply is the selected Type.
                    To enter a value, select the text gadget, delete the current
                    value, type the correct value, and press Return.

Hints for Faster Graphics Printing

- Lower the density.
- Use the horizontal rather than the vertical aspect setting.
- Set Shade to black and white if you are using a two color image.
  This is faster than grey scale or color printing.
- Use Smoothing for final copies only since it doubles the printing
  time.
- Use Ordered or Halftone dithering because they do not increase
  printing time. Floyd-Steinberg dithering doubles printing time.
- Speed up a High Res screen print that uses more than four
  colors by moving the screen to the back of the display after
  printing has started. Press left Amiga+N to do this.

PrinterPS Preferences Editor

The PrinterPS Preferences editor, illustrated in Figure 9-5, allows
you to control text and graphics printing on PostScript printers.
Use this editor only if you have a PostScript printer and if you
choose PostScript in the Printer Preferences editor.
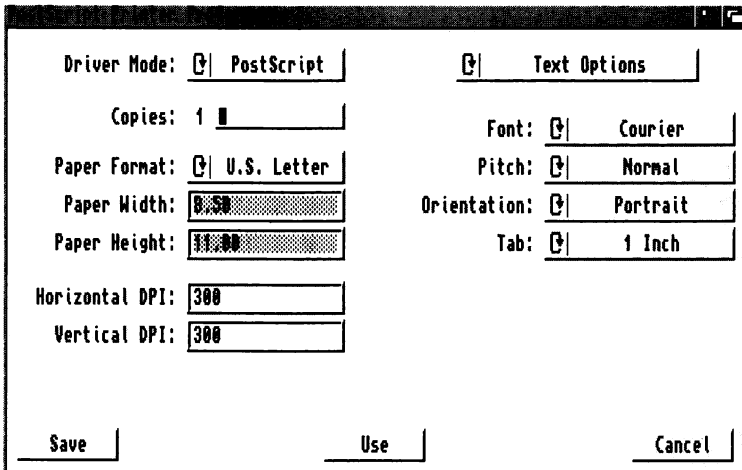
Figure 9-5. PrinterPS Preferences Editor Window

The PrinterPS Preferences editor has an additional item in the Settings menu: Measuring System. Its submenu lets you select Centimeters, Inches, or Points. The selected units are used to display values of your width, height, and margin settings. The default setting is Inches.

The PrinterPS Preferences editor contains the following gadgets:

Driver Mode

Driver Mode lets you select either PostScript or Pass Through. In PostScript mode the driver converts any text output it receives to PostScript and sends the results to the printer. The Pass Through option bypasses the PostScript driver and sends data directly to the printer. The Pass Through option lets programs that output PostScript send their PostScript code directly to the printer.

Copies

This specifies the number of copies of each page to print, from 1 to 99.

Paper Format

Paper Format lets you define the size of the paper to be used: U.S. Letter, U.S. Legal, DIN A4, and Custom. Clicking on this gadget sets the values in the Paper Width and Paper Height cycle gadget to match the proper format.

Paper Width and Paper Height

The Paper Width and Paper Height gadgets let you specify the exact paper dimensions for custom page sizes. These two gadgets are ghosted unless Custom is selected in the Paper Format gadget.

Horizontal DPI and Vertical DPI

The Horizontal and Vertical DPI gadgets allow you to specify the dots per inch to use in the printout. The driver uses this resolution for all its dithering and other processing. Using different DPI settings from those of your PostScript printer can result in printouts with a distorted aspect ratio.

Panel Cycle Gadget

The Panel cycle gadget lets you select from four additional option panels: Text Options, Text Dimensions, Graphics Options, and Graphics Scaling. The panel selected determines the set of gadgets displayed.

Text Options

Text options are illustrated in Figure 9-6.
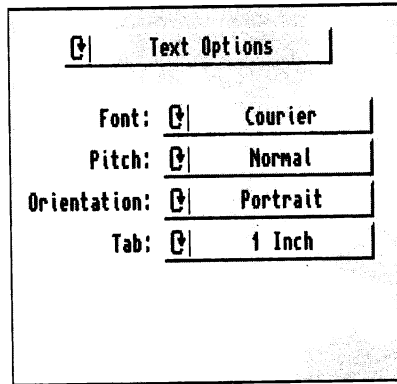
Figure 9-6. PrinterPS Preferences Window/Text Options

Font	Select the font to use in your printout. These are built-in printer fonts and are used whenever text is sent to the printer.
Pitch	Select either Normal, Compressed, or Expanded print faces.
Orientation	Select between Portrait or Landscape printing. Use Landscape printing for envelopes.
Tab	Specify how to handle tabs in the printed file. The available selections are 4 Characters, 8 Characters, 1/4 Inch, 1/2 Inch, and 1 Inch. Use inch settings with proportional fonts.

Text Dimensions

Text Dimensions are illustrated in Figure 9-7.
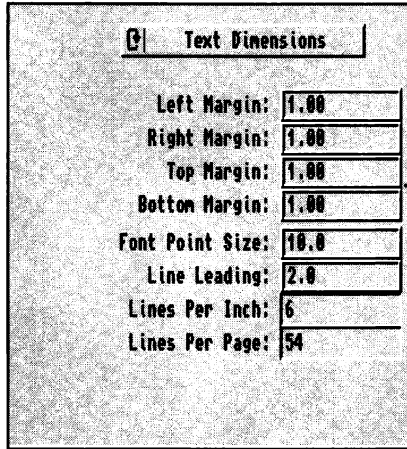
Figure 9-7. PrinterPS Preferences Editor Window/ Text Dimensions

Margin Gadgets	Specify all four margins for text printing. The values entered are relative to the respective edges of the paper, given the paper's width and height values specified previously.
Font Point Size	Specify the size of the font to use whenever text is sent to the printer.
Line Leading	Specify the amount of leading between lines of text. This is the distance from the bottom of one line to the top of the following line.
Lines Per Inch	Displays the approximate number of lines per inch, based on the values of the Font Point Size and Line Leading options.
Lines Per Page	This text display area shows the number of lines per inch, based on the values of the Font Point Size, Line Leading, Paper Height, Top Margin, and Bottom Margin.

Graphics Options

Graphics Options are illustrated in Figure 9-8.

```
┌─────────────────────────────────────┐
│        ⟨▾⟩  Graphics Options    │    │
│                                      │
│             Left Edge: │1.00      │  │
│              Top Edge: │1.00      │  │
│                 Width: │5.50      │  │
│                Height: │9.00      │  │
│        Image: ⟨▾⟩    Positive    │   │
│      Shading: ⟨▾⟩   Grey Scale   │   │
│    Dithering: ⟨▾⟩    Default      │   │
│  Transparent: ⟨▾⟩    White        │   │
│                                      │
│                                      │
└─────────────────────────────────────┘
```

Figure 9-8. PrinterPS Preferences Editor Window/ Graphics Options

Edge/Dimension Gadgets	Similar to the four Margin gadgets, but specifying the print region used for graphics printing.
Image	Positive/Negative.
Shading	Select between Black & White, Grey Scale, and Color.
Dithering	Select Default, Dotty, Vertical, or Horizontal dithering when Grey Scale shading is selected. Default is standard halftone shading. Dotty is similar to halftone shading, but with very large dots for a special effect. Vertical and Horizontal represent grey shades with closely-spaced vertical and horizontal lines of varying thickness.

Transparent   Select which color in the image, if any, is not printed:
Color 0, None, or White. Color 0 is the first color in the
image color palette (in a screen dump of the
Workbench screen this is the background grey areas).
White is a color with its red, green, and blue
components all at their maximum value. Choosing
None ensures that even the lightest color in the image
receives some shading to contrast with the white
paper. The Transparent option is not available with
Black & White shading.

Graphics Scaling

Controls the size, orientation, and aspect ratio of the printed
graphic image. The effects of the different options available under
Graphics Scaling are shown by the four Sample Scalings images at
the bottom right of the window. The shaded areas represent print
regions of varying sizes and shapes. As you change the settings of
the cycle gadgets, the rendering of the source picture changes
accordingly. Figure 9-9 shows Graphics Scaling selected in the
Panel Cycle gadget.
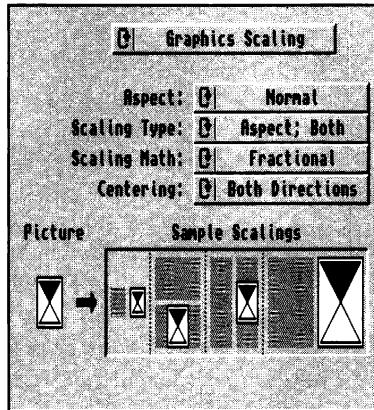
Figure 9-9. PrinterPS Preferences Editor/Graphics Scaling

Aspect   Specify Normal or Sideways for printing graphics. This
                    operation is performed before any other graphic
                    operations, including scaling.

Scaling Type   Select one of seven scaling types. All scaling types
                    control how the picture is printed within the print region
                    specified by the Edge/Dimension gadgets. The Aspect
                    scaling types preserve the image's aspect ratio; the Fits
                    types do not. The types are:

                    1   None. Prints the picture with no scaling. The
                        picture may be clipped on the right or bottom edges
                        to fit within the region specified.

                    2   Aspect; Width. Makes the horizontal dimension as
                        wide as the print region and scales the vertical
                        dimension to preserve the aspect ratio. The
                        vertical dimension is clipped to the print region if it
                        gets too tall.

                    3   Aspect; Height. Makes the vertical dimension as
                        tall as the print region and scales the horizontal
                        dimension to preserve the aspect ratio. The
                        horizontal dimension is clipped to the print region if
                        it gets too wide.

                    4   Aspect; Both. Makes the picture as big as possible
                        while ensuring it fits in the print region and
                        preserves its aspect ratio.

                    5   Fits; Wide. Makes the horizontal dimension as
                        wide as the print region and scales the vertical
                        dimension to preserve the aspect ratio or until the
                        vertical dimension gets as tall as the print region.
                        The difference between this type and type 2 is that
                        the vertical dimension always fits within the print
                        region instead of being clipped.

                    6   Fits; Tall. Makes the vertical dimension as tall as
                        the print region and scales the horizontal
                        dimension to preserve the aspect ratio or until the
                        horizontal dimension gets as wide as the print
                        region. The difference between this type and type
                        3 is that the horizontal dimension always fits within
                        the print region instead of being clipped.

7   Fits; Both. This makes the picture take up an entire print region in both dimensions, distorting the aspect ratio, as needed.

Scaling Math   Determines whether Integer or Fractional math is to be used during scaling operations. The effect of this option is not indicated in the Sample Scalings images.

Centering   Specify None, Horizontal centering, Vertical centering, or both. Centering is the last operation performed in the printing process, after scaling.

Printer Escape Sequences

The Amiga printer device (PRT:) accepts standard escape sequences for implementing special printer features. For example, you can use escape sequences to set margins, turn on styles such as boldface or italics, and specify spacing. If the feature is not supported by your printer or printer driver, the escape sequence for it is ignored. Consult your printer documentation to verify the escape sequences your printer accepts.

Escape sequences are typically used when you print to the printer device directly from the Shell or when you insert print commands into a program.

A typical escape sequence (to turn on boldfacing) is shown as follows:

```
Esc[1m
```

This indicates that you must press the following keys in sequence: Esc, [, 1, m. Escape sequences are case-sensitive. For example, to enter the following escape sequence:

```
Esc[4W
```

press the Esc, [, 4, and Shift+W keys.

Numbers inserted into the escape sequence are indicated by <n>. For example, the escape sequence used to set the left and right margins is:

```
Esc[<n>;<n>s
```

If you want to specify a left margin of 5 and a right margin of 75, type:

```
Esc[5;75s
```

To send an escape sequence to the printer from the Shell:

1. Redirect the keyboard input to the printer by typing:

```
1> COPY * to PRT:
```

2. Wait until disk activity stops and type an escape sequence, such as:

```
Esc[2"z
```

To terminate keyboard input, press Ctrl+\.

You can also create printer command files consisting of several escape sequences by redirecting keyboard input to a file. For example:

1. Redirect the keyboard input to a file:

```
1> COPY * TO RAM:EscapeFile
```

2. Enter the escape sequences, such as:

```
Esc[2"z (turns near letter quality on)
Esc[2w  (turns elite type on)
Esc[1m  (turns boldface on)
Ctrl+\  (terminates input)
```

3. To send these escape sequences to the printer, enter:

```
1> COPY RAM:EscapeFile TO PRT:
```

Extended Commands

An extended command lets you specify a printer-specific command, such as a command to use a particular font. In this case, <n> represents the number of bytes in the command and <x> represents the actual command. In an extended command, one character equals one byte. Esc is one character. For example, if your printer recognizes Esc k 1 as the command to use a sans serif font, type:

```
Esc[3"Esck1
```

If you are entering extended commands within a program, be sure that the commands are applicable to the printer in use.

Typical Printer Escape Sequences

The following is a list of printer escape sequences for typical dot matrix printer text features:

Feature	Escape Sequence	Name
Reset printer	Escc	aRIS
Initialize printer	Esc#1	aRIN
Line feed	EscD	aIND
Return line feed	EscE	aNEL
Reverse line feed	EscM	aRI
Normal character set	Esc[0m	aSGR0
Italics on	Esc[3m	aSGR3
Italics off	Esc[23m	aSGR23
Underline on	Esc[4m	aSGR4
Underline off	Esc[24m	aSGR24
Boldface on	Esc[1m	aSGR1
Boldface off	Esc[22m	aSGR22
Set foreground color	Esc[30m to Esc[39m	aSFC
Set background color	Esc[40m to Esc[49m	aSBC
Normal pitch	Esc[0w	aSHORP0
Elite pitch on	Esc[2w	aSHORP
Elite pitch off	Esc[1w	aSHORP1
Condensed fine pitch on	Esc[4w	aSHORP4
Condensed off	Esc[3w	aSHORP3
Enlarged pitch on	Esc[6w	aSHORP6
Enlarged pitch off	Esc[5w	aSHORP5
Shadow print on	Esc[6"z	aDEN6
Shadow print off	Esc[5"z	aDEN5
Doublestrike on	Esc[4"z	aDEN4
Doublestrike off	Esc[3"z	aDEN3
Near Letter Quality on	Esc[2"z	aDEN2
Near Letter Quality off	Esc[1"z	aDEN1

Feature	Escape Sequence	Name
Superscript on	Esc[2v	aSUS2
Superscript off	Esc[1v	aSUS1
Subscript on	Esc[4v	aSUS4
Subscript off	Esc[3v	aSUS3
Normalize the line	Esc[0v	aSUS0
Partial line up	Esc1	aPLU
Partial line down	EscK	aPLD
US character set	Esc(B	aFNT0
French character set	Esc(R	aFNT1
German character set	Esc(K	aFNT2
UK character set	Esc(A	aFNT3
Danish I character set	Esc(E	aFNT4
Swedish character set	Esc(H	aFNT5
Italian character set	Esc(Y	aFNT6
Spanish character set	Esc(Z	aFNT7
Japanese character set	Esc(J	aFNT8
Norwegian character set	Esc(6	aFNT9
Danish II character set	Esc(C	aFNT10
Proportional spacing on	Esc[2p	aPROP2
Proportional spacing off	Esc[1p	aPROP1
Proportional spacing clear	Esc[0p	aPROP0
Set proportional offset	Esc[<n> E	aTSS
Auto left justify	Esc[5 F	aJFY5
Auto right justify	Esc[7 F	aJFY7
Auto full justify	Esc[6 F	aJFY6
Auto justify off	Esc[0 F	aJFY0
Letter space (justify)	Esc[3 F	aJFY3
Word fill (auto center)	Esc[1 F	aJFY1
1/8" line spacing (8 lpi)	Esc[0z	aVERP0
1/6" line spacing (6 lpi)	Esc[1z	aVERP1
Set form length to <n>	Esc[<n>t	aSLPP
Perf skip <n> (n >0)	Esc[<n>q	aPERF
Perf skip off	Esc[0q	aPERF0
Left margin set	Esc#9	aLMS
Right margin set	Esc#0	aRMS

Feature	Escape Sequence	Name
Top margin set	Esc#8	aTMS
Bottom margin set	Esc#2	aBMS
Top and bottom margins	Esc[<n>;<n>r	aSTBM
Left and right margins	Esc[<n>;<n>s	aSLRM
Clear margins	Esc#3	aCAM
Set horizontal tab	EscH	aHTS
Set vertical tabs	EscJ	aVTS
Clear horizontal tab	Esc[0g	aTBC0
Clear all horizontal tabs	Esc[3g	aTBC3
Clear vertical tab	Esc[1g	aTCB1
Clear all vertical tabs	Esc[4g	aTCB4
Clear all horizontal and vertical tabs	Esc#4	aTBCALL
Set default tabs	Esc#5	aTBSALL
Extended commands	Esc[<n>"<x>	aESTEND

Chapter 10

Other Workbench Programs

This chapter describes the programs found in the Tools and Commodities drawers.

Tools Drawer

The Tools drawer window, illustrated in Figure 10-1, contains programs that expand your printing options, allow you to change the color of non-Workbench screens, define new keys, and create new icons.
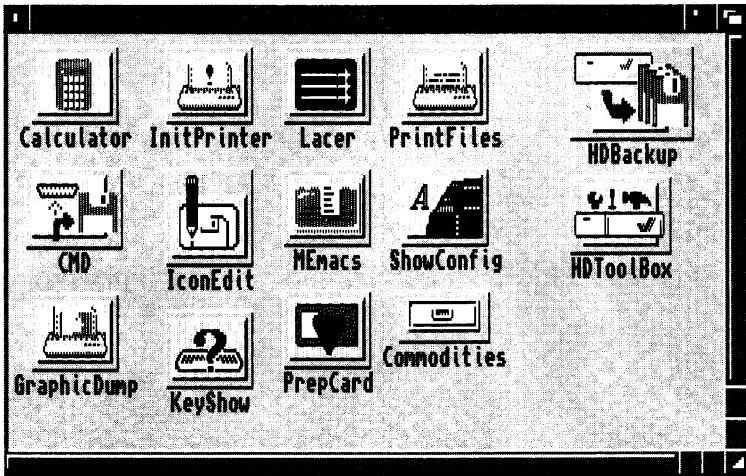
Figure 10-1. Tools Window

The following programs are found in the Tools drawer:

IconEdit	Allows you to change and create icons.
CMD	Allows you to redirect printer output to a file.
MEmacs	A text editor, explained in the *Using AmigaDOS* manual.
Calculator	A standard, four-function calculator.
KeyShow	Displays the current keymap.
GraphicDump	Allows you to print screen images.
InitPrinter	Initializes your printer.
PrintFiles	Sends files to the printer.
ShowConfig	Shows configuration information.
Lacer	Turns video interlace on and off.
PrepCard	Prepares PCMCIA memory cards for use on systems with a PCMCIA slot.
Commodities	A drawer containing programs that monitor your keyboard and mouse input.

HDBackup and HDToolbox are also included in the Tools drawer on hard disk systems. For more information on these programs, see your Amiga hard drive user's manual.

IconEdit

IconEdit personalizes your Workbench by changing the appearance of existing icons and creating new ones.

The window shown in Figure 10-2 appears when you open the IconEdit icon.
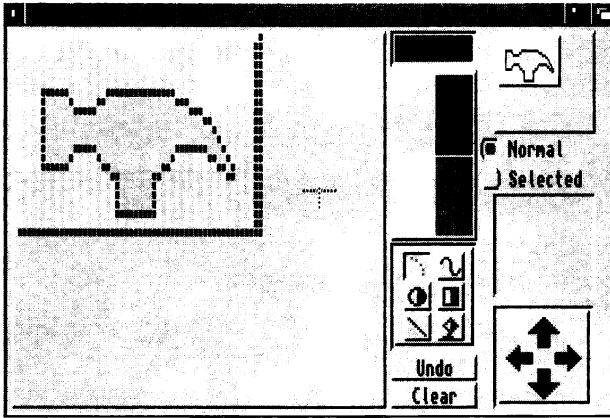
Figure 10-2. IconEdit Window

Draw and edit icons in the magnified view box of the IconEdit window. The Normal and Selected view boxes show the icon images at actual size. Several gadgets in the window draw squares, circles, and straight lines, giving you more control over your drawing.

There are three sub-windows in IconEdit: the Normal and Selected view boxes and the Magnified View Box, which fills most of the window. Each of these is an "AppWindow"-- you can drag an icon into that window to load it, rather than using menus. Clicking in the Normal view box displays the selected image of the icon as long as you hold down the selection button.

Color Selection Gadget

The Color Selection gadget lets you select a color for drawing. In addition to the standard method for selecting a color by pointing to it and clicking the selection button, this gadget allows you to choose two colors at once.

To create a "checkerboard" pattern, select the first color, hold down Shift, then select the second color.

To create a pattern of vertical bars, select the first color, hold down Alt, then select the second color.

Keyboard shortcuts: Press P to cycle forward through the colors. Press Shift+P to cycle through dithered patterns using the background color. Press / (slash) to reset the color to a solid pattern.

Magnified View Box

Use the mouse to draw your icon in this box. Click the selection button to display a pixel of the selected color. Hold down the selection button to draw while moving the mouse.

The pointer turns into cross hairs when it is in the magnified view box. The new pixels appear at the center of the cross hairs. Pixel coordinates (relative to the upper left corner) appear in the IconEdit window title bar to show the position of the crosshair.

To load an existing icon into IconEdit, drag the icon into the magnified view box.

Freehand Gadget

The Freehand gadget lets you quickly draw unstructured shapes. If you select this gadget and then draw in the magnified view box, the pixels fill in as the mouse passes over them. However, you may not get a continuous line and some pixels may not be filled in. Use this gadget to sketch an icon that you intend to fill in the details on later.

Keyboard shortcut: Press S to select the freehand gadget.

Continuous Freehand Gadget

The Continuous Freehand gadget is similar to the freehand gadget, except that it produces a continuous line. When drawing continuous lines, there is a delay before the display catches up with your movement.

Keyboard shortcut: Press D to select the continuous freehand gadget.

Circle Gadget

To draw a circle or oval:

1. Select the circle gadget.

2. Point inside the magnified box at the point where you want the center of the circle, hold down the selection button, and move the mouse.

3. Release the selection button when you reach the correct size and shape.

Selecting the right portion of the gadget draws filled circles. To fill the circle with a dithered pattern, select two colors from the selection gadget.

Selecting the left portion of the gadget draws an outline of a circle. To double the thickness of the circle's outline, hold down Ctrl before releasing the selection button.

Keyboard shortcut: Press E (for ellipse) to draw an outlined circle; Shift+E for a filled circle.

Box Gadget

To draw a box:

1. Select the box gadget.

2. Point inside the magnified box at the point where you want a corner of the box, hold down the selection button, and move the mouse.

3. Release the selection button when the box is the correct size and shape.

Selecting the right portion of the gadget draws filled boxes. To fill the box with a dithered pattern, select two colors from the color selection gadget.

Selecting the left portion of the gadget draws an outline of a box. To double the width of the box's sides, hold down Ctrl before releasing the selection button.

To draw a three-dimensional box, similar in appearance to the Workbench gadgets, hold down an Alt key while drawing a box outline. To draw an "unselected" box hold down left Alt. To draw a selected box, hold down right Alt.

Keyboard shortcut: Press R for an outlined box; Shift+R for a filled box.

Line Gadget

To draw a straight line:

1.   Select the line gadget.

2.   Position the mouse where you want the line to start.

3.   Hold down the selection button.

4.   Move the mouse to the line ending position.

5.   Release the selection button.

Double the thickness of the line by pressing Ctrl before releasing the selection button.

Keyboard shortcut: Press L to select the line gadget.

Fill Gadget

Use the fill gadget to fill an area of the magnified view box with the selected color. Select the fill gadget, then click within the area you want to change to the same color as the dot under the crosshair.

Note   The fill gadget does not fill a patterned area. However, solid areas can be filled with the checkerboard or vertical bar patterns, if selected.

Keyboard shortcut: Press F to select the fill gadget.

Undo

Select Undo to cancel the last mouse action performed in the magnified view box. Undo acts as a toggle switch; selecting it again undoes the Undo.

Keyboard shortcut: Press U to select the Undo gadget.

Clear

Select the Clear gadget to erase the contents of the magnified view box. The magnified view box fills with the currently selected color.

Keyboard shortcut: Press Shift+C to select the Clear gadget.

Normal/Selected Radio Buttons

The Normal and Selected radio buttons switch between unselected and selected images for an icon. The normal image is how an unselected icon looks. The selected image is how an icon looks after you have clicked on it.

When the Normal radio button is selected, any image drawn in the magnified view box appears in the normal view box at the top of the window.

When the Selected radio button is used, you can create the image that appears when the icon is selected. You can only use this radio button when the Image menu item is chosen from the Highlight menu. Any image created appears in the selected view box.

Keyboard shortcut: Press Shift+S to select the Selected radio button; Shift+N for the Normal radio button.

Arrows

The arrows let you shift your image. Clicking on an arrow moves the image in the magnified view in the direction of the arrow. Use these arrows to control the placement of your image within the box surrounding the finished icon.

Note   Any part of the image that is moved off the edge of the
              magnified view box is lost.

Keyboard shortcut: Press the corresponding arrow key to move the
image.

Project Menu

The items in the Project menu let you open and save icon files.

New   ⍽N   Loads the default icon for the currently chosen
                          type of icon. (The type of icon is determined by
                          the Type menu.) Any changes in the window that
                          have not been saved produce a requester asking if
                          you want to save them.

Open   ⍽O   Opens an existing icon file. A requester appears
                          for entering the name of the file. Only the names
                          of drawers and .info files appear in the IconEdit
                          Open file requester.

Save   ⍽S   Saves an existing icon file, overwriting any file with
                          the same name. In this case the previous icon is
                          lost.

Save As   ⍽A   Allows you to specify a filename for saving the
                          current image. A requester lets you enter the
                          destination for the edited icon. Use Save As to
                          prevent overwriting an existing icon file.

Save As   ⍽D   Saves the current image as the default icon for the
Default Icon   currently selected icon type. This image is used
                          for any new icon or pseudo-icon of that type
                          created, including those made with the New menu
                          item in the IconEdit Project menu.

                          For example, if you create a drawer icon and then
                          choose Save As Default Icon, that icon is used to
                          represent drawers when you choose the Show All
                          Files menu item.

Quit   ⍽Q   Exits the IconEdit program. If you have not saved
                          the current image, a requester asks if you want to
                          save the image before exiting IconEdit.

Edit Menu

The items in the Edit menu allow you to use the Amiga's Clipboard to import IFF ILBM clips that were created with other programs.

Cut	⍓X	Deletes the image in the magnified view box and copies it to the Clipboard.
Copy	⍓C	Copies the image in the magnified view box to the Clipboard.
Paste	⍓V	Copies any image in the Clipboard to the magnified view box, replacing the current contents.
Erase		Erases any image in the magnified view box. You can erase everything or save before erasing.
Open Clip		Copies an existing IFF file into the Clipboard. A requester asks for the name of the file to open. You can then Paste the file into IconEdit.
Save Clip As		Saves the current contents in the Clipboard to a specified file.
Show Clip		Displays the current contents in the Clipboard using the Display program. To exit Show Clip, press Ctrl+C. If the Display program is unavailable, Show Clip cannot work.

Type Menu

The items in the Type menu let you specify the type of icon changed or created.

Disk	⍓1	Represents the disk icons appearing in the Workbench window.
Drawer	⍓2	Represents the drawer icons appearing in a disk window, such as the Utilities or Tools drawer.
Tool	⍓3	Represents a tool, such as the Calculator, Clock, or IconEdit program.
Project	⍓4	Represents a project, a file that has been created by a tool, or any of the icons in the Storage drawer.
Garbage	⍓5	Represents the Trashcan drawer.

Highlight Menu

The items in the Highlight menu let you determine how an icon
appears when it is selected.

Complement	A7	Highlights the entire icon, including the background of the box surrounding the icon. For example, if you are using the default Workbench colors and the icon is surrounded by a field of grey, the grey becomes blue when the icon is selected.
Backfill	A8	Highlights the icon, but not the background of the box. For example, if you are using the default Workbench colors and the icon is surrounded by a field of grey, the grey remains the same when the icon is selected.
Image	A9	Allows an entirely different image for the selected icon (a dual image icon). For example, the drawer icons on the Workbench are dual image. When you select a drawer, a new image of an open drawer appears.

Images Menu

The items in the Images menu let you manipulate the images in the
normal and selected view boxes and import IFF images created with
other graphics programs.

Exchange	AE	Swaps the images that appear in the normal view and the selected view.
Copy		Copy is dependent on the selected radio button. If Normal is used, the image in the normal view is copied to the selected view. If Selected is used, the image in the selected view is copied to the normal view.
Use Template		Copies a box resembling the standard Workbench icon "tile" into the magnified view. You can then create your new icon within this box.
Load		Loads previously saved images, without changing the name of the icon being edited. When you point to the Load menu item, a submenu appears.

Save Image   *A*K   Saves an image as a picture data type file.

Restore   *A*R   Returns the IconEdit window to its state prior to opening the window or selecting New or Open.

The available Load submenu items are:

Image   *A*J   Allows you to load a data type image file created by another program as either the normal or selected view, depending on which radio button is selected.

                                 When you choose an item from the submenu, a requester asks you to specify the file to be loaded. You must specify the correct drawer and filename.

Normal   *A*Y   Loads the unselected image of the specified icon
Image   into the normal or selected view box, depending on which radio button is selected. (This is equivalent to dragging an icon into one of the boxes.)

Selected   *A*U   Loads the selected image of the specified icon into
Image   the normal or selected view box, depending on which radio button is selected.

Both Images *A*I   Loads both the normal and selected images of the specified icon into the appropriate view boxes.

Extras Menu

The items in the Extras menu control additional convenience features of IconEdit.

Recolor   *A*M   Swaps the second and third colors in the color selection gadget. By default the second color is black and the third color is white. Use this to convert pre-Release 2 icons to the current color scheme.

Auto TopLeft *A*T   Moves the image to the upper left corner of the magnified view box.

Color Palette   Opens the Preferences Palette editor to change the default colors.

Settings Menu

The items in the Settings menu allow you to save various IconEdit options.

Use Grid?   Use Grid? displays each pixel in the magnified view box distinctly, with the background color surrounding it. When Use Grid? is not chosen, the pixels blend together smoothly. The default is for the grid to be on.

Create Icons?   Create Icons? saves an icon with an IFF Brush file for the contents of the magnified view box. If Create Icons? is not chosen, no icon is saved. The default is for icons to be saved.

Save Settings   Save Settings saves all of the current IconEdit settings, including the size and position of the IconEdit window, the file requesters, and all of the menu item settings.

Tool Types

IconEdit supports the following Tool Types:

CLIPUNIT=<n>   Specifies the Clipboard unit to use. The default is 0.

XMAG=<n>   Enlarges the width of the magnified view box. XMAG accepts a number from 4 to 16. The default is 4.

YMAG=<n>   Enlarges the height of the magnified view box. YMAG accepts a number from 4 to 16. The default is 4.

LEFTEDGE=<n>   Specifies where to place the left edge of the editor window.

TOPEDGE=<n>   Specifies where to place the top edge of the editor window.

FRLEFTEDGE=<n>   Specifies where to place the left edge of the file requester, relative to the editor window. For example, FRLEFTEDGE=0 aligns the left edge of the file requester with the left edge of the editor window.

FRTOPEDGE=\<n\>   Specifies where to place the top edge of the file requester, relative to the editor window.

FRWIDTH=\<n\>   Specifies the width, in pixels, of the file requester.

FRHEIGHT=\<n\>   Specifies the height, in pixels, of the file requester.

PALETTE=\<path\>   Specifies the complete path to the Palette editor when the Color Palette menu item is chosen. The default is SYS:Prefs/Palette. Change this only if you have moved your Palette editor.

SHOWCLIP=\<path\>   Specifies the complete path to the utility used to display the Clipboard. The default is SYS:Utilities/Display. If you only have one floppy drive, copy the Display program onto your Extras disk and change its path. Change this Tool Type if you use another program for displaying the Clipboard.

NOICONS   Disables the ability to create icons when saving support files, such as when saving a file as an IFF brush.

NOGRID   Disables the use of the grid in the magnified view box.

ICONDRAWER=\<path\>   Specifies the default drawer used by the file requesters that appear when the Open and Save As menu items in the Project menu are chosen.

ILBMDRAWER=\<path\>   Specifies the default drawer used by the file requesters that appear when the Load and Save IFF Brush menu items in the Images menu are chosen.

CLIPDRAWER=\<path\>   Specifies the default drawer used by the file requesters that appear when the Open Clip and Save As Clip menu items in the Edit menu are chosen.

ALTDRAWER=\<path\>   Specifies the default drawer used by the file requesters that appear when the Load menu item in the Images menu is chosen.

CMD (Change Main Device)

CMD directs your printer output to a file rather than to a printer, capturing output on disk.

To use CMD, Tool Types must be added in the CMD icon's Information window and you must indicate where to send the printer output.

The following lists the CMD Tool Types and their recognized KEYWORDS, arguments, and default settings.

DEVICE=<port>   The Amiga port where your printer is attached, either parallel or serial. DEVICE=parallel is the default.

FILE=<filename>   The name of the file to which the printer output is sent. FILE=ram:CMD_file is the default.

SKIP=true   Tells CMD to skip any short initial write. The first write sent to the printer may be a printer reset. You can use SKIP=true to ignore it. The default is SKIP=false (initial writes are not skipped).

MULTIPLE=true   Tells CMD to redirect more than one file. The default is MULTIPLE=false (only one file is redirected).

NOTIFY=true   Tells CMD to display progress messages. When CMD intercepts the file, a typical message that may appear is as follows:

```
Redirected <# of bytes> from
parallel.device to <filename>
```

After the output is sent to the file and CMD is turned off, another message may state:

```
CMD redirection of parallel.device
removed
```

The default is NOTIFY=false (messages are not displayed).

To use CMD, double-click on its icon. The next time information is sent to your printer, it goes to the designated file instead.

MEmacs

MEmacs (MicroEmacs) is a screen-oriented text editor. A text editor works the same as a word processor, but it does not support style formatting options. MEmacs is described in detail in the *Using AmigaDOS* manual.

Calculator

The Calculator is a standard four-function calculator for adding, subtracting, multiplying, and dividing. Opening the Calculator icon activates it.

The calculator works like any standard calculator. The "buttons" on the calculator are gadgets. The numbered gadgets represent the digits 0 through 9. The non-numerical gadgets represent:

CA   Clear all previous entries. Resets the calculator to 0.
CE   Clear the current entry.
x   Multiply.
÷   Divide.
+   Add.
-           Subtract.
.   Decimal point.
«   Delete the last digit entered.
±   Change the sign of the current entry. Positive numbers become
            negative; negative numbers become positive.
=   Display the result of the operation.

To press a button, select the gadget with the mouse or press the corresponding key on the keyboard. You can use either the keyboard or numeric keypad keys. On the keyboard Return is equivalent to the equals (=) button.

The calculator displays a message for Overflow and Divide By Zero errors.

Select the close gadget to exit the Calculator.

Calculator menus

The calculator has three menus: the Project menu, the Edit menu, and the Windows menu.

On the Project menu:

Clear Entry   Clears the current entry only.

Clear All   Clears all entries and resets the display to zero.

Quit   Turns off the calculator.

On the Edit menu:

Cut   Copies and clears the current entry to the Clipboard.

Copy   Copies the current entry to the Clipboard without clearing
            the area.

Paste   Places the current clipboard contents into the calculator.

Show Tape is the only Window menu option. It displays a window showing the calculator entries and results. Show Tape can also be copied, but since it does not have a menu, use drag-select and Amiga+C to copy its contents to the Clipboard.

KeyShow

The KeyShow program shows the current keymap on your Amiga. Opening the KeyShow icon displays the default keyboard layout illustrated in Figure 10-3.
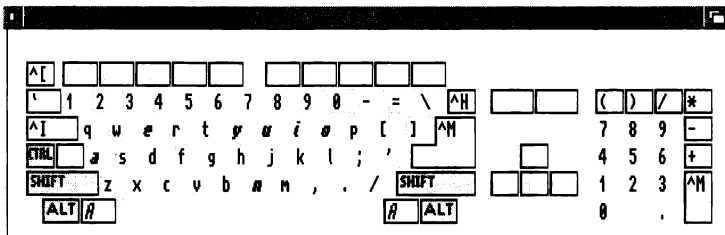
Figure 10-3. Default KeyShow Window

The initial display shows the characters that appear when a single key is pressed. For example, the Q key shows a lower case q. However, when you press a qualifier key with a character key, you may get different output. For KeyShow the acceptable qualifer keys are Ctrl, Shift and both Alt keys.

To see the characters that are output when a qualifier key is pressed simultaneously with a character key:

1. Select any of the qualifer keys that appear in the KeyShow window. That qualifier key is highlighted.

2. The KeyShow display changes to indicate the output that you get if you press the selected qualifer key along with a character key. You can select any combination of qualifers and the display changes accordingly.

3. Select the qualifier key again to return it to its unpressed state.

Keyboard shortcut: Instead of pointing to the qualifer key in the display, you can press the corresponding key on the keyboard. The following list is a guide to interpreting the KeyShow display:

- Qualifier keys not currently pressed are shown in the Workbench background color (normally grey). For example, when you first open the KeyShow window, Ctrl, Shift, and Alt appear in grey. This is because KeyShow is not using those keys in the initial display.

- Dead keys are shown in the Workbench highlight color (normally blue). A dead key is one that modifies the output of the key pressed immediately afterward. For example, on the USA keyboard, the Alt+G combination is a dead key representing the grave accent. If you press Alt+G, then press E, you superimpose the accent symbol over the e (è).

- Bold-italics indicate that a key may be used in conjunction with a dead key. In the previous example, E can be modified by a dead key.

- $$ indicates that it takes more than one character to define the key.

- If a character is preceded by a tilde (~) or a caret (^), it is a control character.

- Blank keys are undefined for the currently selected qualifers.

GraphicDump

GraphicDump prints (or dumps) entire screens, including menus and icons, just as they appear on your monitor. Your printer must be capable of printing graphic images. (Most printers can print GraphicDump output.)

Before using GraphicDump, make sure the settings in the Printer, PrinterPS, and PrinterGfx Preferences editors are appropriate for your printer. You can specify the dimensions of the printout with the Limits setting in the PrinterGfx editor. Otherwise, the printout is the full width allowed by the printer.

To use GraphicDump, double-click on its icon. After a ten second delay, the front-most screen image is sent to the printer. The mouse pointer is not printed.

Tool Types

GraphicDump supports a SIZE Tool Type. The acceptable arguments for SIZE and the resulting size of the printout are:

SIZE=tiny   1/4 the total width allowed by the printer.

SIZE=small   1/2 the total width allowed by the printer.

SIZE=medium   3/4 the total width allowed by the printer.

SIZE=large   Full width allowed by the printer (default).

The height of the printout maintains the perspective of the screen. The Limits Type gadget in the PrinterGfx editor must be set to Ignore for GraphicDump, or else the size of the printout is determined by the Limits setting.

To set specific dimensions in a Tool Type, use:

```
SIZE=<xdots>:<ydots>
```

Substitute the width, in number of printer dots, for the <xdots> argument and the height for the <ydots> argument.

InitPrinter

InitPrinter sends the printer options specified in the Printer and PrinterGfx Preferences editors to the printer. It initializes your printer and loads it with the new or changed specifications when you turn on the printer and double-click on the InitPrinter icon.

Your printer resets automatically when it receives and processes initialization information on first access during a session. If you turn the printer off, you must use InitPrinter to reinitialize it.

PrintFiles

PrintFiles sends text files to your printer. It can accept multiple files selected with drag selection or extended selection. If PrintFiles cannot find or open one of the files, it skips it and goes to the next one. The files are printed using the settings specified in the Printer or PrinterPS Preferences editor.
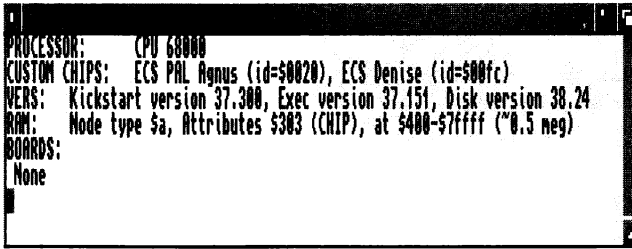
To use PrintFiles:

1. Select the icon of the first file to be printed, hold down Shift and select the icons of any additional files to print. You can also use drag selection to select the icons.

2. Hold down Shift and double-click on the PrintFiles icon.

When printing multiple files, adding a form feed between each file puts it on a new page. Without a form feed, the next file starts printing on the same page on which the previous file ends. Add a form feed with the FORMFEED=true Tool Type in the Printfiles Information window.

ShowConfig

ShowConfig, illustrated in Figure 10-4, displays system configuration information, including processor information, custom chips, software versions, RAM information, and any plug-in boards. Use this information when requesting hardware/software technical support.

Figure 10-4. ShowConfig Window

Lacer

The Lacer program only works when a genlock device is attached to
your Amiga. It toggles the display between interlaced and non-
interlaced mode. This is used primarily for video recording and
genlocking by allowing the Amiga to provide the interlaced input
required by video devices.

PrepCard

The PrepCard utility is used for preparing PCMCIA "credit card"
memory cards. It runs only on Amiga models equipped with a
PCMCIA card slot.

PrepCard prepares standard PCMCIA static RAM cards either as a
disk device or as system RAM. A card prepared as a disk can be
used like a floppy disk: you can read from and write to the card just
as you normally do from applications, the Workbench, or the Shell.
Because the card's memory is battery-backed, the contents of the
card remain when you remove the card or turn off the Amiga. Read
and write operations using memory cards are very fast.

When prepared as system RAM, the card memory is added to the
other memory in the Amiga, as if additional memory were installed
internally. Cards are available in many sizes: from 64 KB to over a
megabyte.

Open the PrepCard window, illustrated in Figure 10-5, by double-
clicking its icon. If a card is inserted, its size and other information

are displayed. The message FAILED in the Battery display box
indicates that the card's battery has run down and must be replaced
before the card can be used.
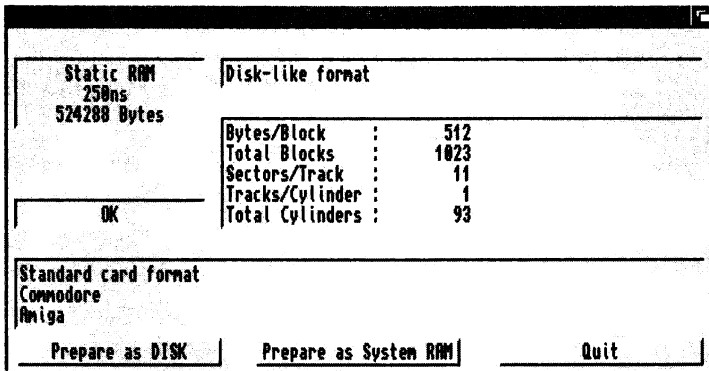
Figure 10-5. PrepCard Window.
PrepCard Display for a 512KB Card Prepared as Disk

You can use PrepCard to prepare cards that are new (unformatted)
or that have been previously prepared as disk or RAM.

1. Select the appropriate gadget, either Prepare as DISK or
   Prepare as System RAM. A warning requester appears,
   reminding you that any information currently on the card will
   be erased if you continue.

2. Select Continue to prepare the card or Cancel to return to the
   PrepCard window. Preparation takes only a few seconds.

   Note   Preparation does not continue if the card is write-
            protected. You can flip the write-protect switch to
            make it write-enabled without removing the card from
            the card slot.

3. Select Quit to exit when you are finished with PrepCard. An
   icon for a card you have prepared as a disk immediately
   appears, labeled Empty.

You can work with the card disk as a normal disk, rename it, and reformat it with the Workbench Format program. A card disk is device CC0:.

To use the memory on a card prepared as system RAM, you must reboot. (The card must be write-enabled and inserted when you boot or reboot for its memory to be added to the Amiga's RAM.) Card memory is added to both Chip (graphics) and Fast (other) memory.

PrepCard has an Advanced Settings window listed on the menu. This window allows a variety of low level card configuration parameters to be altered from the default settings for diagnostic purposes.

Note   Only those with sufficient technical knowledge should change the default settings in the Advanced Settings window. Improper settings do not harm the card or the Amiga, but it can keep the card from functioning properly.

When using PCMCIA cards, note the following:

- PrepCard does not run if a card is currently in use as RAM. To run PrepCard again on a card prepared as RAM, insert the card after booting.
- Removing a card that is currently in use as RAM immediately reboots the Amiga.
- Do not write-protect a card while it is in use as RAM; this causes the Amiga to lock up, requiring you to reboot.

Commodities Drawer

The Commodities drawer, illustrated in Figure 10-6, is in the Tools drawer and contains the Commodities Exchange programs. These programs monitor your keyboard and mouse input to the Amiga.
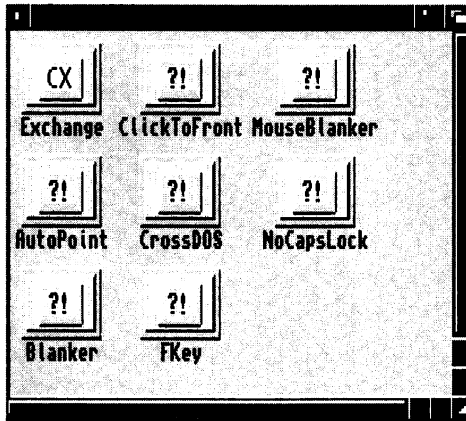
Figure 10-6. Commodities Window

AutoPoint	Automatically activates the window under the pointer.
Blanker	Causes the screen to go blank if there has been no keyboard or mouse activity for a specified period of time.
ClickToFront	Brings a window to the front of the screen by double-clicking in it.
NoCapsLock	Temporarily disables the Caps Lock key.
CrossDOS	See Chapter 7.
FKey	Assigns special functions to keys.
Mouse Blanker	Causes the mouse pointer to go blank when you are typing.
Exchange	Monitors and controls all the other Commodities programs.

Using Commodities Tool Types

All of the Commodities programs share two common Tool Types:
CX_PRIORITY=<n>, which assigns priorities to the Commodities
Exchange programs, and DONOTWAIT, which instructs the
WBStartup file to continue processing without waiting for the
commodity program to finish. All the programs are set to a default
priority of 0. If you enter a Tool Type that changes the priority to a

higher value, that program has priority over any other Commodities Exchange program.

For example, you may have two commodities that allow you to assign operations to function keys. If both programs have an operation assigned to F1, the program with the higher priority intercepts the key, making it unavailable to any other Commodities programs.

There are two Tool Types that apply only to programs that open a window: CX_POPUP and CX_POPKEY.

CX_POPUP=NO prevents the program window from opening when the icon is opened. The program activates when you double-click on its icon, but its window remains closed. The default is CX_POPUP=YES.

CX_POPKEY=<key> determines the hot key for a commodity. When the hot key (or key combination) is pressed, the program's window is automatically brought to the front of the screen. If the window is hidden, it is opened. Hot keys do not start closed commodities.

When specifying key combinations, leave a space between the two keys. For example:

```
CX_POPKEY=F9
CX_POPKEY=Shift F4
CX_POPKEY=LShift LAlt LAmiga X
```

Acceptable Key Combinations

When specifying key combinations for a Commodities Exchange program, you can use any of the function keys (F1 through F10) and any of the keys in the typewriter area of the keyboard (numbers, letter, symbols, and so forth). Keys from the typewriter area must be preceded by a qualifier. The allowable qualifiers are:

Qualifier	Key
Alt	Either Alt key
RAlt	Right Alt only
LAlt	Left Alt only
Shift	Either Shift key
RShift	Right Shift only
LShift	Left Shift only
LAmiga	Left Amiga
RAmiga	Right Amiga
CTRL	Ctrl
Numericpad	Specifies a key on the numeric keypad
Rightbutton	Click the menu button
Leftbutton	Click the selection button
Middlebutton	Click the middle button of a three-button mouse

Qualifiers can also be used before function keys, but are not mandatory. You can use any combination of qualifiers; however, they must be followed by a typewriter or function key. A qualifier is only recognized once in a combination:

```
LAlt RAmiga LAlt F10
```

is the same as

```
LAlt RAmiga F10
```

The following are acceptable combinations:

```
Alt F6
LAmiga 8
Ctrl LShift Y
Leftbutton Ctrl CapsLock =1
Numericpad 82
```

[1] Click the selection button, then press Ctrl+Caps Lock+=.
[2] Use the 8 in the numeric keypad. The 8 in the typewriter area does not satisfy the combination.

AutoPoint

AutoPoint lets you select windows without clicking the selection button. To start AutoPoint, double-click on its icon. AutoPoint does not open a window.

When AutoPoint is running, the system activates the window that is underneath the pointer, eliminating the need to click the selection button.

To disable AutoPoint, double-click on its icon a second time or open the Exchange window, select AutoPoint from the scroll gadget, and then select the Remove gadget.

Blanker

When the Blanker program is running, the screen automatically goes blank if no input has been received during a specified period of time.

The Blanker window allows you to specify the amount of time (in seconds) before the screen goes blank. The default time is 60 seconds. If you do not press a key or click a mouse button during a 60 second period, the screen goes blank. To change this value, enter an alternative in the text gadget after Seconds.

Blanker can also cycle through a series of colors if you check the Cycle Colors gadget box. Checking the Animation gadget displays a random spline display.

To disable Blanker, enter the Exchange screen, select Blanker, select Remove, or pick the Quit menu. The hot key for Blanker is Ctrl+Alt+B.

Tool Types

Blanker has the following Tool Types:

SECONDS=60   The number of seconds of keyboard/mouse activity
                        before the screen is blanked. Default is 60.

ANIMATION=YES   Whether Blanker screen displays animation.
                        Default is yes.

CYCLECOLORS=YES   Whether colors on the blanker screen are cycled.
                        Default is yes.

ClickToFront

ClickToFront lets you bring a window to the front of the screen
without selecting the window's depth gadget. To bring a window to
the front, hold down left Alt and double-click in the window. (The
use of left Alt can be changed with Tool Types.)

To start ClickToFront, double-click on its icon. ClickToFront does
not open a window.

To disable ClickToFront, double-click on its icon again or open the
Exchange window, select ClickToFront from the scroll gadget, then
select the Remove gadget or double-click on its icon again.

Tool Types

ClickToFront supports a QUALIFIER Tool Type, allowing you to
specify a qualifier key that must be pressed while double-clicking in
the window you want to bring to the front of the screen. The four
acceptable key arguments are:

Lalt   Left Alt (Default)

Left_Alt   Left Alt

Ralt   Right Alt

Right_Alt   Right Alt

CTRL   Ctrl

CONTROL   Ctrl

None   No key

For example, if you have specified QUALIFIER=CTRL and ClickToFront is activated, hold down Ctrl and double-click in the window you want frontmost.

NoCapsLock

NoCapsLock disables the Caps Lock key. The Shift keys still function normally, but Caps Lock does not activate if pressed accidentally.

To start NoCapsLock, double-click on its icon. It does not open a window. To disable NoCapsLock, open the Exchange window, select NoCapsLock from the scroll gadget, and select the Remove gadget or double-click on its icon again.

CrossDOS

The CrossDOS commodity controls text options for active CrossDOS drives. The CrossDOS commodity window shows the available drives and allows you to set Text Filtering or Text Translation separately for each. Hotkey: Ctrl+Alt+C. For more information on the CrossDOS commodity, see Chapter 7.

FKey

FKey allows you to assign functions to keys, eliminating the need for repetitive typing.

When you double-click on the FKey icon, the window illustrated in Figure 10-7 appears:
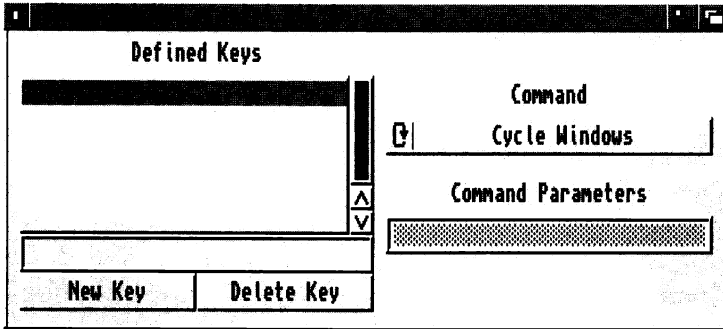
Figure 10-7. FKey Window

FKey lets you assign any of eight commands to any key sequence that you can enter.

The Defined Keys scrolling list shows all the currently defined key sequences.

The New Key and Delete Key gadgets let you add and remove key sequences.

The Command cycle gadget lets you pick a command for the current key sequence. The possible commands are:

Cycle Windows   Brings the rearmost application window on the Workbench screen to the front of the display and selects it. This only affects application windows opened by tools or projects, such as Clock. Disk and drawer windows are not affected.

Cycle Screens   Brings the rearmost screen to the front of the display.

Enlarge Window   Enlarges the selected window to its maximum size, taking into account the edges of the screen.

Shrink Window   Shrinks the selected window to its minimum size.

Toggle Window Size   Zooms the selected window as if you had selected its zoom gadget. It also works on windows that only have a zoom gadget and no sizing gadgets.

Insert Text   When the key sequence is entered, the specified string is inserted instead. The string to insert is specified in the Command Parameters gadget.

Run Program	Lets you run a program by entering any key sequence. The program name and its arguments are specified in the Command Parameters gadget.
Run ARexx Script	Lets you run an ARexx script by entering any key sequence. The script name and its arguments are specified in the Command Parameters gadget. Putting quotes around the script name turns it into an ARexx string file.

The Command Parameters text gadget lets you specify arguments for three of the commands.

For example, to designate Alt F1 as the key sequence to start DPaint, follow these steps:

1. Select the New Key gadget.

2. Enter the key sequence in the string gadget as Alt F1 (be sure to enter a space between Alt and F1).

3. Select the Run Program option in the Command cycle gadget.

4. Enter the path for DPaint in the Command Parameters text gadget.

Mouse Blanker

Mouse Blanker blanks the mouse pointer from the display when you are typing at the keyboard. The mouse pointer returns to the screen when you move the mouse again.

To enable Mouse Blanker, double-click on its icon. To disable Mouse Blanker, double-click on its icon again or open the Exchange window, select Mouse Blanker from the scroll gadget, and select the Remove gadget.

Exchange

Exchange manages the background utilities contained in the Commodities drawer. The hot key for Exchange is Ctrl+Alt+Help.
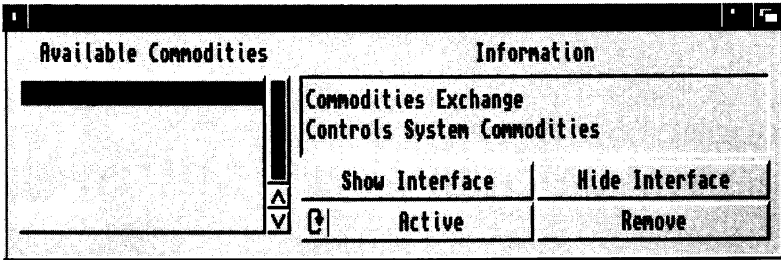
Figure 10-8. Exchange Window

The Exchange window, illustrated in Figure 10-8, lists the commodities that are running and displays information about each one as it is selected. The running commodities can be activated or rendered inactive through Exchange. Turn them off by selecting the Remove gadget. Display the window of a commodity by selecting Show Interface and interact with it as if you had opened the commodity's icon. Select Hide Interface to close the commodity window without turning the commodity off.

Chapter 11
ED Editor

ED is a full screen ASCII text editor that uses menus and function keys to access its features. You can use either a mouse or the keyboard to perform operations. Although ED's menus are preprogrammed, you can reconfigure them as needed.

Note   ED does not accept source files containing binary code. To edit these types of files, use EDIT or MEmacs.

The bottom line of the ED window is the status line. Error messages displayed on the status line remain until you enter another ED command. This is also the line on which you enter extended mode commands.

Starting ED

Start ED from a Shell or with the Workbench Execute Command menu item, described in Chapter 3. Open ED at the prompt by entering ED and a new or existing filename, as follows:

```
1>ED Filename
```

This filename is used for saving your work. If the filename specified cannot be found in the current directory, ED opens a blank window and displays the message "Creating new file".

ED has a default text buffer size of 40,000 bytes. You can change the buffer size using the SIZE option. For example:

```
1> ED Script SIZE 55000
```

increases the size of the buffer to 55,000 bytes.

S:Ed-startup File

When you run ED, the file S:Ed-startup is executed. This is a command file of ED extended mode commands, without the Escape characters, that sets up the default menu assignments. You can edit this file to set up custom menus or preprogrammed function key assignments. If an S:Ed-startup file cannot be found, ED opens with an expanded set of menus, giving you more options. Advanced users can delete, or rename, the default Ed-startup file to get the expanded menu or create their own customized file of startup options.

Using ED

There are two types of ED commands: immediate and extended. ED opens in immediate mode.

Immediate Commands

In immediate mode, ED executes commands right away. Specify an immediate command by pressing a single key or Ctrl+key combination or by using the mouse. All immediate commands have corresponding extended versions.

Immediate commands control the following:

• Cursor movement
• Text scrolling
• Text insertion
• Text deletion
• Repetition of commands

Moving the Cursor in Immediate Mode

The cursor can be positioned anywhere in text by moving the pointer to the desired spot and clicking the selection button. To move the cursor with the keyboard, use the arrow keys, Tab, and Ctrl+key combinations.

Move the cursor one position in any direction by pressing the appropriate arrow key. If the cursor is on the right edge of the screen, ED scrolls the text to the left to display the rest of the line. ED scrolls the text vertically one line at a time and horizontally ten characters at a time. You cannot move the cursor beyond the left edge of the line. If you try to move the cursor beyond the top or bottom of the file, ED displays a "Top of File" or "Bottom of File" message.

Additional key combinations that control cursor movement are:

Shift+up arrow	Top of the file.
Shift+down arrow	Bottom of the file.
Shift+left arrow	Left edge of the ED window (regardless of the margin setting).
Shift+right arrow	End of the current line.
Ctrl+]	To right edge of current line (if cursor is already there, it is moved to the left edge).
Ctrl+E	Start of the first line on the screen (if cursor is already there, it is moved to the end of the last line on the screen).
Ctrl+T	Start of the next word.
Ctrl+R	Space following the previous word.
Tab	To the next tab position (multiple of three).

If your file has more lines than can fit in the ED window, you can scroll through the file vertically. Scroll one line at a time by pressing the up or down cursor key to move in the corresponding direction. Move the text in jumps by pressing:

Ctrl+D	Moves 12 lines down through the file.
Ctrl+U	Moves 12 lines up through the file.

These commands do not move the cursor position in the window; they redraw the text in the window with the new line at the cursor position.

If something disturbs your screen, such as an alert from another program appearing in the ED window, press Ctrl+V to refresh the entire screen.

Inserting Text in Immediate Mode

Any characters typed in immediate mode are inserted at the current cursor position and the cursor is shifted to the right. Any characters to the right of the cursor are shifted to make room for new text. If the line is wider than the width of the window, the window scrolls to the right to show what you are typing. If you move the cursor beyond the end of the line, ED inserts spaces between the end of the line and any new characters inserted.

There is maximum limit of 255 characters in a line. If you add more characters, ED displays a "Line Too Long" message.

To split the current line at the cursor, press Return. Any text to the left of the cursor remains on the original line. All text under and to the right of the cursor moves down onto a new line. Pressing Return at the end of the line creates a new blank line.

Deleting Text in Immediate Mode

ED has no typeover mode. To replace a word or line, you must delete the existing words and insert new information with the following keys and key combinations:

Backspace	Deletes the character to the left of the cursor.
Del	Deletes the character under the cursor.
Ctrl+O	If the cursor is over a space, all spaces up to the next character are deleted. If the cursor is over a character, all characters up to the next space are deleted.
Ctrl+Y	Deletes all characters from the cursor to the end of the line.
Ctrl+B	Deletes the entire line.

When text is deleted, any characters remaining on the line shift to the left and any text beyond the right edge of the screen becomes visible.

Changing Case in Immediate Mode

You can change the case of text by positioning the cursor and pressing Ctrl+F. If the letter is lower case, it becomes upper case and vice versa. Ctrl+F does not change non-alphabetic characters or symbols.

After you press Ctrl+F, the cursor moves to the right. You can repeat the command until you have changed all the letters on the line.

Extended Commands

In extended mode, commands are displayed on the command, or status, line at the bottom of the window. ED does not execute these commands until you press Return or Esc. If you use Esc to execute extended commands, ED remains in extended mode. If you use Return to execute extended commands, ED returns to immediate mode.

To enter extended mode, press Esc. Extended commands consist of one or two characters. Multiple extended commands can be typed on a single command line by separating them with a semicolon. Commands can be grouped together for ED to repeat automatically. Use Backspace to correct mistakes. An asterisk appears as a prompt in the status line.

You can also execute commands through the programmable menu and function keys. Reconfigure the menus and functions keys by assigning a command to the key or menu item of your choice.

In some cases, arguments require a command, such as a number or a text string. A string argument for an ED command must be enclosed in a pair of identical delimiter characters. In unambiguous situations you may omit the trailing one. Valid delimiters are ", /, \, !, :, +, and %. You cannot use the same delimiter character inside your string. Invalid delimiter characters include letters, figures, and control characters.

You can also ask ED to use a file requester, allowing you to view the contents of the drives and directories in your system.

To invoke a file requester after a load or save command, you must place a question mark (?) before the required string argument. Be sure to include a space before the question mark and the string (for example, sa ?/Text/.). Normally, when a command is followed by a string, ED treats the string as the file to be loaded or saved and attempts the operation immediately. However, the question mark indicates that you want to specify the file through a file requester. You must still specify a string after the question mark, but the string is the text that appears in the file requester title bar.

Extended commands manage the following:

- Program control
- Cursor movement
- Text altering
- Block control
- Searching and exchanging text

Program Control in Extended Mode

The following are program control commands:

New Project	Esc,N,W	Creates a new file, replacing the existing file. The message "Edits will be lost -- type Y to confirm" is displayed. To save the existing file, press any key (except Y) to abort the command.
Open File	Esc,O,P	Opens a file. Specify the file by entering the path to the file as a string. To display a file requester for entering a filename, type a question mark after the command along with a properly delimited string. The message "Edits will be lost -- type Y to confirm:" reminds you that you are replacing the current file.
Run File	Esc,R,F	Loads and executes a command file of extended mode commands.

Undo	Esc,U	Reverses changes made to the current line. ED cannot undo a line deletion. Once you have moved from the current line, the U command cannot undo a change.
Show	Esc,S,H	Shows the current state of the editor. The screen displays information, such as the value of tab stops, current margins, block marks, and the name of the file being edited.
Set Tab	Esc,S,T	Sets the tab stop. To change the current setting of tabs, use the ST command followed by a number.
Set Left Margin	Esc,S,L	Sets the left margin. To specify the left margin, use the SL command followed by a number indicating the column position. The left margin should not be set beyond the right edge of the screen.
Set Right Margin	Esc,S,R	Sets the right margin. To specify the right margin, use the SR command followed by a number indicating the column position.
Extend Margins	Esc,E,X	Extends the margins for the current line. Once you enter the EX command, ED ignores the right margin on the current line.
Status Line Message	Esc,S,M	Prints a given string on the status line.
Save	Esc,S,A	Saves the text. If no filename is specified, SA saves to the current file. You can save to a different file via a file requester or by giving the name directly. To save directly to a file, specify the name on the command line. SA followed by Q is equivalent to the X command.
Exit	Esc,X	Exits ED, saving the current file to the designated filename. ED writes the text it is holding in memory to the file that was specified when ED was opened and then terminates.

Exit with Query	Esc,X,Q	Exits ED unless changes have been made to the file. If changes have been made, a requester asks if you want to exit without saving the file. XQ is equivalent to clicking the Close gadget on the ED window.
Quit	Esc,Q	Exits ED without saving changes. If you have made any changes to the file, ED asks if you want to quit. If you press Y, ED terminates immediately without saving the file, discarding any changes.

Cursor Control in Extended Mode

The following commands move the cursor around the screen:

Esc,T	Top of the file; first line of the file is the first line on the screen.
Esc,B	Bottom of the file; last line of the file is the bottom line on the screen.
Esc,E,P	End of a page.
Esc,P,D	Next page.
Esc,P,U	Previous page.
Esc,N	Start of the next line.
Esc,P	Start of the previous line.
Esc,C,L	One place to the left.
Esc,C,R	One place to the right.
Esc,C,E	End of the current line.
Esc,C,S	Start of the current line.
Esc,T,B	Next tab position.
Esc,W,N	Start of the next word.
Esc,W,P	Space after previous word.
Esc,M<n>	Move the cursor to the line specified by <n>.

Altering Text in Extended Mode

The following commands edit text on the screen:

Insert Before	Esc,I	Inserts the specified string on the line before the cursor. Specify a new line's string after the I command to insert text before the current line containing the cursor.
Insert After	Esc,A	Inserts the specified string on the line after the cursor. This command works in the same as I, except that the string is inserted on a new line beneath the current cursor position.

Other commands include:

Esc,S	Splits the current line at the cursor position.
Esc,J	Joins the next line to the end of the current line.
Esc,D	Deletes the current line.
Esc,D,C	Deletes the character under the cursor.
Esc,D,L	Deletes the character to the left of the cursor.
Esc,D,W	Deletes to the end of the current word.
Esc,E,L	Deletes to the end of the current line.
Esc,F,C	Switches the case of the letters.

Block Control in Extended Mode

The following commands move, insert, or delete text:

Block Start Block End	Esc,B,S Esc,B,E	Identifies the beginning and end of a block of text. To specify a block of text to be moved, inserted, or deleted, place the cursor on the first line that you want in the block and enter the BS command. Move the cursor to the last line that you want in the block and enter the BE command.
		You cannot start or finish a block in the middle of a line.

Insert Block	Esc,I,B	Inserts a copy of the block after the current line. The block remains defined until you change the text. Use IB to insert copies of the block throughout the document.
Delete Block	Esc,D,B	Deletes a block.
Show Block	Esc,S,B	Redraws the display so the block is at the top of the screen.
Write Block	Esc,W,B	Writes the block to a specified file. ED overwrites any other files with that name and copies the block to the file.
Insert File	Esc,I,F	Inserts a file into the current file. ED reads into memory the specified file at the point immediately following the current line.

Searching and Exchanging in Extended Mode

ED lets you search through the file for specific instances of text. You can substitute one pattern of text with another.

| **Find** | Esc,F | Finds the next occurrence of the specified string of text. The search starts one character beyond the current cursor position and continues forward through the file. If the string is found, the cursor moves to the start of the located string. The string must be surrounded by acceptable delimiters (quotation marks, slashes, periods, or exclamation points). The search is case-sensitive, unless the UC command is used. |
| **Backward Find** | Esc,B,F | Searches backwards through the file for the specified string. This command finds the last occurrence of the string before the current cursor position. The search continues through to the beginning of the file. |

Exchange	Esc,E	Exchanges one occurrence of text with another. For example, to replace the word to with too, enter "to"too".
		Specify empty strings by typing two delimiters with nothing between them. If the first string is empty, ED inserts the second string at the current cursor position. If the second string is empty, ED searches for the next occurrence of the first string and then deletes it. Note that ED ignores margin settings when exchanging text.
Exchange and Query	Esc,E,Q	Searches for the text to be exchanged and requests verification by displaying "Exchange?".
Upper/Lower Case	Esc,U,C	Specifies a case-insensitive search. UC instructs all subsequent searches not to make any distinction between upper and lower case text. To make searches case-sensitive again, use the LC command.

Repeating Commands in Extended Mode

Pressing Ctrl+G repeats a command line. You can set up and execute complex sets of editing commands many times.

You can repeat a command a specified number of times by entering the number before the command. For example:

```
4 E/rename/copy
```

exchanges the next four occurrences of "rename" to "copy".

Use the RP (Repeat) extended command to repeat a command until ED returns an error, such as reaching the end of the file. For example:

```
T;RP E/rename/copy/
```

moves the cursor to the top of the file, then exchanges all occurrences of "rename" with "copy". The T command (Top of File) changes all occurrences of Rename in the whole file. Otherwise, only the occurrences after the current cursor position are changed.

To execute command groups repeatedly, you can group the commands together in parentheses. You can also nest command groups. For example:

```
RP (F/Workbench/;3A//)
```

inserts three blank lines (the null string //) after every line containing Workbench.

To interrupt any sequence of extended commands, press any key during execution. If an error occurs, ED abandons the command sequence.

Appendix A
Trouble Shooting

If you encounter problems while using system software, the following table describes how to resolve them:

Symptom	Cause	Solution
Display is flickering; screen is not positioned properly.	The wrong display mode is selected.	Open the ScreenMode editor in the Prefs drawer and select the appropriate display mode. If the screen display is totally indecipherable, you may have to reboot with a different Workbench disk.
A requester asks you to insert a particular volume into any drive.	The system cannot find the disk, partition, or assigned directory it is looking for. The disk containing the program may have been removed, renamed, or an ASSIGN was not made.	Check the volume name in the requester. If it is the name of a floppy disk you have removed, insert that disk. If you have mistyped a volume name in a requester or command, select Cancel, then enter the correct name. If the message appears while the Amiga is booting, you may need to add an ASSIGN statement to your User-startup file.

Symptom	Cause	Solution
A requester states that there is not enough memory to load a program.	You have too many programs running and there is not enough RAM left to start another program.	Close any unnecessary windows and exit unnecessary programs.
You cannot move the pointer and keyboard input has no effect.	A program has crashed the Amiga.	Reboot.
	Keylock systems may have lock on.	Turn key to enable position.
The screen goes blank and then a flashing red box appears stating an error, such as Not Enough Memory.	A program performed an illegal action that was serious enough to cause a system failure.	Press the left mouse button and the computer reboots.
A flashing amber box appears stating Recoverable Alert.	A program performed an illegal action that caused an error from which the system can recover.	Press the left mouse button.

Appendix B
Screen Display Modes

The following tables list display modes available on the Amiga.
They are grouped according to the Amiga chip set, showing the
possible modes under the original chip set first, followed by those
that require the Enhanced Chip Set, and then those that require the
AA chip set.

To determine if you can use a particular mode, check the horizontal
and vertical scan rates listed in the Mode Properties display against
the specifications for your monitor. If the display mode's scan rates
are outside your monitor's acceptable range, you cannot use that
mode.

Within the chip set groups, the modes are listed by the monitor file
name that must be in your Devs/Monitors drawer for those modes to
be available in the ScreenMode editor. To use any of the display
modes shown, you must have the full custom chip set required and
the appropriate monitor driver icon must be present in
Devs/Monitors.

Screen Resolution is given in pixels, with the horizontal size
followed by the vertical size. For example, 640 x 400 is a screen 640
pixels wide and 400 pixels high. In the Color Palette column, the
maximum number of displayable colors is given first, followed by a
slash, and then the size of the palette for that mode. For example,
16/4096 is a maximum of 16 displayable colors from a total palette of
4096 colors.

Monitors Available on Amigas with Original Chip Set

Note   All monitors in this Appendix are available for use
          with the AA chip set. On Amigas using the AA chip
          set the color palette for all monitors is 256/16 million,
          except for A2024 monitors.

NTSC Monitor

Screen Display Mode	Screen Resolution	Color Palette
High Res	640 x 200	16 / 4096
High Res Laced	640 x 400	16 / 4096

PAL Monitor

Screen Display Mode	Screen Resolution	Color Palette
High Res	640 x 256	16 / 4096
High Res Laced	640 x 512	16 / 4096

The following are additional display modes that are available under
the original Amiga chip set. These display modes can be used by
applications and the Workbench screen. The Low Res modes are
particularly helpful to users who are visually impaired since they
offer an enlarged display.

NTSC Monitor

Screen Display Mode	Screen Resolution	Color Palette
Low Res	320 x 200	32 / 4096
Low Res Laced	320 x 400	32 / 4096
HAM	320 x 200	256,000 / 16 million
HAM Laced	320 x 400	256,000 / 16 million
Extra Halfbrite	320 x 200	64 / 16 million
Extra Halfbrite Laced	320 x 400	64 / 16 million

PAL Monitor

Screen Display Mode	Screen Resolution	Color Palette
Low Res	320 x 256	32 / 4096
Low Res Laced	320 x 512	32 / 4096
HAM	320 x 256	256,000 / 16 million
HAM Laced	320 x 512	256,000 / 16 million
Extra Halfbrite	320 x 256	64 / 16 million
Extra Halfbrite Laced	320 x 512	64 / 16 million

Monitors Available on Amigas with Enhanced Chip Set

Note   All monitors in this Appendix are available for use
            with the AA chip set. On Amigas using the AA chip
            set the color palette for all monitors is 256/16 million,
            except for A2024 monitors.

The following additional display modes are available for the
Workbench screen on ECS (Enhanced Chip Set) Amiga models:

NTSC Monitor

Screen Display Mode	Screen Resolution	Color Palette
Super-High Res	1280 x 200	4 / 64
Super-High Res Laced	1280 x 400	4 / 64

PAL Monitor

Screen Display Mode	Screen Resolution	Color Palette
Super-High Res	1280 x 256	4 / 64
Super-High Res Laced	1280 x 512	4 / 64

Multiscan Monitor

Screen Display Mode	Screen Resolution	Color Palette
Productivity	640 x 480	4 / 64
Productivity Laced	640 x 960	4 / 64

A2024 Monitor

Screen Display Mode	Screen Resolution	Color Palette
10Hz	1024 x 800	4 / 64
15Hz	1024 x 800	4 / 64

(On PAL Amigas, A2024 modes have a vertical resolution of 1024.)

Euro36 Monitor

Screen Display Mode	Screen Resolution	Color Palette
Low Res	320 x 200	32 / 4096
Low Res Laced	320 x 400	32 / 4096
High Res	640 x 200	16 / 4096
High Res Laced	640 x 400	16 / 4096
Super-High Res	1280 x 200	4 / 64
Super-High Res Laced	1280 x 400	4 / 64

Euro72 Monitor

Screen Display Mode	Screen Resolution	Color Palette
Productivity	640 x 400	4 / 64
Productivity Laced	640 x 800	4 / 64

Super72 Monitor

Screen Display Mode	Screen Resolution	Color Palette
High Res	400 x 300	16 / 4096
High Res Laced	400 x 600	16 / 4096
Super-High Res	800 x 300	4 / 64
Super-High Res Laced	800 x 600	4 / 64

Note   If you have an Amiga model with Display Enhancer
circuitry, you should disable the the Display Enhancer
in Super-High Res, Euro36, Euro72, and Super72
modes, to avoid distortion of the display.

A2024 modes require an A2024-style monochrome
monitor. Do not attempt to use an A2024 mode if you
do not have such a monitor.

Monitors Available on Amigas with AA Chip Set

Note   All monitors in this Appendix are available for use
with the AA chip set. On Amigas using the AA chip
set the color palette for all monitors is 256/16 million,
except for A2024 monitors.

The following are display modes that are only available for the Workbench screen on AA chip set Amiga models:

DBLNTSC Monitor

Screen Display Mode	Screen Resolution	Color Palette
High Res	640 x200	256 / 16 million
High Res Laced	640 x 800	256 / 16 million
High Res Laced No Flicker	640 x 400	256 / 16 million
Low Res	320 x 200	256 / 16 million
Low Res Laced	320 x 800	256 / 16 million
Low Res No Flicker	320 x 400	256 / 16 million

DBLPAL Monitor

Screen Display Mode	Screen Resolution	Color Palette
High Res	640 x 256	256 / 16 million
High Res Laced	640 x 1024	256 / 16 million
High Res No Flicker	640 x 512	256 / 16 million
Low Res	320 x 256	256 / 16 million
Low Res Laced	320 x 1024	256 / 16 million
Low Res No Flicker	320 x 512	256 / 16 million

Appendix C
Special Boot Options

This appendix describes the following special boot options in the
Amiga Early Startup Control system:

- Disabling devices to free memory for large game programs
- Choosing display options for running games
- Diagnosing expansion board failures

The Amiga Early Startup Control Screen, illustrated in Figure C-1,
allows you to select Boot Options, Display Options, or Expansion
Board Diagnostics. Access the Amiga Early Startup Control Screen
by turning on or rebooting your Amiga while holding down both
mouse buttons. You can toggle between NTSC and PAL display
modes by pressing any key on the keyboard, except for the qualifier
keys (Shift, Alt, and Control) and the cursor keys.
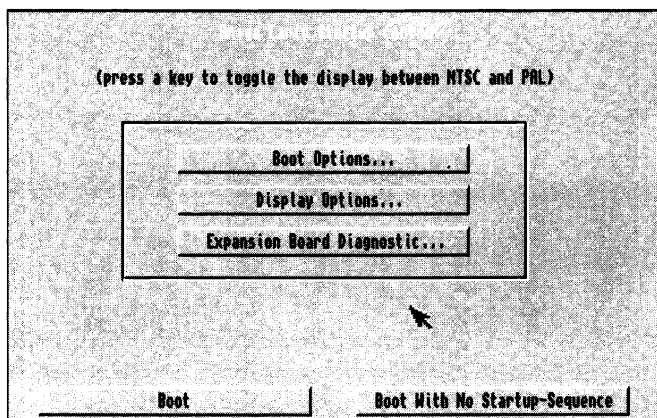
Figure C-1. Amiga Early Startup Control Screen

Exit the Amiga Early Startup Control screen by selecting the Boot
button for a normal system boot or the Boot with No Startup-
Sequence button to boot directly into an AmigaDOS Shell window.

Disabling Devices

The system software requires additional memory to support the
operation of each hard disk partition or floppy disk drive. The extra
memory that is used to maintain a hard disk or an extra floppy disk
drive can prevent some floppy-based games from running.

Selecting Boot Options from the Amiga Early Startup Control
Screen displays the Boot Options screen, illustrated in Figure C-2.
This screen lets you selectively disable your hard disk partitions
and any external floppy drives to leave enough RAM for the
programs to run correctly.

```
Select Boot Device              Control Active Devices

                    Enabled  - DF0      priority 5   DOS0  trackdisk-0
      WB_3.x        Enabled  - WB_3.x   priority 2   DOS1  scsi-6
                    Enabled  - Work     not bootable DOS1  scsi-6






                                                                    ^
                                                                    v


              Use                                     Cancel
```
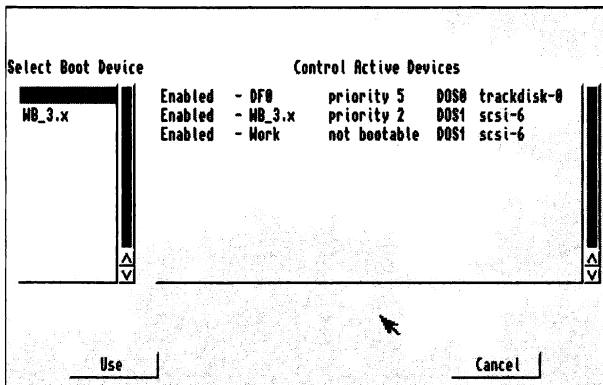
Figure C-2.   Boot Options Screen

The Amiga displays a list of hard disk partitions and floppy drives
in the Select Boot Device column. The devices in this column are
listed in descending priority for the system to access when it boots.
You can select any of them to override the priority.

The Control Active devices column shows the status of the devices.
Clicking on the status line toggles between Enabled and Disabled.

If you are disabling hard drive devices in order to free memory for games, be sure to leave at least one bootable floppy drive enabled.

Note   If your system has more than one floppy drive and the game lets you use additional drives, you can leave those drives (DF1, DF2, and DF3) enabled in the Control Active Devices column on the Boot Options screen.

Selecting Use implements your boot device choices for the current session only. When you reboot your Amiga, it returns to the same configuration as it had before you changed it. Selecting Cancel on the Boot Options screen cancels any changes you made and returns to the Amiga Early Startup Control Screen.

Choosing Display Options

Selecting Display Options from the Amiga Early Startup Control screen displays the Display Options screen, illustrated in Figure C-3. This screen lets you select the display type and chip set that your system uses.
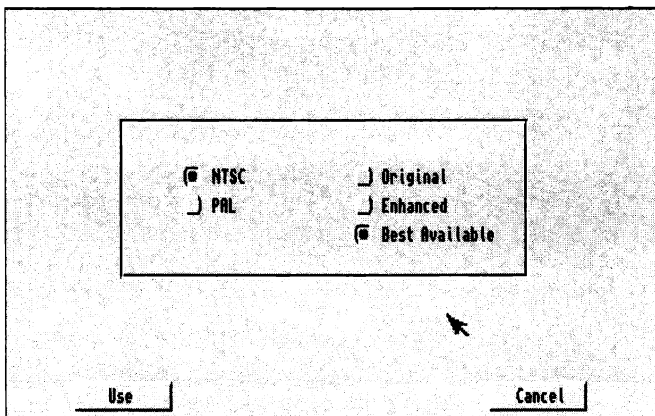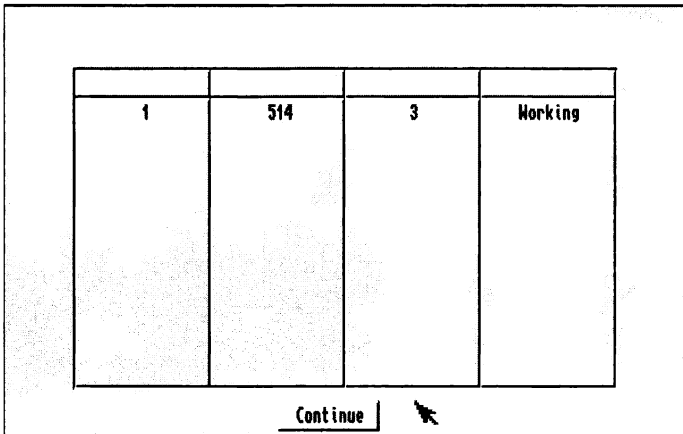
Figure C-3. Display Options Screen

Users with systems containing AA chip sets can choose the Best Available selection in which the system uses the AA chip set. If a game or application needs either the original chip set or the Enhanced Chip Set (ECS) you must select either one for the system emulate. Users with systems containing the ECS chip set can emulate the original chip set if selected. This option is ghosted for users with systems containing only the original chip set.

Diagnosing Expansion Board Failures

Selecting the Expansion Board Diagnostic option displays the Expansion Board Diagnostic Screen, illustrated in Figure C-4. This screen lets you view information about and the status of expansion boards in your system. If one of your expansion boards fails, this screen is automatically displayed.

Figure C-4. Expansion Board Diagnostic Screen

Board Number   The number of the expansion board

Manufacturer   The number of the maker of the board

Product column   The manufacturer's product number for the board

Status column   The status of the board: Working or Defective

We recommend providing the manufacturer with this information when you contact them concerning a failed board.

Glossary

This glossary provides definitions of terms used in the Amiga manuals.

acceleration
An option, selected through the Input editor, that causes the pointer movement to increase as the mouse is moved at a constant speed. Acceleration provides a higher degree of control for small mouse movements and less control, but greater mouse speed, for large movements.

action gadget
A gadget in a window that performs an operation in the window when you select the gadget. Common action gadgets are Save, Continue, and Cancel.

active
Currently selected; used in reference to the selected Workbench window.

alias
An alternative name for an AmigaDOS command or command string, specified with the ALIAS command.

AmigaDOS
The disk operating system (DOS) used by Amiga computers. A disk operating system provides the basic functions of the computer.

application
A program or collection of programs that perform a specific task, such as a word processor, database, or video titler.

archive

1. (n) A backup copy of a file or files.

2. (v) To copy files to disk or tape for backup purposes.

argument

An additional piece of information, such as a filename, value, or option, included along with a command. This information determines the exact action of the command.

argument passing

Specifying parameters on the command line for a program or command to follow.

ASCII (American Standard Code for Information Interchange)

A standardized format for text that assigns code numbers to characters, allowing the exchange of information between different types of computers.

aspect ratio

The proportion of an image's height to its width.

assign

To link a directory name to a logical device name with the ASSIGN command, so that programs that use that directory can look for one device name rather than having to search through several layers of subdirectories for it. For example, the RAM:T directory is commonly assigned to the device name T:.

attributes

A series of flags stored with every file. Attributes indicate file type and control the operations (read, write, delete, and so forth) permissible on the file. Also called protection bits.

autoscroll

To automatically move a screen when the pointer reaches the edges of the viewable area.

backup

A copy of a file on disk or tape used to replace lost data.

back up

To make a backup copy.

baud rate
> The speed at which a device receives or transmits information in serial communication. Roughly equivalent to bits per second.

binary
> The base-2 number system that uses only the digits 0 and 1.

bit
> A single binary digit (1 or 0).

bitplane
> A memory area that adds one bit to the graphic presentation of every pixel. If more than two colors are to be displayed, more than one bitplane is needed.

block
> A contiguous series of bytes (usually 512) treated as a single logical unit in RAM or permanent storage media. Also, a user-marked area of a text file.

boot
> To start the system by reading the information needed from a storage device, such as a floppy or hard disk, into the computer's memory. Also refers to items used in this process: the boot disk. (See reboot.)

bootable
> Refers to a device from which the Amiga can boot. A bootable disk must contain all the system files needed for the computer to start operation.

bridgeboard
> An expansion board from Commodore that allows hardware emulation of PC-compatible computers.

brush
> An IFF graphics file, usually a section cut from a full-sized picture.

buffer
> A temporary storage area in RAM.

bug
> An error in software or hardware.

byte

A unit of memory consisting of eight bits, usually equivalent to one character.

cache memory

A temporary area in memory with extremly fast access that improves the system performance.

check box

A gadget that lets you turn an option on or off. When a check mark appears in the box, the option is selected, or on.

chip

A miniaturized electronic circuit, housed in a small, black, rectangular block edged by metal connector pins. A computer is made up of a variety of specialized chips.

Chip RAM

The area of RAM accessible to the Amiga's custom chip set. This memory is used for graphics and sound data. Also called graphics memory.

clear

1. To change a bit or flag to its 0, off, or disabled state. Opposite of set.

2. To erase a screen or window display.

CLI (Command Line Interface)

A means of communicating with a computer by issuing commands from the keyboard. The Shell is the Amiga's CLI.

click

To press and release a mouse button.

Clipboard

An area in memory that is used to store text and graphics while they are being transferred between programs.

close

To remove a window from the screen.

close gadget

A gadget that may appear in the upper left corner of a window to allow you to close the window.

cold reboot
　To reset the Amiga by turning the power off, waiting 20 seconds, then restoring power.

color correction
　A printing option, selected through the PrinterGfx editor, that tries to better match the colors of a printout to the colors on the screen.

command
　A statement given to the Amiga to perform a task or achieve a result.

command history
　A feature of the Shell that allows you to recall previously entered command lines by using the cursor keys.

command line
　The line on which commands and their arguments are typed. Also, all the information that has been typed on the line.

console window
　A window used for the input and output of text, such as a Shell window.

Control-key combination
　A key combination that performs a special function, entered by holding down Ctrl while pressing another key on the keyboard. Some Control-key combinations are executed as soon as they are pressed, such as when Ctrl-C is used to abort the execution of an AmigaDOS command. Some produce a reversed character image and have no immediate effect.

coprocessor
　A separate processor chip that assists the CPU by performing specific tasks, such as mathematical computations or rapid data transfer.

copy and paste
　The act of copying a block of text or graphics and inserting it at a new location.

CPU (Central Processing Unit)
The "brain" of a computer; the integrated circuit chip primarily responsible for executing the instructions in a program.

current directory
The current location in the directory structure. The directory AmigaDOS uses as the default directory to operate within, if no other directory is specified.

cursor
A highlighted rectangle on the screen used to indicate text position.

cycle gadget
A gadget for selecting one of several options. One option is displayed at a time and as the gadget is selected, the other options become visible. The displayed option is the selected option.

cylinder
A logical division of a magnetic storage disk. Amiga 3.5 inch floppy disks are divided into 80 cylinders during the formatting process.

data
A collection of information.

dead key
A key, or key combination, that modifies the output of the next key to be pressed. For example, on an American keyboard, Alt-H superimposes a caret (^) symbol over the next key to be pressed. Alt-H is a dead key combination.

debug
To find and fix mistakes in software or hardware.

default
A value or action assumed if you have not specified something else.

Default Tool
A tool specified in the project icon's Information window. When the project icon is opened, the Default Tool is automatically loaded and run.

delete
> To erase or discard a file, buffer, or other stored item.

delimiter
> A special character marking the beginning and end of a string.

density
> The number of dots per inch. Many printers support several print densities. Usually, the higher the density, the clearer the printout.

depth gadget
> A gadget that may appear in the upper right corner of a window or screen for moving that window or screen in front of or behind other windows or screens. This is sometimes referred to as depth adjusting.

destination
> The device, directory, or file that is receiving information.

device
> A physical mechanism, such as a printer or disk drive, or a software entity (logical device), such as CON: or NIL:, used as a source or destination for information.

device name
> A short name, such as DF0:, PC1:, or PRT:, that identifies a particular hardware or software device. Device names must end in a colon (:).

directory
> A subdivision in a computer's filing system used to organize files and other directories (subdirectories). Directories are represented on the Workbench as drawer icons.

disk
> A medium for mass storage of computer data. Most computer disks store information magnetically; optical (laser-read) disks are also used.

disk drive
> A storage device that reads and writes data from and to a storage disk, such as a floppy disk.

disk operating system
>   The software that controls the basic input and storage functions
>   of a computer.

display box
>   A rectangular box, usually under a scroll gadget or next to a
>   selection gadget, that displays the current selection. You cannot
>   edit a display box.

display mode
>   A name given to the set of parameters, such as resolution and
>   scan frequency, that define a screen. For example, a High Res
>   display mode is 640 pixels wide and 200 pixels high (for NTSC
>   Amigas).

dithering
>   1. Creating smoother color or grey-scale shading of screen or
>   printed displays by alternating pixel color or density. The
>   PrinterGfx and PrinterPS Preferences editors provides several
>   settings for automatic dithering of printed graphics.
>
>   2. Creating the illusion of a color by using a pattern of other
>   colors. For example, creating the illusion of purple by
>   alternating pixels of red and blue.

double-click
>   To quickly press and release the selection button twice.

drag
>   To move an icon, window, gadget, or screen across the display
>   by pointing to the object, holding down the selection button, and
>   moving the mouse.

drag selection
>   The process of selecting several icons at once by holding down
>   the selection button and using the mouse to draw a box around
>   the icons you want to select. When you release the mouse
>   button, all the icons in the box are selected.

drawer
>   A subdivision of a disk storage area. A drawer corresponds to
>   an AmigaDOS directory.

drive name
> A name assigned to a floppy disk drive or hard disk partition, such as DF0: or DH1:.

dump
> A printout of the image displayed on the screen.

ECS (Enhanced Chip Set)
> The upgraded versions of the Amiga's Agnus and Denise coprocessor chips. The Enhanced Chip Set offers additional display modes (ECS modes) and expands previous graphics capabilities. Many of the benefits of the ECS are available only in conjunction with Release 2 or higher of the operating system.

editor
> A program that lets you create and/or modify certain types of files. The Amiga provides Preferences editors to change Prefs settings and the text editors, MEmacs and ED, for changing text files.

escape sequence
> A sequence of characters, beginning with the Escape character, that perform a special function when entered on a command line or printed as part of a string. Escape sequences are typically used to alter the style of type used by a printer.

execute
> To carry out the instructions in a command line, program, or script.

extended selection
> The process of selecting several icons at once by holding down Shift while selecting each icon with the mouse.

Extra Halfbrite
> A special graphics mode that doubles the number of colors on the screen by duplicating existing colors at half their brightness.

Fast RAM
> General memory used by programs and data.

field
> The screen area behind the text of a Workbench icon label. The color of the field can be changed with the Font editor.

file

An organized collection of data referred to by a name and is stored on some type of media.

file system

The organization and software that controls the data, files, and directories stored on a volume. The primary Amiga file systems are FFS (FastFileSystem) and OFS (OldFileSystem).

floppy disk

A removable magnetic storage medium. The Amiga uses 3.5 inch, double-sided, double-density floppy disks in a rigid plastic case; they can store approximately 900,000 bytes (880KB) of information.

font

Also called typeface. A particular design of a set of letters, symbols, and numbers used for text display, such as Topaz and Helvetica. Fonts are usually available in several sizes, defined in points (10 point, 12 point, and so on).

format

1. To prepare a disk for use with the Amiga. Formatting a disk erases all previously stored data.

2. A way of describing the proper syntax for AmigaDOS commands.

fragmentation

A scattered distribution of data on a disk that results in lack of availability of contiguous areas of memory. If removing data does not alleviate this problem, reformatting may be necessary. This can also occur in RAM, requiring a reboot to resolve it.

function keys

Keys at the top of the Amiga keyboard, labeled F1 to F10, that can be programmed to perform special tasks.

gadget

Any of various programmed graphic images that may appear in a window, requester, or screen and can be manipulated with the mouse to perform a certain function. Each gadget is of a specific type and performs a specific action. Most gadgets appear raised and when selected, appear to sink into the screen.

genlock
> A piece of hardware that allows Amiga graphics to be overlaid onto another video source, for example, from a camera or VCR. The genlock is typically used for applying titles or captions to video or photographic media.

ghosting
> Displaying menu or gadget items on the screen less distinctly than normal to indicate that they are currently unavailable.

graphics memory
> See Chip RAM.

GUI (Graphical User Interface)
> A visually-oriented system allowing you to tell a computer what to do by manipulating graphic symbols rather than by typing in commands. The Workbench is the Amiga GUI.

HAM (Hold And Modify)
> An Amiga graphics mode that allows the full Amiga color palette to be displayed on the screen.

handshaking
> The electronic protocol required for communication between two computing devices.

hard disk
> A high-speed, large-capacity mass-storage device from which the disks usually cannot be removed. Often called a hard drive or hard disk drive.

hierarchical
> A term used to describe the multi-leveled AmigaDOS file structure in which directories can contain other directories and/or files.

history buffer
> A section of memory that stores the most recent commands for a given Shell.

hold down
> To continually press a mouse button until instructed to release it.

hot key
A key or key combination used by Commodity Exchange programs to open a hidden window.

hot spot
The pixel in a pointer, normally the tip of an arrow or the center of a crosshair that must be touching an object on the screen to select it.

icon
An image appearing on the screen to represent a disk, drawer, project or tool. Icons can be moved and selected with the mouse to allow you to work with the items they represent.

IFF (Interchange File Format)
The standardized format in which the Amiga stores picture, sound, and other types of data.

.info file
A file containing the image and position data for an icon (referred to as "dot-info").

initialize
A synonym for format.

input buffer
An area of memory used during serial communication to hold incoming information.

interlace
An aspect of some Amiga display modes that doubles the vertical screen resolution and makes it video-compatible..

Internal
Refers to an AmigaDOS command that is built into the Shell, rather than loaded from disk.

KB (Kilobyte)
1024 bytes. Often abbreviated as K.

keyboard shortcut
A method for performing a mouse action by pressing a key or key combination.

keymap
> A file that determines the arrangement of characters on the keyboard and determines the meaning of each key. Different languages have different keymaps.

keyword
> A word recognized by an AmigaDOS command or a Tool Type entry as identifying an argument or specifying an option.

Kickstart
> Refers to the portion of the Amiga operating system that is in ROM.

library
> An integrated set of functions and date that can be used by different programs. On Amiga systems, libraries can be found in ROM and in the LIBS: drawer.

macro
> A single command that represents a sequence of commands. Many editors and applications support the use of macros to facilitate commonly used command sequences.

MB (Megabyte)
> 1024KB (1,048,576 bytes). Often abbreviated as M or Meg

memory
> The Amiga's internal storage circuitry that holds programs and data. The Amiga has Chip (graphics) memory, Fast (normal) memory, and 512K of ROM memory. The amount of RAM (Random Access Memory) memory limits the size and number of programs that can be operating within the Amiga at one time.

menu
> A list of on-screen options, displayed by using the menu button, from that you can choose commands that control a program.

menu bar
> The list of headings that appears across the top of the screen when the menu button is held down.

menu button
> The right mouse button.

menu item

An option that appears in a menu. For example, New Drawer is the first menu item in the Workbench's Window menu.

modem

A device allowing serial communication over telephone lines.

monitor

A video display terminal on which a computer's visual output is shown. There are many types of monitors; the Amiga's standard output uses an analog RGB color monitor to display both graphics and text.

mouse

The device used to move the pointer on the screen and to communicate with the Amiga. Its buttons can be used for displaying menus, and for selecting and dragging icons, windows and screens.

multiscan

A type of video monitor than can accept several different scan rates (types of video output).

multitasking

The ability to perform more than one operation, or task, at a time. The Amiga can have several independent programs running at once. For instance, you could simultaneously be displaying an animation, playing a sound file, communicating with another computer, and formatting a floppy disk.

nonproportional font

A font in which each character takes up an equal amount of space. For example, an uppercase W is allotted the same amount of space as a lowercase l. Also called a monospaced font.

offset

To shift or move over.

open

To make the selected object available for use. Open an icon by double-clicking on it or by selecting it then choosing the Open menu item from the Icons menu. When you open a disk or drawer icon, a window appears, displaying its contents. When you open a project or tool icon, a program is started.

operating system
　　Software, in ROM or supplied on floppy or hard disk, that
　　controls the basic functions of a computer.

overscan area
　　The normally unused area surrounding a standard-size screen.
　　The Overscan editor allows you to expand your screen to fill this
　　area.

overwrite
　　To write information to a file or disk, replacing any information
　　that previously was stored there.

parallel
　　An interface port that transfers data one complete byte (8 bits)
　　at a time, contrasted to a serial interface that sends a single bit
　　at a time. The Amiga has an external parallel port to which a
　　printer is often connected.

parent
　　The window from which another window was generated. For
　　example, the Workbench window is the parent window of the
　　disk windows.

parity
　　A method of detecting errors in serial communication by
　　attaching an extra bit to bytes of data.

partition
　　A section of the hard disk that the sytem treats as if it were a
　　separate drive.

path
　　The series of volume and drawer names that define the location
　　of a file.

pattern matching
　　An AmigaDOS feature that lets you specify file and directory
　　names by using wildcard characters. With wildcards, you can
　　create search patterns that allow you to refer to a number of
　　files whose names share a common text pattern without
　　naming each file individually.

peripheral
> An external hardware device connected to the Amiga.

pitch
> The number of characters printed in a horizontal inch or the dot distance on a color monitor.

pixels
> The dots of light that make up the Amiga screen display. A pixel is the smallest unit of display information on a given screen.

point
> 1.(v) To place the mouse pointer so that its hot spot is touching the object pointed to.
>
> 2.(n) The unit of measurement of vertical font size. Traditionally this is 1/72 of an inch; on the Amiga it means one screen pixel.

pointer
> An image on the screen, usually arrow-shaped, that moves as you move the mouse. Use the pointer to select icons and gadgets and to choose menu items.

PostScript printer
> A high-resolution printer that can accept text and graphics information in the PostScript page description language.

Preferences (Prefs)
> A Workbench drawer containing editors that let you configure and customize your Amiga environment, such as changing the colors of your screen and setting the specifications for communication through the serial port.

printer driver
> A program that enables the Amiga to communicate with a given printer.
>
> A printer driver works as a translator between a computer and a printer, taking the information from the computer and presenting it to the printer in a format that the printer can understand.

program
A series of instructions that tell the Amiga how to perform certain tasks. Applications and system software are programs.

project
A file in which information created or used by a tool is stored. For example, files created with a text editor or paint program are projects.

prompt
A message or symbol that indicates that text input to the computer is possible.

protection bits
(See attributes.)

pseudo-icon
An icon that is displayed for an object that does not have a .info file when the Show All Files menu item is chosen.

pure
Describes a command or program that can be made resident. If a file is pure, the p attribute is set.

qualifier
A key, such as Shift, Ctrl, or Alt, that changes the Amiga's interpretation of a simultaneous or subsequent keystroke or mouse click. Commonly used with Commodity Exchange programs.

radio button
A circular gadget beside an option on a list. To select an option, select its radio button. You can only select one option from the list at a time.

RAM (Random Access Memory)
Part of the Amiga's internal memory that can be used for data storage and is directly accessible by the CPU. Applications are loaded into RAM from disk and use additional RAM to process and store data while the computer is on. Data in RAM is lost when the Amiga is rebooted or powered off.

Ram Disk

A section of RAM set aside to function as if it were a disk drive. This is much faster than a physical drive, since there are no mechanical elements.

read

To retrieve stored information.

Read Only

If disk status is Read Only, you can only look at the contents of the disk, you cannot alter them.

Read/Write

If disk status is Read/Write, you can both look at and alter the contents of the disk.

reboot

To reset the Amiga by pressing Ctrl, left Amiga, and right Amiga. This is roughly equivalent to turning the power off, then on again. Memory is reset. Also called warm boot.

redirect

To change the source or destination of a command's input or output from the default by using the special characters < or >.

requester

A window that appears when the system needs a response from you. A requester contains action gadgets that give you a choice of continuing or aborting the operation in progress. To exit the requester, you must select one of the displayed gadgets.

resident

Describes a command or program that has been copied into memory, with the RESIDENT command, for quicker execution. Resident commands are specially set up to prevent reloading on subsequent executions. Only pure files can be made resident.

resolution

The dimensions, in pixels, associated with a particular display mode. For example, a normal NTSC Hires screen has a resolution of 640 (horizontal) by 200 (vertical) pixels.

RGB (Red-Green-Blue)

A type of video signal in which the three primary color signals are sent separately. Standard Amiga output uses an RGB monitor.

ROM (Read Only Memory)

Permanent memory that is pre-programmed with system instructions and does not change. The contents of ROM are not affected by user commands or program operation.

root block

The area of a disk that contains the name of the disk and information pertaining to the disk layout. If the root block is erased, you cannot retrieve any information from the disk -- it is effectively blank.

root directory

The main directory on a volume. The root directory is at the top of the filing hierarchy and is created when a volume is formatted. All other directories on the volume exist within the root. The root directory is specified by the volume name followed by a colon.

scaling

Changing the size of an image or font for printing or display. Usually, a screen image is scaled down to a smaller size for printing, but you can also enlarge, or scale up, an image.

screen

An area of the display that shares the same video attributes, such as resolution and colors. Screens are always at least the full width of the viewable area. The Amiga can have several screens open at once.

script

A text file containing a series of commands that can be automatically executed to perform a complex or repetitive task. An example of a script is the Startup-sequence file executed when you boot your Amiga.

scroll

To move through the viewing area of a window.

scroll arrows
  Gadgets that may appear in a window to allow you to move the viewing area continuously.

scroll bar
  The highlighted area within the scroll box that can be dragged to display the hidden contents of a window. It changes in size to indicate the portion of the window that is currently visible.

scroll box
  The shaded area within which the scroll bar can be dragged. You can click in the scroll box to move the scroll bar.

scroll gadget
  A gadget that may appear in a window to let you move through a list of options or through the viewing area of a window. A scroll gadget is made up of the scroll bar, scroll box, and scroll arrows.

scrolling list
  The options that appear inside a scroll gadget. If the list is too long to be displayed in the scroll gadget, you can use the scroll bar or scroll arrows to move (scroll) through the list.

search path
  The list of directories that AmigaDOS uses when it is looking for a command. Directories are added or removed from the search path with the PATH command.

select
  To choose an item to work with by pointing to it with the mouse, then pressing and releasing the selection button.

selection button
  The left mouse button.

selection gadget
  A gadget from which you can choose one of several displayed options, often used for colors.

serial
  An interface port that transfers data one single bit at a time, contrasted to a parallel interface which sends one complete byte

(eight bits) at a time. The Amiga has an external serial port to that a modem, MIDI interface, or printer is often connected.

set
>To change a bit or flag to its on or enabled state. Opposite of clear.

Shell
>The command line interface used to send typed commands to the Amiga. The Shell is a console window that supports many special features, such as command-line history, aliases, and copy and paste operations.

sizing gadget
>A gadget that may appear in the lower right corner of a window to allow you to enlarge or shrink the size of the window.

slider gadget
>A gadget from which you can select a value by dragging a bar through the gadget. As you move the slider bar, different values are displayed.

slider value
>A number that appears next to a slider gadget to indicate the currently selected value.

smoothing
>A printing option available in the PrinterGfx editor that attempts to eliminate, or smooth, jagged lines that can sometimes appear in printouts.

snapshot
>To save the positions of a window and/or the icons within it.

source
>A device, drawer, or file that is supplying information. For example, when you copy a disk, the disk you are copying is the source disk.

stack
>A special area of RAM reserved by a program for temporary storage.

Startup-sequence

An AmigaDOS script file, executed when the Amiga is booted, that helps set up the hardware and directory systems.

stop bits

Extra bits added to signal the end of a character, used during serial communication.

string

A piece of text treated as a single unit.

subdirectory

A directory that is within another directory; equivalent to a drawer within a drawer.

submenu

A secondary menu that appears when some menu items are highlighted. If a menu item has a submenu, a » symbol appears to the right of the menu item.

swap

To alternately place different floppy disks into the same drive, as when performing a single-drive disk copy.

SYS:

The name assigned to the volume name that the Amiga searches for its system files and directories. Usually the volume booted from.

text gadget

A rectangular box in which you can type information, such as a filename or command. Text gadgets are used by the Rename and Execute Command menu items, as well as many programs.

threshold

A PrinterGfx value related to color intensity. It determines which colors are printed as black and which are printed as white during black-and- white printing.

timestamp

The date and time associated with a file or directory. This is usually the date and time when the file or directory was created or last modified.

title bar

The top border of a screen or window, which commonly displays the name of the screen or window.

toggle

An option that can be switched between two states, such as on and off.

tool

A program that creates or uses data, such as a text editor or paint program.

Tool Type

An optional parameter that you can enter in an icon's Information window to control a program. For example, if you enter the SECONDS Tool Type in the Clock's Information window, the Clock displays the seconds when it is opened.

Trashcan

A directory for storing files that you want to delete.

type ahead

A feature of the Shell that lets you enter commands as a previous command's output is being displayed.

volume

A floppy disk or hard disk partition.

volume name

The name of a volume, as distinguished from its device name. Renaming a disk changes its volume name, not its device name.

wait pointer

An image of a stopwatch that appears in place of the normal pointer when the Workbench is busy and cannot accept further input.

wildcard

A symbol used in pattern matching to represent a range of possible values, such as when specifying filenames that all start or end with the same character. The question mark (?), for example, is used as a wildcard to match any single character.

window

A rectangular screen area that can accept or display information. A window has a title bar identifying it and may contain gadgets in its border.

Workbench

The Amiga's icon-based, graphical user interface.

write

To record data in memory or on a magnetic storage medium such as a floppy disk.

write-enable

To allow information to be written onto a storage device. When a floppy disk is write-enabled or Read/Write, a small, plastic tab is covering the hole in the corner of the disk.

write-protect

To prevent information from being written onto a storage device. Floppy disks have a plastic tab that can be moved to write-protect the entire disk, making it Read-Only. Also called write-inhibit.

zoom gadget

A gadget that may appear in the upper right corner of a window to allow the window to alternate between two sizes.

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C

K

AMIGA

C= Commodore