



Digital Research®

Artline®

Installation Startup Tutorial



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Artline[®]

Installation

Startup

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Artline Installation / Startup

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Preface

ARTLINE, Version 2.0 is an easy-to-use program that gives you the sophistication of professional illustrating tools in the PC environment. Whether you are designing advertising graphics, business presentations, or technical illustrations, Artline can meet your needs—quickly and efficiently.

This documentation package helps you become productive immediately. This *Artline Installation / Startup* guide explains how to install Artline; the *Artline Tutorial* contains exercises with step-by-step instructions that show you how to create graphics with Artline; the *Artline Utilities Guide* describes several programs that enhance the text and output capabilities of Artline, and the *Artline User Reference Guide* describes the use of every Artline component and tool.

Each manual contains a comprehensive Table of Contents and an Index to help you find what you need quickly.

About this Guide

Chapter 1

Chapter 1 explains what you should do before you begin installing Artline, and provides an overview of the installation process. Also in this chapter are instructions on how to use the Setup installation program and a description of the kind of help that Setup provides during installation.

Chapter 2

Chapter 2 tells you how to install Artline on your system.

Chapter 3

Chapter 3 tells you how to start and exit Artline from:

- the operating system command line;
- the GEM[®]/3 Desktop;
- ViewMAX[®];
- Microsoft Windows/286[®];
- Microsoft Windows/386[®];
- Microsoft Windows 3.0[®].

Chapter 3 also contains instructions on customizing Windows PIF files and tips on improving program performance.

Appendix A

Appendix A lists some of the Setup messages that you might encounter while installing Artline.

Appendix B

Appendix B contains information about using files created with GEM Artline.

Appendix C

Appendix C describes how to configure Xerox Ventura Publisher[®] to work with Artline.

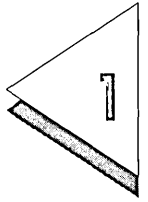
Appendix D

Appendix D contains a blank Artline configuration table that you can fill in with the specific information about your system.

Assumptions

This guide assumes that you are familiar with the basic operations of your operating system. If you have questions about these operations, refer to your system's manual.

Installation Overview



THIS chapter discusses:

- how to prepare for installation;
- how Setup works and how to use Setup screens;
- how Setup provides help during installation.

Before You Begin

Check the Package Contents

In addition to the set of master diskettes, check that your Artline package contains:

- Artline User Reference Guide*
- Artline Utilities Guide*
- Artline Clip Art Gallery*
- Customer Support Guide*
- Software License Agreement

Back Up Your Master Disks

Use your operating system's DISKCOPY command to make copies of the Artline master diskettes. For example, the following command copies the contents of the diskette in drive A to a diskette in drive B:

DISKCOPY A: B: ↵

Store the original diskettes in a safe place, and use the backup copies to run the installation program.

Register Your Software

Complete the registration card (you will find this in the documentation tray in your package) and mail this to Digital Research® to register your software. This will entitle you to technical support and place you on the mailing list for future product upgrade and discount offers.

Prepare Your System

You need at least 430 Kb of free system memory (RAM) to install Artline. (You might need to remove memory-resident programs to make this system memory available.) In addition, you must have at least 3.5 Mb of free space on your hard disk; additional disk space is required if you intend to load the clip art files.

If you have DR DOS™, it must be version 3.41 or later. If you are using MS™-DOS or PC DOS, it must be version 3.1 or later.

Gather Hardware Information

Before you start installing Artline, gather the following information so you are ready when Setup asks for it:

- the drive letter of the floppy diskette drive (source drive) where you will insert the Artline diskettes;
- the drive letter of the hard disk drive where you want Artline installed;
- the name of the subdirectory where you want Artline installed;
- the name of your graphics card and display type;
- the name of your mouse or other pointing device and, for serial mice, the mouse port identification (ID);
- the name of your printer and printer port ID;
- the name of your plotter type and plotter port;
- the name of your camera type and camera port.

For more information about port identifications, see *About Communications Ports* later in this chapter.

Setup provides a series of help screens that provide details about the device and system configuration information that it requests. You can usually obtain hardware model information from the labels on your equipment. If you are unsure about a product name or type, consult your hardware documentation or computer dealer.

The following table is an example hardware configuration. Appendix D contains a blank form of this table: fill it in with the information for your system, and have it accessible during the installation process for convenient referencing.

Device Type	Device Name
VDT – Graphics Display Type	IBM® VGA 16-color
Pointer Device (Mouse) ID / Port #	Microsoft® serial mouse / COM1
Printer 1 – Printer ID / Port #	HP LaserJet Series II / LPT1
Printer 2 – Printer ID / Port #	Epson® FX-80 / LPT2
Plotter ID / Port #	Not used
Camera ID / Port #	Not used

NOTE: After the installation is complete and you find that you specified the wrong device, don't worry—it will not harm your system—but the device won't function. You can correct the error by following the instructions in “Changing an Existing Configuration” in Chapter 2.

About Communications Ports

If you are using a printer, a non-bus mouse or other peripheral device, it is physically attached to a *communications port* located at the back of your computer. Setup asks you for the number of each port you use.

There are two types of communications ports:

- ❑ A *serial* port is identified by the prefix COM followed by a number—usually 1 or 2 (COM1, COM2, etc.).
- ❑ A *parallel* port is identified by LPT, followed by a number, again typically 1 or 2 (LPT1, LPT2, etc.).

If you choose a parallel device, Setup offers you a range of LPT port numbers from which to choose. Likewise, if you choose a serial device, Setup offers you a range of COM port numbers from which to choose. Unless you are using multiple parallel or serial devices, you should choose the first number ID on the list, (COM1 or LPT1).

How Setup Works

Artline works with a variety of computer types which can be connected to different printers, display monitors, pointing devices, and other equipment. To communicate with each type of device, Artline uses specific software programs called *drivers*. Setup asks you to identify the devices connected to your system to determine your specific hardware configuration.

After you enter the required information, Setup installs the appropriate drivers and builds and installs the necessary supporting applications on your hard drive. After you finish Setup, the installation process is complete and you are ready to start Artline.

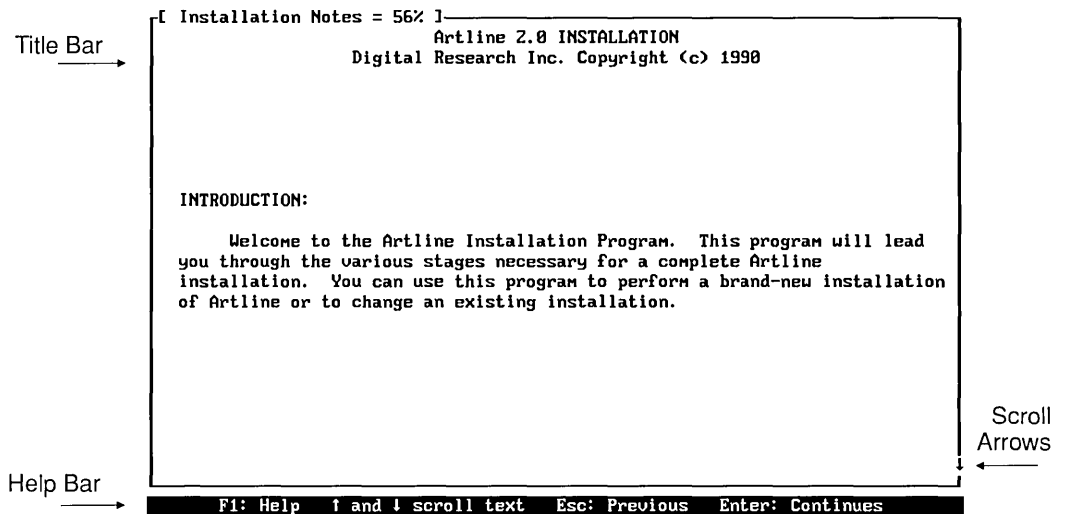
Setup Screens

Setup uses three kinds of screens to communicate and request information:

- pages
- menus
- dialogs

Pages

Pages contain explanatory text. The first Setup screen is an example of a page:



The *title bar* at the top of the page displays the subject of the page and the percentage of the information contained in the screen.

The *scroll arrows* on the right of the page show the location of the text within the window. Use the arrow keys to scroll the text one line at a time and the **PgUp** and **PgDn** keys to scroll by screens.

The *Help bar* at the bottom of the page lists instructions for using the page.

If you have a printer attached to port LPT1, you can print the contents of any page by pressing either **p** or **P**.

Menus

A Setup *menu* lists options you can choose. The following is a sample menu:

The diagram illustrates a setup menu interface with three distinct windows:

- Menu Window:** A list of pointer device options. The first option, "No Mouse", is highlighted. Each option is followed by a right-pointing arrow and the text "<No>".
- Directions Window:** A text box providing instructions on how to use the menu without a mouse.
- Help Bar:** A shaded bar at the bottom containing keyboard shortcuts for navigating the menu.

[Select Primary Pointer Device]	
No Mouse	<No>
Bus Mouse/Requires MOUSE.COM	<No>
IBM Personal System/2 Mouse	<No>
Microsoft Serial Mouse (RS232)	<No>
Mouse Systems PC Mouse/SummaMouse/Compatibles	<No>
Summasketch 961 Cursor-Type Tablet	<No>
Summasketch 961 Stylus-Type Tablet	<No>
Summasketch 1201 Cursor-Type Tablet	<No>
Summasketch 1201 Stylus-Type Tablet	<No>
Summagraphics MM1812 Cursor-Type Tablet	<No>
Summagraphics MM1812 Stylus-Type Tablet	<No>
Select here to Continue to next menu.	

[Directions]	
Press Enter to select the highlighted item if your computer is not equipped with a mouse. Instead of a mouse, you use the cursor control keys to perform operations such as cursor movement, dragging, and clicking.	

Help Bar	
F1: Help Esc: Previous Enter: Selects Item ↑: Cursor Ctrl End: Last Line	

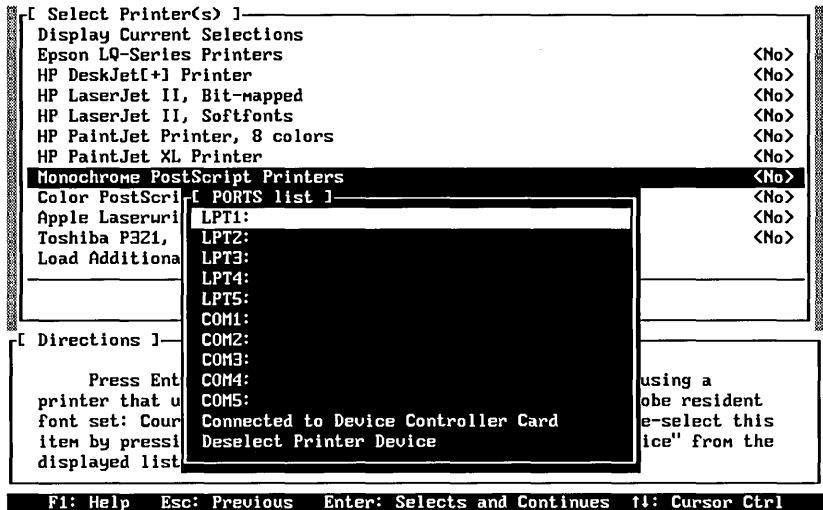
The *menu window* lists the menu entries. Use the arrow keys to scroll through them. As you scroll, each entry becomes highlighted. To choose a highlighted entry, press Enter.

The *directions window* explains your options for each menu entry.

The *Help bar* at the bottom of the menu lists instructions for using the page menu.

Dialogs

Setup uses dialogs to request additional information about a preceding menu selection. The dialog below is displayed after you choose a printer; it asks you to identify the port to which the printer is connected.



Getting Help

Setup provides three levels of Help:

- Item Description
- Context Help
- Keyboard Commands

Item Descriptions

Like the Directions window associated with menus, each Item Description explains your options for a selected item on the screen.

Context Help

Press **F1** to access Context Help, which explains your options or the objectives of the current menu or screen.

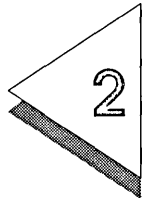
Keyboard Commands

Press **F1** a second time to access Keyboard Commands Help. This screen lists all the commands that can be performed by pressing one or more keys simultaneously.

Exiting Help

To exit Help at any time, press **Enter**.

Installation



THIS chapter describes:

- ❑ the Setup program, how it works, and what it does;
- ❑ step-by-step instructions for installing Artline;
- ❑ how to change an existing Artline configuration;
- ❑ the directories that Setup creates on your disk.

The Setup Program

To install Artline on your system, you run the Setup program. Setup creates the Artline directories on the hard disk drive you specify, and installs the necessary files into these directories. Setup can be run from any floppy drive and can write files into any valid hard disk directory that you specify.

Setup can also install special driver packs for certain devices that are not listed specifically. Contact the Digital Research Technical Support Department if you have a device that is not listed in the Setup menus during the installation.

What Setup Does

When you run Setup, you accomplish two basic steps:

- ❑ you define your *software configuration*, that is, the hard disk drive and directories in which you want Artline and related files to reside;
- ❑ you define your *hardware configuration*, that is, the type of screen display, mouse, printer, etc., that you have in your system.

Given this information, Setup can build the necessary files and install them on your system.

Helpful Hints

Throughout the installation process, you will see <Yes> or <No> on the right side of the installation screen. You can change these with the space bar. If you make a mistake and accidentally set a selection to <Yes>, you can change it back to <No> by pressing the **Del** key. The **End** key returns you to the “Select Here to Continue” selection. If you want to back up one menu, press the **Esc** key. Pressing the **Home** key returns you to the top of the option list.

Starting and Exiting Setup

To begin installation:

- 1 Insert the disk labeled *Installation Disk* into the source drive. The source drive can be any floppy disk drive that is media-compatible with the installation disks.

For example, if you want to use the A drive as the source, type:

```
A: ↵  
SETUP ↵
```

or

```
A:SETUP ↵
```

If the source drive is B, then type:

```
B: ↵  
SETUP ↵
```

or

```
B:SETUP ↵
```

NOTE: If you are using a plasma or LCD two-color display with a color emulation mode, use the /M monochrome switch. For example, if your source drive is A, then type:

```
A:SETUP /M ↵
```

You will see the following screen momentarily as the Setup program loads.

```
[ Working ]  
Loading control file: A:\INSTALL.CFG
```

When Setup is finished loading, the Artline Installation screen appears.

```
[ Installation Notes = 56% ]
                               Artline 2.0 INSTALLATION
                               Digital Research Inc. Copyright (c) 1990

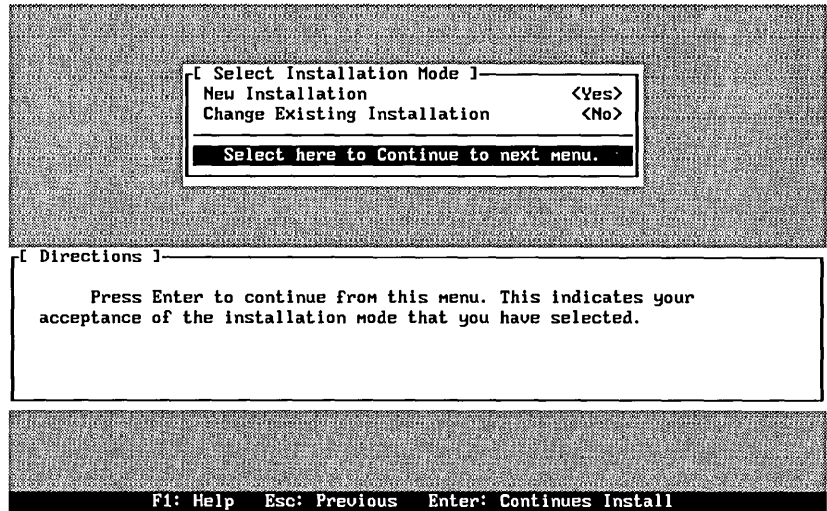
INTRODUCTION:

Welcome to the Artline Installation Program. This program will lead
you through the various stages necessary for a complete Artline
installation. You can use this program to perform a brand-new installation
of Artline or to change an existing installation.

F1: Help  ↑ and ↓ scroll text  Esc: Previous  Enter: Continue
```

- 2 Use the arrow keys or **PgUp** or **PgDn** to page through the information in this screen. When you are ready to continue, press **Enter**.
- 3 After you have read the installation instructions, press **Enter**.

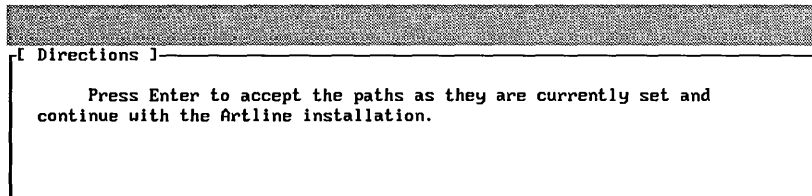
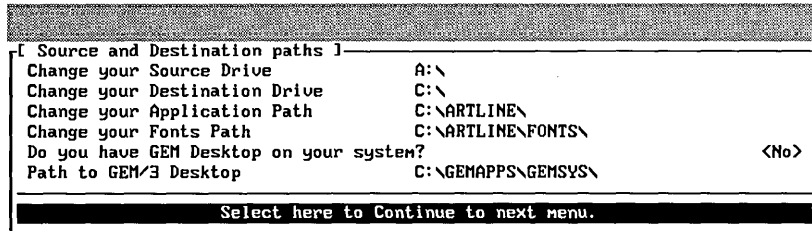
Setup displays the Select Installation Mode Menu. “New Installation” is pre-set to <Yes>, and the “Select Here to Continue to next menu.” bar is highlighted. Press **Enter** to select it.



NOTE: Once you begin the installation, you can stop Setup at any time and immediately return to the operating system command line without installing Artline, by pressing **Alt-X**.

Define your software configuration:

- 1 Use the arrow keys to highlight the entries in this menu. To select an entry, highlight it, then press **Enter**. Setup displays the Source and Destination paths menu.

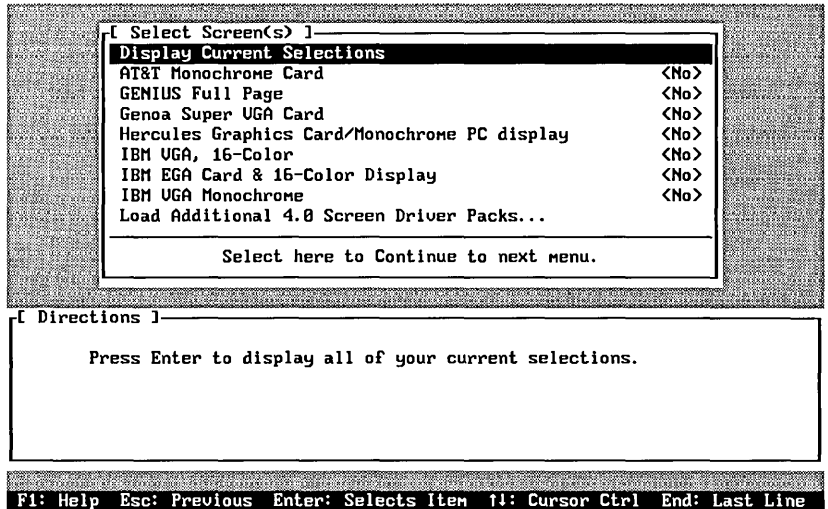


- 2 To change an entry, select it, press **Enter**, then type the full path name of the new directory. To accept all entries select the Continue bar using the **End** key, and press **Enter**.
- 3 If you have an existing GEM/3 Desktop installed on your system, use the arrow keys to highlight “Do you have an existing GEM/3 Desktop”, press the space bar to change <No> to <Yes>, and then type the correct path to the existing GEM/3 Desktop on the next line. This will allow you to start Artline from the GEM/3 Desktop (see page 3-2).

NOTE: Setup will not alter your existing GEM/3 Desktop.

Define your hardware configuration:

- 1 When Setup displays the Select Screen(s) menu, identify your computer's display type.



- 2 Choose the entry for your display monitor or for a compatible model. The directions listed for each entry are explained in the directions box to help you choose the correct monitor.

If the monitor type that you are using is not on the list, select "Load additional 4.0 Screen Driver Packs" and press **Enter**. If you do not have the current 4.0 screen driver pack, contact Digital Research Technical Support.

- 3 You can select as many display monitors as you intend to use. If you select multiple displays, Setup asks you to identify the *primary* display. The primary display is the one you use most often. When you start Artline, it loads the driver for this screen automatically. Use the **Del** key to change a previously-selected <Yes> to <No> and the space bar or **Enter** to change from <No> to <Yes>.

- 4 To continue, press **End** to highlight the Continue bar, then press **Enter**. Setup displays the Select Primary Pointer Device menu.

```

[ Select Primary Pointer Device ]
No Mouse <No>
Bus Mouse/Requires MOUSE.COM <No>
IBM Personal System/2 Mouse <No>
Microsoft Serial Mouse (RS232) <No>
Mouse Systems PC Mouse/Summouse/Compatibles <No>
Summasketch 961 Cursor-Type Tablet <No>
Summasketch 961 Stylus-Type Tablet <No>
Summasketch 1201 Cursor-Type Tablet <No>
Summasketch 1201 Stylus-Type Tablet <No>
Summagraphics MM1812 Cursor-Type Tablet <No>
Summagraphics MM1812 Stylus-Type Tablet <No>
-----
Select here to Continue to next menu.
    
```

```

[ Directions ]

Press Enter to select the highlighted item if your computer is not
equipped with a mouse. Instead of a mouse, you use the cursor control
keys to perform operations such as cursor movement, dragging, and
clicking.
    
```

F1: Help Esc: Previous Enter: Selects Item F1: Cursor Ctrl End: Last Line

- 5 Choose your mouse type or other pointing device. If you choose a mouse that connects to a port, Setup displays the Ports List menu.

```

[ Select Primary Pointer Device ]
No Mouse <No>
Bus Mouse/Requires MOUSE.COM <No>
IBM Personal System/2 Mouse <No>
Microsoft Serial Mouse (RS232) <No>
Mouse Systems PC Mouse/Summouse/Compatibles <No>
Summasketch 961 Cursor-Type Tablet <No>
Summasketch 961 Stylus-Type Tablet <No>
Summasketch 1201 Cursor-Type Tablet <No>
Summasketch 1201 Stylus-Type Tablet <No>
Summagraphics MM1812 Cursor-Type Tablet <No>
Summagraphics MM1812 Stylus-Type Tablet <No>
-----
Select here to Continue to next menu.
    
```

```

[ PORTS list ]
COM1:
COM2:
Deselect Pointer Device
    
```

```

[ Directions ]

Press Enter to select the highlighted item if your mouse is any of
the above, or if it is a "generic" mouse. If you are unable to determine
the name and model of your mouse, you are probably using a generic serial
mouse and should choose this entry.
    
```

F1: Help Esc: Previous Enter: Selects and Continues F1: Cursor Ctrl

- 6 Choose your mouse port ID, then press **Enter**. When Setup redisplay the Select Primary Pointer menu, the port ID is displayed to the right of the device name.
- 7 To continue, press **End** to highlight the Continue bar, then press **Enter**. Setup displays the Select Printer(s) menu.

```
[ Select Printer(s) ]-----
Display Current Selections
Epson LQ-Series Printers                <No>
HP DeskJet[+] Printer                   <No>
HP LaserJet II, Bit-mapped              <No>
HP LaserJet II, Softfonts               <No>
HP PaintJet Printer, 8 colors           <No>
HP PaintJet XL Printer                  <No>
Monochrome PostScript Printers         <No>
Color PostScript Printers               <No>
Apple Laserwriters                     <No>
Toshiba P321, P341, or P351 Printer     <No>
Load Additional 4.0 Printer Driver Packs...

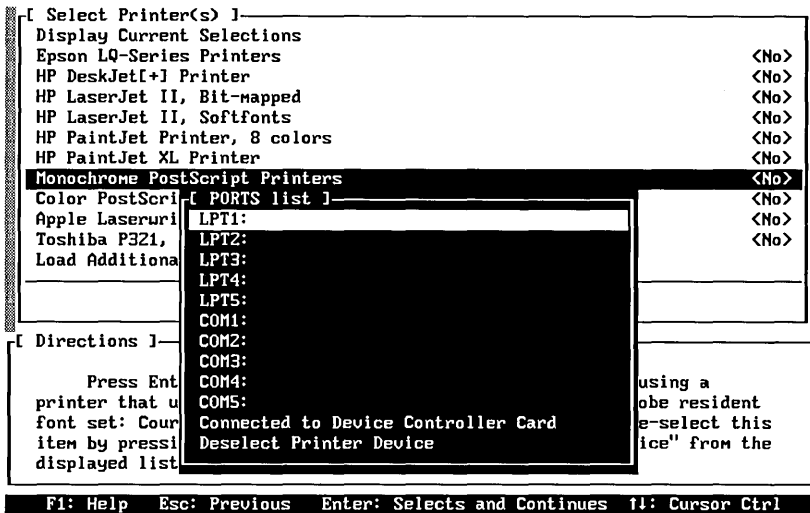
Select here to Continue to next menu.

[ Directions ]-----

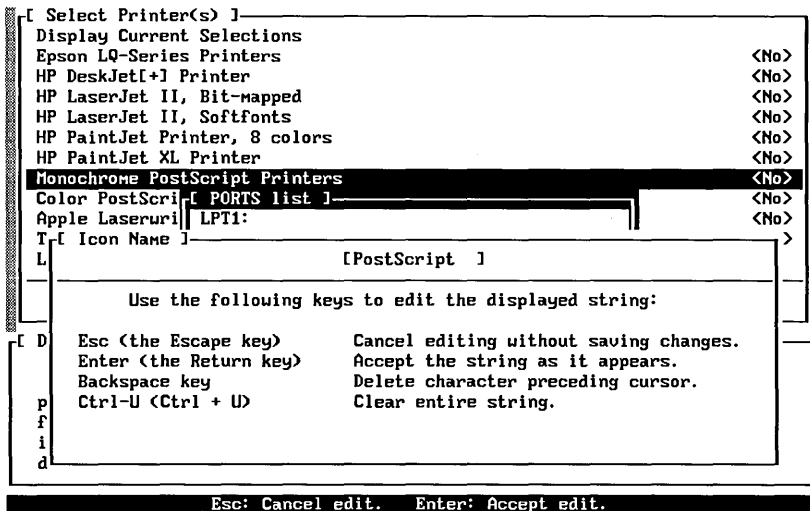
Press Enter to accept your printer driver selections and continue
with the Artline installation.

F1: Help  Esc: Previous  Enter: Continues Install
```

- 8 Choose the entry for your printer or for a compatible printer. Setup then displays the Printer(s) Ports menu:

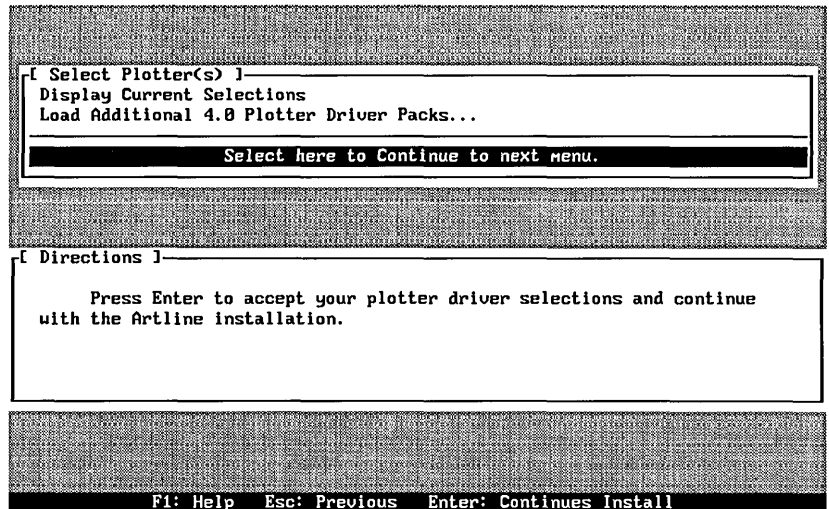


- 9 Highlight the port ID for the printer and press **Enter**. The Icon Name Editor menu appears.



This dialog displays the label of the icon that Artline uses to represent the printer you selected. To change the name, press **Ctrl-U**, then type in a new name up to 12 characters long. Press **Enter** to complete your selection.

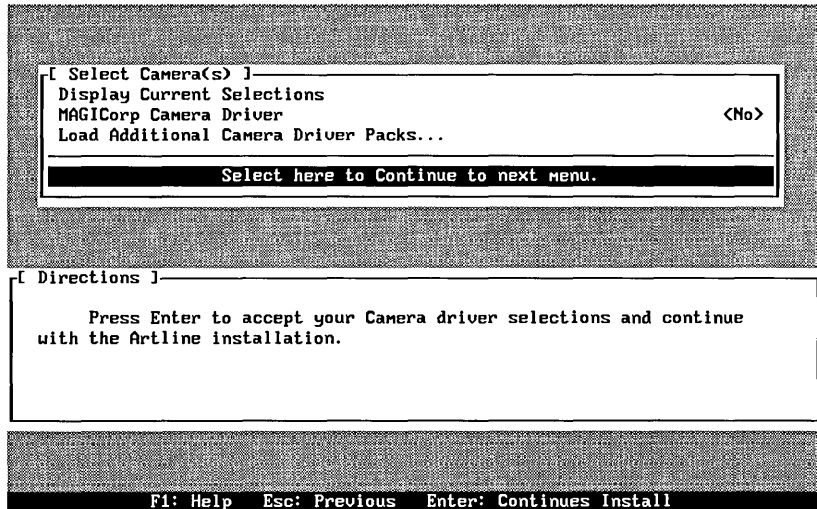
- 10 To continue, press **End** to highlight the Continue bar, then press **Enter**. Setup displays the Select Plotter(s) screen.



- 11 If you do not want to install a plotter, just press **Enter**. Plotter drivers are only available in a 4.0 Driver Pack. Insert the plotter driver pack you want into the source floppy drive, then use the arrow keys to highlight “Load Additional 4.0 Plotter Driver Packs” and press **Enter**.

Setup prompts you to select the plotter you want to install. Use the arrow keys to highlight your selection and press **Enter**.

- 12 To continue, press **End** to highlight the Continue bar, then press **Enter**. Setup displays the Select Camera(s) screen.

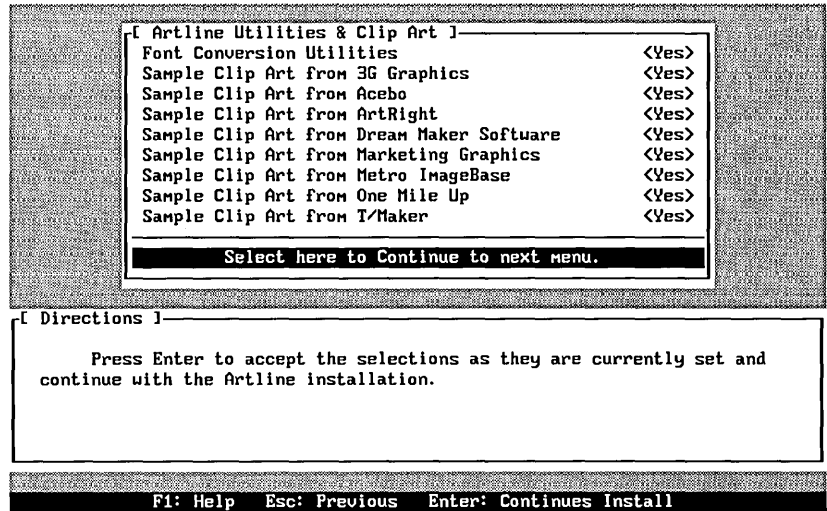


- 13 If you do not want to install a camera, just press **Enter**. To install a MAGICorp® camera, use the arrow keys to highlight it, press the space bar to change to <Yes>, press **End** and then press **Enter** to continue.

To install a 4.0 Camera Driver Pack, use the arrow keys to highlight “Load Additional 4.0 Camera Driver Packs” and press **Enter**.

Setup prompts you to select the camera you want to install. Use the arrow keys to highlight your selection and press **Enter**.

- 14 To continue, press **End** to highlight the Continue bar, then press **Enter**. Setup displays the Artline Utilities & Clip Art screen.



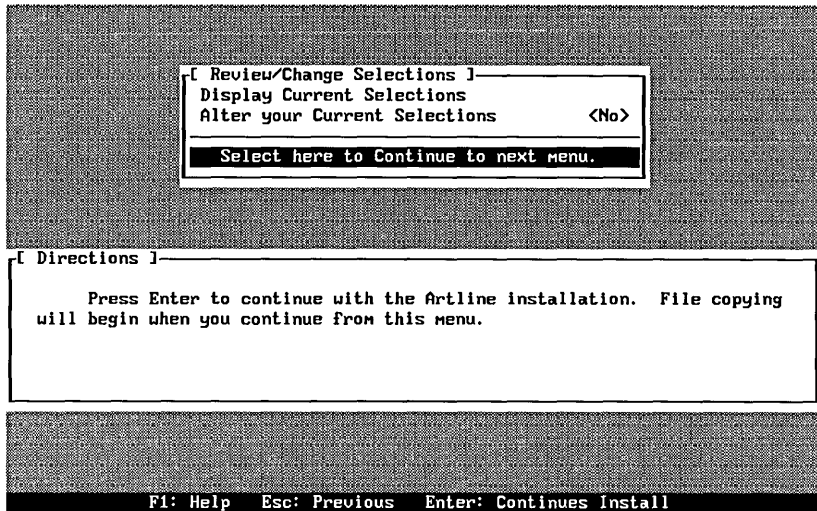
- 15 If you want the font conversion utilities and Clip Art just press **Enter** to continue.

NOTE: The sample Clip Art requires the following amounts of disk space:

3G Graphics	800 Kb
Acebo	200 Kb
ArtRight	400 Kb
Dream Maker Software	600 Kb
Marketing Graphics	275 Kb
Metro ImageBase	600 Kb
One Mile Up	1 Mb
T/Maker	800 Kb

- 16 If you do not need the font conversion utilities or the Clip Art, you can choose to de-select them by highlighting the item with the arrow keys, then changing <Yes> to <No> using the **Del** key.

- 17 To continue, press **End** to highlight the Continue bar, then press **Enter**. Setup displays the Review/Change Selections screen.



Install program files onto your system:

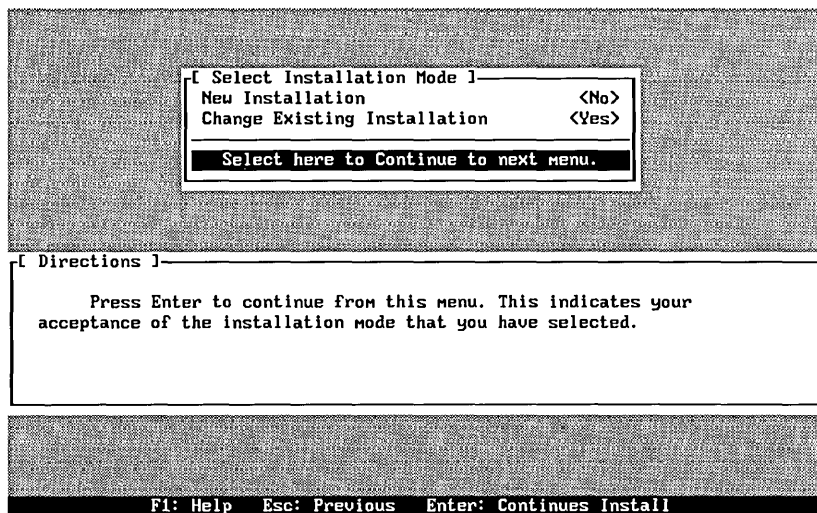
- 1 Display or alter your selections, then press **End** to choose the Continue bar and press **Enter** to continue. Setup now begins to copy the Artline application and all related files onto your system.
- 2 Insert the installation disks that Setup requests. The number of disks you need to insert depends on the particular display screens, printers, plotters, etc. that you have selected.
- 3 When Setup finishes copying files, the installation is complete. Remove the installation disks from the source drive and store them in a safe place.
- 4 You are now ready to run Artline. Refer to Chapter 3, “Starting and Exiting Artline”, for instructions on how to start and exit Artline.

Changing an Existing Configuration

The process for changing an existing setup is almost identical to a new installation. The only difference is that instead of using Setup from the source drive, you use AlSetup from the hard disk. For example, if you installed Artline on drive C, to change an existing configuration, type:

C:\ALSETUP ↵

Setup then displays the Select Installation Mode Menu. “Change Existing Installation” is set to <Yes>. Press **Enter** to continue. Remember to use the **Del** key if you want to change <Yes> to <No>.

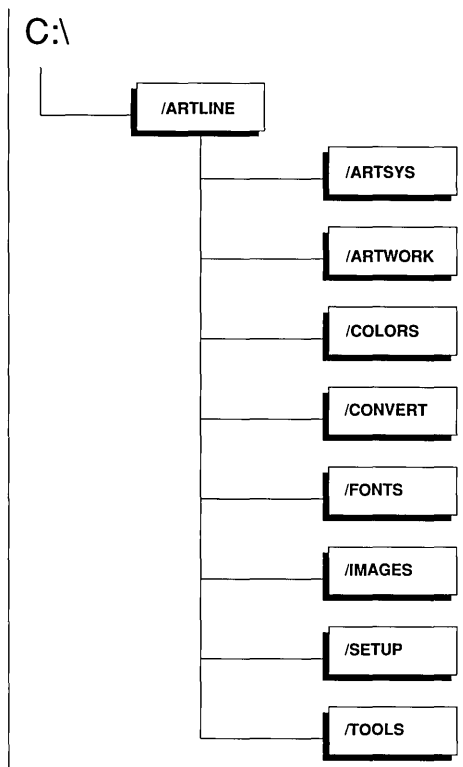


When you change an existing configuration, AlSetup will ask you only for the disks that pertain to the software that changes. For example, AlSetup will not ask you to insert any disks if you change the mouse or a communications port.

NOTE: If for some reason your initial installation is stopped before Setup completes copying all the files onto your hard disk, you should run Setup again from the floppy diskette drive, and set "Change Existing Installation" to <Yes>. Select the same choices again, and insert the proper diskettes when Setup asks for them. Setup will again start copying files from the place where it was interrupted.

Installation Results

The figure below illustrates the directory structure Setup installs on your hard disk. The files that are in each directory vary according to the different hardware choices you made during the installation.



Starting and Exiting Artline

THIS chapter explains how you start and exit Artline. At this point, you should have completed the installation process and exited Artline Setup. You are now ready to start using Artline.

This chapter describes starting Artline from:

- the operating system command line;
- the GEM/3 Desktop;
- ViewMAX;
- Windows/286, Windows/386, or Windows 3.0.

This chapter also describes:

- customizing Windows PIF files;
- exiting Artline;
- tips for improving program performance.

Starting from the Command Line

To start Artline from the operating system prompt, change to the drive on which you installed Artline and then go to the root directory. For example, if you installed Artline on drive C, you would enter these commands:

```
C: \
```

```
CD \
```

To start Artline, type this command:

ARTLINE ↵

To start Artline and load a file, type this command:

ARTLINE <filename.GEM> ↵

where <filename.GEM> is the file you want to load. The GEM extension is required. If the file is not in the default directory, you must include the full directory path. For example, to start Artline and load FIGURE3.GEM in the subdirectory \PROJECT1 on drive C, type this command:

ARTLINE C:\PROJECT1\FIGURE3.GEM ↵

NOTE: When typing operating system directory names on the command line, be sure to use a backslash (\), not the slash (/).

Starting from the GEM Desktop and ViewMAX

If you told Setup that you have the GEM Desktop and gave the correct path information, you can start Artline from the GEM Desktop. You can also start Artline from ViewMAX, the graphics interface in DR DOS 5.0.

To start Artline from the GEM Desktop:

- 1 Start the GEM Desktop as you normally do.
- 2 Open the GEMAPPS directory on the drive on which the GEM Desktop is installed.
- 3 Double-click on the icon for the file ARTLINE2.APP.



To start Artline from ViewMAX:

- 1 Start ViewMAX as you normally do.
- 2 Switch to the root directory of the drive on which you have installed Artline.
- 3 Double-click on the icon for the file ARTLINE.BAT.



Notes on Starting Artline from the GEM Desktop and ViewMAX

- ❑ When you start Artline from the GEM Desktop or ViewMAX, you will see a momentary “blackout” on the screen as the transition occurs from your GEM Desktop or ViewMAX system software to the Artline system software.
- ❑ Memory-resident programs (TSR’s) can reduce available memory so that you cannot start Artline from the GEM Desktop or ViewMAX. If you receive an alert saying there is not enough memory to start Artline, return to the operating system command line, remove any TSR’s, and try again. If you still get the “not enough memory” alert, you must start Artline from the command line.
- ❑ Always start the GEM Desktop or ViewMAX first, and then start Artline. Do not try to start the GEM Desktop or ViewMAX from Artline with the **To App** command.

Starting from Windows

Because Artline was not specifically designed to run under Microsoft Windows, you must use a *Program Information File (PIF)*, which contains the application name, its path, and various other parameters.

You can start Artline from the Windows Executive by using one of the associated PIF files that was copied onto your hard disk during Setup.

Windows/286

If you are using Windows/286, use the operating system’s COPY command to copy AL286.PIF from the \ARTLINE directory on the drive where you installed Artline to your \WINDOWS\PIF directory.

To start Artline from Windows/286:

- 1 Double click on the AL286.PIF icon in the \WINDOWS\PIF directory.
- 2 Artline closes out Windows and then runs. Upon exit, it reloads Windows. Although AL286.PIF has been configured to provide the best performance, you can modify this file to suit your requirements. You will need to modify AL286.PIF if you did a non-standard installation (installed the files on drive D:\ or changed the names of directories). To modify AL286.PIF, follow the instructions in your Windows documentation.

Windows/386

If you are using Windows/386, use the operating system's COPY command to copy AL386.PIF from the \ARTLINE directory on the drive where you installed Artline to your \WINDOWS\PIF directory.

To start Artline from Windows/386:

- 1 Double click on the AL386.PIF icon in the \WINDOWS\PIF directory.
- 2 Artline closes out Windows and then runs. Upon exit, it reloads Windows. Although AL386.PIF has been configured to provide the best performance, you can modify this file to suit your requirements. You will need to modify AL386.PIF if you did a non-standard installation (installed the files on drive D:\ or changed the names of directories). To modify AL386.PIF, follow the instructions in your Windows documentation.

CAUTION: If you are using a serial mouse, Windows/386 releases the serial port to any application configured as *Exclusive* and is then unable to regain control when you quit that application because Windows no longer detects the serial mouse.

To ensure correct mouse function after re-starting Windows:

- 1 Configure and save the .PIF file.
- 2 Return to Windows.
- 3 Quit Windows.
- 4 Start Windows again.

Windows 3.0

If you are using Windows 3.0, use the operating system's COPY command to copy AL30.PIF from the \ARTLINE directory on the drive where you installed Artline to your \WINDOWS directory.

To start Artline from Windows 3.0:

- 1 Double click on the AL30.PIF icon in the \WINDOWS directory.
- 2 Artline closes out Windows and then runs. Upon exit, it reloads Windows. Although AL30.PIF has been configured to provide the best performance, you can modify this file to suit your requirements. You will need to modify AL30.PIF if you did a non-standard installation (installed the files on drive D:\ or changed the names of directories). To modify AL30.PIF, follow the instructions in your Windows documentation.

Exiting Artline

To exit Artline, choose the Quit command from the File menu. If you started Artline from the operating system command line, you will return there upon exiting. If you started from the GEM Desktop, you will return to the Desktop; if you started from Windows, you will return to Windows.

Improving Program Performance

The time it takes Artline to load and install depends on many factors including:

- type of system processor (8088, 80286, 80386, 80486 etc.);
- speed of the system processor;
- amount of memory available;
- types of drives installed;
- amount of disk cache;
- size of BUFFERS allocation;
- optimization of hard disk drive.

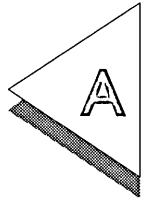
If Artline fails to load because of insufficient memory, you might need to remove any memory-resident terminate and stay resident (TSR) programs running in the background.

Disk caching can improve the performance of Artline. However, if the cache program uses memory from the lower 640 Kb used by DOS, it might interfere with Artline. If this occurs, disable the cache program and try running Artline again.

Since Artline spools data to the disk, it is important to make sure there is at least 1 megabyte of disk space available on the drive where Artline is installed. Artline can use up to 4 Mb, if it is available.

Optimization of the hard disk drive is an important maintenance operation that should be performed regularly to reduce the fragmentation of the drive that results from normal operation. There are many utility programs available for performing disk maintenance and optimization.

Messages



THIS appendix contains some of the messages you might receive while running the Artline Setup program, and suggest the action you should take if you receive the message.

WARNING!

The program was unable to find the specified files. This installation session will continue, but may fail because these files were not copied. Contact the Digital Research Technical Support Department with the failed file specifications below for a possible workaround.

Below are the files that were not found:

If you receive this message, first make sure the files on the diskette are the same as those on the master diskette. If they are not, make a new copy of the master diskette and try installing again. If the files are missing from the master diskette, contact Digital Research Technical Support for a replacement.

WARNING!

Bad Directory Entry in <filename>. It is highly recommended that you contact the Technical Support Department at Digital Research for a replacement disk. Press ALT-X now.

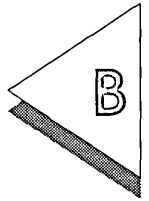
If you get this message, the most likely reason is that the data on the diskette is corrupt. Make a new copy of the master diskette and try the installation again. If that fails, try using the master diskette. If that fails, then the master diskette is bad and you should contact Digital Research Technical Support for a replacement.

WARNING!

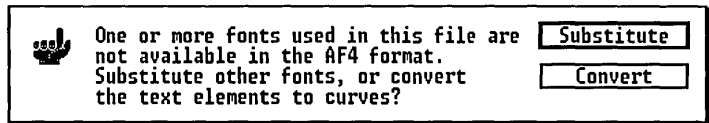
This installation session may not know your complete installation. If you have an existing installation that you wish to change, execute this program from your existing installation rather than from your original disk set.

You might get this message if you attempt to reinstall Artline or change an existing configuration by running Setup instead of ALSETUP.BAT from the hard disk directory where you installed Artline.

Using GEM Artline Files



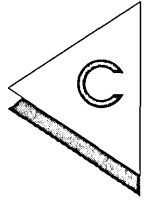
ARTLINE, Version 2.0 can import and edit files created with GEM Artline, with one exception. If you attempt to load a GEM Artline file that contains text, Artline, Version 2.0 will display the following alert:



You can choose to substitute the font or convert the text to curves. If you convert the text to curves, you will not be able to edit it again. In either case, once a GEM Artline file is saved by Artline, Version 2.0, it cannot be opened by GEM Artline.

NOTE: GEM Artline cannot load files created with Artline, Version 2.0.

Using Artline Files in Ventura Publisher



THIS appendix describes how you can use Artline files with GEM versions of Ventura Publisher.

Artline File Formats

Artline can create graphics files in either of two formats:

- ❑ EPSF—Encapsulated PostScript® (EPS file extension)
- ❑ GEM (GEM file extension)

EPSF Files

You can import Artline EPSF files directly into Ventura Publisher frames. However, note the following about EPSF files:

- ❑ An EPSF file tends to be considerably larger than a GEM file version of the same picture.
- ❑ An EPSF file cannot be viewed in Ventura unless you save it in Artline with a TIFF preview. In that case, Ventura converts the TIFF preview to an IMG file and loads it into the frame. You see the IMG version of the picture on the screen, usually at significantly lower resolution than the original.
- ❑ Ventura files containing EPSF files must be printed on a PostScript printer.

GEM Files

In addition to being smaller than EPSF files, Artline GEM files can be printed on non-PostScript printers and can be displayed directly on the screen. However, the Artline system software is a later version than Ventura's, and Artline GEM files will not load correctly in Ventura unless you run a program called VPSETUP. (The Artline installation placed it on your hard disk.) VPSETUP creates the necessary files for starting Ventura and copies the Artline system software to the VENTURA directory.

NOTE: VPSETUP does not affect your original Ventura installation. You can still start Ventura with the old batch file, without loading the Artline system software.

Running VPSETUP

To run VPSETUP:

- 1 On the drive where you installed Artline, type these two commands from the command line to switch to the SETUP subdirectory and then start VPSETUP:

```
CD \ARTLINE\SETUP ↵
```

```
VPSETUP ↵
```

VPSETUP functions just like SETUP. Make your selections and then insert the disks that are requested.

Note that you can create two batch files, one that starts the Ventura base edition and another that starts the Professional Extension.

- VPDRI.BAT starts the Ventura base edition.
- VPPDRI.BAT starts Ventura Professional Extension.

Starting Ventura

VPSETUP places the batch files in the root directory of the drive on which Ventura is installed.

To start Ventura:

1 Switch to the root directory of the Ventura drive.

2 To start the base edition, type:

VPDRI ↵

To start the Professional Extension, type:

VPPDRI ↵

As Ventura loads, you will see the following message:

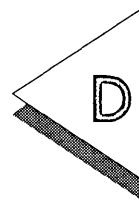
Inserting DRI system software

When you quit Ventura, you will see this message:

Restoring Ventura software

If for any reason Ventura stops before its system software can be restored (for example, in the event of a power failure), restart Ventura using **VPDRI** or **VPPDRI**. When you quit Ventura, the original system software will be restored.

Hardware Configuration Form



The following table is a blank form that you can use to keep track of your hardware configuration. Fill it in with the information for your system.

HINT: Use a pencil so you can change the entries if you change hardware.

Device Type	Device Name
VDT – Graphics Display Type	
Pointer Device (Mouse) ID / Port #	
Printer 1 – Printer ID / Port #	
Printer 2 – Printer ID / Port #	
Plotter ID / Port #	
Camera ID / Port #	

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Artline.®

Tutorial

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Artline Tutorial

First Edition: August 1990

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A Standard Tools

Preface

WELCOME to Artline®, Version 2.0, a powerful illustration program from Digital Research® for IBM® and compatible computer systems. Artline provides full color and PANTONE color support, and a full set of drawing and text manipulation tools. With Artline you can:

- ❑ create sophisticated graphic illustrations;
- ❑ print to PostScript® and non-PostScript output devices;
- ❑ autotrace scanned images interactively;
- ❑ create color separations;
- ❑ customize tools to perform a set of steps you specify;
- ❑ access a wide variety of fonts from different vendors;
- ❑ convert pictures to a variety of formats;
- ❑ incorporate pictures made in a variety of formats.

The *Artline User Reference Guide* gives complete and detailed instructions for all of Artline's functions. It also lists the key features that are new in Artline, Version 2.0.

You can run Artline from several different operating systems and window management programs. The *Artline Installation/Startup* guide gives complete installation and start-up instructions for each configuration.

What You Should Know

This tutorial makes the following assumptions:

- ❑ Artline, Version 2.0 is installed on your computer.
- ❑ You know how to start Artline from your system.
- ❑ Artline is in its default state—the way it appears when you first install it.
- ❑ You know what the following terms mean:
 - disk drive
 - system prompt
 - file
 - filename
 - filename extension
 - directory

About This Tutorial

This tutorial takes you step-by-step through most of the features of Artline, using simple examples designed to convey a concept in as few steps as possible. You can then apply the concept to your own designs. The tutorial is designed to show graphic illustrators new ways to accomplish traditional tasks.

Initially, each step is described in full detail, but later in the tutorial it is assumed that you are more familiar with Artline and the steps are more briefly stated.

If you are familiar with Artline or other graphics programs, you might want to just skim chapters 1 and 2 for concepts you want to review and some that are new to Artline, Version 2.0.

If you want to learn about drawing and editing curves you can do the exercises in chapters 4 and 5 at any time.

- ❑ Chapter 1 contains an introduction to Artline screen components, mouse techniques, tools, menus, and dialogs. This chapter also shows you how to use some of the drawing tools, and how to select, move, resize, copy, and delete elements.
- ❑ Chapter 2 shows you how to set up your workspace, use some of the drawing tools, create a picture, create a new fountain fill, save, and print. This chapter presents important concepts about selecting elements in stacks, using the grid, and using menu commands.
- ❑ Chapter 3 shows you how to use most of Artline's exciting features for creating special effects with text and elements. If you are familiar with the techniques for using the mouse and menus, and for selecting tools and elements, you can do the exercises in this chapter at any time.
- ❑ Chapter 4 shows you how to draw lines and curves with the Quill tool, and Chapter 5 shows you how to edit lines and curves with the Plane tool. If you are familiar with Artline basics you can do the exercises in chapters 4 and 5 at any time.
- ❑ Chapter 6 teaches you how to use the interactive autotrace feature to trace a bit-image file. You can do the exercises in this chapter at any time, but because Artline automatically makes curves while tracing, the exercises do build on Chapters 4 and 5.
- ❑ Appendix A shows the picture and name of each tool in the standard toolbox. You can use this page for reference.

This tutorial does not attempt to cover all of the aspects of a feature, nor all of the features of Artline. These are described in the *Artline User Reference Guide*.

For a thorough introduction to the basic concepts and features of Artline, read Chapter 1 in the *Artline User Reference Guide*.

If Your Version Is Customized

Because Artline allows you to create your own color files and toolboxes, it is possible your version of Artline has been customized. If so, your toolbox might look different from the one in this tutorial.

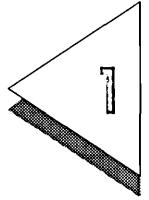
In most cases you can proceed with the instructions given here because the function of each standard tool remains the same. However, if your tools appear to be so altered that you cannot follow the instructions, you can reset Artline to the default configuration. Refer to Chapter 13, “Tools Manager,” in the *Artline User Reference Guide* for instructions on how to do that.

V E N U S



Fine chocolates

Getting Acquainted



THIS CHAPTER teaches you the basics of using Artline. It is designed to allow you to experiment with Artline and become familiar with some of its most important features. Do not worry if your screen looks different from the screens in this tutorial. By practicing the techniques described in this chapter, you will be able to follow all of the exercises in this book.

For an in-depth discussion of all basic techniques, refer to Chapter 1 of the *Artline User Reference Guide*.

For the exercises in this chapter, start Artline according to the instructions in the *Artline Installation / Startup* guide. When Artline appears on your screen, you are ready to begin.

The exercises in this chapter will take you about half an hour to complete.

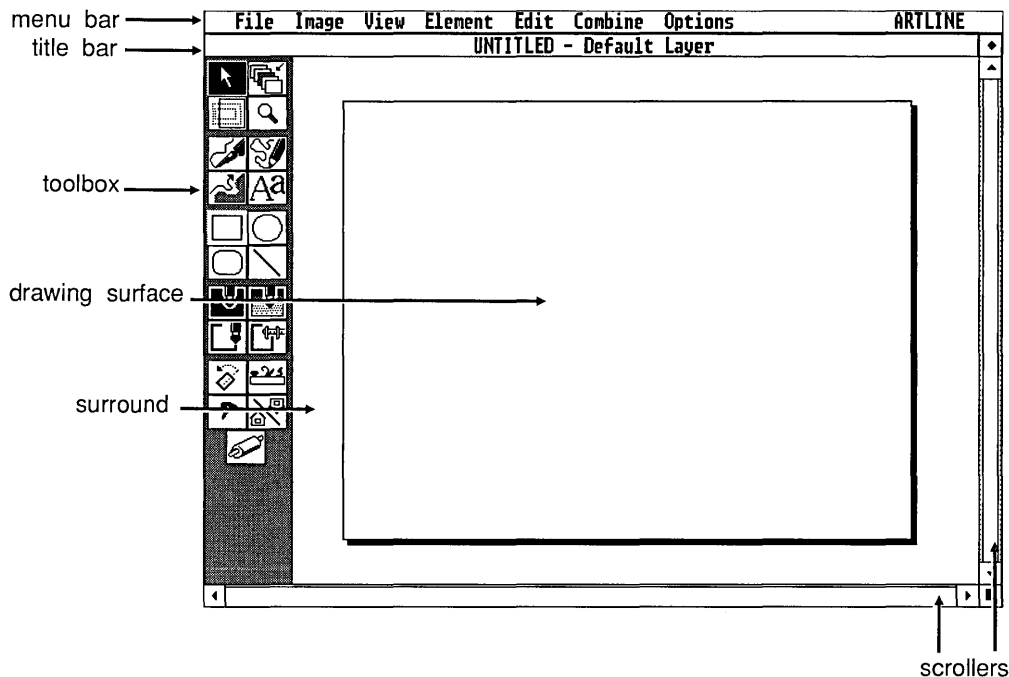
What is in this chapter:

- Artline screen components
- using the mouse, menus, and tools
- selecting, moving, resizing, and copying elements
- changing the magnification
- exiting Artline

Artline Screen Components

The following discussion assumes Artline is in its default configuration, with the default view and toolbox.

When you start Artline, your screen looks like this:



Menu Bar

The top line of the screen is called the *menu bar*. It displays the names of the menus.

The menu commands are fully described in the *Artline User Reference Guide*, Chapters 3 through 9.

Title Bar

The *title bar* displays the name of the currently displayed picture and picture *layer*. If you have not yet saved the picture, the title bar reads "UNTITLED - Default Layer."

Once you save a picture, the title bar displays its filename. When you create or display a new layer, the title bar displays the layer name. In this tutorial you use the default layer only.

Layers are explained in Chapter 10 of the *Artline User Reference Guide*.

Toolbox

The *toolbox* contains the icons that represent the Artline tools. You will learn how to use all of the tools as you complete the exercises in this tutorial. Chapter 2 of the *Artline User Reference Guide* describes each tool in detail.

Workspace and Drawing Surface

The *workspace* is the part of the screen that is enclosed by the title bar, the toolbox, and the scrollers. It is like a frame through which you view the *drawing surface*, on which you create and edit pictures. Depending on the *view*, the drawing surface can be larger or smaller than the workspace.

The drawing surface represents one printed page and, in many ways, you can think of it as a sheet of paper. You determine its shape and size when you set up the page layout, and you determine how much of it is visible when you use the view and magnification tools. In other words, the size of the drawing surface in relation to the workspace can change, depending on the page layout and magnification level.

When you first start Artline, the drawing surface is set to full view (it is entirely visible in the workspace) and the page layout is set to *landscape*, which makes the drawing surface wider than it is tall.

The *surround*, described in Chapter 1 of the *Artline User Reference Guide*, is the part of the workspace that is not covered by the drawing surface. It is visible when the drawing surface is smaller than the workspace.

Using the Mouse

This section tells you about the mouse, which you use in some way in almost all program operations.

Moving the Pointer

To move the mouse without moving the pointer, pick it up first.

The small black arrow on your screen is the *pointer*; it moves when you move the mouse. You use the pointer to select tools and elements, and to choose menu commands. Practice moving it.

Clicking

In Artline, you use only the left button of the mouse.

To *click* means to press and immediately release the mouse button.

You click to make selections on the screen.

Dragging

To *drag* means to press and hold the mouse button down while you move the mouse. You use this technique to:

- draw lines and shapes with the drawing tools;
- resize elements;
- move elements around the drawing surface;
- select groups of elements.

Double-Clicking

To *double-click* means to press and release the mouse button twice in rapid succession. You use this technique to:

- display options for tools that have them;
- display element information for selected elements;
- display Combine menu dialogs for combined elements;
- quickly select and exit from the Item Selector.

Selecting Tools

Refer to Appendix A for the name and icon for each tool in the standard toolbox.

When you start the program, the *Selector tool* (shown at the left) is highlighted in the toolbox, showing that it is selected, or ready for use.



Selector tool selected



Selector tool not selected

When the Selector is active, the mouse pointer shape is an arrow. You use the Selector tool to select, move, and re-size elements on the drawing surface.

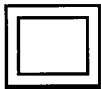
The pointer assumes different forms, depending on which tool is selected.

The mouse pointer is always an arrow when it is over the toolbox and the menus, no matter what tool is currently selected.

To select a tool, you click on it.

Drawing a Rectangle

The Rectangle tool makes rectangles and squares.



Rectangle tool

You use the dragging technique to draw with the Rectangle, Circle, Rounded Rectangle, and Line tools. For this exercise you will draw a rectangle.

To draw a rectangle:

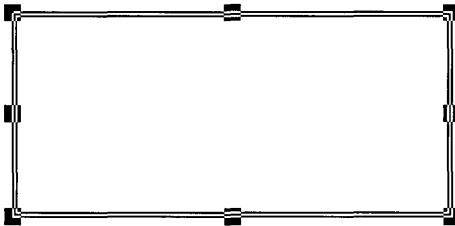
- 1 Click on the Rectangle tool to select it, then move the pointer onto the drawing surface. The pointer changes to a cross to show that the Rectangle tool is selected.
- 2 Place the cross near the upper left corner of the screen, where it will define the upper left corner of the rectangle.

- 3 Hold the mouse button down and drag the cross diagonally (down and to the right), away from the starting point.

As you drag, Artline displays an outline of the rectangle you are drawing. If you move the pointer back toward the starting point, the outline shrinks. Make the rectangle cover about one quarter of the drawing surface.

- 4 Release the mouse button. The rectangle is drawn on the screen, and is enclosed in a *selection frame*, a frame with solid boxes at the midpoints and corners.

The selection frame indicates that an element is selected.



If your rectangle is not to your satisfaction, you can erase it while it is still selected, then draw a new one.

To erase the selected rectangle:

Press **Alt-E**. That is, hold down the **Alt** key while you press **E**. The selected rectangle disappears.

Selecting Elements

There are several ways to select elements on the drawing surface. Here are the two basic methods. Try each one.

To select the rectangle with the Selector tool:



Selector tool

1 Click on the Selector tool.

2 Click in the rectangle.

The selection frame surrounds the rectangle.

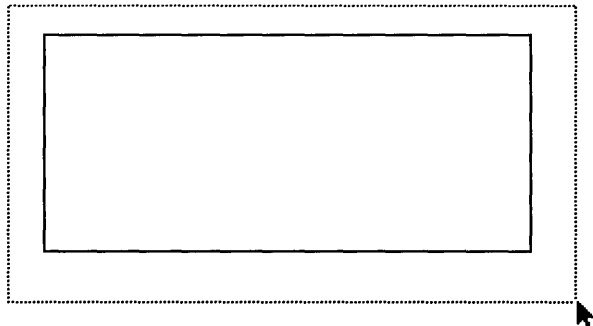
3 Click outside the rectangle to de-select it.

To select the rectangle by dragging:

1 Click on the Selector tool, if it's not already selected.

2 Place the pointer *outside* the rectangle, at the *top left* corner.

3 Hold down the mouse key and drag diagonally to *outside* of the *bottom right* corner. As you drag, a dotted rectangular outline expands to show you the area you are enclosing.



4 When the outline completely surrounds the rectangle, release the mouse button.

The selection frame surrounds the rectangle.

De-selecting Elements

To *de-select* is to remove the selection frame from an element.

To de-select an element, click on an empty area of the workspace. The selection frame disappears.

If you accidentally make a tiny rectangle when you click to de-select the first one, you can use the **Alt-E** key combination to erase it.

Moving Elements

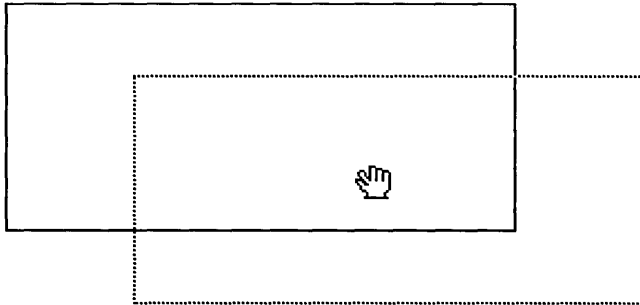


Selector tool

To move the rectangle:

- 1 Select the rectangle.
- 2 Place the pointer in the interior of the rectangle.
- 3 Press the mouse button until the pointer becomes a *hand*. The hand shows you that you can move the whole element.
- 4 Drag the rectangle to a new location.

As you drag, a dotted outline of the selection frame moves with the hand.



- 5 Release the mouse button.

The rectangle is in the new location.

Moving and Copying Elements



Selector tool

Artline provides many ways to copy an element. One way is to press the **Shift** key while dragging. This technique is called *Shift-dragging*.

To move and copy the rectangle:

- 1 Select the rectangle if it's not already selected.
- 2 Place the pointer in the middle of the rectangle.
- 3 Press the **Shift** key first, and hold it down while you drag the rectangle to a new location. When you start dragging, the pointer changes to a hand, and a *copy* of the rectangle moves with the hand.
- 4 Select and delete all but one rectangle.

Resizing Elements

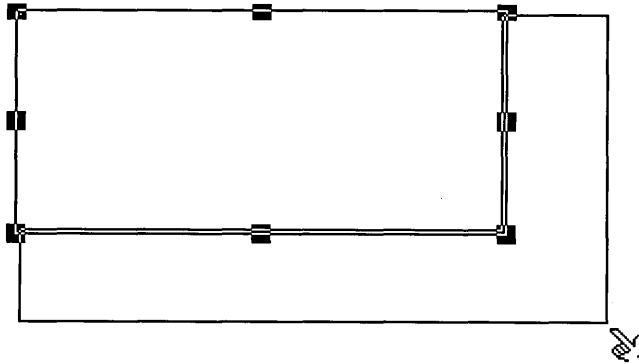
At the corners and in the middle of each side of a selection frame are small boxes called *handles*. You use the handles to resize selected elements.

To resize the rectangle:



Selector tool

- 1 If the rectangle you drew in the preceding section is not already selected, click on the Selector tool, then click on the rectangle to select it.
- 2 Place the pointer on top of the bottom right *corner* handle and press the mouse button until the pointer changes to a *pointing finger*. The pointing finger shows that you can drag a handle. If you see the hand, try again.
- 3 Drag the handle *down and to the right diagonally*. As you drag, the rectangle changes size.



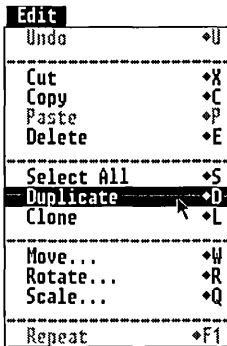
- 4 Drag a *middle handle* up, down, left, and right. The rectangle changes in width or height.
You can drag any corner handle horizontally, vertically, and diagonally. You can drag any middle handle horizontally and vertically.

Using Menu Commands

Many menu commands act on selected elements. When no element is selected, these commands are dimmed to show they are unavailable.

For this exercise, make sure the rectangle is selected.

To choose a menu command:



- 1 Click on the menu name to display a menu. For this exercise, click on the **Edit** menu.
- 2 When the Edit menu drops down, move the pointer through it to highlight each of the commands.
- 3 When you highlight the **Duplicate** command, click the mouse.

The duplicate appears beneath and to the right of the original rectangle. To separate them, *drag* the selected element away.

Using the Repeat Command

The **Repeat** command lets you repeat the last action you performed, in this case, moving the rectangle.

To repeat the move:

- 1 Make sure the rectangle is selected.
- 2 Choose the **Repeat** command from the Edit menu. The rectangle moves again.

Using the Delete command

You can delete any element that is selected.

To delete the copied rectangle:

- 1 Make sure the rectangle is selected.
- 2 Choose the **Delete** command from the Edit menu. The second rectangle disappears from the screen.

Undoing the Delete command

You can undo many actions you take with Artline. Some actions cannot be undone, in which case the **Undo** command is dimmed.

To undo the delete and redisplay the rectangle:

Choose the **Undo Delete** command from the Edit menu.

The deleted rectangle reappears.

The exact name of the **Undo** command changes according to the action you have just taken.

To redraw the screen:

Sometimes, after a lot of editing, you might want to completely redraw the screen. To do this, press the **Esc** (Escape) key.

Using Keyboard Shortcuts

Some menu commands have a *keyboard shortcut*—a combination of key strokes that chooses the command.

In a previous exercise, you duplicated a rectangle by choosing the **Duplicate** command from the Edit menu. In this exercise, you'll duplicate a rectangle with the keyboard shortcut for the **Duplicate** command.

The keyboard shortcuts are listed in the menus on the right of the command name.

- Diamond (◆) indicates the **Alt** key.
- Caret (^) indicates the **Ctrl** key.
- Up-arrow (⇧) indicates the **Shift** key.
- Function keys are listed as **F1**, **F9**, **F10**.

To use the keyboard shortcut:

- 1 Select the rectangle.
- 2 Type **Alt-D**: hold down the **Alt** key as you type the letter **D**.

The element is duplicated beneath and to the right of the original. To separate them, drag the selected element away.

Continuing to hold down **Alt-D** creates multiple duplicates. If you do this, you can select them for deletion by:

- dragging to select a group of them;
- choosing the **Select All** command from the Edit menu.

About Copying Elements

You have already used the **Duplicate** command, the **Alt-D** keyboard shortcut, and the **Shift**-drag technique to copy elements.

Artline provides two additional commands to copy elements, depending on the purpose.

The **Cut** command *removes* the element and places it in memory for future pasting.

The **Copy** command places a copy of the selected element in memory. You can then use the **Paste** command to paste it into the same picture, or into another picture that you open, or into another *layer*. Layers are described in Chapter 10. If you paste into the same picture or layer, the **Paste** command places the copy on top of the original element, so you must drag the copy away to see it.

The **Clone** command creates a copy of the selected element and places it on top of the original. You must drag the copy away to see the original.

Drawing Lines



Line tool

You draw, move, and resize rectangles, squares, ellipses, circles, and rounded rectangles exactly the same way. Because a line has only one dimension, you manage it in a slightly different way.

To draw a line:

- 1 Select the Line tool. The pointer changes to a cross.
- 2 Place the crosshair on the left side of the drawing surface, and drag horizontally to the right side. As you drag, adjust the line up or down to try to make it exactly horizontal, although it does not need to be for this exercise. When the line is about two thirds of the screen in length, release the mouse button.

The selection frame surrounds the line.



- 3 Click on the Selector tool.
- 4 To make the line longer or shorter, press on one of the *end* handles until you see the pointing finger, then drag toward the edge or toward the middle of the drawing surface. The line shortens or lengthens.
- 5 To move the line, place the pointer on top of the line, but not on a handle, and press until you see the hand. Then drag the line to a new position.

If you press on the middle handle, you get the pointing finger. For lines, dragging the pointing finger from the midpoint handle simply moves the line half the distance you drag.

You can duplicate or delete the line just as you would any other element.

Using Dialogs

Menu commands followed by three dots display a *dialog*, a box into which you can type data or choose options. Double-clicking on an element, a group of elements, and some tools also displays a dialog for setting options.

Setting Preferences

You can use the **Preferences** command to set five Artline functions to suit your needs:

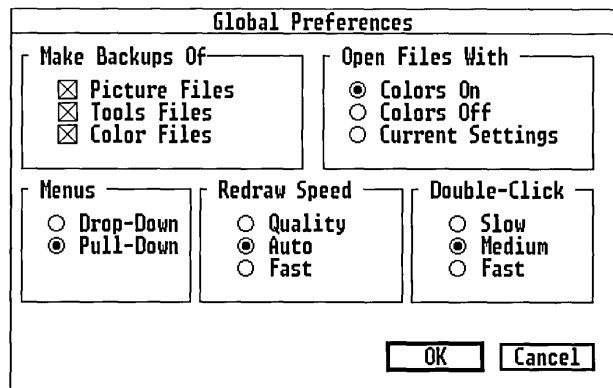
- automatic backups
- opening settings
- menu operation
- redraw speed
- double-click speed

To set preferences:

- 1 Choose the **Preferences** command from the Options menu.

Artline displays the Global Preferences dialog.

You can place the pointer in the title bar of a dialog and drag to move it around the screen.



Chapter 9 of the *Artline User Reference Guide* describes the **Preferences** and **Save Preferences** commands in detail.

You click on *check boxes* and *radio buttons* to turn options on and off.

- Check boxes in a section indicate you can turn on as many options as you like.
- Radio buttons in a section indicate you can choose only one of the options at a time.

Artline pictures have a file extension of .GEM. Backup pictures have a file extension of .SEM.

2 Under Make Backups Of, if there is not already an X in the box next to Picture Files, click to place one there. This will cause Artline to make a backup of any picture you make.

3 Under Menus, click on the radio button next to the kind of menu you prefer.

- Drop-Down menus means you just move the mouse pointer over the menu name to display a menu.
- Pull-Down menus means you must click or hold down the mouse button on the menu name to display a menu.

4 Under Redraw Speed, click on Quality. This displays the best screen picture, but takes longer to draw. For highly detailed pictures, you might want to use Fast.

You can also open files with Colors Off to display complex pictures faster.

You can change your double-click speed if you want.

5 Click on OK or press ↵ to exit the dialog.

Notice that you can click on Cancel to exit a dialog without making any changes.

You can also press the **Esc** (Escape) key to cancel a dialog.

Your preferences are now in effect until you quit this session of Artline.

NOTE: Preferences are active for the current session only. To keep them active for subsequent sessions you must choose the **Save Preferences** command from the Options menu.

Setting Tool Options

Double-clicking on some tools opens a dialog that allows you to set options for the way in which the tool functions.

For example, you might have had difficulty drawing a horizontal line in the preceding section. You can use the Line Options dialog to set the angle at which lines are drawn.

To set Line tool options:

- 1 Double-click on the Line tool. The Line Options dialog appears.

The Snap Angle *field* is highlighted and contains the number 0 (degrees).

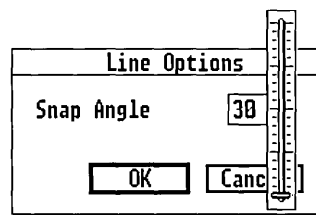
- 2 Type the number **30** (degrees). The number appears in the box. Press Backspace to clear the field.

You can press the plus (+) and minus (-) keys on the numeric keypad to increase or decrease the value by ten degrees. Hold down the **Shift** key while you press the key to change the value by one degree.

Alternatively, you can place the pointer anywhere in the Snap Angle field and press the mouse button to display a *pop-up slider* that you can drag up and down to change the value. The slider shows the range of acceptable values for that field.

When a dialog field is highlighted, you can change its value by typing in a new value. As you type, the value appears in the field.

Press the **Shift** key while you drag to change the value by one degree.



Leave the value set to 30 degrees.

- 3 Click on OK or press ↵ to exit the Line Options dialog.
- 4 Practice drawing some horizontal, vertical, and diagonal lines. Artline constrains them to 30° angles.

Changing the Magnification

This section shows you how to change the magnification level of a picture.

For this exercise, be sure to have one or two rectangles in the center area of the drawing surface. You can keep the line in the picture also.

You can use any of the following tools to change the magnification:

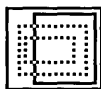
- View tool
- Magnifier tool
- magnification keys

Note that the *View menu* contains commands to display and hide items such as rulers, grids, colors, and even tools, but this menu does not change the magnification level or location of a picture on the drawing surface.

Artline opens pictures in Full View, which means you can see the whole drawing surface. The view size has no effect on the size of the printed picture, but it does affect how much of the drawing surface you see on the screen.

NOTE: When you magnify the view, elements appear very *large*, but you are looking at a very *small* portion of the drawing surface. The drawing surface extends beyond the workspace, and elements that are selected on the part you cannot see can be affected by the next action you take.

Using the View Tool



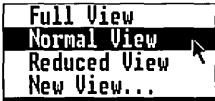
View tool

The View tool lets you choose from three view sizes:

- Full View
- Normal View
- Reduced View

You can also compose your own view and name it using the **New View** command in the View tool pop-up menu.

To select a view size:



- 1 Click on the View tool in the toolbox. A pop-up menu appears.
- 2 Click on **Normal View**.
Your rectangle or line appears enlarged. It is possible that now you can see only part of it in the workspace. You can move it to the center if you wish.
- 3 Click on the View tool again, but this time choose **Reduced View** from the View tool pop-up menu.
The drawing surface is now quite reduced.
- 4 Choose **Full View** from the View tool pop-up menu.
The drawing surface is returned to its original state.

Using the Magnifier

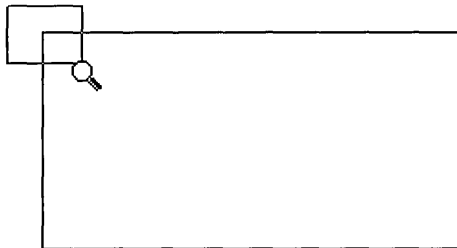
With the Magnifier you can magnify or reduce the view.



Magnifier

To magnify the view:

- 1 Select the Magnifier tool. The pointer becomes a magnifying lens.
- 2 Place the lens *at the center* of the area that you want to magnify. Try magnifying a corner of the rectangle.
- 3 Drag the lens outward from the point you selected.
As you drag, a selector box, which previews the new view area, expands.



The larger the selector box, the lower the magnification level.

- 4 Release the mouse when the outline encloses the corner. The element is magnified. You now see just the corner of the rectangle.

If you magnify an empty area of the drawing surface, you will not see the rectangle, because it occupies a part of the drawing surface that extends beyond the workspace.

To reduce the view:

- 1 Select the Magnifier.
- 2 Click the pointer anywhere inside the workspace.
The view is reduced.

To return to Full View:

Double-click anywhere in the workspace.
The drawing surface is now back in Full View.

Using the Magnification Keys

You can use the magnification keys when any tool is selected.

The magnification keys are the plus (+) and minus (-) keys on the *numeric* keypad. They allow you to increase and decrease the magnification one level at a time.

- ❑ To magnify the view by one step, press the plus key once. You can magnify the drawing surface beyond Normal View.
- ❑ To reduce the view by one step, press the minus key once. You can move to a drawing surface one size smaller than Reduced View.

The magnification keys always display the center of the drawing surface.

Try magnifying and reducing your view of the rectangle.

Notice that in high magnification the rectangle can become so large that its borders extend beyond the workspace into another portion of the drawing surface.

The next section shows you how to move the rectangle back into the workspace.

Moving Around the Screen

This section shows you how to display different parts of the drawing surface on your screen, when the whole page is not visible, such as in Normal View.

For this exercise, choose **Normal View** from the View tool pop-up menu.



View tool

You can use the *scrollers* to bring various parts of your picture into view. The Artline screen contains one horizontal and one vertical scroller.

Each scroller contains:

- two scroll arrows
- one slider

Using the Scroll Arrows

To scroll the picture by small increments, click on the up arrow or the down arrow on the vertical scroll bar or on the left or right arrow on the horizontal scroll bar.

Using the Slider

To scroll the picture by an increment of your choice, drag the slider up or down in the vertical scroll bar, and left or right in the horizontal scroll bar.

If the slider spans the entire length of the scroll bar, you are already looking at the whole drawing surface, such as in Full View or Reduced View, and you cannot scroll.

Exiting Artline

When you exit Artline, you return to the directory from which you started.

If you are going on to Chapter 2 without exiting, you need to reset your screen to Full View and clear it of all elements.

To reset Artline to the default view:

Choose **Full View** from the View tool pop-up menu.

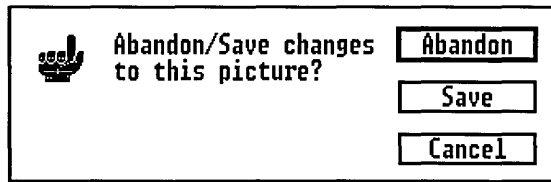
To clear the screen using menu commands:

- 1 Choose the **Select All** command from the Edit menu.
Selection frames appear around all the elements on your screen.
- 2 Choose the **Delete** command from the Edit menu, or press **Alt-E**.
All the elements disappear.

To clear the screen using the **New** command:

- 1 Choose the **New** command from the File menu.
Artline displays the Abandon/Save alert.

Artline always displays this dialog when you edit, then choose **New** or **Quit** without saving changes.



- 2 Click on Abandon.
A new UNTITLED screen is displayed.
Note that you can click on Cancel to return to the drawing surface.

To exit Artline:

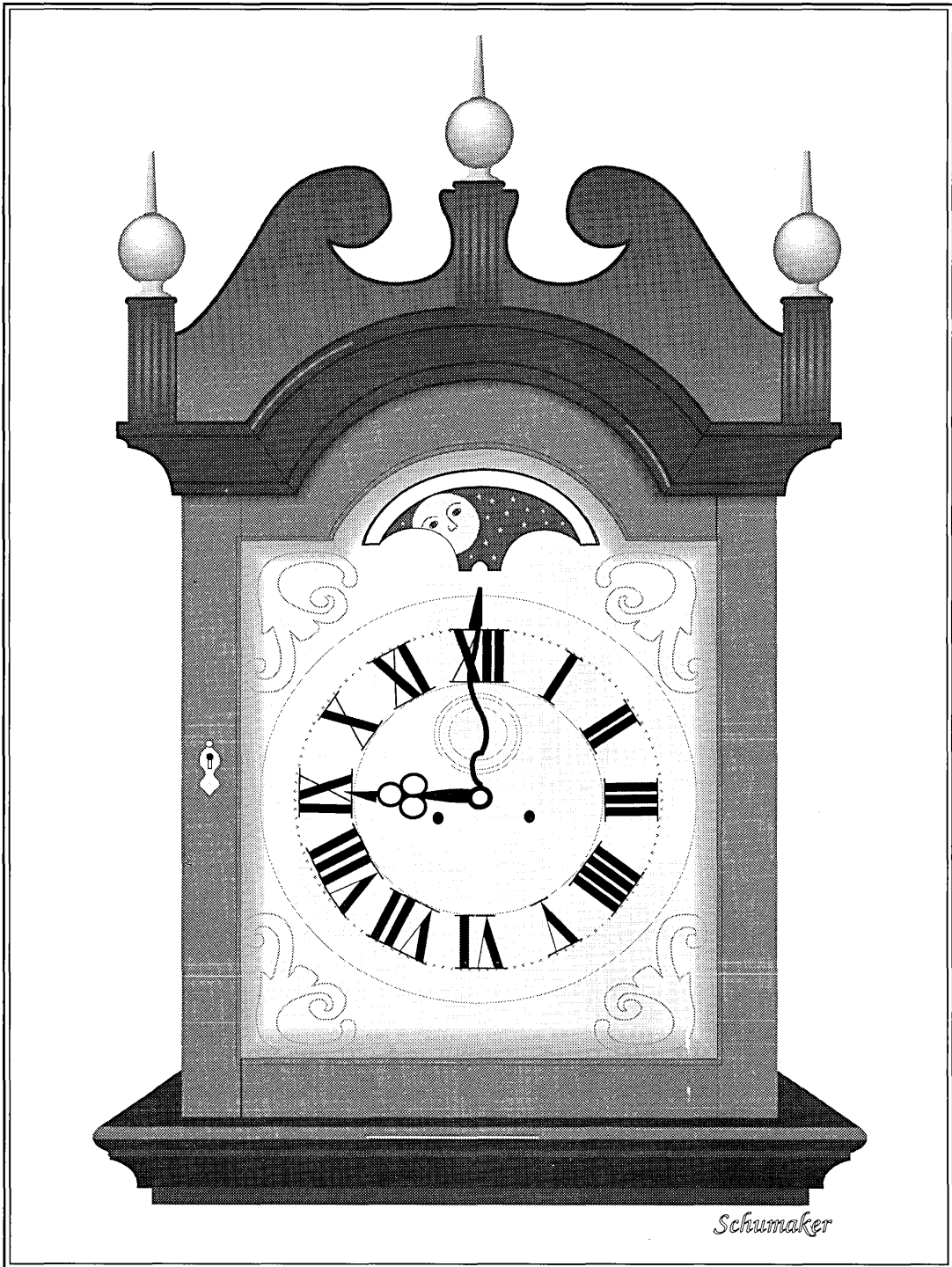
- 1 Choose the **Quit** command from the File menu, or Press **Ctrl-Q** (hold down the **Ctrl** key while you press **Q**).
Artline displays the Abandon/Save alert shown previously.
- 2 Click on Abandon.
Artline quits and returns you to the directory from which you started.

What You Learned

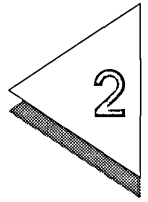
You now know how to:

- start and quit Artline;
- use the mouse;
- select elements, tools, and menu commands;
- draw lines and rectangles;
- move, copy, resize, delete, and undelete elements;
- use keyboard shortcuts;
- use dialogs;
- change the view of the drawing surface.

The next chapter shows you, step-by-step, how to: set up the workspace; use more of the drawing tools to create a picture; group and ungroup elements; change line width, color, and pattern; name and save your picture; and print your picture or display it on the screen.



Basic Drawing Techniques



THIS CHAPTER shows you how to set up the workspace, draw a picture, save the file, and print.

The exercises in this chapter will take about half an hour to complete.

What is in this chapter:

- setting the page layout
- setting up the workspace
- identifying the tools
- drawing a true square and circle
- using the Scale and Rotate commands
- saving your picture
- more about selecting elements
- grouping and ungrouping elements
- changing line width, line color, and fill color
- creating a fountain fill
- printing with PostScript
- printing with Output

Setting the Page Layout

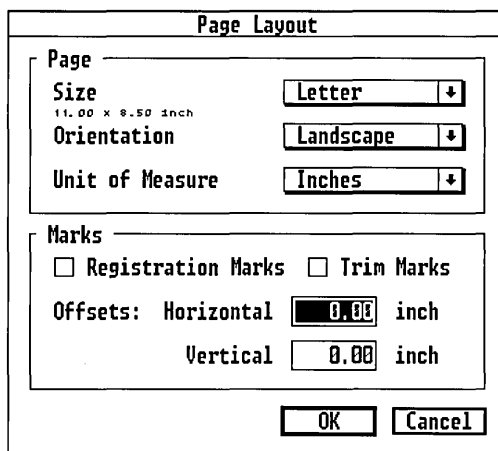
It's good practice to set the page layout before you begin to draw. Artline is probably already set to the following defaults, but this exercise shows you how to use the Page Layout dialog.

To set the page layout:

- 1 Choose **Page Layout** from the File menu, or type **Ctrl-S**.

The Page Layout dialog appears.

A shadowed field with an arrow indicates a pop-up menu.



- 2 In the Page Layout dialog, choose **Letter** in the Size pop-up menu.
- 3 Choose **Landscape** in the Orientation pop-up menu.
- 4 Choose **Inches** in the Unit of Measure pop-up menu.
- 5 Click on **OK** or press ↵ to exit the dialog.

The drawing surface reflects the changes you made to the page layout.

Registration marks, trim marks, and offsets are described in Chapter 3 of the *Artline User Reference Guide*.

Setting up the Workspace

When an item is turned on, an arrow appears to the left of the command name in the View menu.

Most of the commands in the View menu are toggles that turn certain commands on and off.

To turn on the item, you choose the command. To turn off the item, you choose the command again.

- ❑ You use the **Image** command to show and hide bit-image files when you are using the Autotrace tool.
- ❑ You can turn off the **Colors** and **Fountains** commands while you are editing complex pictures to make screen drawing faster, and to better see the outlines of your elements. Elements with fountain fills display “Fo’s” when fountains are turned off. For this chapter, leave colors and fountains turned on.
- ❑ You can use the **Status Line** command to display the status line, which shows the default fill and line color, selected tool, number of selected elements, and other parameters depending on the tool that is selected. The default fill color is *hollow*; the default line color is black.
- ❑ The **Guide Lines** command displays a horizontal and a vertical line that intersect in the center of the workspace. You can drag the guide lines or use the **Set Guide Lines** command to change their position. You can use the guide lines to align elements; you can use the intersection as a rotation point.
- ❑ You can use the **Toolbox** command to turn off the toolbox to make more room in the workspace. While you are doing the exercises in this tutorial leave the Toolbox turned on.

The following exercises use the remaining commands in the View menu.

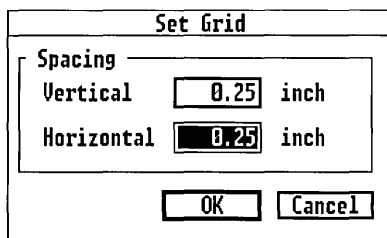
Setting the Grid

The grid allows you to align objects precisely.

To set the grid:

- 1 Choose **Set Grid** from the View menu.

The Set Grid dialog appears.



Type directly into the highlighted field, or use the pop-up slider.

- 2 Under Spacing, enter **0.25** (inches) for the Vertical spacing.
- 3 Click in the Horizontal field to highlight it, and enter **0.25** for the Horizontal spacing.
- 4 Click on OK or press ↵ to close the dialog.
- 5 Display the View menu again and choose **Grid**.

Dots appear on the screen at .25 inch intervals. The vertical and horizontal rows of dots cross at one inch intervals.

Turning on the Rulers

The rulers help you to accurately judge the size of your drawing.

To turn on the rulers:

Choose **Rulers** from the View menu.

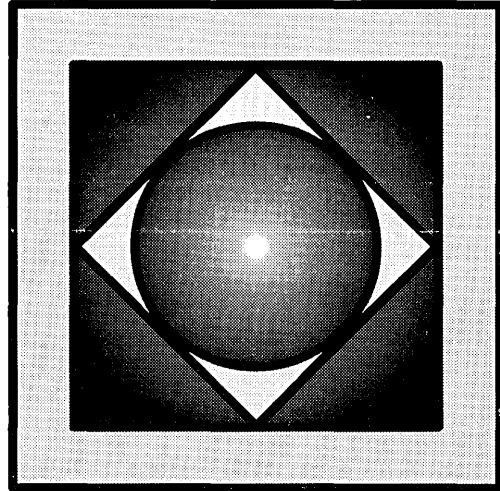
The rulers appear at the top and left sides of the workspace, in one-inch increments.

You are now ready to draw.

Using Basic Drawing Tools

In this section, you'll draw this picture using these tools:

- Rectangle and Circle tools
- Scale and Rotate menu commands
- Line Width, Line Color, Fill Color, and Fountain tools



Correcting Mistakes

You can cancel certain commands by choosing **Undo** from the Edit menu.

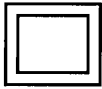
If you are dissatisfied with the way an element appears, select the element and choose the **Delete** command from the Edit menu, or press **Alt-E** to erase it and start over.

Drawing a True Square

When drawing measured lines or curves, it is helpful to use the **Snap to Grid** command, which causes elements to align with the nearest grid point. For this exercise, choose **Snap to Grid** from the View menu.

You start by drawing the largest square in the picture on page 2-5.

To draw a true square:



Rectangle tool

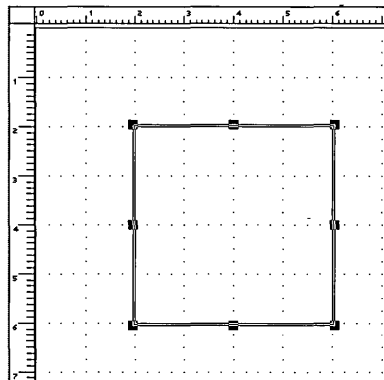
The **Ctrl** key constrains the rectangle to a square.

- 1 Select the Rectangle tool.
The pointer becomes a crosshair.
- 2 Place the crosshair on the drawing surface next to the grid point located at 2" on the vertical ruler and 2" on the horizontal ruler. You will be drawing a four-inch square.
- 3 Hold down the **Ctrl** key and drag the crosshair away from the grid point.

As you drag, an outline previews the square that you are drawing.

- 4 Release the mouse button when the square is 4" tall by 4" wide, at the grid point located at 6" on the vertical and horizontal rulers.

Leave the square selected.



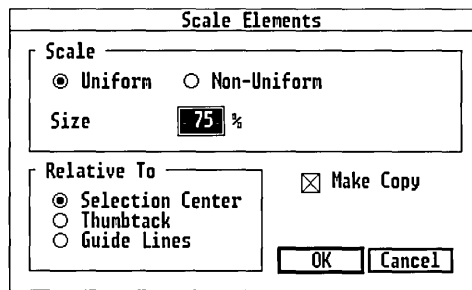
You can also double-click on the Rectangle tool and check **Draw Squared** in the Rectangle Options dialog to draw a true square.

Scaling the Square

You can now use the **Scale** command to make the smaller square.

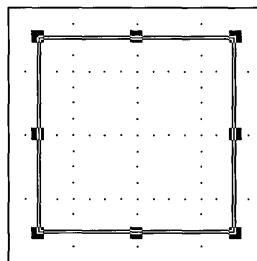
To make the smaller square:

- 1 Choose the **Scale** command from the Edit menu.
- 2 The Scale Elements dialog appears.
Uniform and Selection Center are already turned on.



- 3 In the Size field, type **75 (%)**, or use the pop-up slider.
- 4 Click in the Make Copy box to turn it on. An X appears in the box.
- 5 Click on OK or press ↵ to exit the dialog.

A copy of the square, scaled to 75% of its original size, appears inside the original square, with the selection frame around it. Leave it selected.



Rotating the Square

You can make a diamond with the Line tool or the Quill tool, but it is easiest to simply rotate a square.

Make sure the second square is still selected.

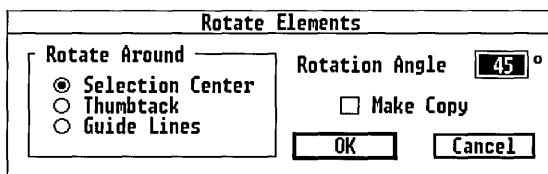
To make the diamond:

- 1 Follow steps 1 through 4 above to scale and copy the second square, but this time scale it to **70%**.

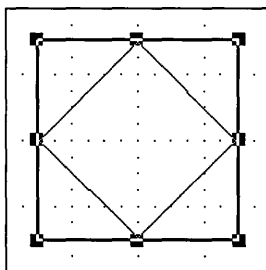
You now have a third square selected, inside the other two.

- 2 With the new square selected, choose the **Rotate** command from the Edit menu.

The Rotate Elements dialog appears.



- 3 Leave Selection Center turned on. Type **45** (degrees) in the Rotation Angle field. Do not make a copy.
- 4 Click on OK or press ↵ to exit the dialog.



Notice that the diamond's selection frame is in the same place as the selection frame for the second square.

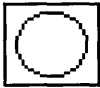
You will now add the last element, the circle.

Drawing a True Circle

The Circle tool draws ellipses and circles.

Next draw the circle inside of the diamond. To place the circle correctly, draw it from the *center*, instead of from the upper left starting point.

To draw a true circle from center:

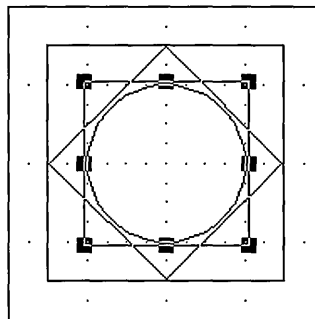


Circle tool

Ctrl-drag draws true.
Shift-drag draws from center.

- 1 Click on the Circle tool. The pointer becomes a cross.
- 2 Place the cross on the drawing surface at the *exact midpoint of all the polygons*—the grid point that intersects at 4" on the vertical ruler and 4" on the horizontal ruler.
- 3 Hold down the **Ctrl** and **Shift** keys, then drag the cross away from the center in any direction. You will be dragging to the inside edge of the diamond. Because the grid snap is on, you need to drag a small distance before you see the circle. As you drag, an outline previews the circle.
- 4 Release the mouse button when the circle is as close to the inside edge of the diamond as it can get, but before it snaps to the outside of (or gets bigger than) the diamond. (It might not quite touch the sides of the diamond on the screen.)

The selection frame now surrounds the circle.

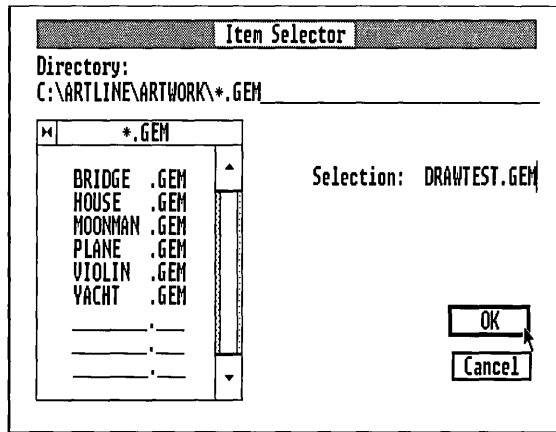


Saving Your Work the First Time

To save your picture in a file you must give it a name.

To name and save a picture:

- 1 Choose the **Save As** command from the File menu.
The Item Selector dialog appears.



The *Directory line* shows you the current drive, directory path, and a *wildcard file specification*, *.GEM, which means files with the .GEM filename extension are currently displayed in the *directory window*.

Artline creates picture files with the .GEM extension only.

The directory window displays the names of directories (marked with a diamond) and files in the current directory, in this case, ARTLINE\ARTWORK.

The cursor is on the *Selection line*.

- 2 Type a name for your picture, such as **DRAWTEST**.
Artline automatically supplies the .GEM extension, so you do not need to type it. If you type the period, it is automatically placed before the filename extension.

If you try to enter a different extension, Artline displays an alert asking you to re-enter the name.

- 3 Click on OK or press ↵ to exit the Item Selector.

Artline displays a spinning ball while saving a file.

Your picture is now in the file DRAWTEST.GEM in the ARTLINE\ARTWORK directory, and its name appears in the title bar of the Artline window.

For detailed instructions on using the Item Selector, see Chapter 1 in the *Artline User Reference Guide*.

NOTE: The next time you want to save changes, you need only choose the **Save** command from the File menu. Artline automatically saves your file under the name in the title bar.

If you want to save a version under a different name, choose the **Save As** command again, and give the picture a different name, such as DRAWTST2.GEM.

If you want to revert to the last saved version, choose the **Abandon** command from the File menu and do not save changes in the Abandon/Save alert.

More About Selecting Elements

Elements are placed in a *stack*, in the order in which you create them, with the first-drawn element at the bottom of the stack, and the last-drawn element at the top of the stack.

For the next exercise, click on the Selector tool.

To practice selecting elements:

- 1 Click outside the design so that no element is selected.
- 2 Click in the circle to select the circle. The selection frame surrounds the circle. This is the top element.
- 3 Press **F4** on the *function keypad* to select the next element down in the stack, in this case the diamond. The selection frame surrounds the diamond, which has the same boundaries as the smaller square.
- 4 Press **F4** again to select the next element down, in this case the smaller square. Notice that the selection frame appears in the same place. This is because the outer edges of the diamond are in the same place as the edges of the square.
- 5 Press **F4** again to select the outer square. The selection frame moves to the outside of the design. Pressing **F4** again de-selects the design, because there are no more elements under the large square.

The **F4** function key selects the next element down in the stack.

Here are some rules for selecting elements:

- ❑ To select the top element of a stack, click on it.
- ❑ To select the bottom element of a stack, place the pointer over the element, then press the **Ctrl** key while you click. When you start at the bottom, **F4** selects the next element toward the top of the stack.
- ❑ To select more than one element at a time, click on the first element, then **Shift**-click on the next and subsequent elements.

Ctrl-click selects the bottom element of the stack.

- ❑ To select more than one *overlapping* element at a time, click on the first element, then press **Shift-F4** to select additional elements.
- ❑ To select many elements, *drag* a selector box around the elements.
- ❑ To *de-select* one selected element in a group of selected elements, **Shift-click** on the element.
- ❑ To select all the elements on the drawing surface, choose the **Select All** command from the Edit menu. The Selector tool need not be selected to do this.

Practice selecting the elements in this stack until you feel comfortable with a few of the methods.

NOTE: When the selection frame for one element is in exactly the same place as the selection frame for another element, the selection frames seem to disappear. This is because they are actually two frames on top of one another and they cancel each other out. The elements are nevertheless selected. You can prove this by selecting all the elements, then dragging to move them. All the elements move.

Grouping Elements

When you group elements, the individual elements become one *grouped* element. Any change you make to a grouped element affects all the elements in the group. The individual elements cannot be modified until you ungroup the element.

To group elements:

- 1 Choose **Select All** from the Edit menu or type the keyboard shortcut **Alt-S**. Or, you can drag a selector box around the outside of the elements.

All the elements in the picture are selected.

- 2 Choose **Group** from the Element menu or type the keyboard shortcut **Alt-M** (for Make Group).
- 3 When the elements are grouped, their selection frames are replaced by a single frame around the picture.

Chapter 6 of the *Artline User Reference Guide* discusses the attributes of grouped elements in detail.

Changing the Line Width

It is easiest to change the line width of many elements at once when they are grouped.

For this exercise, make sure the now grouped element is selected.

Make sure also that colors and fountains are turned on in the View menu. When colors are turned off, you cannot see a thick line.

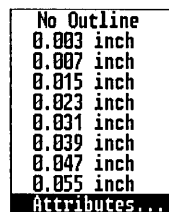
To change the line width:

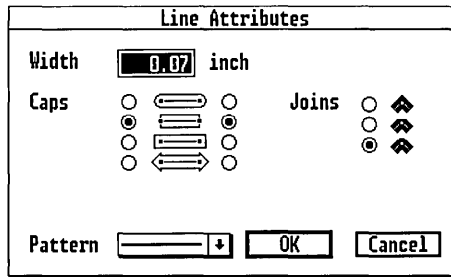
- 1 Click on the Line Width tool to display the pop-up menu.

This menu provides line widths ranging from No Outline to a custom option in which you can enter your own line width.

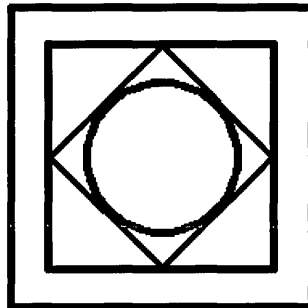


Line width tool





- 2 Choose the **Attributes** command from the bottom of the menu. The Line Attributes dialog appears:
 - 3 Type **0.07** (inches) in the Width field. (This is the smallest width that makes a visible difference in Full View on a VGA™ monitor.)
 - 4 You can press on the Pattern pop-up menu to peruse the available line patterns, but for this exercise leave it set to the solid line.
- Caps and Joins are discussed in Chapter 2 of the *Art-line User Reference Guide*.
- 5 Click OK or press ↵ to exit the dialog.
- The element now looks like this:



Changing the Line Color

While the element is grouped, you can change the line color of all the lines at once. Make sure the element is selected.

To change the line color:



Line Color tool

- 1 Click on the Line Color tool to display the color palette.
 - If you are using a monochrome monitor, you will see a palette containing shades of gray.
 - If you are using a color monitor, you will see a palette of colors.
- 2 Move the pointer over the colors. As a color is selected, a black border surrounds it, and *its name appears at the top of the color palette*.
- 3 Click on the color Blue. The palette disappears and the lines turn blue, (or a dark gray pattern in monochrome).

Leave the element selected.

Ungrouping elements

To change the fill color of individual elements in the design, it is necessary to ungroup it.

To ungroup the design:

Choose the **Ungroup** command from the Element menu, or use the keyboard shortcut **Alt-B** (Break Group).

The selection frames appear around the individual elements. Note that you see parts of the double selection frame surrounding the diamond and the small square.

Adding Fill Color

Make sure the Selector tool is selected.

Click outside the design to de-select all the elements.

When you select the Fill Color tool, you will see a palette of gray shades on a monochrome monitor, and a palette of colors on a color monitor.

To color the design:



Fill Color tool

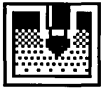
- 1 Click on the circle to select it.
- 2 Click on the Fill Color tool to display the color palette.
- 3 Click on Cyan Light -1. The palette closes, and the circle is filled with the color.
- 4 Press **F4** to select the diamond, and repeat steps 2 and 3 to color the diamond Yellow Light -1.
- 5 Press **F4** to select the smaller square, and repeat steps 2 and 3 to color it Cyan Dark +1.
- 6 Press **F4** to select the larger square, and repeat steps 2 and 3 to color it Magenta, or Magenta Light -3 if you are using a monochrome monitor.

The design now looks similar to the picture at the beginning of this chapter.

Creating a Fountain Fill

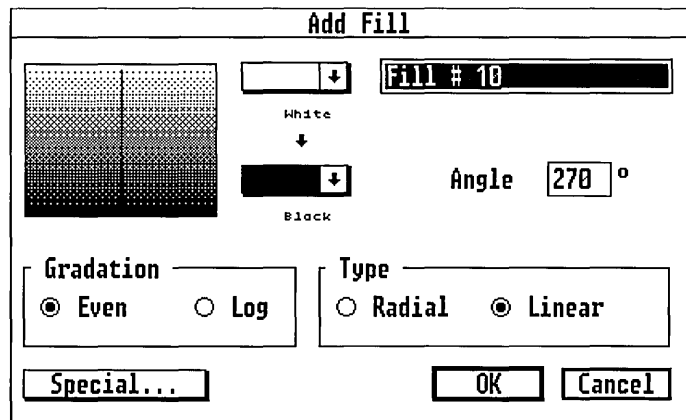
A *fountain* is a gradual blending of one color into another. Artline gives you some preset fountains from which to choose, or you can create your own.

To create a fountain fill:



Fountain tool

- 1 Select the circle in the center of the picture.
- 2 Click on the Fountain tool to display the preset palette of fountains.
- 3 Click on **Add Fill** at the bottom of the palette.
The Add Fill dialog appears.



- 4 Press on the bottom color box showing Black to display the pop-up palette of colors, move the pointer down to the arrow next to **more** to scroll through the palette, and highlight Cyan Light -1.
Cyan now appears in the bottom color box, and the sample fill shows a fountain from Cyan to White.
- 5 Press on the White color box at the top and repeat step 3, but this time highlight Magenta.
Magenta fills the top color box, and the sample fill shows a fountain from Cyan to Magenta.

- 6 Place the pointer on the arrow tip in the sample box and press. The pointer changes to a crosshair.
- 7 Drag clockwise or counter clockwise until the arrow tip is pointing to a corner. Notice that the number of degrees in the Angle field changes automatically as you drag.
- 8 Release the mouse button. The linear fountain fills the example box at the new angle.
- 9 Drag the pointing arrow to the opposite corner. The bottom and top colors reverse in order in the sample, but remain the same in the color boxes.
- 10 Under Type, click on Radial. The example shows a radial fountain fill made with the selected colors.
- 11 Under Gradation, click on Log (Logarithmic). The example shows a radial fountain fill with a logarithmic gradation.

Chapter 12 of the *Artline User Reference Guide* describes the Special Postscript fill options you can set from this dialog.

- 12 Click on OK or press ↵ to exit the dialog.
The new fountain fills the circle.
- 13 Press F4 twice to select the smaller square.
- 14 Click on the Fountain tool to display the fountain list.
Your new fill appears in the list, with the default name of **Fill # 10**.
- 15 Click on **Fill # 10** to color the smaller square with your new fountain. The diamond and circle are redrawn after the smaller square is filled.

The new fill remains associated with *this picture file*, and does not appear in the default Artline fountain palette that is loaded when you choose the **New** command, or when you restart Artline.

Creating, loading, merging, and saving color files is described in Chapter 12 of the *Artline User Reference Guide*.

Saving Your Work

To save your picture under a new name:

- 1 Choose **Save As** from the File menu or type **Ctrl-M**.
- 2 When the Item Selector appears, type the new filename on the Selection line.
- 3 Click on **OK** or press ↵.

To save your picture under its existing name:

Choose **Save** from the File menu or type **Ctrl-V**.
Artline displays the spinning ball while saving.

Printing Your Picture

Artline provides two ways to print your pictures:

- PostScript** command
- To Output** command

You can use the **PostScript** command to:

- print your picture directly to a PostScript printer;
- make color separations;
- output standard PostScript to a File, which creates a file that you can print from the operating system Print and Copy commands, or send to a phototypesetter;
- output the picture to Encapsulated PostScript File format (EPSF), which you can use to import into or print from other applications.

The **To Output** command starts the Output program. You can use Output to:

- print directly to a printer;
- make a list of files to print all at once;
- display files on the screen in a slideshow effect;
- make transparencies with a camera.

Chapter 3 of the *Artline User Reference Guide* describes the **PostScript** command extensively, and the *Artline Utilities Guide* describes the **To Output** command in detail.

If your computer is connected to a PostScript printer, you can follow the steps in the section “Printing from the PostScript Command” to print directly from that command.

You can use the **To Output** command to print to a PostScript printer, a non-PostScript printer, or to the screen.

If your computer is not connected to a printer, you can skip this section, or you can follow the instructions in the next section to display your picture on the screen.

The section entitled “PostScript Command” in Chapter 3 of the *Artline User Reference guide* tells you how to output your picture to a file that you can print on someone else’s printer.

Printing from the Output application

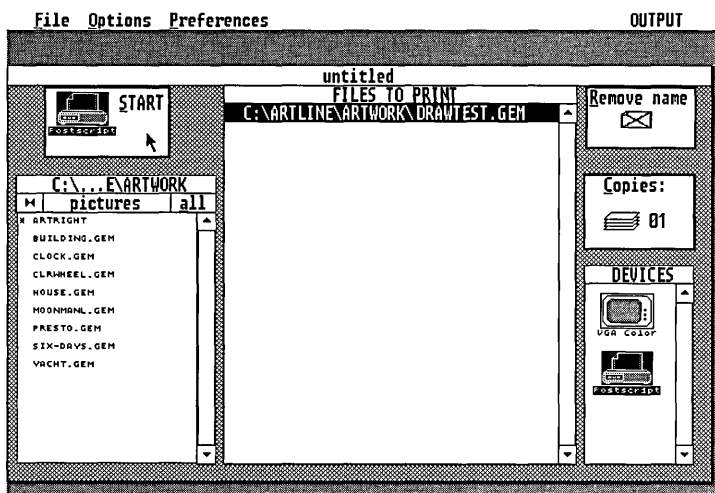
In this exercise, you will use the **To Output** command to print the picture you created in this chapter.

Be sure to save your picture before you begin. Otherwise, Artline displays the Abandon/Save alert, to which you must respond accordingly.

To start Output:

Choose **To Output** from the File menu or type the keyboard shortcut **Ctrl-U**.

The Output program loads into memory and displays the Output screen.



The FILES TO PRINT window contains the name of the picture you just saved in Artline.

The Pictures window is similar to the Artline Item Selector.

To select an output device:

The Devices window contains icons representing the screen and printer that you installed during Setup. The illustration above shows the PostScript printer icon in this window.

- If you have more than one printer installed, click on the icon representing the one you want to use.
- If you want to display on the screen, click on the screen icon. You do not need to set any screen options at this time.

Before you print on paper, you need to set the scaling and page size options, to ensure that your picture prints correctly.

To set the scaling options:

- 1 Click on the printer icon to highlight it.
- 2 Choose **Page scale** from the Options menu.
- 3 In the Printer Page Scale Options dialog, click on the **Scale to page** icon.
- 4 Click on OK or press ↵ to exit the dialog.

To set the page size options:

- 1 Choose **Paper Size** from the Preferences menu.
In the Printer Preferences: Paper Size dialog:
- 2 Choose the paper size that matches the paper in your printer. Many printers use **Letter** size (8.5 x 11.0 inches.)
- 3 Press ↵ to exit the dialog.
You are now ready to print.

To print to the screen or printer:

Click on the **Start** button in the upper left corner of the Output window.

Output begins printing to the output device you selected.

- ❑ To exit from a screen display, press the **Esc** (Escape) key.
- ❑ To return to Artline, choose the **To Artline** command from the File menu. You can abandon changes to the .LIS file (a file you can create that contains the names of the pictures listed under Files to Print.)

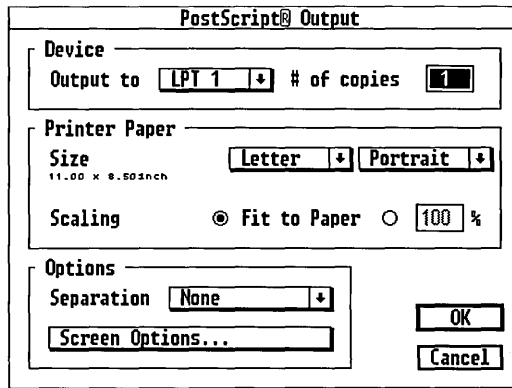
Output quits and Artline reloads and displays your picture once again.

Printing from the PostScript Command

It is not necessary to save your file before choosing the **PostScript** command, but it is recommended.

To print with PostScript:

- 1 Choose the **PostScript** command from the File menu.
The PostScript® Output dialog appears.



In the Device section:

- 2 Next to Output to, press on the pop-up menu to display a list of printer ports. Choose the port name to which your printer is attached.
- 3 Next to # of copies, leave 1 selected, or enter a different number.

In the Printer Paper section:

- 4 Next to Size, choose a paper size that matches the paper in your printer.
- 5 Choose Landscape from the second pop-up menu.
- 6 Click on Fit to Paper.

The Options section is explained in detail in Chapter 3 of the *Artline User Reference Guide*.

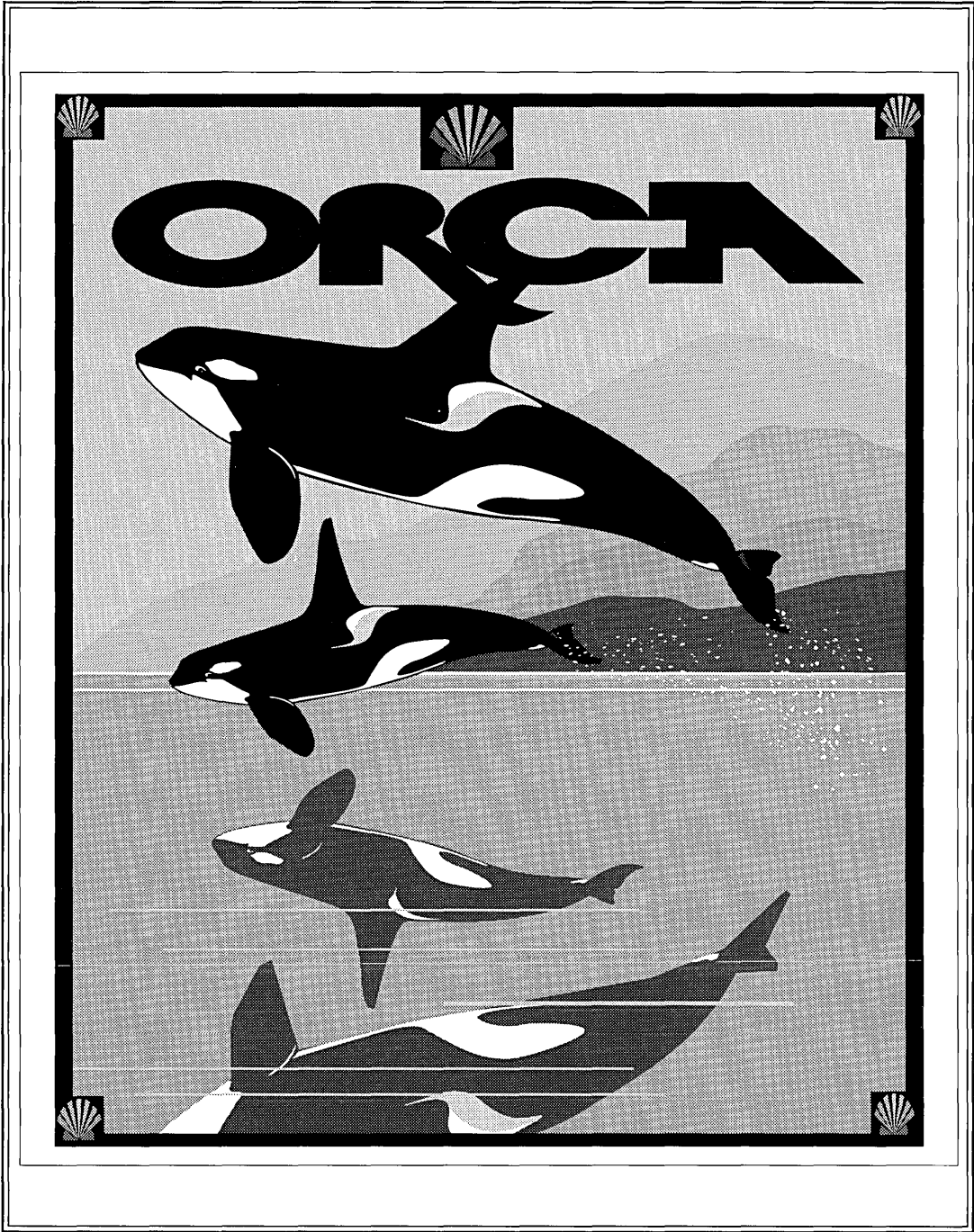
- 7 Click on OK or press ↵ to exit the dialog.

What You Learned

You now know how to:

- set the page layout;
- set up the workspace;
- use the grid;
- draw true squares and circles;
- select multiple elements and elements in stacks;
- save your pictures;
- use the Scale, Rotate, Group, and Ungroup commands;
- use the Line Width, Line Color, Fill Color, and Fountain tools;
- print your pictures.

The next chapter shows you how to use all of the commands in the Combine menu to create interesting effects with text and elements. These are some of Artline's most powerful features. The exercises are designed to teach you the concepts through simple examples.



Working With Text and Other Elements

THIS CHAPTER shows you how to use more of the tools and the commands in the Combine menu to create special effects with a combination of text and elements.

All of the commands and tools are fully described in the *Artline User Reference Guide*.

The commands in the Combine menu are described in Chapter 8 of the *Artline User Reference Guide*.

What is in this chapter:

- blending elements
- placing text along a path
- masking elements
- converting text to curves
- merging elements
- using the rolling pin
- rotating elements
- using the thumbtack
- flipping elements
- shadowing text

Preparing the Workspace

For all of the exercises in this chapter:

- Start Artline, or choose the **New** command from the File menu to start with a new drawing surface.
- Choose **Full View** from the View tool pop-up.
- Choose **Page Layout** from the File menu; set the Page Size to Letter, the Orientation to Landscape, and the Unit of Measure to Inches.
- Turn on **Colors** and **Fountains** in the View menu.
- Turn on **Rulers** in the View menu.
- Turn *off* **Snap to Grid** in the View menu.
- Choose **Preferences** from the Options menu and set the Redraw Speed to Quality.
- If you like working with the status line, turn it on in the View menu, but it is not necessary for these exercises.
- After each exercise, clear the screen and keep the same settings listed here. If you like the examples you make in this chapter, you can save them.

Each exercise in this chapter will take about ten or fifteen minutes to complete.

Blending Elements

Artline lets you blend one shape and its color into another. This exercise shows you how to use the **Blend** command to do this.

To blend two elements:

You cannot blend elements containing fountains.

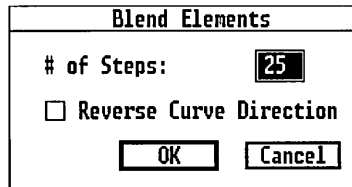
- 1 Draw a rectangle in the bottom left corner of the screen, about 1.5 inches wide and 1 inch tall.
- 2 Click on the Fill Color tool to display the color palette and choose Magenta. Do not use the Fountain tool.
- 3 Draw a circle in the upper right corner of the screen, about 1 inch in diameter.
- 4 Color the circle Cyan.
- 5 Select the square, then **Shift**-click to select the circle.



Artline blends from the bottom element on the stack to the top element.

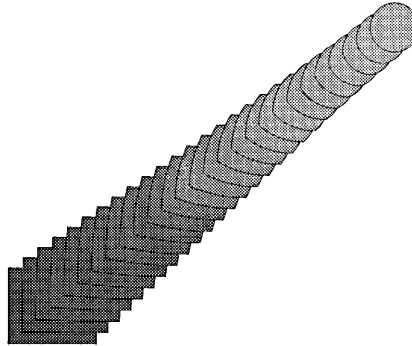


- 6 Choose the **Blend** command from the Combine menu. The Blend Elements dialog appears.



- 7 In the # of Steps field, type **25**.
- 8 Click on **OK** or press ↵ to exit the dialog.

The square blends into the circle, and magenta gradually blends into cyan, in 25 steps.



- 9 While the new element is selected, choose the **Split Element** command from the Combine menu.

The square and circle are once again separate. You can repeat steps 6 through 8 to blend them again.

NOTE: To redisplay the Blend Elements dialog and modify the number of steps, use the Selector tool to double-click in the selection frame of the blended element.

If another tool is selected, you can hold down the **Alt** key while you double-click in the selection frame, to redisplay the Blend Elements dialog.

You can save this picture, or simply clear the drawing surface for the next exercise.

To clear the drawing surface:

Choose the **New** command from the File menu.

If you made changes and did not save your picture, respond appropriately to the Abandon/Save alert.

Placing Text Along a Path

Artline lets you place text along a selected path that you create, for example, a curve or a circle.

In this exercise you will make this picture:

Roller Coaster

Drawing the Path

If you start drawing with the Quill tool, choose New and start over. Chapter 4 teaches you how to use the Quill tool.



Sketch tool

To start, you will use the Sketch tool to make the path. The Sketch tool lets you draw freely, as if you were sketching with a pencil.

To draw the path:

- 1 Select the Sketch tool. The pointer changes to a cross. *If you see a crosshair in a circle, you have selected the Quill tool.* Select the Sketch tool instead.
- 2 Place the cross on the grid point at the intersection of 3 on the vertical ruler and 1 inch on the horizontal ruler.
- 3 Press the mouse button down and begin dragging to make the downward curve, and then the upward curve.
- 4 Release the mouse button at the end of the curve, on the right side of the drawing surface.

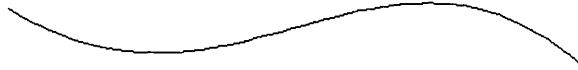
When you release the mouse button, the line disappears briefly while Artline constructs the curve.

The spinning ball is displayed, and then the line appears on the drawing surface, surrounded by the selection frame.

This might take some practice. If you are not satisfied, delete the line and start over. It is not necessary for your path to look just like the path in the picture.

Chapters 4 and 5 show you how to draw curves with the Quill tool and edit them with the Plane tool.

Remember that you can move the line when it is selected.



When you have a path you like, go on to the next step.

- 5 Select the Line Width tool and choose **0.078** inch from the pop-up menu. The line becomes wider to reflect the new setting.

You can save your work to this point, then continue with the next series of steps.

NOTE: It is a good idea to save your picture at the end of a series of steps that is followed by another series of steps. This way, if you do not know how to fix an error, you can revert to the last saved version and re-start the next series without beginning the whole exercise from scratch.

Creating the Text

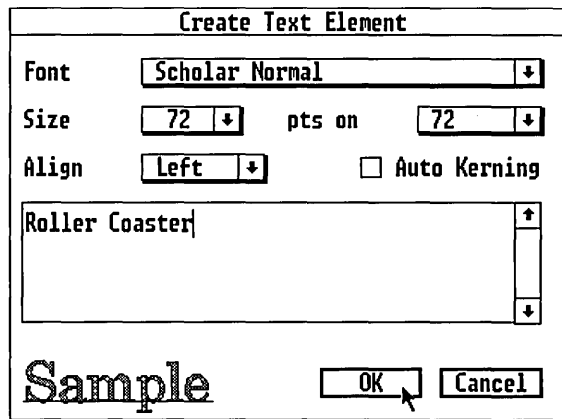
Artline provides a variety of typefaces, styles, and sizes for you to use when working with text. This exercise shows you how to use the Text tool to create text.



Text tool

To create the text:

- 1 Click on the Text tool to select it. The pointer changes to an I-beam text cursor.
- 2 Move the text cursor onto the drawing surface, away from the path you just made, and click. The Create Text Element dialog appears. Fill it out as shown.



This dialog is discussed in greater detail in Chapter 2 of the *Artline User Reference Guide*.

- 3 Press on the Font pop-up to display a list of fonts, move the pointer down until **Scholar Normal** is highlighted, then release the mouse button.

“Scholar Normal” now appears next to Font in the dialog.

Note the word “Sample” under the *Text window*. Sample is always displayed in one point size, but the typeface changes to match the font showing in the Font field.

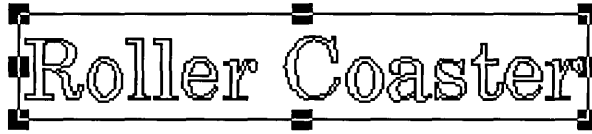
- 4 Press on the Size pop-up and choose **72** (points). The number 72 appears in the Size field. (Changing the text size is unnecessary, but it makes it easier to read the text.)

- 5 Type **Roller Coaster** in the text window. If you make a mistake, you can use the Backspace, Delete, and arrow keys to move the cursor and correct the mistake.

Do not press Enter after you type the line, because that will move the cursor to the second line in the text window, instead of exiting the dialog.

- 6 Click on OK to exit the dialog. The words “Roller Coaster” appear on the drawing surface in 72 point Scholar Normal, and are surrounded by the selection frame.

To edit the text, select it, then double-click to redisplay the Create Text Element dialog.



Notice that the text is outlined. Artline lets you fill text with colors and fountains, and set the line color and width.

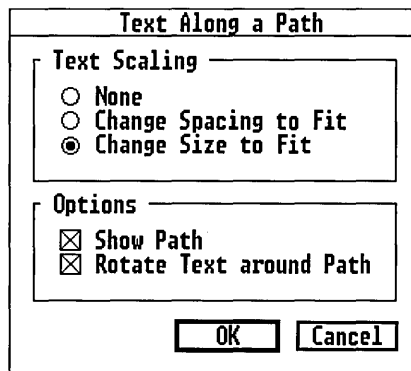
- 7 With the text selected, click on the Fill Color tool and select Light Gray. The text is filled with Light Gray.

Combining the Text and Path

To complete the placement of the text, you must select the text and the path, then use the **Text Along Path** command in the Combine menu.

To combine the text and path:

- 1 Click on the Selector tool and drag a selector box around the path and the text.
- 2 Choose the **Text Along Path** command from the Combine menu. The Text Along a Path dialog appears.



- 3 Under Text Scaling, click on **Change Size to Fit**.
 - Change Spacing adds or deletes space between characters, but does not change the point size.
 - Change Size changes the point size to fit the path.
- 4 Under Options, click on **Show Path**.
 - Show Path includes the path with the element.
 - Rotate Text around Path orients each character according to the curve or angle of the path. This is the default. Leave it checked.

When this option is not checked, the characters follow the path, but are all upright.

- 5 Click on OK or press ↵ to exit the dialog.

The text is combined with the path, and the selection frame surrounds the combined element.

To re-display the Text Along a Path dialog, double-click on the selected element.

The best way to see the differences in the options is to re-display the Text Along a Path dialog and try them.

Splitting Text Along a Path

While the combined element is selected, you can choose the **Split Element** command from the Combine menu to separate them again.

Selecting with the Alt key

Most of the time you can select an element without first clicking on the Selector tool.

- To select an element when a different tool is selected, hold down the **Alt** key while you click on the element.
- To select a second element, press **Alt** while you **Shift-click**.

Clearing the Drawing Surface

To clear the screen for the next exercise, choose **New** from the File menu and respond appropriately to the Abandon/Save alert.

Masking Elements

Artline lets you place an element on top of a particular pattern or design so the design shows through. This effect is called *masking*. In the following exercise, you will use the **Mask** command to make this picture:

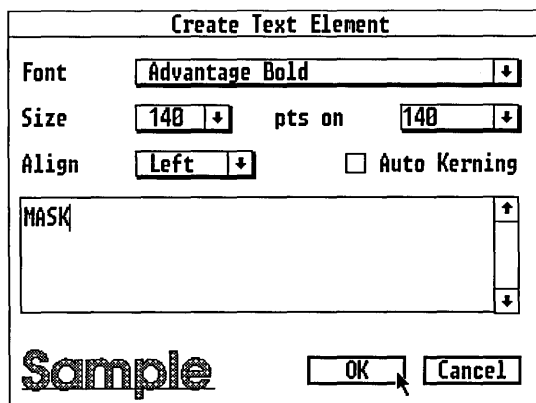


Creating the Text

You begin by making the text to contain the design. The text, in this case, is the *mask element*. The design is the *mask background*.

To make the text:

- 1 Click on the Text tool, then click in the center of the drawing surface to display the Create Text Element dialog. Fill it out as shown.



- 2 In the Font pop-up, choose **Advantage Bold**.

- 3 In the size pop-up, choose **Custom**, type **140** points in the New Size field, then click on OK.
- 4 In the text window, type **MASK**. Use all capital letters.
- 5 Click on OK to exit the dialog.

The word “MASK” appears on the drawing surface in 140 point Advantage Bold.

Converting Text for Masking

In order to use text as a mask element, you must change it into a single non-text element. To do this, first convert it to curves, and then merge it into one element.

To convert text to a single non-text element:

Once you convert text to curves, you can no longer edit it as text.

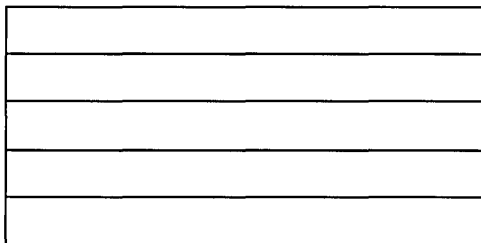
- 1 Select the text. The selection frame surrounds it.
- 2 Choose the **Convert to Curves** command from the Combine menu. The text is now grouped. You cannot use grouped text as a mask element.
- 3 Choose the **Ungroup** command from the Element menu. A selection frame surrounds each letter.
- 4 Choose the **Merge Elements** command from the Combine menu. A selection frame surrounds the now merged element—a single graphic element equivalent to elements drawn with the other tools.

NOTE: You can use the **Split Element** command to split merged elements. When you split merged text, letters such as “i” and “o” that are composed of two parts are split into separate elements.

Now you are ready to make the pattern to display inside the text—the mask background.

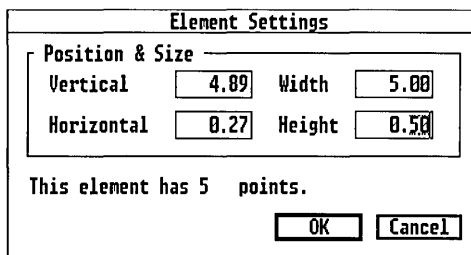
Making the Mask Background

The mask is made from five rectangles arranged in a column. Later, each is filled with a different color, and all five are set to No Outline. Before you add the color and remove the outline, the result looks like this:



To make the design for the mask element:

- 1 Click on the Rectangle tool, then draw a rectangle about 0.5 inch high and 5 inches long. Leave the rectangle selected.
- 2 Choose the **Element Info** command from the Element menu. The Element Settings dialog appears.

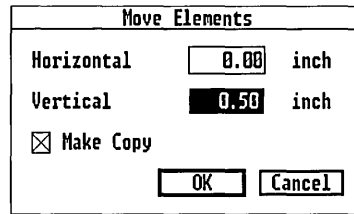


- The Vertical and Horizontal fields show the ruler settings for the upper left corner of the rectangle.
- The Width and Height fields show the width and height of the rectangle.

You can use these fields to set an element to an exact measurement.

(The number of points refers to the number of anchor points, which are discussed in Chapters 4 and 5.)

- 3 In the Width field, type **5.0**. In the Height field, type **0.5**. This sets the rectangle to exactly 0.5 inch by 5 inches.
- 4 Click on OK or press ↵ to exit the dialog.
The rectangle adjusts to the exact measurement.
- 5 Choose the **Move** command from the Edit menu. The Move Elements dialog appears.



- Leave the Horizontal field set to 0.0.
- In the Vertical field, type **0.5** inches.
- Click on Make Copy.
- Click on OK to exit the dialog.

The copy appears under the original. Leave it selected.

- 6 Choose the **Repeat** command from the Edit menu, or type **Alt-F1**. A third rectangle appears under the second one.
- 7 Choose the **Repeat** command two more times, to make a total of five rectangles.

The rectangles should be touching each other, flush against each other, making a vertical column.

Now you are ready to color the rectangles. This is a good time to save your work so far.

Coloring the Rectangles

A mask background cannot contain a fountain. It can, however, contain a blend. For this background you color each rectangle individually. You will be using the Selector.

To color the rectangles:

- 1 Click on the top rectangle to select it.
- 2 Click on the Fill Color tool and choose Cyan Light -1.
- 3 Color the second rectangle Cyan Dark +1.
- 4 Color the third rectangle Magenta.
- 5 Color the fourth rectangle Blue.
- 6 Color the bottom rectangle Blue Dark +2.
- 7 Select all the rectangles and choose **Group** from the Element menu.

The rectangle is colored and grouped, but it still has black lines (or whatever default line color is current in the Line Color palette) around all the component rectangles.

- 8 With the grouped rectangle selected, click on the Line Width tool and choose **No Outline** from the pop-up. This turns off the outlines around the rectangles.

Resizing the Text

You should now make sure the text fits inside the colored rectangle, and that it includes all of the colors, before you combine the text with the rectangle.

To check the text:

- 1 Drag the text so that it is centered inside the rectangle group.

Because you made the text first, it is underneath the rectangle, but you can still see its selection frame.

You can use **Ctrl-click** to select the element on the bottom of the stack.

- 2 With the text selected, choose the **Bring to Front** command from the **Element** menu. You can now see the text.
- 3 Adjust the text so it includes all the colors, but is not larger than the colored rectangle.
If it is too small to include all the colors, or too large, you can drag one of the object handles on the selection frame to change the size.
 - The middle handles change the height or width.
 - The corner handles change the height and width.

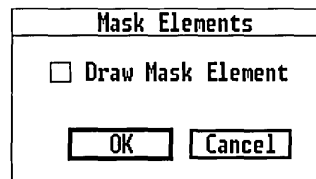
Combining the elements

You are now ready to combine the elements into the mask.

To create the mask effect:

- 1 Drag a selector box around both elements to select them. Selection frames surround both elements.
- 2 Choose the **Mask** command from the **Combine** menu. The **Mask Elements** dialog appears.

When **Draw Mask Element** is checked, you can see the outline of the text.



- 3 Click on **OK** or press **↵** to **Exit** the dialog.

The text now appears in the five colors of the rectangle, and you have created the mask effect.

You can double-click on the selected mask to re-display the **Mask Elements** dialog.

To restore the masked element into its original components, choose the **Split** command from the **Combine** menu.

Choose the **New** command and respond appropriately to the **Abandon/Save** alert.

Merging Elements

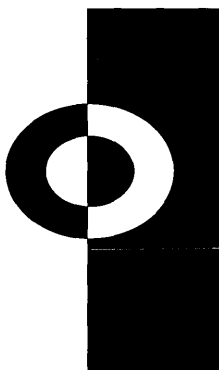
Artline lets you merge two or more elements into a single element.

- ❑ When there are an odd number of layers overlapping, the areas where the original elements overlap become solid.
- ❑ When there are an even number of layers overlapping, the areas where the original elements overlap become *hollow*.

NOTE: Hollow means that the object has *no fill color*, so you can see through it to whatever is underneath. This can be other fill colors or lines, or the drawing surface on your screen, which ultimately represents the film or paper on which you print.

You have already used the Merge Elements command to merge text into a single element.

Here is a simple exercise to show you the effect of merging three elements—a large rectangle, a circle, and a smaller circle inside the first. You will make this picture:

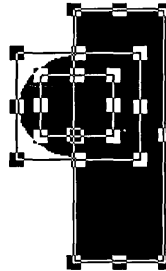


There are many ways to draw and color the lines and curves in this picture, but merging is the simplest way to do it.

To merge three elements:

- 1 Draw a rectangle like the one in the picture.
- 2 Draw the larger circle, about the same size as the one in the picture. Make sure it overlaps the rectangle about half way.
- 3 Draw the smaller circle inside the larger circle, also overlapping the rectangle half way.
- 4 Select all three elements, then click on the Fill Color tool and select Black. All three elements are now black.

Drag with the Selector tool, or press **Shift-F4** to select overlapping elements.



- 5 While the three elements are selected, choose the **Merge Elements** command from the Combine menu.

The three elements are combined into a single merged element.

To clear the drawing surface for the next exercise, choose the **New** command from the File menu and respond appropriately to the Abandon/Save alert.

Using the Rolling Pin with Text

Artline lets you use the Rolling Pin to skew or distort elements. You can create interesting effects with text, place diagonally oriented colors on a masking background, or create other pictorial effects.

In this exercise, you will use the Rolling Pin on text to make something like this picture:



ROLLING PIN

Creating the Text

You start by creating the text.

To create the text:



Text tool

- 1 Click on the text tool, then click in the drawing surface to display the Create Text Element dialog.
- 2 Fill out the dialog like this:
 - Choose a font from the Font pop-up, or leave the default font selected.
 - Choose **72** points from the Size pop-up, so the text will be large enough to see the effects easily.
 - Type **Rolling Pin** in the text box.
- 3 Click on OK to exit the dialog.

The text appears on the drawing surface.
- 4 With the text selected, click on the Fill Color tool and choose a color from the color palette. The text is colored.
- 5 Click on the Line Color tool, and choose another color for the outlines around each letter.

Converting Text to Curves

To use text with the Rolling Pin, you must first convert it to curves.

To convert the text to curves:

- 1 Select the text if it is not already selected.
- 2 Choose the **Convert to Curves** command from the Combine menu. The text changes to curves.

Using the Rolling Pin

Now you can use the Rolling Pin to skew the text like the picture.

To skew the text:



Rolling Pin

- 1 Click on the Rolling Pin tool.
- 2 Place the pointer over the handle in the *upper right corner* of the selection frame.
- 3 Drag the handle diagonally about one inch toward the upper right corner of the screen.

The selection frame extends out at an irregular angle, indicating the degree to which the text will be skewed.

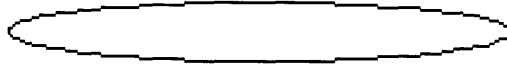
The text now looks something like the picture at the beginning of this section.

You can experiment with the Rolling Pin to learn its effects.

- You can drag a corner handle vertically, horizontally, or diagonally. Dragging a corner handle diagonally skews the text in two directions at once—for example, up and to the right, or down and to the left.
- You can drag midpoint handles horizontally or vertically, but not diagonally.

Rotating Elements

Artline gives you several ways to rotate elements. You have already used the **Rotate** command to rotate a square in Chapter 2. This section shows you how to use the Rotator tool and the Thumbtack to rotate elements. In this exercise you first practice rotating this ellipse:



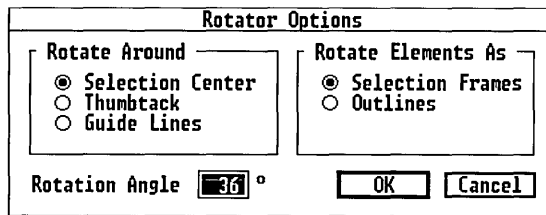
Using the Rotator Tool

To rotate an ellipse:



Rotator tool

- 1 First, draw a horizontal ellipse about 4.5 inches long and 0.5 inch high in the center of the workspace.
- 2 You can use the **Element Info** command to precisely set the measurement if you like. Leave the ellipse selected.
- 3 Double-click on the Rotator tool to display the Rotator Options dialog.

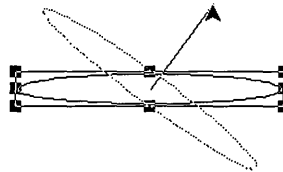


— Under Rotate Around, click on Selection Center, if it is not already selected.

Selection Center rotates an element around the center of its selection frame.

- In the Rotation Angle field, type **36** (degrees).
This means the element can only be rotated in increments of 36 degrees. (When this field is set to 0° you can rotate an element freely.)
- Under Rotate Elements As, click on either choice.
Selection Frames displays the element's selection frame as you rotate it, and draws quickly.
Outlines displays the element's outline as you rotate it, and can take longer to draw.

- 4 Click OK or press **↵** to exit the dialog.
The Rotator Options are now set.
- 5 Click on the Rotator tool to select it. The pointer changes to an arrowhead.
- 6 Move the pointer to just above the top middle handle of the selection frame. (The pointer does not have to be on top of the ellipse or the handle to rotate it.)
- 7 Press down on the mouse button. A line appears between the center of the selection frame and the pointer.
- 8 Drag the line clockwise until a new selection frame or outline appears, then release the mouse button.



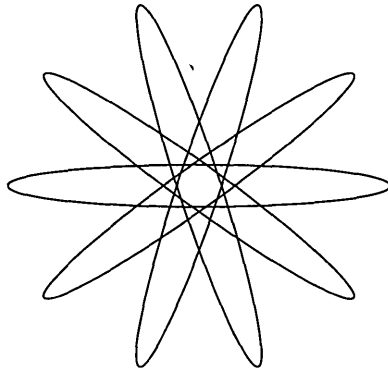
The ellipse snaps into the new position.

Note that the new selection frame or outline appears only after you drag the line clockwise (or counter-clockwise) at least 36 degrees.

- 9 Practice doing this until the ellipse is horizontal again. Make sure the ellipse is selected.

To de-select the ellipse, click on the Selector tool, then click outside the ellipse.

Now you can use the Rotator tool to copy and rotate, to make this picture:



You can also use the **Rotate** menu command (with Make Copy turned on) to accomplish the same thing, but for this exercise use the Rotator tool.

To rotate and copy the ellipse:

- 1 Repeat steps 5 through 7 above, but this time press the **Shift** key while you drag the line, to copy and rotate the ellipse.

A second ellipse appears in the new position.

- 2 **Shift-drag** three more times, or choose the **Repeat** command from the Edit menu three times, until you have a total of five ellipses rotated around center, as shown in the picture.

The remaining steps in this sequence are to remind you about coincident selection frames.

- 3 Click on the Selector tool, then select each ellipse individually.

Because the selection frames for two pairs of the ellipses are in exactly the same place, it looks like two ellipses are selected. The status line shows you that one ellipse is selected.

- 4 Choose **Select all** from the Edit menu.

Notice that a selection frame appears briefly around each element and ultimately appears around only the horizontal ellipse. This is because the selection frames for the other two pair cancel each other out.

- 5 Choose **Group** from the Element menu. The selection frame surrounds the entire design.

Move this picture to one side of the drawing surface so you can compare rotating around the center to rotating with the Thumbtack.

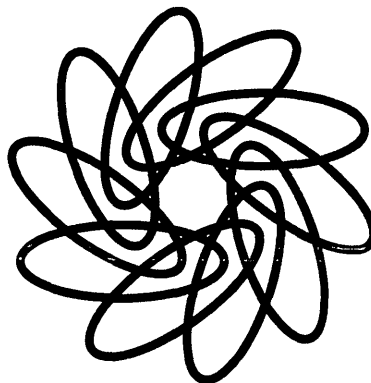
You are now ready to learn to use the Thumbtack to set a rotation point.

Using the Thumbtack

The Thumbtack lets you rotate an element around a specific point other than the element's center.

You can also rotate an element around the intersection of the guide lines.

In this exercise you will make this picture:



To rotate around the Thumbtack:

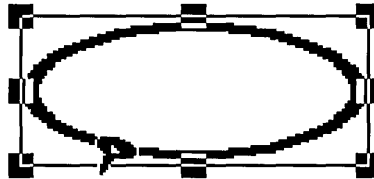
- 1 Draw another ellipse, this time about 2.5 inches long and about 1 inch high. Again, you can use the **Element Info** command to set precise measurements.
- 2 Click on the Line Width tool and choose **0.078** inch from the pop-up menu. This makes the outline of the ellipse easier to see.
- 3 Double-click on the Rotator tool to display the Rotator Options dialog, select Thumbtack, then click on OK.

The Rotator is now set to rotate around the Thumbtack.

- 4 Click on the Thumbtack tool.
- 5 Move the pointer to a little below and left of center of the ellipse, as shown in the picture, then click to place the Thumbtack on the drawing surface.



Thumbtack

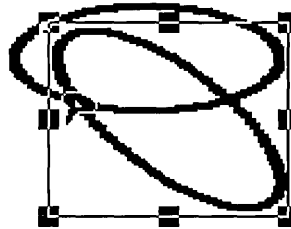


- To move the Thumbtack, click on it while the Thumbtack tool is selected. It disappears. Click again where you want to place it. It reappears.
- To remove the Thumbtack, click on it while the Thumbtack tool is selected.

Make sure the ellipse is still selected.

- 6 Click on the Rotator tool.
- 7 Press the **Shift** key while you drag the rotation line clockwise at least 36 degrees, then release the mouse button.

A copy of the ellipse appears as before, but this time it is offset from center and is rotating around the Thumbtack.



- 8 **Shift**-drag or use the **Repeat** command in the Edit menu to repeat step 7 eight more times, to complete the circle of ten ellipses.

If you want to group the ellipses, choose **Select All** from the Edit menu, **Shift**-click on the first picture to de-select it, then choose **Group** from the Element menu.

You are now ready to save or abandon changes to clear the drawing surface for the next exercise.

Creating a Mirror Effect

You can use the Flipper tool to flip elements or flip and copy elements at an angle you control.



In this exercise, you copy and flip to make this picture.

To create the text:

Start by creating the text.

- 1 Click on the Text tool, then click in the center of the drawing surface and fill out the Create Text Element dialog like this:
 - Choose **Advantage Bold** from the Font pop-up menu.
 - Choose Custom from the Size pop-up and type **140** (points), then click on OK.
 - Type **MIRROR** in all capital letters in the text window.
 - Click on OK to exit the dialog.

Leave the text selected.

- 2 Click on the Selector tool, place the pointer inside the selection frame, press until you see the hand, and move the text to the center of the workspace.

To flip and copy the text:



Flipper tool

- 1 Click on the Flipper tool.
- 2 To show Artline a line to flip an element across, you drag a *flip line*. Place the pointer on the bottom line of the text, approximately in the center (in this case, between the two R's).
- 3 Press the **Shift** key while you drag horizontally. The flip line extends from the pointer in two directions. When the flip line is long enough, a selection frame appears showing where the copy will be placed.
If you don't like the position of the preview, make the flip line shorter. When the preview disappears, release the mouse button.
Artline displays an alert stating the flip line is too short. Click on OK and start over.
- 4 When the preview is visible, release the mouse button.

The copy appears in a mirror image under the original.

To color the design:



Fill Color tool

- 1 Select the original word, click on the Fill Color tool, and color it Black.
- 2 Select the mirrored second word, click on the Fill Color tool, and color it Light Gray.

To clear the drawing surface for the last exercise in this chapter, choose the **New** command from the File menu and respond appropriately to the Abandon/Save alert.

More Special Text Effects

This exercise shows you how to make this picture by creating text, filling it with a fountain, and then creating a shadow effect.



SHADOW

Creating the Text

First, you need to create the text.

To create the text:

- 1 Click on the text tool, and then click in the center of the drawing surface to display the Create Text Element dialog.
 - Choose **Advantage Bold** from the Font pop-up.
 - Choose **Custom** from the Size pop-up, type **140** (points) in the New Size field, and click on OK.
 - Type **SHADOW** in the text window. Use all capital letters.
 - Click on OK to exit the dialog.

The text appears on the screen with the selection frame around it. Leave it selected.

- 2 Click on the Selector tool, place the pointer inside the selection frame, press until you see the hand, and move the text to the center of the drawing surface.

- 3 Click on the **Fountain** tool to display the Fountain list, and select one of the preset fountains.
The text fills with the fountain. Leave the text selected.
- 4 Choose the **Duplicate** command from the Edit menu. The duplicate appears below and to the right of the original, with the selection frame around it. Because you made it last, the duplicate overlaps the original. Leave it selected.
- 5 Click on the **Fill Color** tool to display the color palette, and select **Black**. The duplicate fills with black.
- 6 Choose the **Send to Back** command from the Element menu. The picture now looks like this:



The black duplicate is now in back of the original, or on the bottom of the stack. Leave it selected.

This is a good time to set the Selector tool options to move the element as an outline instead of as a selection frame.

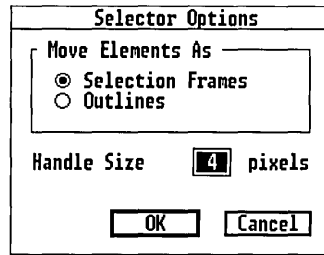
Setting Selector Tool Options

You can set Selector tool options to let you move objects more precisely.

To set Selector tool options:

- 1 Double-click on the Selector tool.

The Selector Options dialog appears.



The choices are:

- Move Elements As Selection Frames means you see just the rectangular outline of the selection frame when you move an element. This is the fastest method.
- Move Elements as Outlines means you see the actual outline of the object you are moving, which can take longer to draw, but allows you to place objects more accurately.
- Handle Size refers to the number of *pixels* in a handle. You can change this value if, for example, you want to make handles larger.

- 2 Click on Outlines.
- 3 Click on OK or press ↵ to exit the dialog.

Moving the Duplicate

You can now easily perform the final step of the design, which is to move the shadow into place.

To move the shadow:

- 1 Click on the Selector tool, if it is not already selected.
- 2 Place the pointer inside the selection frame of the black copy, and move it up and to the left, to its final location as shown in the completed picture.

Because the Selector is now moving elements as outlines, it is easier to see exactly where to place the duplicate. It might take several moves to place the black copy exactly where you want it.

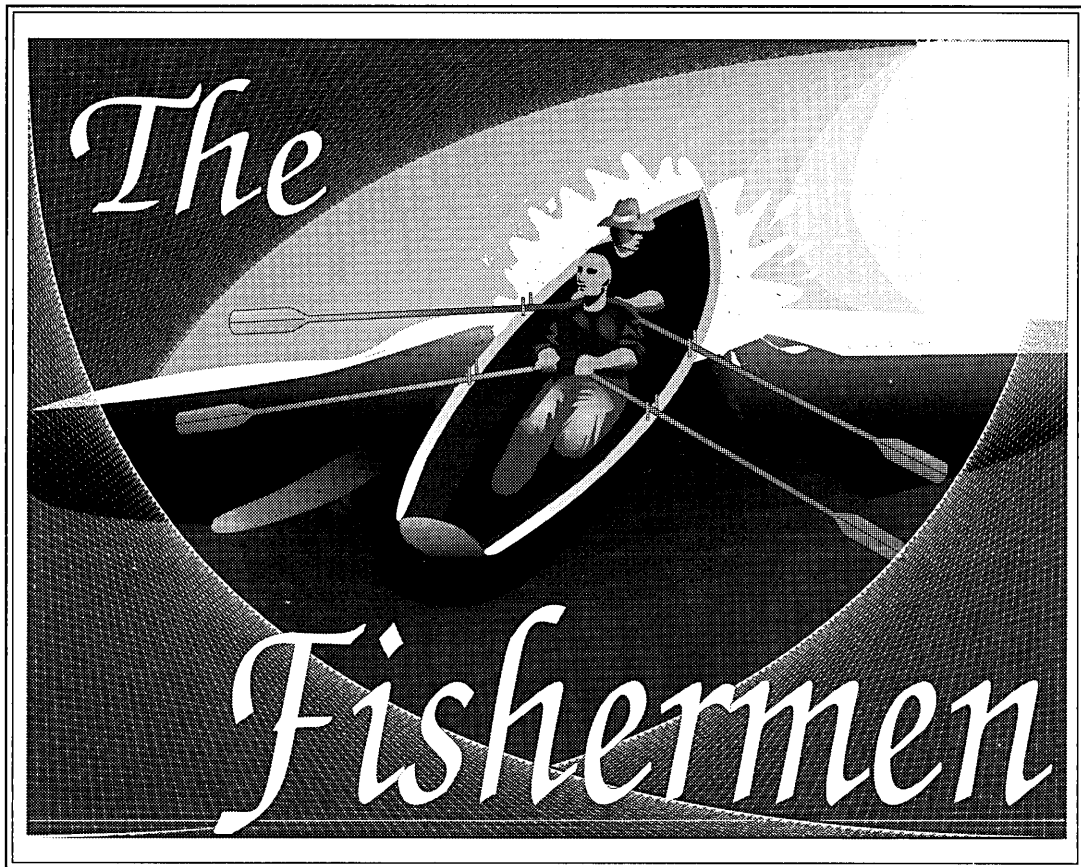
The result now looks similar to the picture.

What You Learned

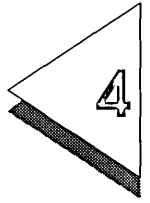
You now know how to:

- blend elements;
- create, size, and move text;
- place text along a path;
- mask elements;
- merge elements;
- flip elements;
- rotate elements;
- use fountain fills with text;
- shadow text.

The next chapter shows you how to use the Quill tool to draw precise lines and curves.



Drawing Lines and Curves with the Quill



THIS CHAPTER shows you step-by-step how to use the Quill tool to draw line segments, angles, and curves.

When you want to draw a single line, it is easiest to use the Line tool. When you want several connecting line segments, such as in a polygon, or when you need to fill an area created by line segments, it is more efficient to use the Quill tool.

You can use the Sketch tool to draw the same curves as you draw with the Quill tool, but they will probably not be as smooth. You have already used the Sketch tool to create a curved segment in the section “Placing Text Along a Path” in Chapter 3.

Chapter 5 shows you how to use the Plane tool to edit lines and curves.

The exercises in this chapter will take about half an hour to complete.

What is in this chapter:

- drawing line segments
- drawing polygons
- drawing simple curves
- drawing compound curves
- adding a line to a curve
- adding a curve to a line
- changing the direction of a tangent line
- tracing an ellipse

For all the exercises in this chapter:

- Choose the **Preferences** command in the Options menu and set Redraw Speed to Quality.
- Choose the **New** command from the File menu to clear the drawing surface.
- Turn off **Colors** in the View menu.
- Turn on **Rulers** in the View menu.
- Choose **Set Grid** from the View menu, and ensure that vertical and horizontal spacing is set to 1 inch.
- Turn on **Grid** in the View menu.
- Turn on **Snap to Grid** in the View menu.
- Click on the View tool and choose **Full View**.

In this chapter you make small sample line segments and curves to learn how to use the Quill tool. You do not need to save any of the pictures; you can if you want to.

After each exercise you can choose **New**, unless you are directed otherwise.

Drawing Line Segments and Polygons

This section shows how to use the Quill to:

- draw line segments
- draw polygons

To draw a line segment:



Quill tool

You click on the beginning and endpoints of the line and Artline draws the line between the two points.

- 1 Select the Quill tool and move the pointer onto the workspace. The pointer changes to a crosshair (cross within a circle).
- 2 Click in the workspace. Artline places a small hollow box at the point where you clicked. This is the first *anchor point* of the line. It marks where the line begins.

The crosshair becomes a plain cross to indicate that the Quill is active, and that you have started to draw.

- 3 Click at the point where you want the line to end. A second hollow box appears, marking the second anchor point, and Artline draws the line between the two points.
- 4 *Double-click* anywhere on the drawing surface to complete the line. This tells Artline you are finished drawing this element.
- 5 A selection frame surrounds the line, *the cross reverts to a crosshair*, and you can start a new element with the Quill.

Artline will continue creating lines until you double-click.

The line you drew begins and ends with anchor points. The line between these points is called a *segment*.

In the next exercise, you use the Quill to draw a triangle.

You can use the Line tool or the Quill tool to draw a triangle. With the Line tool, you must make three separate lines, or elements. Then, to fill the triangle, you must join the corners to make one element. With the Quill tool, the triangle is already one element containing three line segments, so it is more efficient to use the Quill to make a triangle.

To draw the triangle:

- 1 Select the Quill tool. The pointer becomes a crosshair (cross within a circle).
- 2 Click at the points where you want the corners to be. Each time you click, a new *corner* point and straight line is added to the last one you drew.
 - To cancel the *first* corner point, double-click. The corner point disappears and the cross reverts to the crosshair.
 - To delete a corner point, press the Backspace key.

Artline snaps to the nearest grid point.

When two straight lines are joined at an angle by an anchor point, the point is called a *corner point*.

- 3 Complete the element by double-clicking.

The cross reverts to the crosshair, indicating that the Quill is active, but not in the process of drawing an element. The triangle is complete.

NOTE: If you draw with the Quill and then choose another tool *without first double-clicking* to end the Quill element, then select the Quill again, anything you draw connects to the endpoint of the unfinished element. This can result in some unexpected line segments. Furthermore, you cannot select an unfinished Quill element. You must select the Quill and double-click to complete the element; then you can select it.

Drawing Simple Curves

A simple curve flows in one direction, like a U. A compound curve flows in two directions, like an S. In this exercise you connect many simple curves to make this picture:



Drawing curves electronically is different from drawing them freehand. It will take some practice to get the feel of it. These exercises are designed to show you the principles so you can create your own designs.

When you draw a curve, Artline uses special anchor points to determine the size and direction of the curve.

The length of a straight line is determined by the distance between the starting and ending anchor points.

A tangent line intersects with a curve at the tangent point.

Similarly, the distance between the starting and ending points of a curve is also determined by the distance between the starting and ending anchor points, but in a curve these are special anchor points called *tangent points*.

For the following exercise:

- Choose **New** from the File menu to clear the screen.
- Make sure **Colors** is turned off and **Snap to Grid** is turned on, which makes this particular learning exercise easier to manage.

To draw simple curves:

- 1 Select the Quill. The pointer changes to a crosshair (cross within a circle).
- 2 Move the crosshair onto the grid point located at 4 inches on the vertical ruler and 2 inches on the horizontal ruler.
- 3 Press *and hold down* the mouse button to set the first tangent point. *Do not release the mouse button yet.*
- 4 Drag straight *down* one inch to the grid point at 5 inches on the vertical ruler and 2 inches on the horizontal ruler. As you drag, a line extends from the tangent point an equal distance in both directions. Points, called *direction points*, are at each end of the *tangent line*.
- 5 Before you release the mouse, the line looks like this:



- 6 Release the mouse.
- 7 The bottom portion of the tangent line remains, because you dragged downward.

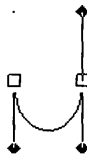
To cancel the *first* tangent point, double-click.

To delete a tangent point, press the Backspace key.

The line now looks like this:



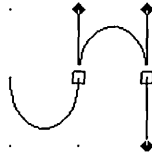
- 8 Place the cross one inch to the right of the first tangent point, on the grid point at 4 inches on the vertical ruler and 3 inches on the horizontal ruler.
- 9 Drag *upward* one or two inches, still holding the mouse button. As you drag the tangent line, the curve forms between the two tangent points. The farther you drag, the longer the line, and the deeper the curve. Drag back toward the starting point to shorten the curve. Still holding down the mouse button, drag toward the right and then the left, to see what happens to the curve. As you drag a direction point, the curve changes direction.
- 10 Drag to the grid point at 3 inches on the horizontal and vertical rulers and release the mouse button. The curve now looks like this.



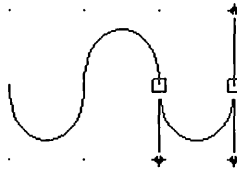
- 11 Place the cross one inch to the right, near the grid point at 4 inches on the vertical and horizontal rulers.
- 12 Drag *downward* one inch, to the grid point at 5 inches on the vertical ruler, and 4 inches on the horizontal ruler. Release the mouse button.

The height of the curve is determined by the length of the tangent line.

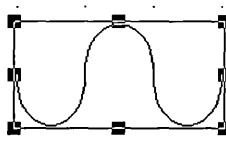
The curve now looks like this.



- 13 Move the cross one inch to the right and drag *upward* one inch. Release the mouse button. The curve now looks like this.



- 14 *Double-click to close the curve.* The cross reverts to the crosshair, and the selection frame surrounds the element. It now looks like this:



The picture is almost complete. The next section shows you how to de-select an element while the Quill is active, and how to re-open an element drawn with the Quill.

To de-select the element:

Click on the Selector tool, then click outside the element. The element is de-selected.

To re-open the element:

- 1 Click on the Selector tool if it is not already selected.
- 2 Click on the element to select it.
- 3 Click on the Quill tool.
- 4 Double-click on the selected element. The selection frame disappears, the crosshair changes to a cross, and tangent lines and direction points appear around the last curve you drew. The picture looks just like it did before you closed the element in step 14.
- 5 Move the cross to the grid point one inch to the right of the last tangent point, then add two more curves in the same pattern.
- 6 **Double-click to complete the picture.**

If you try this exercise with **Snap to Grid** turned off, you will be surprised at the versatility of the curves you create!

Drawing Compound Curves

This exercise shows you how to draw a series of compound curves, like these:



Choose the **New** command to clear the screen and respond appropriately to the Abandon/Save alert. Use the same settings as the last section, making sure that **Snap to Grid** is turned on and **Colors** is turned off in the View menu.

To draw compound curves:

If the pointer is a cross, double-click to get the crosshair.

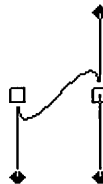
To cancel the *first* tangent point, double-click.

To delete a tangent point, press the Backspace key.

- 1 Select the Quill tool. The pointer changes to a crosshair.
- 2 Move the crosshair onto the grid point at 4 inches on the vertical ruler and 2 inches on the horizontal ruler.
- 3 Press *and hold down* the mouse button to set the first tangent point. *Do not release the mouse button yet.*
- 4 Drag *straight down* one inch to the grid point at 5 inches on the vertical ruler and 2 inches on the horizontal ruler. As you drag, the tangent line extends from the tangent point an equal distance in both directions, and the direction points appear at each end of the line. The line looks just the same as in the first exercise.
- 5 Release the mouse. The bottom portion of the tangent line remains, because you dragged downward.
- 6 Place the crosshair one inch to the right of the first anchor point, at the grid point at 4 inches on the vertical ruler and 3 inches on the horizontal ruler.
- 7 Drag *downward again* one inch, and release the mouse button.

This time Artline makes a compound curve, because you dragged two tangent points in the *same* direction.

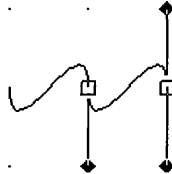
The curve now looks like this:



- 8 Place the cross one inch to the right, on the grid point at 4 inches on the vertical and horizontal rulers.

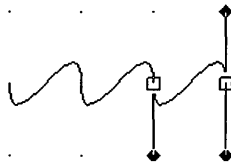
- 9] Drag *downward* again one inch, to the grid point at 5 inches on the vertical ruler, and 4 inches on the horizontal ruler, and release the mouse button.

The curve now looks like this:



- 10] Move the cross one inch to the right and drag *downward* one inch again. Release the mouse button.

The curve now looks like this:



- 11] Double-click to close the curve. The cross reverts to the crosshair, and the selection frame surrounds the element.



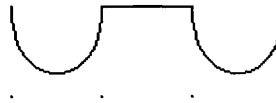
To make a compound curve that moves in the opposite direction, repeat this exercise, but drag *upward* each time.

Be sure to double-click to end the last element.

Connecting a Line to a Curve

Choose the **New** command from the File menu to clear the screen again, making sure that **Colors** are still turned off and **Snap to Grid** is on in the View menu.

In the next exercise you make this figure to learn how to add lines to curves and curves to lines.



To draw a line after a curve:

- 1 Select the Quill. The pointer changes to a crosshair.
- 2 Move the pointer to the grid point at 4 inches on the vertical ruler and 2 inches on the horizontal ruler.
- 3 Drag straight *down* one inch to the grid point at 5 inches on the vertical ruler and 2 inches on the horizontal ruler, and release the mouse button.
- 4 Place the crosshair one inch to the right of the first anchor point, at the grid point intersecting at 4 inches on the vertical ruler and 3 inches on the horizontal ruler.
- 5 Drag *upward* one inch to make a simple curve, then release the mouse button.

The curve now looks like this:

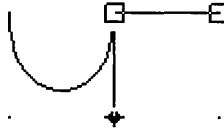


To cancel the *first* tangent point, double-click.

To delete a tangent point, press the Back-space key.

- 6 Place the cross one inch to the right, near the grid point at 4 inches on the vertical and horizontal rulers, and *click* to set the endpoint of the line segment. *Do not drag.*

Artline draws a line between the last tangent point and the endpoint of the line. The direction point for the last curve remains. The figure now looks like this:



- 7 Move the cross to another point and click, to set another endpoint and draw another straight line.
- 8 Press the Backspace key to erase the last straight line and return to the figure shown in the last picture.

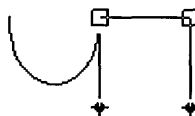
Keep the curve and line just as it is and go on to the next section to learn how to add a curve to a line.

To add a curve to a line segment:

- 1 Press down the **Alt** key, place the cross near the endpoint of the line, and press the mouse button. A direction point appears.
- 2 Drag the direction point *downward* one inch to the grid point at 5 inches on the vertical ruler and 4 inches on the horizontal ruler, and release the mouse button.

This creates a tangent line and changes the endpoint of the line to a tangent point like the ones in the previous exercises.

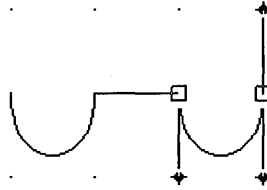
The picture now looks like this:



To start over, press Backspace, then click to replace the line segment.

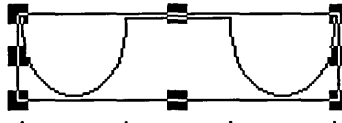
- 3 Place the cross on the grid point at 4 inches on the vertical ruler and 5 inches on the horizontal ruler, and drag *upward* one inch, to the grid point at 3 inches on the vertical ruler and 5 inches on the horizontal ruler. As you drag, a curve like the first curve appears. Release the mouse button.

The picture now looks like this:



- 4 Double-click to close the element. The cross reverts to a crosshair and the selection frame surrounds the element.

A curve meets a line at a junction point.



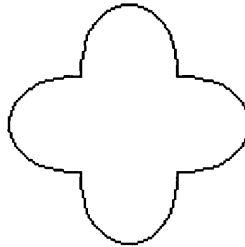
To de-select the element, click on the Selector tool, then click outside the element.

The next section shows you how to change the direction of a tangent line. You can skip it and go directly to the section “Tracing an Ellipse,” if you want to practice drawing with the Quill without the grid snap.

Changing the Direction of a Tangent

Choose the **New** command to clear the screen again, and ensure that the settings for this chapter are still in effect.

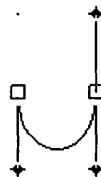
In this exercise you make this picture to learn how to change the direction of a tangent line that will affect the direction of the next curve.



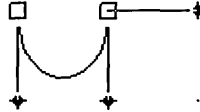
To make the symbol:

- 1 Select the Quill tool.
- 2 Move the crosshair onto the grid point at 4 inches on the vertical ruler and 2 inches on the horizontal ruler.
- 3 Drag *downward* one inch, to set the first tangent line, and release the mouse button. The lower direction point remains on the workspace.
- 4 Place the cross on the grid point at 4 inches on the vertical ruler and 3 inches on the horizontal ruler.
- 5 Drag *upward* one inch and release the mouse button, to set the second tangent line and create the first curve between the two tangent lines. The picture again looks like this:

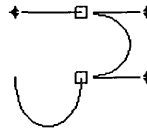
Press Backspace to back up one anchor point.



- 6 Place the cross over the top direction point, the one located at 3 inches on the vertical and horizontal rulers.
- 7 Hold down the **Alt** key, and *drag* the direction point one inch clockwise to below and to the right of the grid point located at 4 inches on the vertical and horizontal rulers. Release the Alt key and the mouse button. The picture now looks like this:

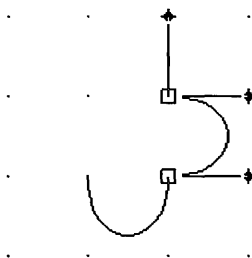


- 8 Place the cross on the grid point located at 3 inches on the vertical and horizontal rulers.
- 9 Press and hold down the mouse button to set a tangent point, then drag to the left one inch to make the second curve. Release the mouse button. The picture now looks like this:

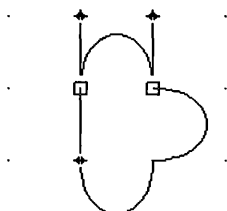


- 10 Place the cross over the leftmost direction point, on the grid point at 3 inches on the vertical ruler, and 2 inches on the horizontal ruler.
- 11 Hold down the **Alt** key, and *drag* the direction point clockwise one inch, to the grid point at 2 inches on the vertical ruler and 3 inches on the horizontal ruler. Release the **Alt** key and the mouse button.

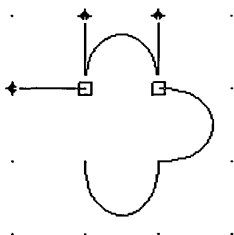
The picture now looks like this:



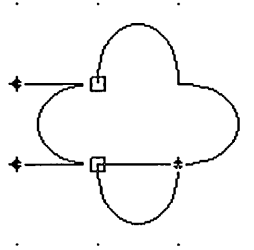
- 12 Place the cross just below and to the right of the grid point located at 3 inches on the vertical ruler and 2 inches on the horizontal ruler.
- 13 Drag *downward* one inch to make the third curve.



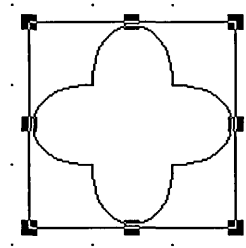
- 14 Place the cross over the lower direction point, the one located at 4 inches on the vertical ruler and 2 inches on the horizontal ruler.
- 15 Hold down the **Alt** key, and *drag* the direction point one inch *to the left and upward*, to the grid point at 3 inches on the vertical ruler and 1 inch on the horizontal ruler. Release the Alt key and the mouse button.



- 16 Place the cross on the first tangent point, the one at 4 inches on the vertical ruler and 2 inches on the horizontal ruler. Drag *to the right* one inch, to make the fourth curve. Release the mouse button.



- 17 Double-click to close the element.



To de-select the element, click on the Selector tool, then click outside the element.

Tracing an Ellipse

One of the best ways to learn to draw with the Quill is to trace existing curves. The idea is to use as few points as possible to accomplish the task.

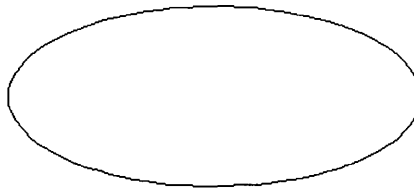
In this exercise you draw and trace an ellipse to get the feel of placing tangent points and drawing curves without the grid snap.

For this exercise, choose **New**, then turn the **Snap to Grid** command *off* in the View menu. Leave all the other settings the same.

To draw the ellipse:

- 1 Click on the Circle tool to select it. The pointer changes to a cross.
- 2 Place the cross on the drawing surface and drag an ellipse that is about 7 inches long and 3 inches high. You can use the **Element Info** command in the Element menu to help you. Place the ellipse in the center of the drawing surface, and de-select it, so it looks like this:

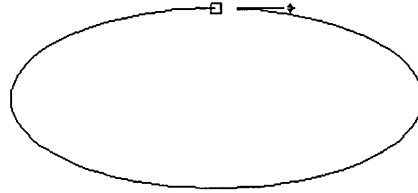
Double-click on the selected element to display the Element Settings dialog.



To trace the ellipse:

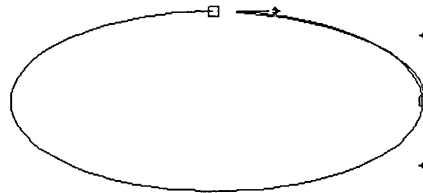
- 1 Click on the Quill tool to select it. The pointer changes to a crosshair (cross within a circle).
- 2 Move the crosshair to the top center of the ellipse. Align the horizontal line of the crosshair exactly on top of the ellipse, in the middle, and drag a tangent line to the right about one inch, so it looks like this:

Double-click to start over.



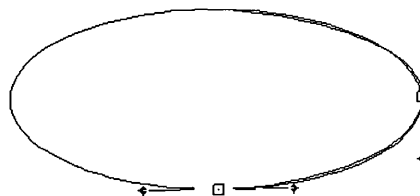
Press Backspace to back up one point.

- 3 Place the cross on the right side of the ellipse, so the vertical line of the cross is exactly on top of the ellipse, in the middle. Drag straight down to set another tangent line and create the first curve. Drag until your curve is as close to a copy of the ellipse as you can make it. It might take you a few tries to do this. The ellipse looks something like this:

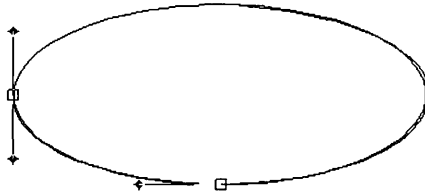


Note that when the **Snap to Grid** command is off, the tangent point appears exactly where you click. Note also how the curve changes as you drag the tangent line.

- 4 Move the crosshair to the bottom center of the ellipse. Align the horizontal line of the crosshair exactly on the ellipse, in the middle, and drag a tangent line to the left about one inch, so it looks like this:

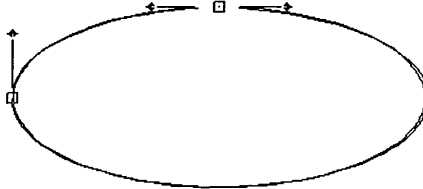


- 5 Place the cross on the left side of the ellipse, so the vertical line is exactly on top of the ellipse and opposite the point on the right. Drag upward to set the third tangent line, so the ellipse looks something like this:

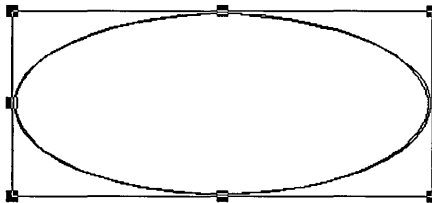


Note how you are placing tangent points along the path, following the direction of the curve from its starting point toward its finish.

- 6 Place the cross on the top again, where you placed the first tangent point, and again drag to the right about an inch, so the ellipse looks like this:



- 7 Double-click to finish the curve and return to the crosshair.



Using Fill Color with Open and Closed Elements

When you start Artline or choose the **New** command from the File menu, the default fill color is Hollow, and the default line color is Black. The default fill and line colors are displayed in two boxes on the left side of the status line. The fill color is on top; the line color is on the bottom.

Any element you draw automatically has these default colors, until you select the element and choose a different color.

You can set your own default color by choosing it in the color palette when *no element is selected* on the drawing surface. The default stays in effect until you restart Artline.

Keep the following in mind when drawing with the Quill and Sketch tools:

- ❑ When the Fill Color palette is set to hollow, elements are not filled with any color or pattern. Hollow means the element is transparent and you can see through it.
- ❑ When the Fill Color palette is set to any color, any element you make is automatically closed and filled, until you select the element and set it to Hollow in the Fill Color palette.

What You Learned

You now know how to use the Quill to:

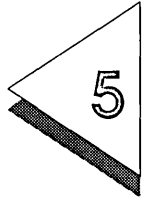
- set line endpoints, and draw lines and polygons;
- set tangent points and tangent lines;
- draw simple and compound curves;
- correct mistakes;
- change from lines to curves and vice versa;
- change the direction of a tangent.

You can also identify tangent lines, direction points, and the following types of anchor points:

- tangent point: between two curves;
- corner point: between two straight lines;
- junction point: between a straight line and a curve.

The next chapter shows you how to use the Plane tool to edit all elements in Artline.

Editing Curves



THIS CHAPTER shows you how to use the Plane tool to edit elements you create in Artline. In Chapter 4 you learned how to draw lines and curves with the Quill tool, and how to identify anchor points, tangent lines, and direction points. The Plane tool lets you modify all these components of an element.

The exercises in this chapter center around editing an ellipse. By the time you are done editing the ellipse you will be able to use the Plane tool and all of the commands in the Plane tool pop-up menu. The exercises in this chapter will take about forty-five minutes to complete.

For all of the exercises in this chapter:

- Turn **Grid** off in the View menu.
- Turn **Colors** off in the View menu.
- Turn **Snap to Grid** off in the View menu.
- Choose **Full View** from the View tool pop-up menu.
- Choose **Preferences** from the Options menu and set Redraw Speed to Quality.

What is in this chapter:

- selecting and moving anchor points
- editing tangent lines
- using the commands in the Plane tool pop-up menu
- making an equilateral triangle
- making a 90° arc

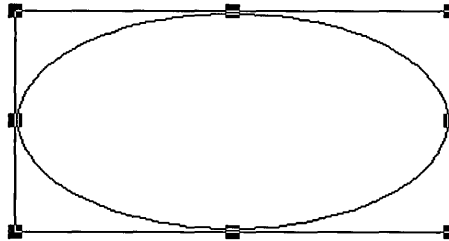
Editing an Ellipse

In this exercise you draw an ellipse and practice basic editing with the Plane tool.

To draw the ellipse:



- 1 Select the Circle tool.
- 2 Place the cross in the middle of the drawing surface.
- 3 Hold down the **Shift** key while you drag horizontally, to draw an ellipse from center. Make the ellipse about 6 inches long and 3 inches wide. You can use the **Element Info** command to set the exact measurements.
- 4 Release the mouse button. The ellipse appears surrounded by the selection frame, and looks like this:



- 5 Choose **Save As** from the File menu. The Item Selection appears. Type ELLIPSE.GEM on the Selection line. The picture will be saved in the directory listed on the Directory line. Click on OK.

After learning several editing operations on this ellipse, you will abandon those edits and revert to the picture you just saved. You can, however, abandon your current edits on the ellipse at any time during this tutorial, in order to return to the original shape.

Selecting Anchor Points

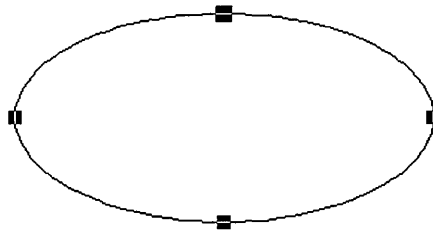
When you select an element with the Plane tool, you see its anchor points, not its handles. When *all* of an element's anchor points are selected, you can move the element by dragging one of the anchor points.



You can also use the Plane tool to drag a selector box around the ellipse.

To select and move the ellipse with the Plane:

- 1 Click on the Plane tool to select it. The selection frame disappears, and the cross changes to the pointer.
- 2 Press the **Alt** key while you click on the ellipse, to select it with the Plane tool. Four anchor points appear, and the ellipse looks like this:

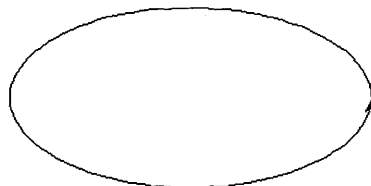


Because the ellipse is created from four curves and no straight lines, all of these anchor points are *tangent points*.

The tangent point at the top of the ellipse is larger than the others because it is, in fact, two overlapping tangent points—the beginning point of the ellipse and the endpoint of the ellipse.

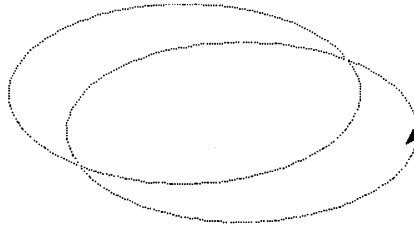
Anchor points are solid when selected and hollow when not selected.

- 3 Place the pointer over any one of the tangent points and press the mouse button. The pointer changes to an arrowhead and the tangent points disappear.



If you do not press on one of the selected tangent points, the ellipse becomes de-selected. Press **Alt** and click on the ellipse to select it again, then repeat step 3. If you see tangent lines, de-select, re-select, and repeat step 3.

- 4 Drag in any direction. The ellipse changes to a dotted line, and its dotted outline moves as you drag. The entire ellipse moves because you selected all of the tangent points.

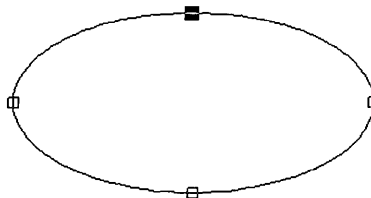


You can use the Undo command to undo the last move or edit.

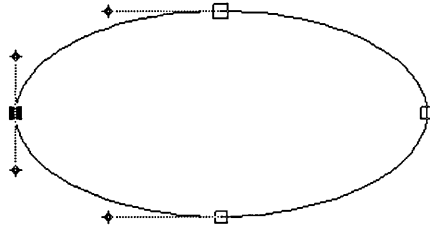
- 5 Still holding down the mouse button, drag it back to the center of the drawing surface.
- 6 Click away from a tangent point to de-select the ellipse.

To select anchor points by dragging:

- 1 Drag a selector box around the top tangent point only. It is selected; the three other points are identified by hollow squares, which show they are not selected.



- 2 Drag a selector box around the left tangent point.



- The left-hand point is selected.
 - Its tangent line and direction points are displayed.
 - The tangent points on either side of the selected point are identified by a hollow box, and show the tangent line and direction point closest to the selected tangent point.
- 3 Drag a selector box around the bottom tangent point, and then around the right-hand tangent point.

Note that all but the top tangent point behave the same way. You will learn more about the top point later.

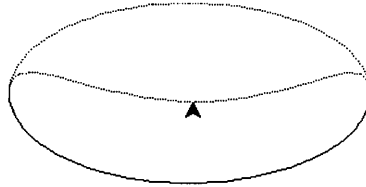
Moving Curves

You can select an anchor point and drag it to change the shape of a curve on both sides of the point. To drag the top of the ellipse, you must select both the starting and endpoint together. When you select more than one point at a time, you do not see the tangent line for an individual point.

To move the ellipse from the top:

- 1 Drag a selector box around the top point again.
- 2 Place the pointer over the top point and press the mouse button. *Do not release the mouse button yet.* The pointer changes to an arrowhead.
- 3 Drag the top of the ellipse in every direction. The original shape remains on the drawing surface, while a dotted outline shows the new shape as you drag.

Note that dragging affects the curves on either side of the tangent point you are dragging, and that the bottom curves remain stationary.

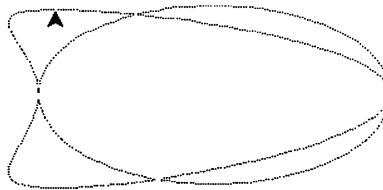


- 4 Drag back to the starting point and release the mouse button.

To move two curves:

You can click and Shift-click on anchor points to select them with the Plane tool.

- 1 Drag a selector box around the top *and* the bottom tangent points. The two points are selected.
- 2 Again drag the top point in every direction.
- 3 This time note how all the curves are affected, because all of the curves are adjacent to a selected tangent point.



- 4 Drag back to the original shape and release the mouse button.

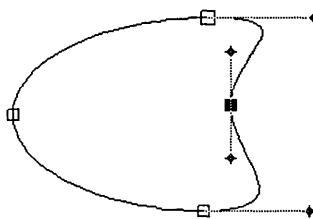
Editing Tangent Lines

You can edit curves by dragging two or more selected anchor points, as you did in the previous exercise. You can also drag a single selected anchor point that is displaying a tangent line and direction points.

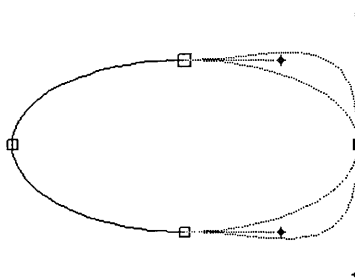
Finally, you can edit curves by dragging the direction points at the ends of a tangent line.

To edit a tangent line:

- 1 Drag a selector box around the right-hand tangent point. The solid box appears to show the point is selected, and its tangent line and direction points appear.
- 2 Place the pointer directly over the selected anchor point (solid box), and press on the mouse button to display the arrowhead.
- 3 Drag the anchor point to the left and right, noting the two curves that are affected, and the two that remain stationary. The figure might look something like this:



- 4 Drag back to the original shape and release the mouse button.
- 5 Place the pointer over the top direction point, press the mouse button, and drag the direction point to the left, to the right, up, and down. Notice how the curve changes as you drag the direction point.



- 6 Drag it back to its original position and release the mouse button.

When you dragged the direction point, both sides of the tangent line changed in length equally. This is true of a *symmetric* tangent. A tangent is always symmetric unless it is *broken*.

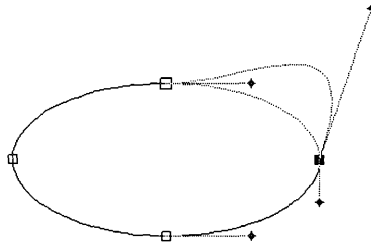
Breaking a Tangent Line

You can break a tangent line in order to move one side of it independently from the other.

To break the tangent line:

- 1 Place the pointer over the top direction point again, but this time hold down the **Alt** key while you drag the direction point all around.

Notice that now only the top part of the tangent line moves as you drag.

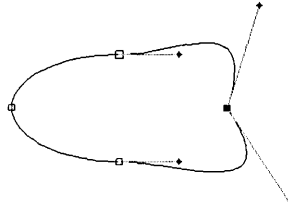


- 2 Drag the direction point so the tangent line is at an angle and release the **Alt** key and mouse button.

From now on, until you change it, the tangent is broken. You do not need to press the **Alt** key again to drag it separately.

- 3 Drag the bottom direction point in different directions. It too remains separate. Leave the bottom tangent line at an angle to the top tangent line.

To undo an edit, choose the **Undo Edit** command from the Edit menu.



To change the tangent from broken to symmetric:

Add Point
Delete Point
to Line
to Curve
Split
Join
Symmetric
Smooth
Align Vert.
Align Hor.

The path of a curve runs from the starting point toward the end-point.

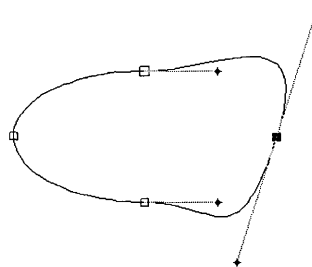
- 1 With the right-hand tangent still selected, move the pointer away from the ellipse and double-click to display the Plane tool pop-up menu.

It appears in the workspace where you double-click. The appearance of the ellipse changes like this:

- The tangent line and direction points disappear.
- The solid box shows the selected tangent point.
- The hollow boxes show the other tangent points on the element.
- The dotted line shows the curve that is between the selected tangent point and the next tangent point on the path. This is the curve that can be affected by commands in the Plane tool pop-up.

- 2 Choose the **Symmetric** command from the Plane tool pop-up menu.

The pop-up disappears, and the tangent lines reappear. The selected tangent line is returned to a straight line.



- 3 Drag one of the direction points again. The curve is restored to its unbroken symmetric state; both sides are the same length, and when you drag one side, the other side moves too.

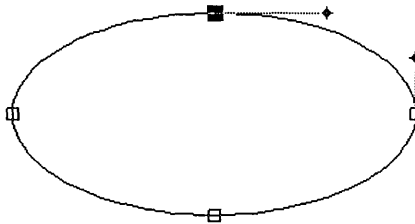
Separating Overlapping Points

To edit one point in an overlapping pair, you must select it separately. For this exercise, you revert to the original ellipse that you drew.

Choose the **Abandon** command from the File menu and click on Abandon in the Abandon/Save alert. Artline discards the current picture and displays the original ELLIPSE.GEM in the workspace. Make sure the Plane tool is selected.

To separate the starting and endpoints:

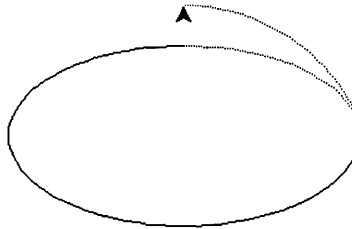
- 1 Click on the top tangent point. The ellipse looks like this:



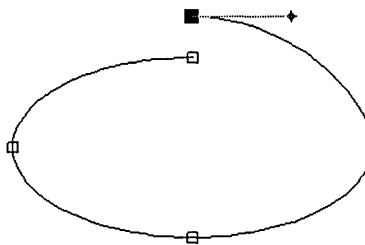
Note the following about the starting point:

- When you drag around the starting point, you see both the starting point and the endpoint selected.
 - When you click on the starting point, you see the tangent line of the starting point only. This is because the starting point is on top of the endpoint, and the starting point is selected when you click.
- 2 Place the pointer over the selected tangent point—the solid box—and press the mouse button. The pointer changes to the arrowhead.

- 3 Drag the tangent point up about an inch, still pressing the mouse button. The ellipse now looks like this:

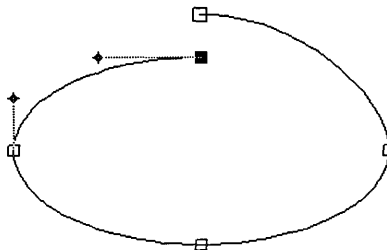


- 4 Release the mouse button. The ellipse now looks like this:

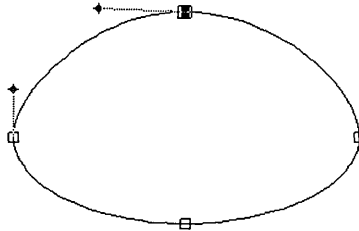


Note that the starting point is identified by a larger tangent point than the endpoint.

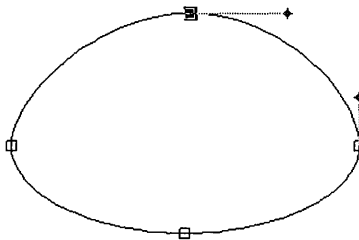
- 5 Click on the smaller tangent point to the left—the endpoint of the ellipse, to display the endpoint tangent line. The ellipse now looks like this:



- 6 Drag the endpoint to a new position and release the mouse button.
- 7 Drag the endpoint to meet with the starting point of the ellipse. You see the solid box (selected endpoint) inside the hollow box (de-selected starting point).



- 8 Click on the right side of the tangent point to select the starting point and its tangent line. The ellipse looks like this:



At this point, the starting point is on top again.

Because you are manually placing them together, they might not be exactly aligned, and they might look slightly different from the picture.

You can use the left and right arrow keys to move through anchor points from start to end and back.

To select the endpoint now you must use the right arrow key to move through the tangent points along the ellipse from start to end. When the endpoint is selected, you cannot use the right arrow key to select the starting point. You must use the left arrow key to move back through the tangent points to the start of the ellipse.

Joining Overlapping Points

You can use the **Join Points** command to bring the first and last points of an element together, or to join two separate points into one.

- ❑ If the points are on the same element, one point is placed on top of the other.
- ❑ If the points are on different elements, they become one point.

When you join the starting point and the endpoint, the **Join Points** command *aligns* the points on top of one another, but does not physically join them.

To join the starting point and endpoint:

- 1 Drag a selector box around only the top two tangent points. The selected points look a little different than when you first started because you have moved them.
- 2 Double-click away from the ellipse to display the Plane tool pop-up.
- 3 Choose the **Join Points** command. The pop-up disappears, and the top two tangent points appear just as they did when you selected them in the first exercise.
- 4 Double-click to display the Plane tool pop-up again. Note that the **Join Points** command is still available. This is because the starting point and endpoint of an element, even an apparently closed element, are always separate points.

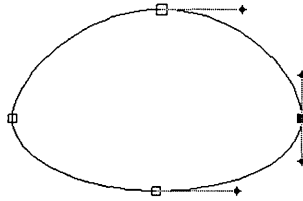
Once the two points are joined you can select only the top one again, unless you use the arrow key, or drag one away from the other.

Splitting a Point

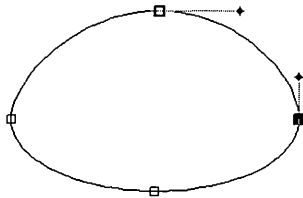
The **Split Point** command splits a single selected point into two points. The element that contained the point is split into two elements that can be separately selected, moved, rotated, and so on. This command is available for any single point, except for an element's beginning and endpoints.

To split a point:

- 1 Click on the right-hand tangent point to select it. The ellipse now looks something like this:



- 2 Double-click to display the Plane tool pop-up and choose the **Split Point** command. The element now looks like this:



The right hand tangent point is now split. The split creates another curve, another endpoint, and another starting point in the figure.

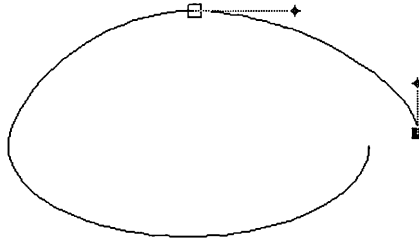
The selected tangent point is large because it is now the starting point of one element and the endpoint of another element. The tangent line for one end is showing.

- 3 Press the left arrow key to move to the starting point for the new curve.
- 4 Press the right arrow key to return to the endpoint of the new curve.

Because there are now two distinct curve segments, you must drag a selector box or click to select points on the other segment. You cannot move through all of the points in the figure with the arrow keys, as before.

You can now move the direction point of the split tangent separately, or drag the tangent point away.

- 5 Drag the tangent point to the right about one inch, so the figure looks something like this:

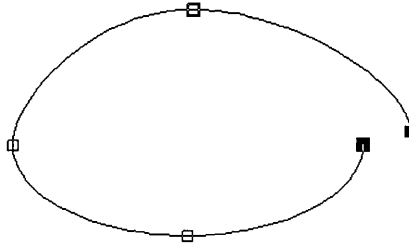


Joining Two Points

These two points are now on different elements, so joining them will create one point.

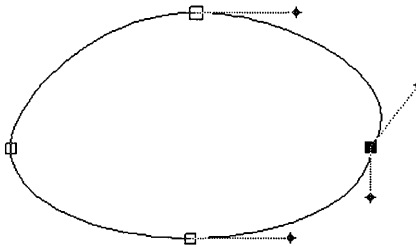
To join two points:

- 1 Drag a selector box around the two points at the right, so the figure looks something like this:



- 2 Double-click to display the Plane tool pop-up, and choose the **Join Points** command.

The two points are once again joined, and the figure looks something like this:



Note that the tangent lines are broken, and that you can drag the direction points separately.

- 3 To return them to a symmetric condition, choose the **Symmetric** command from the Plane tool pop-up.

The tangent line is once again straight, both sides are the same length, and dragging one direction point causes the other one to move an equal distance in the opposite direction.

Deleting a Point

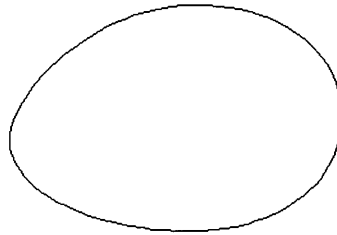
The **Delete Point** command deletes the selected point.

To delete a point:

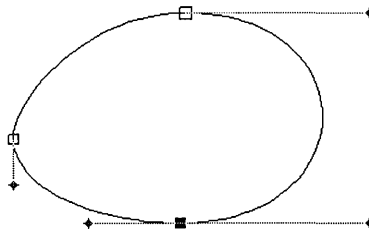
- 1 With the right-hand tangent point still selected, double-click to display the Plane tool pop-up. The dotted line appears between the selected point and the next point on the path.

- 2 Choose the **Delete Point** command.

The point disappears entirely, the curve becomes continuous from the starting point to the tangent point on the bottom, and the figure now looks like this:



- 3 Click on the top tangent point—once again the only starting point. The tangent lines appear for the top and the next point toward the end of the curve, which is now the bottom point.
- 4 Click on the bottom point. Tangent lines appear for the bottom and for the points on either side of it.



Note that the bottom tangent lines are now different lengths, and you can drag either direction point separately.

- 5 Click on the left-hand tangent point. It is unchanged.

Adding a Point

The **Add Point** command adds a new point to an element, located at the midpoint of the dotted line.

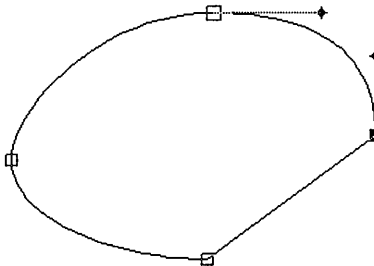
To add a new point:

- 1 Click on the top tangent point.
- 2 Double-click to display the Plane tool pop-up. The dotted line appears between the selected starting point and the next point along the path.
- 3 Choose the **Add Point** command. The right-hand tangent point reappears between the two points, and it is symmetric.

Converting to a Line

The **to Line** command converts the dotted line from a curve to a straight line, and is available only when the dotted line is a curve.

With the right-hand tangent point still selected, choose the **to Line** command from the Plane tool pop-up. The figure now looks like this:



The curve along the dotted line is converted to a line, creating junction points on the right and on the bottom.

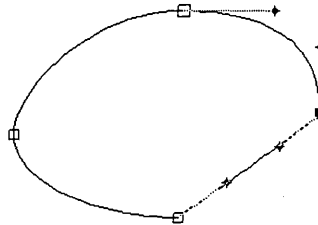
Recall from Chapter 4 that a junction point joins a straight line to a curve, and has one direction point.

Converting to a Curve

The **to Curve** command converts the dotted line from a straight line to a curve, and is available only when the dotted line is a straight line.

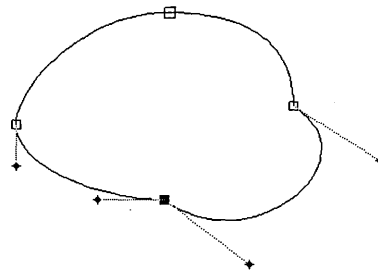
To convert to a curve:

- 1 Select the right-hand tangent again.
- 2 Choose the **to Curve** command from the Plane tool pop-up. The figure looks something like this:



The little points on the line are direction points that you can drag to shape the converted line into the curve you want.

- 3 Drag each direction point until the line is curved on both sides, and it looks something like this:



Smoothing a Transition

The **Smooth** command removes the angle between curves at a broken tangent, or between a curve and a line at a junction point, but does not change the broken or unequal status of a tangent line.

With the bottom tangent point selected, choose the **Smooth** command from the Plane tool pop-up.

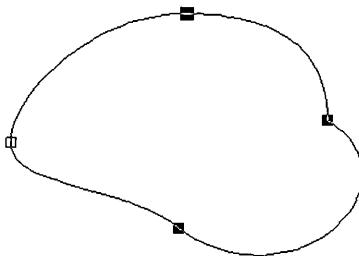
The broken tangent line becomes one straight tangent line, but each side remains a different length, and you can still move each side separately.

Aligning Anchor Points

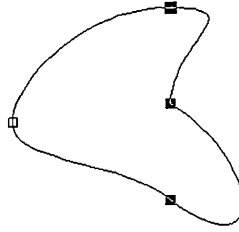
The **Align Vert.** and **Align Horiz.** commands align selected anchor points vertically or horizontally.

To align anchor points:

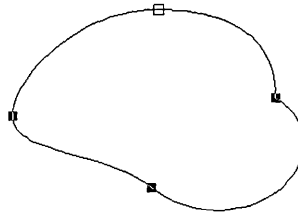
- 1 Drag a selector box, or click and **Shift**-click with the Plane tool, to select the three rightmost tangent points, as shown in the picture:



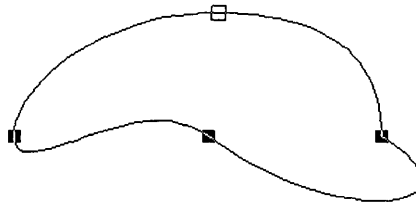
- 2 Choose the **Align Vert.** command from the Plane tool pop-up. The three selected points are aligned vertically with the selected point nearest the starting point, like this:



- 3 Choose the **Undo Align** command from the Edit menu. The figure is returned to its previous shape.
- 4 Drag a selector box, or click and **Shift-click** to select the three bottom most tangent points, as shown in the picture:



- 5 Choose the **Align Horiz.** command from the Plane tool pop-up. The three points align horizontally with the first selected point nearest the element's starting point, as shown in this picture:

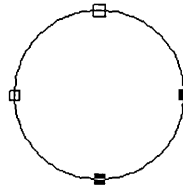


Drawing a 90° Arc

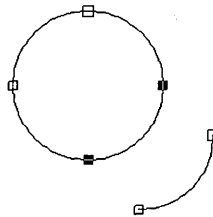
This exercise shows another way to use Artline's electronic tools to accomplish a task. Traditionally, to draw an arc, you use a compass, a protractor, and a ruler or T-square. The easiest way to draw a 90° arc in Artline is to select and copy one quarter of a circle.

To make a 90° arc:

- 1 Select the **Ellipse** tool.
- 2 Press the **Shift** and **Ctrl** keys to draw a true circle from center.
- 3 Select the **Plane** tool.
- 4 Drag a selector box around the right-hand and bottom two points, so the circle looks like this:



- 5 Choose the **Duplicate** command from the Edit menu. The arc appears below and to the right of the circle.



To make an arc of any degree, use the **Line** and **Rotate** tools to create an angle, then use the **Quill** to set tangent points perpendicular to the radii of the angle. The next exercise shows you how to create an angle.

Drawing an Equilateral Triangle

To make an equilateral triangle, one in which all sides are of equal length and each angle measures 60° , you must copy and rotate a straight line.

For this exercise, it is helpful to:

- turn on the grid (set to 1 inch) in the View menu;
- turn on **Snap to Grid** in the View menu.

Decide the length you want each side of the triangle to be. For this exercise, use four inches.

To draw an equilateral triangle:

The Shift key draws a line from center. The Ctrl key constrains it to a straight line.

- 1 Select the Line tool. The pointer changes to a cross.
- 2 Place the cross in the center of the workspace, and about two thirds of the way down. Press the **Shift** and **Ctrl** keys while you drag horizontally, until you have a straight line four inches long, like this:

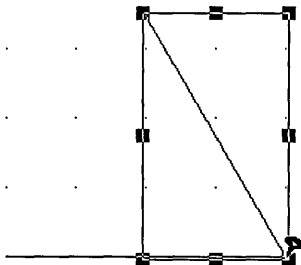


- 3 Click on the Thumbtack, move the pointer to the right end of the line, and click to place the thumbtack like this:

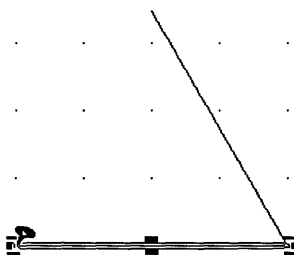


- 4 Double-click on the Rotator tool to display the Rotator Options dialog.
 - Under Rotate Around, click on Thumbtack.
 - Under Rotation Angle, type 60 (degrees).
 - Click on OK or press ↵ to exit the dialog.
- 5 Click on the Rotator tool. The pointer changes to an arrowhead.

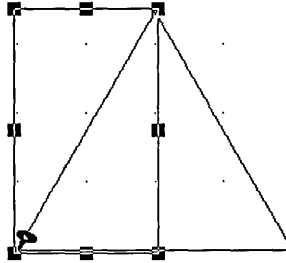
- 6 Move the arrowhead to the left end of the line, hold down the **Shift** key, and drag clockwise until you see the dotted line representing the copy appear on the right side of the triangle, then release the mouse button. The figure now looks like this:



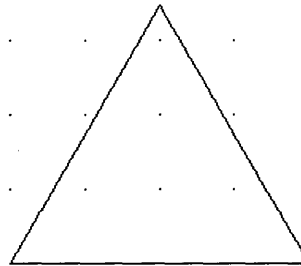
- 7 Click on the Selector tool and select the bottom line.
- 8 Click on the Thumbtack tool, then click on the thumbtack to remove it from the drawing surface.
- 9 Click on the left end of the bottom line, to place the thumbtack there. The figure looks like this:



- 10 Click on the Rotator tool. The pointer changes to an arrowhead.
- 11 Move the arrowhead to the right end of the line. Hold down the **Shift** key while you drag the right end of the line counter clockwise, until you see the dotted copy appear at the left side of the triangle, then release the mouse button. The figure now looks like this:



- 12 Click on the Thumbtack tool, then click on the thumbtack to remove it from the drawing surface.
- 13 Click on the Selector tool, then click outside the triangle to de-select it. It looks like this:



If you want to color the triangle, you must join the corners so the triangle is one element instead of three.

To join the corners of the triangle:

Recall that corner points have no tangent lines.

- 1 Click on the Plane tool, then drag a selector box around the anchor points at the bottom left corner of the triangle, which will become one corner point when joined.
- 2 Double-click away from the triangle to display the Plane tool pop-up menu, and choose the **Join Points** command. The points at the bottom left of the triangle are joined into one corner point.
- 3 Repeat steps 1 and 2 for the bottom right corner.

The top of the triangle is now a starting and end-point. Therefore, the triangle is now one element—a polygon—and you can fill it.

However, you might want to join the top points anyway, just to make it neater.

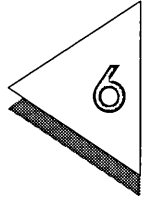
- 4 Click on the Selector tool, turn **Colors** on in the View menu, or press the **F10** function key.
- 5 Click on the Fill Color tool and select a color from the color palette. The triangle is filled with the color.

What You Learned

You now know how to use the Plane tool and the Plane tool pop-up menu to:

- select anchor points;
- move anchor points;
- edit tangent lines;
- break a tangent line;
- separate and bring together overlapping points;
- split and join points;
- add and delete points;
- convert to lines and curves;
- smooth junctions and other curve transitions;
- align anchor points.

Autotracing Images



ARTLINÉ'S interactive autotracing feature lets you load a *bit-image* file, such as those created in paint and scanning programs, and automatically trace the image, creating a picture in Artline's format. Chapter 11 of the *Artline User Reference Guide* discusses autotracing in detail.

In this chapter you load an image file and practice using many of Artline's autotracing features.

For the exercises in this chapter:

- Choose the **New** command from the File menu and respond appropriately to the Abandon/Save alert, if it appears.
- Choose the **Page Layout** command from the File menu and choose Landscape from the Orientation pop-up menu.
- Choose Full View from the View tool pop-up menu.

The exercises in this chapter will take about twenty minutes to complete.

What is in this chapter:

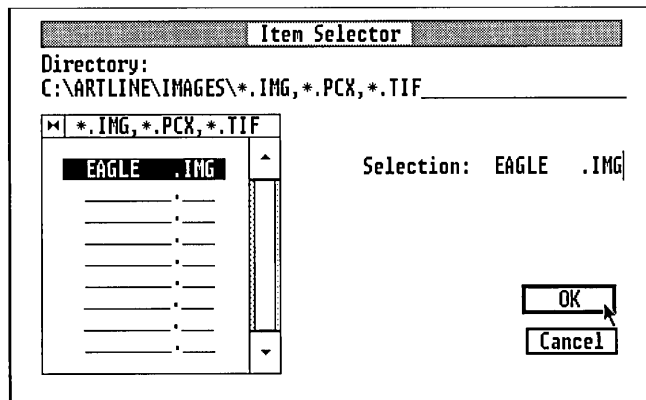
- loading the image
- setting the image options
- autotracing the image
- finishing the picture

Loading the Image

To autotrace an image, you must first load the image you want to trace. The image appears on the screen, but is not part of the picture file and remains unchanged in its original file. Artline comes with an image file called EAGLE.IMG that you use in this exercise.

To load the eagle:

- 1 Choose the **Load Image** command from the Image menu. The Item Selector appears.



The directory line shows you:

- the current drive—the one on which Artline is installed;
- the current directory path, in this case ARTLINE\IMAGES;
- the image file formats that Artline can load, identified by their filename extensions: IMG, PCX, and TIF.

The directory window shows the names of any files in the current directory with these extensions.

You can double-click on EAGLE.IMG in the directory window to open the file.

- 2 Click on the name EAGLE.IMG in the directory window, or type the name on the Selection line, so it looks like the picture.
- 3 Click on OK or press ↵ to exit the Item Selector.
After a few moments, the eagle appears in the upper left-hand corner of the workspace.

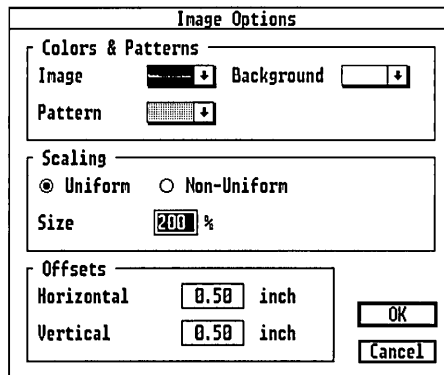


Setting Image Options

You can set some options to change the colors, scaling, and position of the image in the workspace.

To set the image options:

- 1 Choose the **Image Options** command from the Image menu. The Image Options dialog appears.
Fill in the dialog as shown in the picture.



Under Colors and Patterns:

- If you have a color monitor, choose Cyan from the Image pop-up menu.
- If you have a monochrome monitor, leave the Image set to black and choose the bottom (*lightest*) pattern from the Pattern pop-up.

Under Scaling:

- Leave Uniform selected.
- Type 200 (%) in the Size field, or use the pop-up slider.

Under Offsets:

- Type 0.5 inch in the Horizontal and Vertical fields.

- 2 Click on OK or press ↵ to exit the dialog.

The image is enlarged, appears in a light pattern, and is offset 0.5 inch from the top and left borders of the workspace.



For accurate tracing, Scaling and Offset values must be exactly the same each time you load the image.

The current settings in the Image Options dialog are saved as defaults when you choose the **Save Preferences** command.

If you intend to stop, save your picture, and continue the exercise later, choose the **Save Preferences** command from the Options menu.

Setting Tracing Options

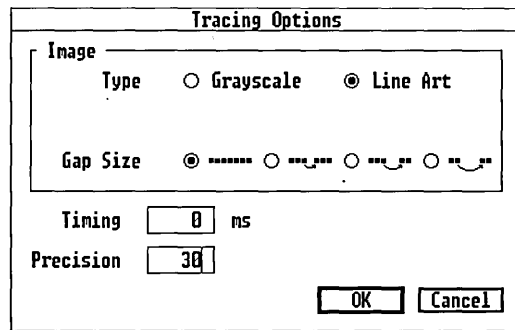


Trace tool

You can set tracing options to specify the type of image and the precision you want to use when tracing. In general, it is best to use the lowest precision that still reproduces the shape; otherwise the element outline might look too busy, and there may be needless anchor points and curves that can get in the way when editing the traced outline.

To set tracing options:

- 1 Double-click on the Trace tool. The Tracing Options dialog appears:



Fill it out like the picture.

- Click on Line Art. This is for images that contain only solid areas of black and white. Grayscale is for images that contain different shades of gray.
- Leave Gap Size set to the first option—zero pixels. This means Artline will follow all of the pixels and not skip over any tiny irregularities. This is fine for the eagle, which does not have many irregularities.
- Leave Timing set to 0 milliseconds. This option determines how long autotrace waits before starting the next curve segment.

— Type 30 (%) in the Precision field, or use the pop-up slider or the + and - keys on the number key pad. This is enough for the eagle. A higher precision adds needless curves to the element, and a very high precision causes autotrace to exceed its point limit before the end of the trace.

- 2 Click on OK or press ↵ to exit the dialog.

Autotracing the Image

If you are tracing the outside of an image, the tracing line moves clockwise. If you are tracing inside an image, the tracing line moves counter-clockwise.

To autotrace the eagle:

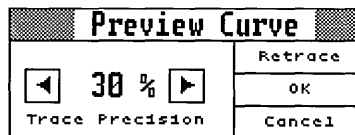


Trace tool

- 1 Click on the Trace tool to select it. The pointer changes to a cross.
- 2 Place the cross in the white space just above the “V” between the eagle’s wings.
- 3 Click to start autotracing. Artline displays the spinning ball while computing the curves.

If you click too far from the image, Artline displays the “Cannot find tracing image” alert. Click on OK and try again.

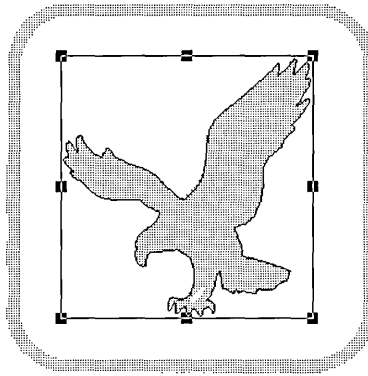
When the spinning ball stops, you see the black outline of the eagle and the Preview Curve dialog appears.



You can use this dialog to change the precision and retrace, or to cancel the tracing.

- 4 Click on OK to accept the tracing.

The dialog disappears, and a selection frame surrounds the tracing.



- 5 Click on the Selector tool, then click outside the selection frame to de-select the traced eagle.

If you click outside the element with the Autotrace tool, Artline displays the “Cannot find tracing image” alert. Click on OK and repeat step 5.

- 6 Choose the **Image** command from the View menu, or press the **F9** function key, to hide the image and view the tracing.



- 7 Press **F9** to display the image again.

- 8 Click on the Autotrace tool, then click in the oval space between the eagle's legs.

The oval is traced, and the Preview Curve dialog appears again.

- 9 Click on OK to accept the tracing.

The next part of this exercise shows you how to stop the autotracing by pressing the spacebar, add and delete points, continue tracing, and look at the anchor points with the Plane tool.

Because the border is slightly irregular, you can enlarge the gap size and reduce the precision to create a straighter edge on the border.

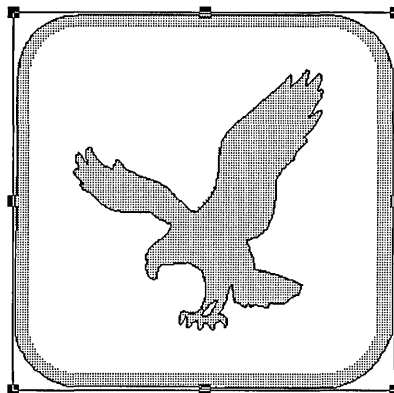
To trace the border:

- 1 Double-click on the Autotrace tool. The Tracing Options dialog appears.
 - Type 500 (milliseconds) in the Timing field. This slows the trace so you can manually interrupt it to do this exercise.
 - Type 0 (%) in the Precision field.
- 2 Click on OK or press ↵ to exit the dialog.
- 3 Click on the Autotrace tool. The pointer changes to a cross.
- 4 Place the cross on the *outside* border, over the *top left* edge, and click to start the autotrace.
- 5 Watch carefully, with your finger on the spacebar. When you see the first part of the outline appear, press the spacebar.

The tracing stops and the Preview Curve dialog appears. You can drag the title bar to move it away from the tracing area, but leave it on the screen.
- 6 Press the Tab or right arrow key to add the next point. Press the Backspace or left arrow key to delete the last point.

- 7 There is no need to change the precision here, so click on “Go on” to continue tracing.
- 8 Click on OK to accept the tracing.

The tracing completes and the border appears with its selection frame.

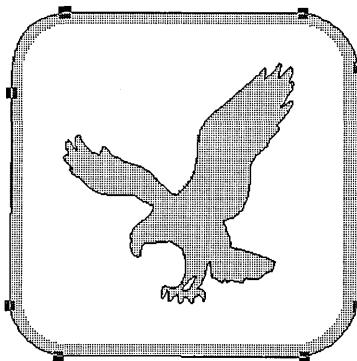


The next two steps show how you can edit the curves drawn with the Trace tool just like those drawn with the Quill or Sketch tools.



Plane tool

- 9 Click on the Plane tool. The selection frame disappears.
- 10 Place the pointer on the outer border, hold down the **Alt** key, and click to display the anchor points. The picture looks like this.



The anchor points on the corners are tangent points. You can edit these points later if you wish.

- 11 Click on the Autotrace tool.
- 12 Place the cross on the *inside* border, under the top left edge, and click to start the autotrace.
- 13 When the Preview Curve dialog appears, click on OK.
- 14 Click on the Selector tool, then click outside the image to deselect it.



- 15 Press **F9** to hide the image.



Finishing the Picture

You can now color the picture if you like. This exercise reviews selecting elements in stacks, and using fill colors, which you learned in Chapter 2.

If you autotraced the borders in a different order, or if you select and color the elements in a different order than listed here, use the Selector tool and the **Send to Back** and **Send to Front** commands in the Element menu to organize the stack so the fills show correctly.

Recall that you drew the eagle first, so it is on the bottom of the stack of elements.

To color the picture:

- 1 Turn on **Colors** in the View menu.
- 2 Press the **Ctrl** key and click on the eagle to select it.
- 3 Click on the Fountain tool and choose Gray from the list. The eagle is filled with a gray fountain.
- 4 With the eagle still selected, choose the **Bring to Front** command from the Element menu. This prevents the border fills from covering the eagle.
- 5 Click on the *inner* border to select it.
- 6 Click on the Fill Color tool and choose White.

The inner area appears to remain the same, but it has changed from Hollow to White. If you leave it hollow, the outer border's dark gray fill will show through it and obscure the eagle.

- 7 Click on the *outer* border to select it.
- 8 Click on the Fill Color tool and choose Dark Gray from the color palette. The outer border is filled with dark gray, and because it was made before the inner border, it is underneath it and does not cover it.
- 9 Deselect the border, and the picture looks like this:



You have now completed the autotracing exercise. You can save the picture if you like. The original image is not saved with the file and remains unchanged.

What You Learned

You now know how to:

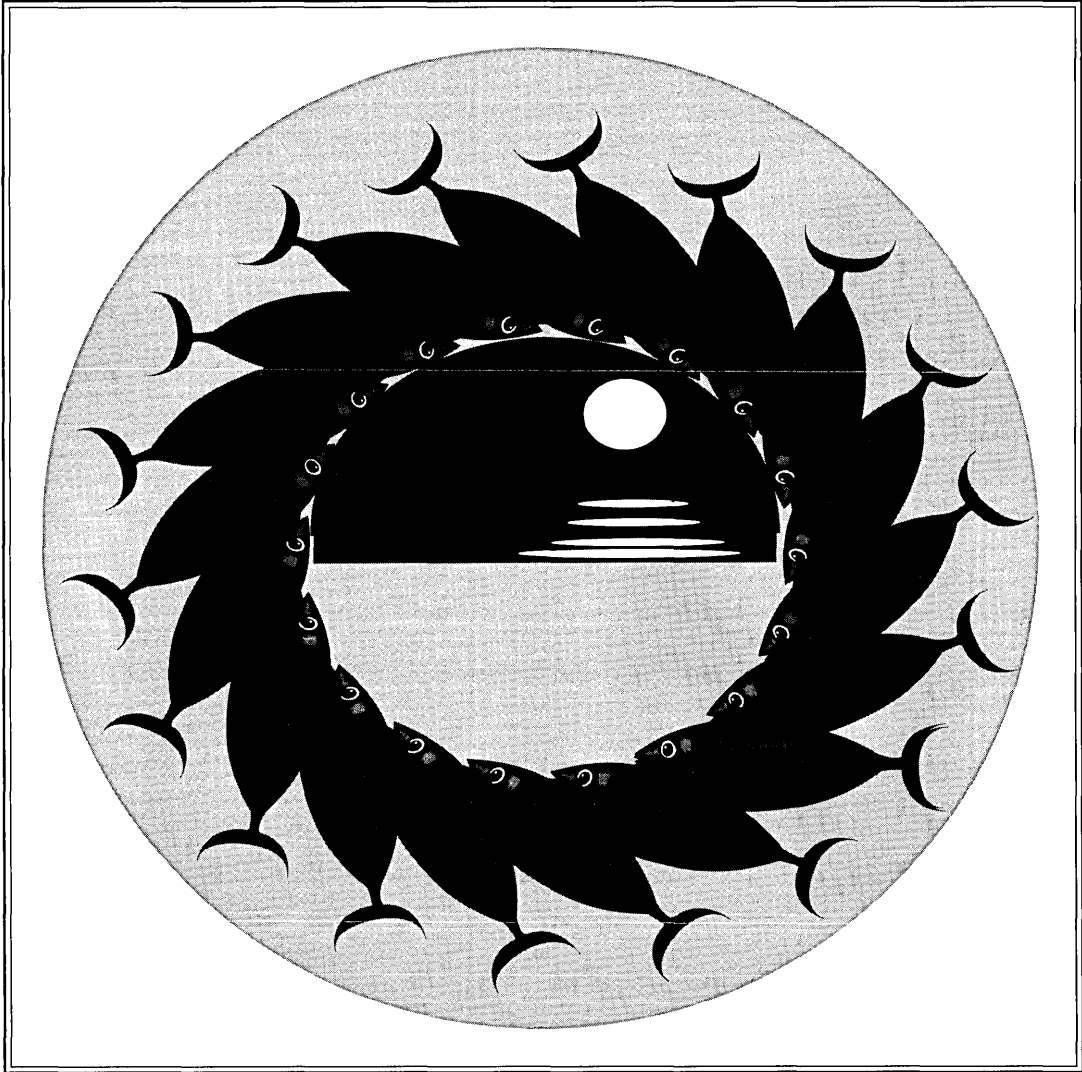
- load an image file;
- change the color and pattern of the image;
- show and hide the image you are tracing;
- scale the image;
- move the image on the workspace;
- set tracing precision, gap size, and timing;
- autotrace an image;
- stop, add and delete points, reset the precision, and continue the autotrace.

Conclusion

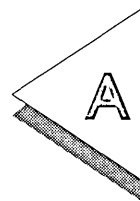
This concludes the Artline tutorial. If you have completed the exercises in this book, you know how to use all of the tools and almost all of the commands in Artline.

You have the experience you need to use Artline comfortably. You have the confidence to explore the many and varied artistic effects you can create with Artline, because you know how to create and manage elements on the drawing surface, how to create and undo effects until you see the one you want, and how to open, save, and print your pictures.

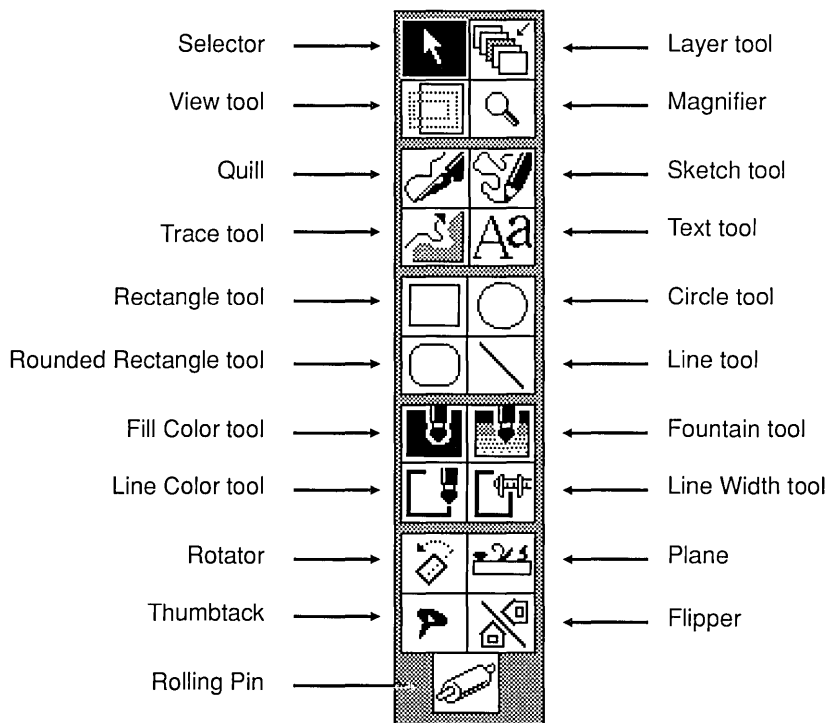
The *Artline User Reference Guide* discusses every Artline tool and menu command in detail.



Standard Tools



ARTLINE comes with these standard tools.



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