Serif DrawPlus 3.0

Online Companion

DrawPlus 3.0 Companion

Third Party Credits

License Agreement

All Serif products are provided under this simple, no-nonsense, License Agreement. This software package is proprietary to Serif, Inc. [Serif] and is protected under US copyright law.

This **Single User License** entitles you to use the software on the following terms:

You are free to copy this software as you see fit (e.g. for archival or backup purposes) *provided* that only one person is using the software at any particular time. This means, for example, that you may have copies on both office and home machines for your *own* use. It does *not* allow the software to be installed on a network for use by more than one person. For network use, or any other multiple user situation, you must upgrade to a **Multiple User Site License**.

Within sixty (60) days of purchase you may return the disk(s) for replacement if any physical defects occur (including, for example, damaged or incorrect media). Serif provides no other warranty, and under no circumstances will Serif's liability to you exceed the retail price of the software.

Serif will maintain and help you use the software in accordance with our support policies provided you are a **Registered User**.

By using the Serif product(s) covered by this license, you agree to become bound by its terms. This agreement will be governed by the laws in force in the state of New Hampshire.

If you have any questions about this agreement, please feel free to contact us in writing:

Serif, Inc. PO Box 803, Nashua NH 03061 USA

Copyrights

Companies and names used in samples are fictitious.

Serif DrawPlus 3.0 was designed to provide the best product/value *and* lowest price in Windows 95 desktop publishing and graphics. Many thanks to our million users for supporting us… Especially our international user panel, dedicated beta testers, local pizza delivery, and everyone else who took the time to make comments and suggestions to help us. We couldn't do it without you. Just Publish It!

How to contact Serif

Our main office (USA, Canada):

Serif, Inc.
PO Box 803, Nashua NH 03061 USA

Main	(603) 889-8650
Registration	(800) 697-3743
Sales	(800) 489-6719
Technical Support	(603) 886-6642
Customer Service	(800) 489-6720
Fax	(603) 889-1127

European office (UK, Europe):

Serif (Europe) Limited
PO Box 15, Nottingham NG7 2DA UK

Main	(0115) 9421502
Registration	(0500) 454645
Sales	(0800) 924925
Technical Support	(0115) 9421502
Customer Service	(0115) 9421502
Fax	(0115) 9701022

On-line

Internet http://www.serif.com/ (e-mail serif@serif.com)
CompuServe GO PAGEPLUS

International

Please contact your local Serif distributor/dealer. For further details please call Serif.

TABLE OF CONTENTS

Just Draw It!

Welcome

Welcome to DrawPlus 3.0 from Serif. It's the complete drawing, graphics and illustration package for your home, school, church or growing business. DrawPlus 3.0 can do-it-all-for-you with automated Wizards or let you do-it-all-yourself with total control over the powerful drawing features available.

DrawPlus 3.0 is the latest in the DrawPlus line from Serif, developer of the best-selling desktop publisher, PagePlus. We've added powerful creative and ease-of-use tools, yet still kept the acclaimed simplicity of DrawPlus 2.0. And DrawPlus is now a powerful 32-bit application, designed exclusively for Windows 95, and ready to handle the most demanding of drawing tasks. It's everything you need to get started NOW!

About this book

Read this book to learn how to install, start and use DrawPlus 3.0 – from the basics to advanced user tips & tricks.

- Just Draw It! Tells you how to install, start and register DrawPlus and gives you an overview of key features.
- A Whistle-Stop Tour. A quick tour of the important elements of the DrawPlus window and an introduction to the Design Wizards.
- A Wiz of Wizards. A quick tutorial based around creating a poster using Wizards.
- Beyond Wizards. A tour of creating and manipulating DrawPlus objects on the page.

- How it Looks. Discusses the formatting of text and graphic objects.
- Special Objects. Introduces QuickShapes, text objects, bitmaps and OLE objects.
- Curves and Shapes. An overview of creating a drawing from lines, curves and closed shapes.
- Control Your Drawing. A tour of the advanced control features that make every drawing a work of perfection.
- Gallery. A design primer together with a pot-pourri of advanced techniques and ideas.

About DrawPlus

From logos, maps and marketing material for business users to fun-stuff like cartoon drawings, masks and origami DrawPlus 3.0 does it all. With your PC, printer and DrawPlus you've got instant creativity with a personalized touch. It's packed full of Wizards which do everything from creating designer publications, logos and page elements to importing pictures, creating colorful fills and creating cool text effects.

- **Total Ease-of-Use**
  DrawPlus 3.0 makes powerful features available to new users through a slew of ease-of-use features designed to zap that learning curve. Specific accelerated learning tools include ToolTips, context-sensitive Hints & Tips and multimedia demos.

- **Design Wizards**
  DrawPlus 3.0 is fully-loaded with over 150 Design Wizards – instant designer drawings and publications. Just answer the questions and let the Design Wizards do the work! There's Design Wizards for all kinds of business and home-based tasks.

- **Logo Wizard**
  Logo Wizard makes it simple to add stunning logos, powerful headlines and eye-popping text effects to a drawing. Input the text, choose a design and DrawPlus 3.0 drops a typographic bomb!

- **Background Wizard**
  Adding abstract or themed backgrounds is easy with Background Wizard. From dazzling presentation backgrounds to space style scenes, Background Wizard gives your drawing a ready-made designer canvas.

- **Watermark Wizard**
  Watermark Wizard makes a notoriously difficult effect a snap to create with a wide range of customisable watermark designs on hand.

- **Border Wizard**
  Vastly flexible Border Wizard instantly adds borders to the page or to individual objects. Choose a border from the extensive library, or be creative and let Border Wizard guide you through building a unique design.

- **QuickShapes**
  Can't draw? Won't Draw? QuickShapes are the answer! They work like intelligent clipart… or the most powerful set of drawing tools you've ever envisaged. Even extremely complex shapes like spirals, petals and webs are simple to draw and customize using QuickShapes.

- **Professional-Standard Drawing Features**
  Features like convert text to curves, user-defined envelopes, automatic shadows, layers and multi-color fills give complete creative power.

- **Fun Stuff**
  As drawing and graphics appeals to all those creative types… and to make DrawPlus the only real drawing application to let your kids loose on there's heaps of fun stuff included. Create fearsome fiends with the Monster Maker Wizard; crazy caricatures with the Crazy Face Wizard; and use Design Wizards for making cool games, masks, planes, origami and scenes.

About Serif

Serif develops and publishes PagePlus, the world's #1 best-selling, award-winning desktop publisher. And now DrawPlus 3.0 brings that revolutionary ease and power combination to drawing and graphics. Serif is dedicated to giving you the chance to own and use great software.

Registration, Upgrades and Support

Please register your software by taking a moment to call us. Our upgrades to registered users are great value, and our registered users are always the first to know thanks to our regular newsletter, and upgrade mailings.

If you need technical support please contact us: we aim to provide fast, friendly service and knowledgeable help.

Installation

What you need to run DrawPlus

Serif DrawPlus 3.0 works with Windows 95, and you'll need a PC setup which runs Windows 95 adequately. If you need help installing Windows 95, or setting up your printer, see Windows 95 documentation and help.

- You need, at least, a 386DX IBM-compatible personal computer and 8 Mb of RAM. The performance of Windows 95 is improved by a faster PC and more memory.
- You need a mouse, adequate hard disk space (at least 20 Mb free to install essential files) and a CD-ROM drive.
- You need a Windows 95 compatible printer connected and ready to print.

What you need to know

Serif DrawPlus is the easiest drawing package around. You don't need any drawing or design experience, as the DrawPlus Wizards will do virtually all the work for you! However, you will find it much easier if, before installing and using DrawPlus, you have a working knowledge of Windows 95.

You may find it helpful to spend a little time using Windows 95 before you proceed. You should be familiar with terminology such as "icons" and "clicking".

First Time Install

To install Serif DrawPlus simply insert the CD-ROM into your CD-ROM drive. The Windows 95 AutoRun feature automatically starts the Setup process and all you need to do to install the program is answer the on-screen questions.

If the AutoRun does not start the install (this is not the first time you have installed DrawPlus), use the Manual Install instructions shown below.

Manual Install

To re-install the software or to change the installation at a later date, select **Settings/Control Panel** from the Windows **Start** menu and then click on the **Add/Remove Programs** icon. Make sure the Serif DrawPlus 3.0 CD-ROM is inserted into your CD-ROM drive, click the **Install...** button and then simply follow the on-screen instructions.

📖 ***To save valuable hard disk space, the DrawPlus Design Wizards remain on the CD-ROM. This means that the CD-ROM must be in your drive for you to use these features. Don't worry; DrawPlus will prompt you whenever the CD-ROM is needed.***

Let's Get Started...

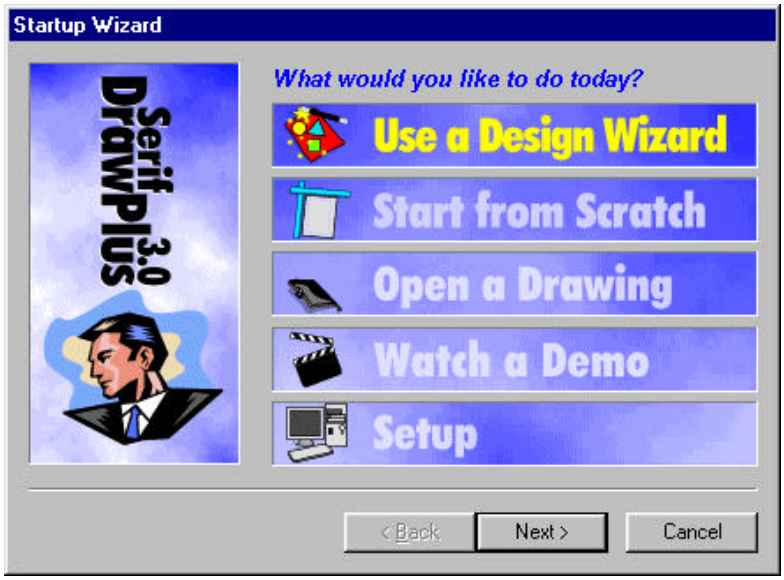
Once DrawPlus has been installed you're all ready to go! Setup adds a **Serif DrawPlus 3.0** icon to the **Programs** group of the Windows **Start** menu.

☞ **Use the Windows Start button to start DrawPlus 3.0, (or if DrawPlus is already running do a File/New) to display the Startup Wizard (the main working screen).**

DrawPlus 3.0 starts, and the Startup Wizard will be displayed.

DrawPlus Startup Wizard

The Startup Wizard appears whenever you start DrawPlus and gives you five choices of things to do.



Watching one of the DrawPlus demos is a good way to discover some of the many exciting and powerful features available.

☞ **Choose Watch a Demo now.**

Select the **DrawPlus Introduction** demo and then click on the **Watch Demo...** button. DrawPlus will now load the demo (it takes a few moments). You can move forwards and backwards through the screens using the buttons. This is just one of the interactive demos provided with DrawPlus, and you can look at them at any time by using the Startup Wizard.

The demos are a good way to find out what you can do with DrawPlus 3.0. Now you're ready for some real hands-on exploration!

Serif Registration Wizard

If you start DrawPlus 3.0 and the registration Wizard is displayed you should register your copy of DrawPlus. The Registration Wizard includes information about registration and technical support.

To finish with the Registration Wizard, just click on the **Finish** button at the end of the Wizard. You can register whenever you feel like it. When you have a moment, please call Serif toll-free with you installation number, and we'll give you a personalized registration number to enter.

About this manual

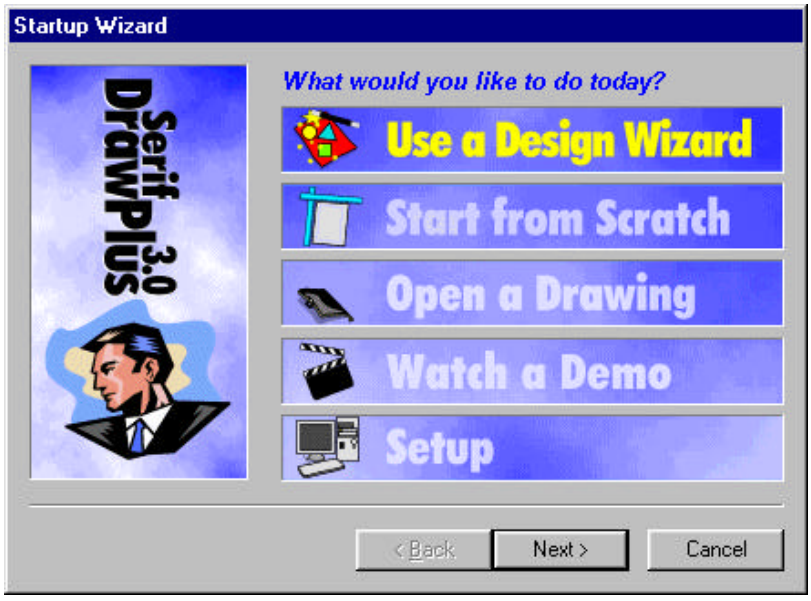
After watching the demo you might feel that you're ready to go! DrawPlus is a fast and intuitive application and, if you've used drawing software before, you'll have no problem picking up DrawPlus. If you're new to drawing software or want to make sure that you are getting the job done in the fastest and most economical way then read this companion guide - which takes the form of an enjoyable journey, including tutorials, through the ideas that make DrawPlus easy and fun!

A Whistle-Stop Tour

An Instant Design

Serif DrawPlus 3.0 has all the tools you need to draw anything from scratch but it also offers plenty of instant ways to create drawings automatically. To see how quick and easy it can be, let's start by creating a personalized birthday card in just a few minutes.

☞ **Use the Windows Start button to start DrawPlus (or if it is already running do a File/New) to display the Startup Wizard.**



☞ **Choose Use a Design Wizard now.**

1. Select the **Cards** category and click on **Next>**
2. Select **Birthdays & Anniversaries** and click on **Next>**
3. Select **Birthday 1** and click on **Next>**

It's easy to see a quick preview of the available designs by clicking once on each design name

☞ **Now use the Wizard to personalize your card.**

1. Add the name of the person you are sending the card to and your own name to the card by entering the two names in the boxes. Then click **Next>**.
2. Now there are some design choices to be made. First you have to choose a fill for the text. Just click on the one you want and then click **Next>**.

3. The next choice is a border for the front of the card. Click on the one you like best and then click **Next>**.

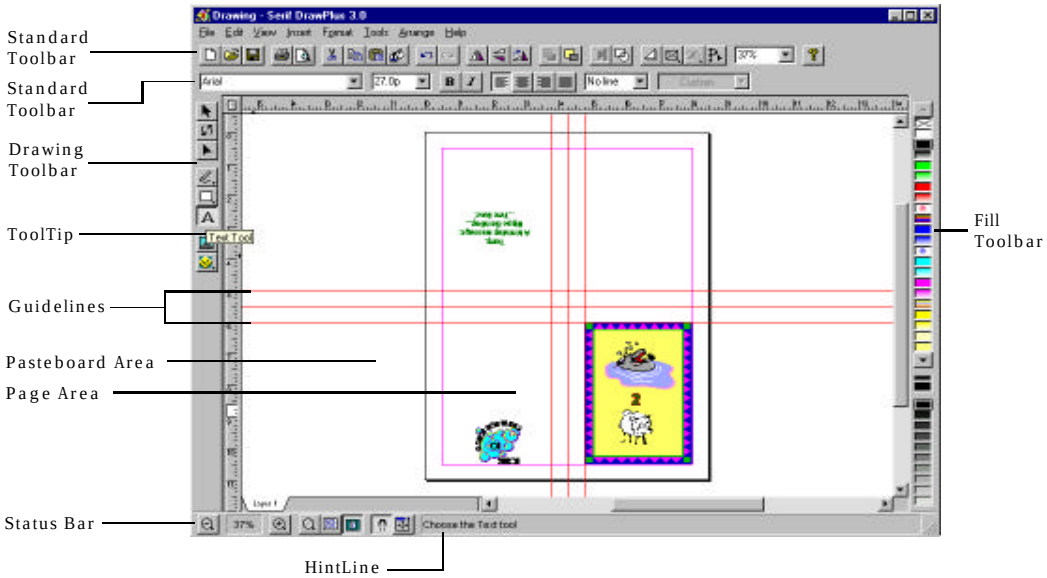
4. Finally choose one of the background fills and then click **Next>**.

5. Click **Finish** to instruct the Wizard to create your greetings card.

At any time you can move backwards through the Wizard to review any selection you've made, simply by clicking on the ***<Back*** *button.*

The DrawPlus Screen

The Wizard takes just a few moments and then you see your drawing on the normal DrawPlus screen. We'll take a look at this and introduce its main elements.



- The active area of the DrawPlus display is made up of two areas, the **page** and the surrounding **pasteboard** area. You can draw onto either area but it is the page area that will be printed. You can use the pasteboard to store items that you might want to use in a design or to experiment with them.

- The red lines on the page and pasteboard are non-printing **guidelines** which you can create and move as required to help you position objects on the page.
- The **Drawing Toolbar** goes down the left side of the screen and contains tools for creating, editing and manipulating objects.
- The **Standard Toolbar** just below the menu bar is used for button based shortcuts for many operations.
- The **Formatting Toolbar** below the **Standard Toolbar** is used for adjusting the properties and formatting of objects.
- The **Fill Toolbar** goes down the right side of the screen and is used for applying colors, fills and shades to objects.
- The horizontal **Status Bar** for various view and zoom level shortcuts.
- The **HintLine** to the right of the Status Bar gives information about the object your cursor is pointing at.
- If you hover the cursor over any of the DrawPlus tools a pop-up **ToolTip** will appear giving you its function.

Let's Experiment

Before printing the birthday card we'll use some of the DrawPlus tools to make a couple of modifications to the drawing the Wizard produced.

There's a personalized logo in the lower left quadrant (the back of the card) that includes the sender's name and we are going to shrink it a little. Before you can make any changes to an object you have to select it using the Selection Tool.

Click on the Selection Tool and then single click on the logo. You will see eight square dots appear around it. These are the object's "handles".

Let's take a closer look by zooming in on the logo. With the object selected click the **Actual Size** button on the **Status Bar.**

> 🕮 ***If you're having trouble finding the* Actual Size *button on the* Status Bar, *remember* ToolTips. *Hover your mouse cursor above the buttons to help find the one you want.***

Now hover the mouse over one of the logo's corner handles. The cursor changes and displays the size cursor. Click and drag with this cursor towards the middle of the logo to reduce its size.

> 🕮 ***If you can't see the eight black "handles" around the object, it's not selected. Select the Selection Tool, then click once over the object to select it.***

The other change we'll make is to the color of the fill used on the front of the card. First use the **Fit Page** button  on the Status Bar to view the whole page. Now click on the background of the card inside the border (avoiding the border and the graphics and text objects). Then click on the solid red fill in the Fill Toolbar. The effect is not what we want so choose a lighter shade by clicking on the bottom button in the shade section of the Fill Toolbar.

If you prefer the original fill supplied by the Wizard, that's not a problem. Click twice on the **Undo** button  on the Standard Toolbar and it will be restored.

Finish Up...

Congratulations! You've just finished customizing your card.

Save your card

Use **File/Save** to save a copy of your edited card design. DrawPlus saves and opens files just like all your Windows applications.

Print your card

☞ **Print the page**

1. Select **File/Print....**
2. Click on the **OK** button.

If your card does not print properly, check your Windows documentation to make sure that your printer is installed correctly.

When the page comes out of the printer fold the card in half top to bottom and in half again left to right, sign it and pop it in an envelope.

Getting Help

All the tools we have just used are explained more fully later in this book. If you ever need help then it is always available via the **Help** menu, by pressing **F1** or by clicking on the **Help** button on the Standard Toolbar.

You may also have noticed that when you do some operations for the very first time, a hint is automatically displayed giving you help on the action you just did. These contain useful information for the new user.

What's Next?

We've seen how a Design Wizard can create a great-looking instant publication. Next we'll take a look at how we can create a drawing from scratch. Don't worry, there'll be more Wizards to help along the way!

A Wiz of Wizards

Introduction

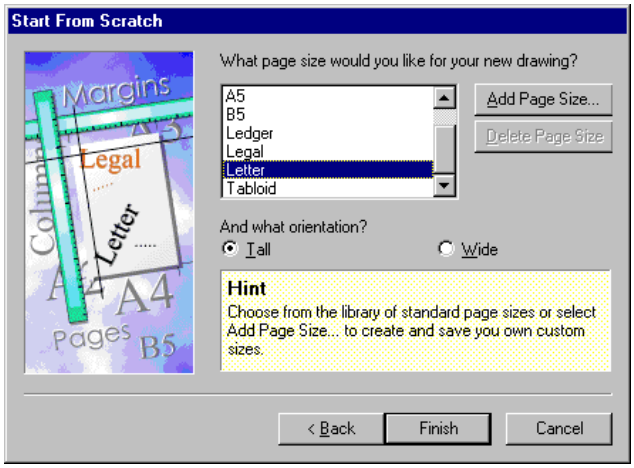
Instead of using just a single Design Wizard you can put to work other Wizards to help create specific elements of a drawing. In this way you can create something that's original without having to draw each element individually. And that saves plenty of time!

Creating a Poster

We're now going to use nothing but Wizards to produce a Wanted Poster - for a villain! It's a fun example that's used as a starting point to demonstrate the basics of creating unique design elements using Wizards. You can then put these features to work with your own drawing ideas and requirements.

☞ **Start with a blank page, ready for your drawing.**

1. Start DrawPlus (or use **File/New** if it's already running).
2. Select **Start from Scratch** from the Startup Wizard and click **Next>**.

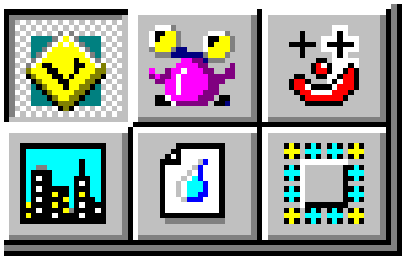


3. Select a paper size. Check that **Orientation** is set to **Tall** and then Click on **Finish**.

At this point you may feel you're on your own but this is not the case. The **Wizard** button at the bottom of the Drawing Toolbar  gives access to six Wizards, and with help from four of them, we'll soon have a Wanted Poster.

☞ **Click on the Wizard tool.**

The flyout that appears has six buttons.



From left to right the top row contains the Logo, Monster Maker and Crazy Face Wizards and the bottom row contains the Background, Watermark and Border Wizards. All of these guide you through specific tasks, making it easy to add custom design elements to your drawing.

The Watermark Wizard

First we'll use the Watermark Wizard to transform a blank drawing into something a little more interesting. It provides a subtle background so that the page itself conveys a message.

☞ **Click on the Watermark Wizard** 

1. Step through the list to preview the available choices and select **Random Text**. Click on **Next>**.
2. Type "Sheriff Wyatt Earp" into the text box and click on **Next>**.
3. Choose a fill and click on **Next>**.
4. Choose a shade, say **20%**, and click on **Next>**.
5. Click on **Finish**.

At any time you can move backwards through the Wizard to review any selection you've made, simply by clicking on the **<Back** *button.*

Once the Wizard has created the watermark your previously blank page will look like this:

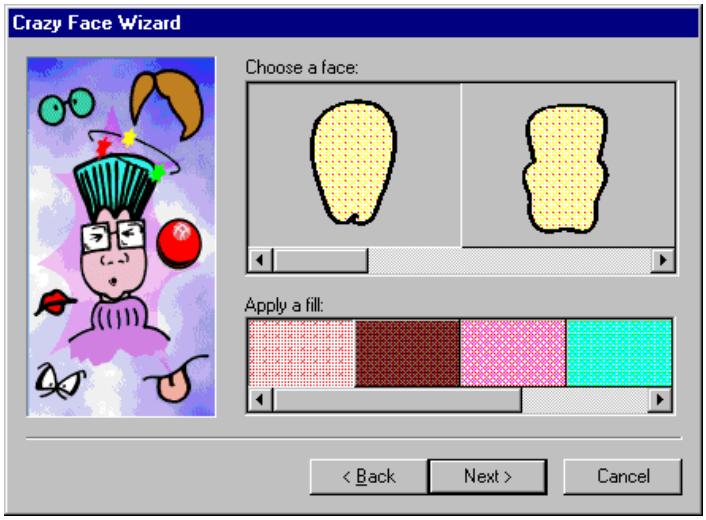
It has combined the basic design with the text you entered and your choice of fill and shade to produce a subtle message over which you can create your main design.

The Crazy Face Wizard

Next we'll use the Crazy Face Wizard which allows you to create cartoon faces from a kit of body parts! Notice that its pages have scroll bars, indicating that there are more choices than just the ones that are visible.

☞ **Click on the Crazy Face Wizard** 

1. On the first pages of the Crazy Face Wizard you simply click **Next>.**
2. In the one that follows choose **No, I want to choose the rest of the design myself.**



The next three pages all have the same format and ask you to pick a face, hair style and body. At each stage click on your preferred choice in the top row and apply a fill using the bottom row. Then click on **Next>**. If you want to return to an earlier screen to pick an alternative use the **<Back** button.

The next three pages don't involve fills, they simply require a selection to be made for eyes, nose and mouth. The next page asks you to choose a halo and one of the options is blank, i.e. no halo. Finally you are asked to type in a name for your character. You can leave this blank if you prefer.

The Finish screen gives you a last chance to go back or to cancel. When you click **Finish** the Face Maker Wizard proceeds with its job of assembling your cartoon face.

When the Wizard has finished it's time to position the face on your drawing. The cursor changes to a hatched rectangle with a cross diagonally above it. Using this cursor you can click and drag to mark out the area for the face.

Rough Rider

Given the number of options, the face you produce might be very different - but then that's the whole idea!

Logo Wizard

The Logo Wizard has a great way with words and is indispensable when you have a powerful message to add to a drawing. In fact the Logo Wizard is great for headlines, titles and any place where text needs to look incredible.

☞ **Click on the Logo Wizard.** 

1. Choose the **Headlines** category and click on **Next>**.
2. Scroll through the available designs to choose the effect you want. You will see each one you select in the preview window.
3. Once you have made a choice, click on **Next>**, replace the default text with the words "WANTED - ALIVE" and click again on **Next>** and then on **Finish**.

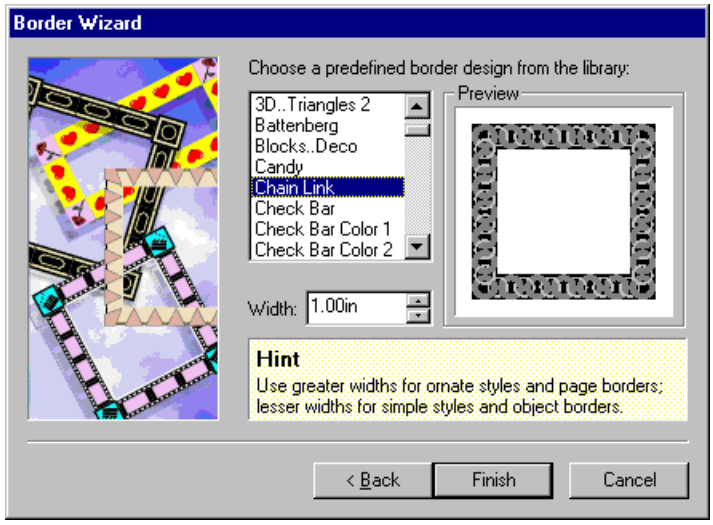
As before, a cursor appears on the page. Notice the highlights that have appeared on the rulers. These show the default size for the logo. Instead of dragging, just single-click on the page where you want the top-left corner of the logo to be. It appears on the page at the default size.

Border Wizard

The Border Wizard can place a border around the entire page or around selected objects. In this example, we're going to do both. The first border is one around the entire page.

☞ **Click on the Border Wizard** 

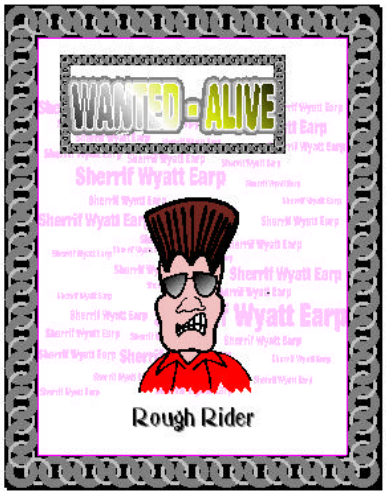
1. You'll be asked what type of border you want. Choose **From Library** and click **Next>**.
2. Next you have to specify where the border is to be placed. Choose **Whole Page** and click **Next>**.
3. You can choose a border design and width on the next page of the Wizard. Make an appropriate choice and click **Finish**.



The border will automatically be placed around the edge of the page in the page margins.

Now we'll add a border around the "WANTED-ALIVE" Logo group object. Make sure you've got the Logo group object selected (if it's not, use the Selection Tool) and use the Border Wizard a second time. At the second screen accept **Around Current Selection**. As well as selecting a border in the final screen alter the setting in the Width box, clicking on the lower button until a value of **0.25 in** is shown. When you click **Finish** the Wizard automatically places the border in the correct position around the logo.

Now if you look at your drawing it should look similar to the example below. You may have made different design choices but the basic layout should be the same.



Saving the drawing

That's all we want the Wizards to do to this drawing and at this point it's tempting to start editing! However, this will make much more sense once you know a little more about the way DrawPlus works with objects. We will be using this drawing in the next Tour so the next step is to save the drawing to disk.

Click the **Save** button in the Standard Toolbar (or use the **File/Save** menu command) and save your drawing.

What's Next?

We've covered how Wizards can be used to create commonly used design elements for your drawing. If you'd like a quick recap, watch the **Wizard Design Elements** demo. Do a **File/New** to access the Startup Wizard and choose **Watch a Demo.**

In the next section we'll be going beyond Wizards and exploring the creation and editing of objects using the powerful drawing tools available in DrawPlus.

Beyond Wizards

Introducing Objects

A Serif DrawPlus 3.0 drawing is made up of objects which can be picked up, moved and changed in many ways. If you were working with pencil and paper you would have to erase and redraw a shape to move it a little to the right. Using DrawPlus you can do the same job more directly and with far less work by picking the shape up and moving it to where you want it to be! If you want to think of a DrawPlus drawing in real-world terms, think of cut-out paper shapes with low-tack adhesive; not pencil and paper.

The Wizards that we've explored so far can be thought of as "object factories". They take you step-by-step through the specification and creation of a complete design or of single design elements and when they finish you are left with one, or usually more, new objects on the page. If the design is exactly what you want then all that is left is for you to print it. If you want to personalize the design or add to it then you need to know how to work with objects! Ready to go?

Using the pointers

Working with objects isn't difficult and mainly involves the use of the three Pointer Tools.

- The first Pointer Tool is the Selection Tool and, as you would guess, it is mainly used for selecting which object or objects you are going to be working with.
- The second tool is the Rotate Tool which allows you to rotate objects to any angle or distort them by shearing.
- The third tool is the Node Tool. It's used to alter the shape of objects in very precise ways. This is discussed in detail in later sections of this book.

Selecting objects

When you draw an object it is initially selected for you so that you can modify it. To see how this works, and to see how other selection methods work, we need to draw some new objects on a blank page. Start DrawPlus, or use the **File/New** command, and select the **Start from Scratch** option from the StartUp Wizard. After you have selected the paper size that you want to use, you will see a blank page ready to draw on.

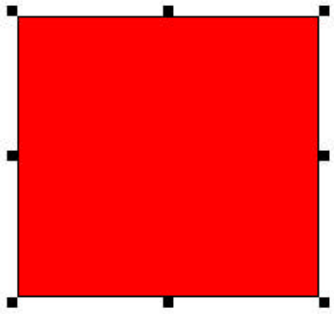
QuickShapes

The simplest of graphic objects to create is a box, or rectangle, and this is made even easier because DrawPlus provides a tool for creating standard shapes.

 By default you will see the QuickBox Tool as the middle icon in the Create Tools section of the Drawing Toolbar. When you click on it and hold the mouse down for a moment the QuickShapes flyout appears. The QuickBox shape is at the top left corner.

When you have selected the QuickBox, or any QuickShape tool, the cursor changes to be an outline arrow with a light bulb below it.

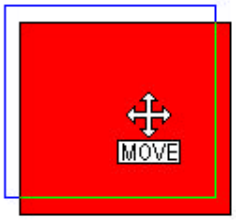
To draw using the QuickBox Tool click and drag out a box on the page. When you release the mouse button you'll see that the box appears surrounded by eight black markers - these are called "handles" and they indicate that the box is currently selected.



If you look at the Drawing Toolbar, you will notice that the Selection Tool has been automatically activated and that the cursor is now an arrow. If you want to de-select the object click using the Selection Tool anywhere outside its outline. Now click anywhere within its outline to select it again.

Moving objects


You can move any selected object using the Selection Tool. As we have just seen, once you have drawn a box the current tool automatically changes to the Selection Tool so that you can position it. If you move the cursor over the object and press down and hold the left mouse button you will see that the cursor changes to a four pointed arrow and the Move Cursor appears.



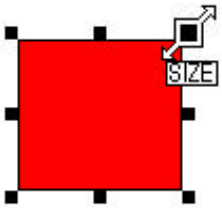
You can now move the object anywhere you want it to be and drop it back onto the page or pasteboard by releasing the left mouse button.

An alternative way of moving a selected object is to press the cursor keys. The object moves one step in the direction of each cursor key you press. There are various techniques for positioning an object with extreme precision that are described in more detail in the *Curves and Shapes* chapter.

Tip: ***If you pause for a moment before you move the object you will see the object as you have drawn it throughout the move. If you move off as soon as you press the left mouse button down you will only see an outline of the object.***

Sizing objects

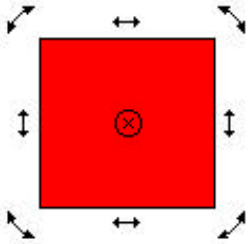
As well as moving a selected object you can also alter its size. If you position the Selection Tool over one of the object's handles you will notice that the cursor changes to a double headed Size Cursor.



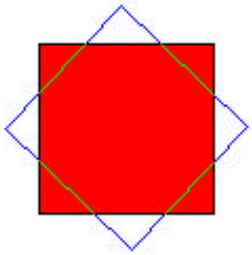
If you now drag the handle, the object will grow or shrink accordingly. Clicking and dragging the corner handle produces an equal change in both the horizontal and vertical size of the object - it keeps the aspect ratio. If you click and drag one of the handles on the sides of the object you can change its size horizontally or vertically, so stretching or squashing the object in that direction. For example, to turn a square into a long thin rectangle just drag on one of the handles on a vertical side.

Rotating objects

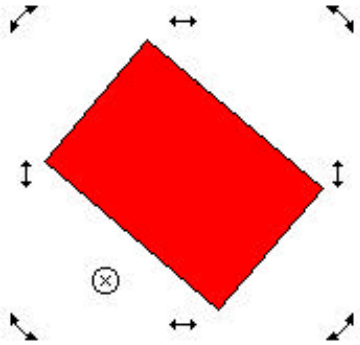
 To rotate a selected object you use the Rotate Tool. For convenience, you can also select objects using the Rotate Tool just as in the case of the Selection Tool. The difference is that the selected objects are displayed with a different set of handles appropriate for the tool.



The curved handles at each corner of the object are used to rotate it about the center of rotation - the circle with a cross. If you click and drag any of the curved handles the object pivots around this center marker. When you release the mouse button the object is redrawn at its new angle.



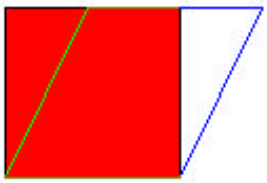
You can drag the center of rotation to any position on the page and when you drag on the curved arrows the object will rotate about the new pivot.



Although the Rotate Tool is primarily designed to allow you to rotate objects you can also use it to move objects by clicking on the object away from any of the handles and then dragging to the new location.

Shearing objects

As well as being able to rotate an object the Rotate Tool allows you to skew or “shear” it. If instead of dragging one of the curved arrows you drag one of the straight double headed arrows in the middle of each side then the shape is distorted.



The effect of a shear distortion is very easy to see in a very simple shape such as a square. To understand how it affects other more complicated shapes just imagine that the shape is drawn on a small sheet of material that is being distorted in the same way as the square.

Constraining a change

One of the advantages of being able to change objects so easily is that it is quick to rearrange things. Sometimes this very freedom to make changes is a problem and you want to be able to control the changes more precisely. If you hold down the **SHIFT** key while dragging an object then the change will be restricted to a smaller range of possibilities. For example, moving an object with the **SHIFT** key down restricts movement to the horizontal and vertical directions only. If you hold down the **SHIFT** key while rotating then the angle will change in 15 degree steps.

If you hold down the **SHIFT** key while dragging a corner handle you can move it freely to produce an unequal scaling in the horizontal and vertical directions.

When you are drawing a new QuickShape object you can also constrain the horizontal and vertical dimensions to be the same by holding down the **CTRL** key while dragging. For example, if you want to draw an exact square or perfect circle press and hold the **CTRL** key before you release the mouse button.

Working with objects

Having seen how much can be achieved simply using the pointers it's time to move on to other operations that you can perform on selected objects. These involve menu commands and tools from the Standard Toolbar.

Deleting

To delete an object from the page simply select it with the Selection Tool and use the menu command **Edit/Clear.** Removing an object is such a common operation that most users quickly learn that pressing the **DELETE** key has the same effect as **Edit/Clear**.

Changing your mind

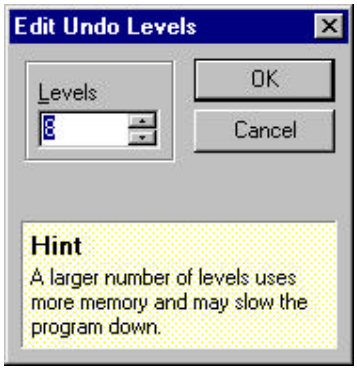
After introducing a way of deleting objects it is time to introduce a quick and easy way of undoing! If you perform any operation on a drawing you can undo it by using the **Edit/Undo** menu command. The command as shown in the menu will actually name the action that it will undo. For example, if you have just deleted an object using the **Edit/Clear** command the Undo menu item will become **Undo Clear**. In this way you can always be sure what you are "undoing"!

As well as undoing the last operation you can use **Edit/Undo** to step back repeatedly through a series of operations. Each time you undo an operation the name of the next operation to be undone will appear in the menu item.

 The Undo command is so useful that you will quickly become familiar with its button and learn its keyboard shortcut, **Ctrl-Z,** but using these quick methods you lose the benefit of seeing what operation you are about to undo.

 Having changed your mind you might regret it and want to restore the previous state of affairs. This can be done by clicking on the Redo button, the equivalent of **Edit/Redo**.

By default DrawPlus keeps track of the last eight operations. You can change this if required by double clicking on the Undo button.



You can also set this in the General page of the **Tools/Options...** dialog.

Cut, Copy and Paste

As well as deleting a selected object you can also remove it to the Windows clipboard using the **Edit/Cut** menu command. Once on the clipboard you can paste the object back onto the page using the **Edit/Paste** menu command. If you don't want to remove the object from the page you can use the **Edit/Copy** command to make a copy on the clipboard. These commands are useful when you want to transfer an object between drawings or between different Windows applications.

The standard Windows keyboard shortcuts for these operations are worth remembering together, of course, with their icons on the Standard Toolbar which may be familiar to you from other Windows 95 applications .

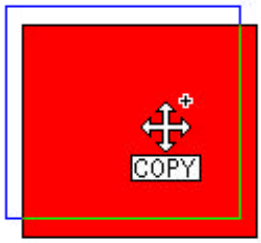
Ctrl-X - Edit/Cut 

Ctrl-C - Edit/Copy 

Ctrl-V - Edit/Paste 

Quick Copying

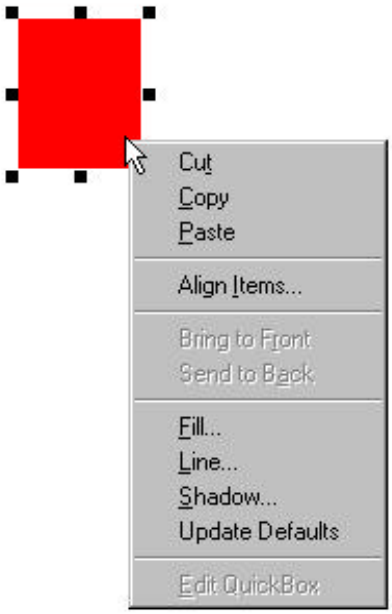
While you can make a copy of an object using **Edit/Copy** and **Edit/Paste** or their shortcuts there is an even quicker way. If you press and hold the **CTRL** key down while moving an object the cursor changes to show a small "+" in the top right hand corner and the word "COPY" appears just below it. When you release the object a new copy is displayed at the location and the original object is left in its original position.



The same technique works when you are rotating or shearing an object. For example if you hold down the **CTRL** key while rotating an object the result is a new copy at the new angle, and overlapping the original object.

Right-click menus

For maximum flexibility there is yet another quick way to perform cut, copy and paste operations. If you click the right mouse button while an object is selected you will see a pop-up menu appear. This is usually referred to as a “right-click menu”.



This contains common operations that are context-sensitive, so the actual commands that you see listed depend on the type of the object or the area of the screen on which you right-click.

More than one object

So far all our examples have been concerned with selecting and manipulating a single object. In a real drawing there are likely to be lots of objects. DrawPlus draws objects on the page in the order in which you created them. It's easier to see this in practice than to read about it so it's worth following through this explanation.

1. Start DrawPlus or do a **File/New** and select **Start from Scratch.**

2.  Click on the QuickBox tool. If you accidentally open the flyout select the QuickBox tool from it.

Notice that the cursor changes to an arrow with a light bulb below when it is over the page.

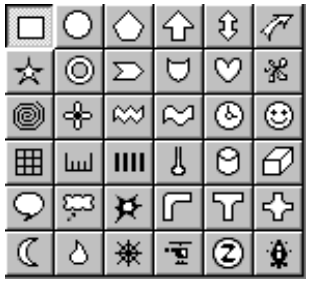
3. Click with this cursor near the center of the page.

This produces a small square, that automatically appears colored with the default fill. Notice that the square is surrounded by eight handles, indicating that the Selection Tool is active and that this object is selected.

5. Click on the QuickBox tool again. This time click and drag a long, thin box that overlaps half of the original box, and extends below it as shown below.

6. The rectangle is the same color as the square so to make the objects more distinct click with the mouse on a different color in the Fill Toolbar while the rectangle is selected.

7. Now click the QuickBox tool and hold the mouse button down. This will open the QuickShapes flyout.



8. Select the second tool in the top row, the QuickEllipse.

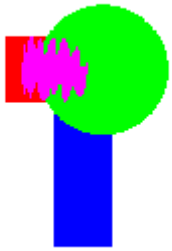
9.  The QuickEllipse draws ellipses and to draw a regular circle with it you simply hold down the **CTRL** key while you click and drag across the page. Select green from the Fill Toolbar to change the appearance of the circle.

10.  Now select the QuickSplats tool from the QuickShape flyout, click with the mouse cursor positioned inside the circle and set its fill to another color by clicking on the Fill Toolbar.

Notice that after you draw a QuickSplat, the Node Tool, not the Selection Tool, is activated. We'll cover that later but for now…

11. Select the Selection Tool and click on the "splat" to select it.

12. Click on the splat again and hold the mouse button down so that the Move Cursor appears. Move the splat so that all four objects overlap as shown.



Selecting overlapping objects

Once you have a set of overlapping objects the job of selecting a specific one becomes a little more complex. How do you select an object that is "behind" other objects? If the object you want to select isn't completely hidden then you could click on a portion of it where it is visible. Alternatively, repeatedly click with the mouse over the objects. Each time you click at the same location a different object in the stack is selected allowing you to select any of the overlapping objects.

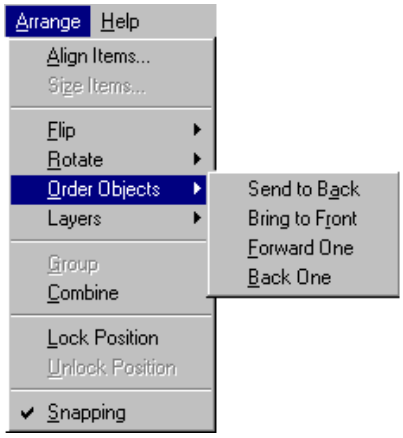
Let's see this in action. First click with the cursor somewhere on the pasteboard so that none of the objects are selected. Now place your cursor at a point where all the objects overlap. Click once and the object "on top" (the splat in this case) will be selected. A second click at the same point will select the next object, the circle in this case. A third click selects the rectangle, the fourth the square and a fifth click takes us back to the first object, the splat.

For this to work it is important that you really do click repeatedly at the same place. Moving the mouse and clicking starts the process over again by selecting the top most object.

We will be using these objects later in the chapter so save this drawing to disk.

Re-arranging objects

As we have seen, DrawPlus places objects on the page in the order you draw them. It also gives you the opportunity to change this order using **Arrange/Order Objects**.



There are four possibilities in this menu but not all of them are always available. If you have selected an object that is on top of all others you will have the options **Send to Back** and **Back One** - you can't bring it forward because it's on the top level of the stack. If you have selected the object that is at the bottom of a heap you will have the options **Bring to Front** or **Front One**. All the options are available for objects that are neither at the top or bottom.

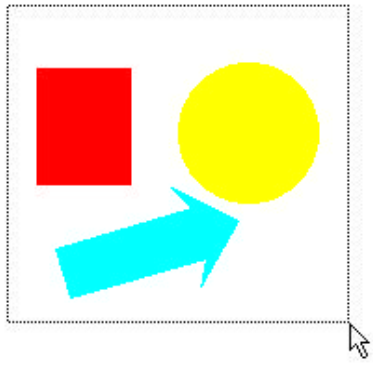
There are buttons for the ordering operations in the Standard Toolbar.

Click on  for Forward One and on  for Back One. If you double-click on these buttons they do a Bring to Front or a Send to Back respectively.

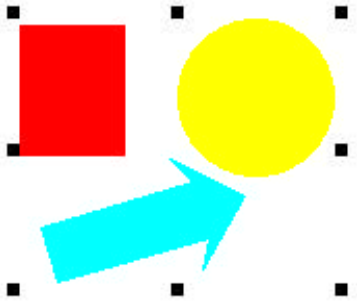
Selecting multiple objects

As well as selecting a single object you can select multiple objects at one time. A set of objects selected in this way forms a temporary group that you can manipulate as if it was one object - you will discover that you can make groups permanent in the *Control your Drawing* chapter. The question here is how to select more than one object at a time?

There are two general ways of doing this. The first is to use the Selection Tool to draw a marquee box around the objects you want to select. Drawing a marquee box is exactly like drawing a QuickShape rectangle. Make sure the Selection Tool is active and click and drag to create a selection area. You see an outline showing the region containing the objects that will be selected as you make the selection.



When you let go of the left mouse button all of the objects within the marquee box are selected and a selection box complete with handles appears around the group of objects.



Once selected, the group can be sized, rotated, skewed, copied, deleted, and so on, together in one operation.

Another method of creating a group of objects is to use the **SHIFT** key to modify an existing selection. If you click on an object while holding down the **SHIFT** key it will be added to the current selection. If the object is already part of a group selection then it will be deselected. Using the **SHIFT** key you can add objects to or take objects away from the current selection.

The SHIFT key also works if you use the marquee method of selecting multiple objects. In other words, you can add or remove more than one object at a time from the current selection by dragging a marquee box around the objects while holding down the SHIFT key.

Transformations

We have already seen how to use the Rotate tool to rotate a selected object or objects interactively through any angle. If you want to rotate a single object or a group through steps a quarter turn at a time then its easier to achieve this with the buttons on the Standard Toolbar that perform simple transformations.

Rather than read about them in the abstract you may like to see them in action using the overlapping objects we drew earlier in this chapter.

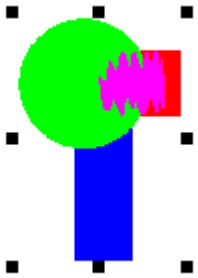
☞ **Open the drawing you saved earlier.**

1. With the Selection Tool draw a marquee box around the overlapping objects. This temporarily groups them so as they behave like a single object.
2.  Click on the Rotate 90° button to turn the grouped object through a quarter turn.

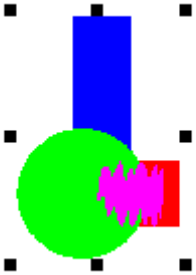
Double click on the Rotate 90° tool and the Rotation dialog box opens. You can specify the angle through which you want the object or group to be rotated.

The two other rotate buttons in the Standard Toolbar produce mirror images in the horizontal and vertical directions.

 Click on the Flip X button to get a mirror image of the grouped object from left to right.

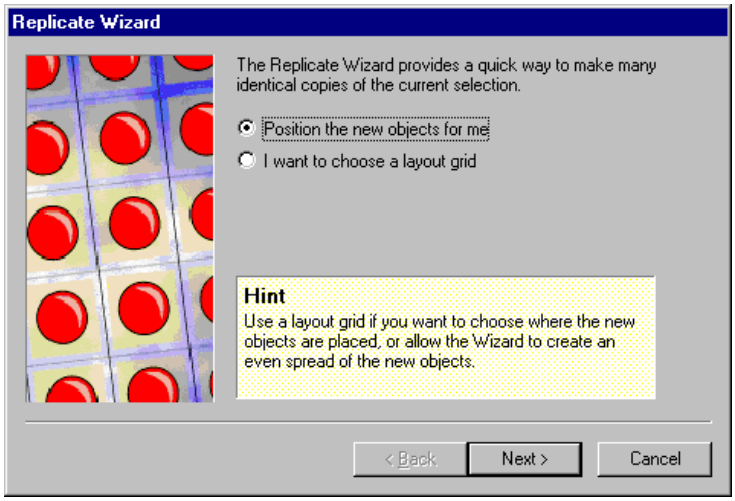


 Click on the Flip Y button and you get a mirror image of the grouped object from top to bottom.

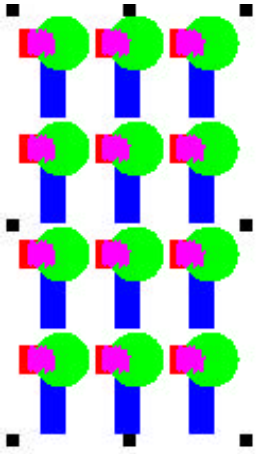


The Replicate Wizard

The Replicate Wizard on the **Tools** menu makes multiple copies of an object. Before you use the replicate Wizard size the object to be replicated and place it in a convenient starting position - usually the top-left of the page.



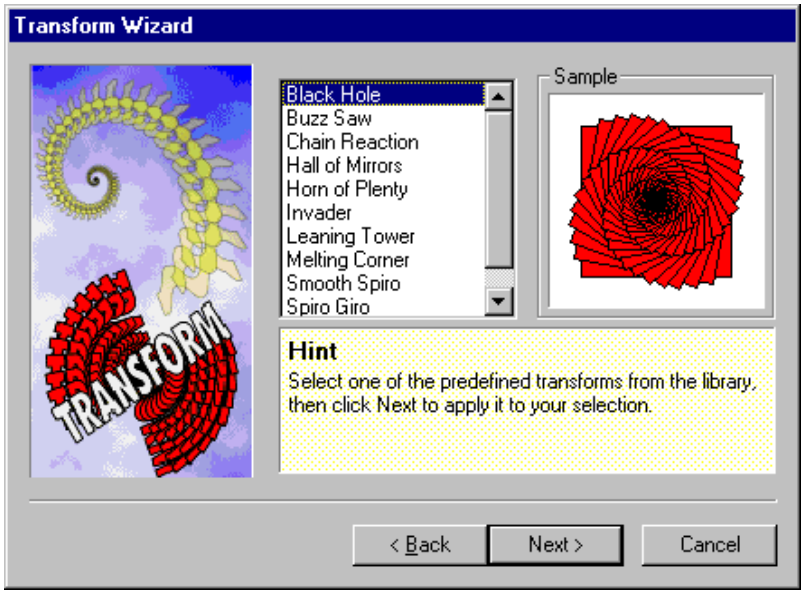
If you request the Replicate Wizard to position the objects for you it will devise the most suitable grid. This is the default option so just click **Next>.** The only point to remember at the next page of the Wizard is that one object already exists. So if you want a total of 12 objects you need to ask for 11. There's a slight delay while the new objects are created.



If you prefer you can use the Replicate Wizard to specify a layout grid in terms of column and rows.

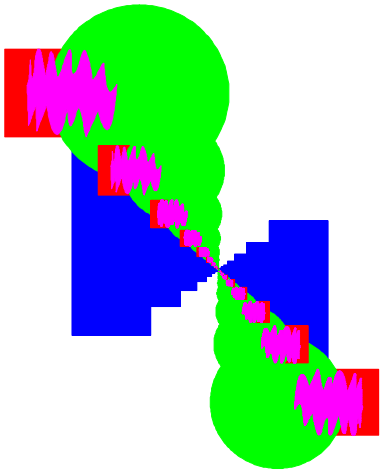
The Transform Wizard

The Transform Wizard, also on the **Tools** menu performs multiple operations of scaling, rotation and positioning and the results can range from unusual to simply stunning.

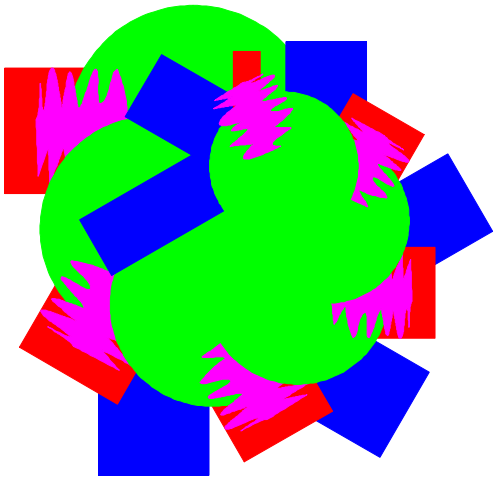


Again there are two options. The first is to choose a predefined transformation. The sample shows how a square would be transformed by each of the predefined designs.

Chain Reaction was the one that seemed most suitable for the object we are considering and here's the result.



If you decide to take the Transform Wizard's other option of creating a custom transform you will need to enter values for rotation, scaling, number of copies and the X offset and Y offsets. Providing values of 60° for rotation, 90% for scaling, 5 copies and offsets of 0.5in in both directions produced the following result.



☞ **Try using the Transform Wizard with simple, single objects or objects with a clear fill. It's easy to create amazing "spirograph" style effects.**

What's Next?

We've explored how objects can be created and worked with and now's a great time for a quick recap. **Select Help/Watch a Demo...** and spend a few minutes with the **Working with QuickShapes** demo.

Next we'll look at the formatting options available for different objects. You're already primed on content so now's the time to consider style.

How it Looks

Introduction

We've covered the creation and basic manipulation of objects, now it's time to consider how they look. We have already been using properties such as size and fill color and in this section we look more closely at the formatting features that DrawPlus provides.

Fill style

Colorful fills are such obvious and necessary properties of objects that we have been applying them naturally since the start of our exploration of DrawPlus. Here we'll explore fills in more detail.

Whenever you draw a closed shape, whether with a QuickShape Tool or with the line drawing tools, it automatically fills with the currently selected fill. So if you want to draw a green box you can click on **green** on the Fill Toolbar before you select the QuickBox Tool and the box you draw will then appear with a green fill.

Once you choose a fill it remains as the default until you change it. This means that the next object you draw will also be green. You can change the fill after an object is drawn simply by selecting it and specifying your choice of fill.

The Fill Toolbar

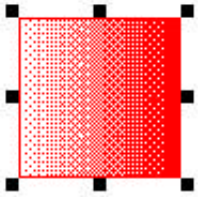
To alter the fill of the currently selected object you click on the fill of your choice in the top section of the Fill Toolbar. There are far more fills to choose from than just the ones on display. Click on the scroll arrows at the top and bottom of the bar to scroll the selection to see more.

Notice that if you hover the cursor over a fill, its name appears as a ToolTip. Some of these are single color fills while others, such as “aurora borealis” and “sunny day” and are more evocative descriptions.

You can also set a tint level for the color you select using the Shade section of the Fill Toolbar. A tint is a shade of the fill specified as a percentage. For example, a tint of 100% is the pure fill you select, 90% is lighter. There are boxes for 100% downwards in 10% increments.

Graduated Fills

The top section of the Fill Toolbar doesn’t just contain solid color fills. It has choices for graduated fills which can be used in exactly the same way. If instead of a plain green box you want one that goes from light green to dark green then click on **green linear**.

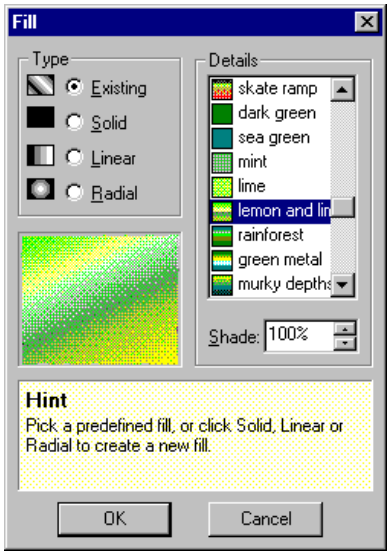


You still have the option of setting the Shade with a graduated fill although choosing a lighter tint obviously reduces the effect of the graduation.

The Fill Toolbar also includes a selection of graduated fills which merge one color with another and this obviously opens up incredible creative possibilities!

Creating Fills

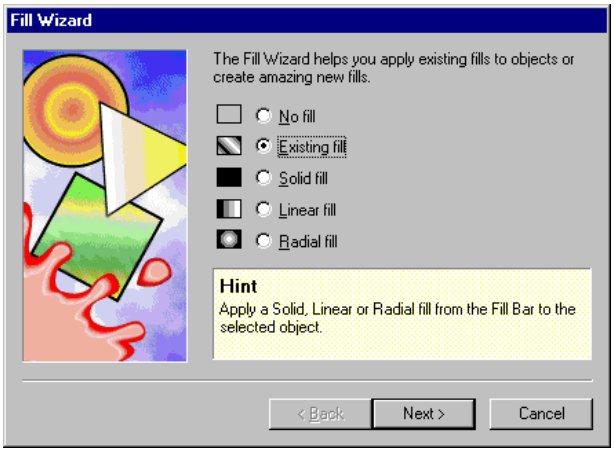
If the selection of colors and gradient fills already on the Toolbar does not include what you want, the solution is to create your own fills and add them to the Fill Toolbar. The larger of the two boxes between the two sections of the Fill Toolbar always shows the currently selected Fill. Double clicking on this is one way to open the Fill Dialog and create your own unique fills.



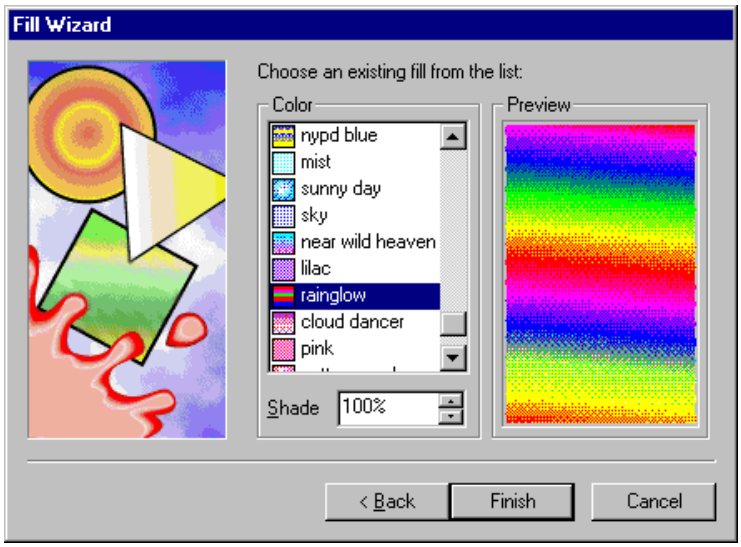
The Fill dialog may initially look complex but, as usual in DrawPlus, there's a Wizard ready to help.

The Fill Wizard

With an object selected, select **Format/Fill Wizard** from the menus to start the Fill Wizard.



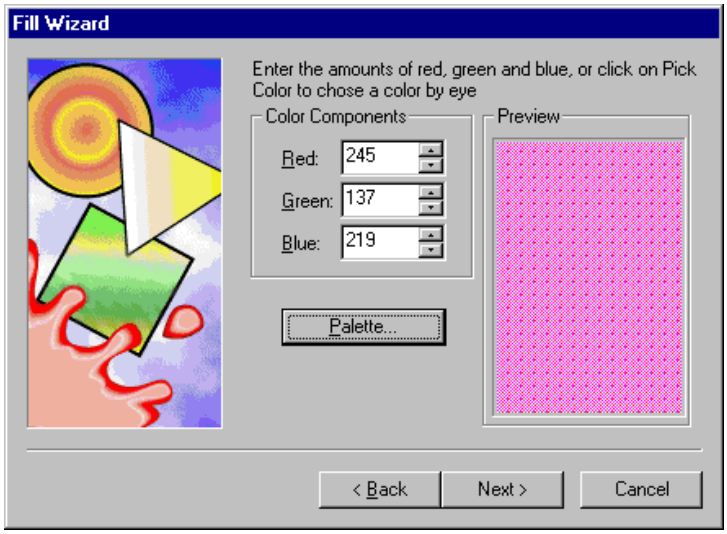
The Fill Wizard offers five choices. **No fill** is the same as selecting the **[Clear]** option in the Fill Toolbar. **Existing fill** lets you choose from the same list as contained on the Fill Toolbar with the advantage that the names are on display and you can see a larger sample in the Preview window.



The main use for the Fill Wizard is to help you create new fills from scratch. There are three types of Fill you can define and each of them requires different considerations.

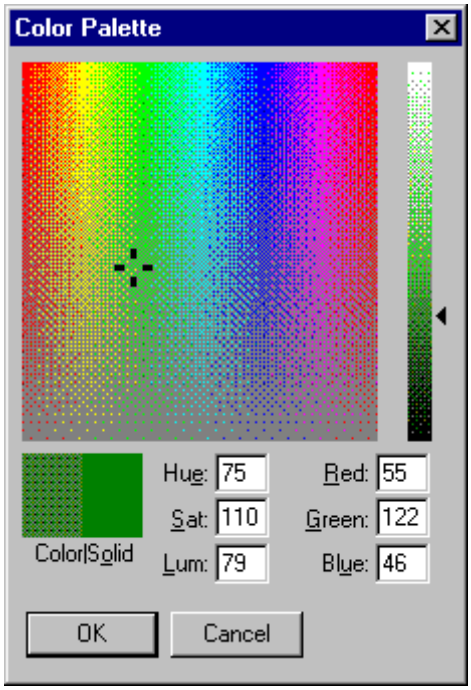
Solid Fill

When you want to create a new solid fill there's two ways to do it. The first is to enter values for the three **Color Components** that make up any solid fill - **Red**, **Green** and **Blue**.



The amount of any color component you can add to the mix is specified by a value between 0 and 255. A pure red fill is given by Red 255, Green 0, Blue 0 and pure green by Red 0, Green 255 and Blue 0. Slightly less obvious is that Red 255, Green 255, Blue 0 gives yellow. It's less obvious because this is not what happens when you mix paints; instead you're mixing colored light. For example, setting the three color components to 0 gives Black, i.e. no color, and setting them all full on at 255 gives White, i.e. all colors.

Sometimes you may need to define colors by mixing these RGB values but a more natural way of working is also available. You can use the Color Palette where you can simply pick the color you want. When you pick a color you can see the amount of Red, Green and Blue needed to make it up. You can also see how the color is made up in terms of another system of color mixing based on Hue - the color, Saturation - how much of the color is used and Luminance - how bright the color is.

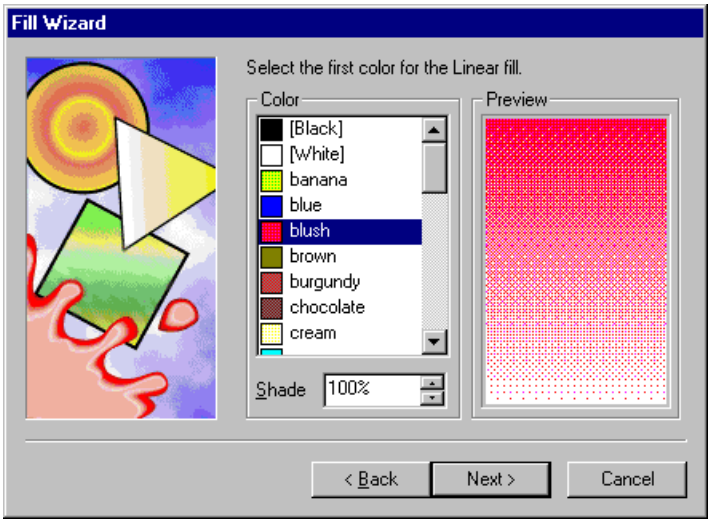


Moving the selection point horizontally in the main Color Palette window changes the Hue and moving vertically changes the Saturation. The colors along the top edge are pure and as you move down the screen they become paler. The vertical bar window to the right controls the Luminance or brightness.

Once you have the fill you want to use the final step is to give it a name. The name will appear at the end of the Fill Toolbar list and you can select it from there in the future. The new fill will also be applied to the original selected object.

Linear Fill

A linear fill involves a fade between two colors. When you use the Fill Wizard to define a new linear fill you are asked to choose the first color. You can also specify a **Shade** from 0% to 100% for the color.

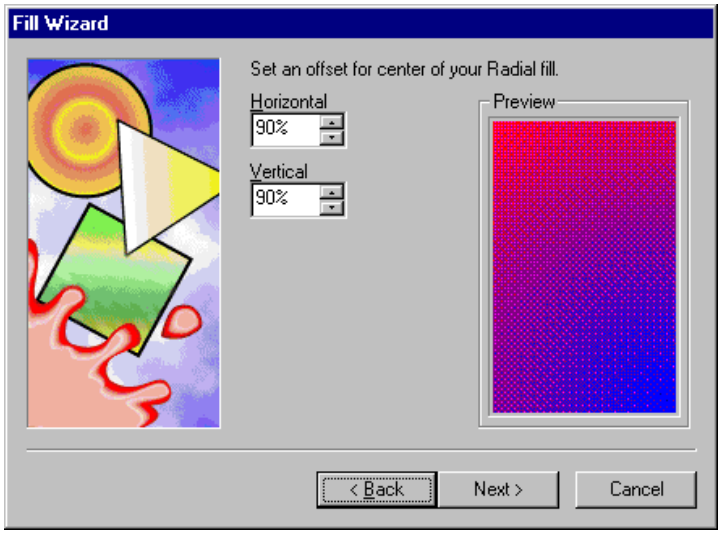


You repeat the same process for the second color. The next step is to specify the **Angle**. This is particularly important if you are using the fill to suggest the effect of lighting, making it appear as if the light was coming from a certain angle.

The final step is to name your new Fill and as before it will be added to the list of those available and applied to the original selected object.

Radial Fill

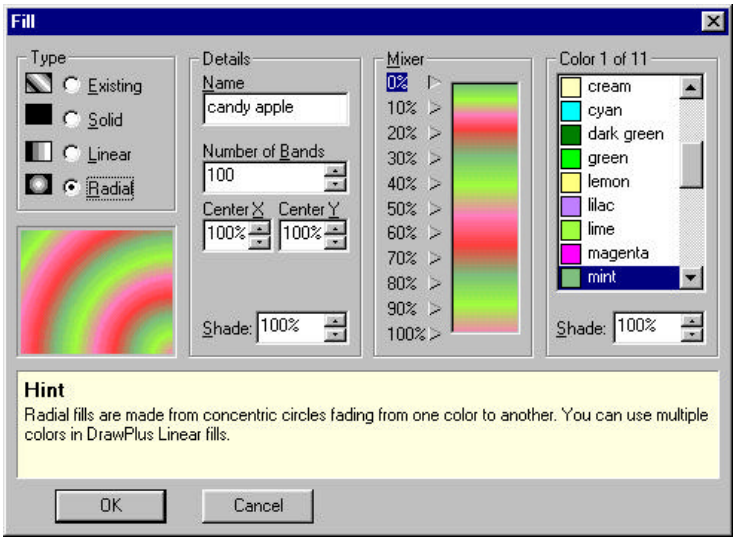
The initial steps in defining a radial fill are identical to those in the linear fill. You choose each of two colors and their shades from the same list of possibilities. The third step is to determine the position from which the fill radiates. The default value is the center and you specify the new position in terms of a percentage offset in both the **Horizontal** and **Vertical** directions. The value you type in must be in the range -100% to +100%.



The Fill Dialog

Once you have been guided through the process of defining fills with the Fill Wizard you'll be ready to work with the Fill dialog. As well as choosing an existing fill you can use the Fill dialog to create new solid, linear and radial fills. It has the advantage that you can quickly open it by double clicking on the Current Fill box of the Fill Toolbar.

☞ **To appreciate the fill capabilities available select the fill called Candy Apple. Double click on the Current Fill box to open the Fill Dialog and click on Radial as the type.**



The thumbnail shows you the fill and if you look at the far right of the dialog you will see that there are 11 colors involved.

To discover how the colors have been used click on each of the percentages in the Mixer section of the dialog. When you click on the marker at 0% you will see that Mint is highlighted in the list, the 10% marker corresponds to Lime, 20% to Pink and 30% to Rose. This particular fill then repeats the same sequence of colors. Try sliding some of these markers up and down the column and watch how the sample changes.

If you want a substitute color in the fill, just click on one of the markers and then click on the color of your choice. If you want an additional color in the fill just click at a location where there isn't currently a marker and a new one will be created for you. The colors in the gradient fill change smoothly change from one to another as specified by the markers.

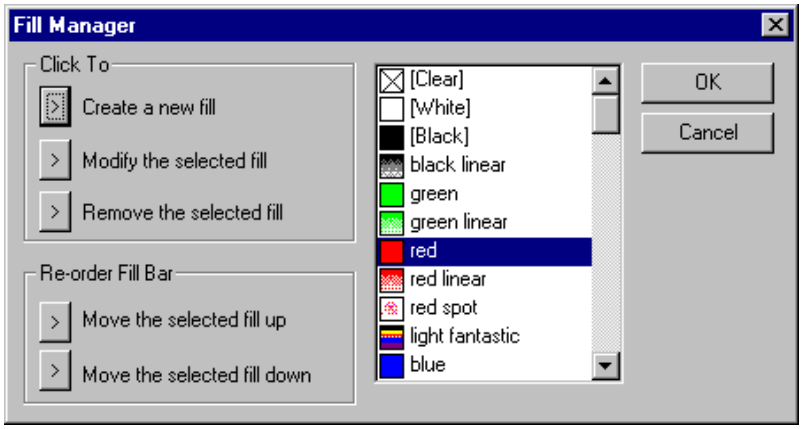
When you have designed a fill you like give it a new name and click **OK**. Otherwise click **Cancel** in order not to create an unwanted fill.

The other facility in the Fill dialog is the ability to specify the number of bands in a fill. This determines how smooth the graduation is. The maximum is 100 and while this looks very smooth it could make the time to redraw an object longer.

If you have applied complex fill to objects in a drawing and you want to move or size them you can speed up the process using the command* View/Wireframe*. This shows you the outlines of objects and not their fills.

The Fill Manager

There are so many fills available, and so many possibilities for creating new ones that a Fill Manager has been provided on the **Format** menu, to help customize the Fill Toolbar.



Create a new fill opens the Fill dialog for you. **Modify the selected fill** works in the same except that you replace the fill associated with the current name.

You can also **Remove the selected fill** using the Fill Manager and also re-order the Fill Toolbar - something that may be useful when you want a specific set of colors at the top of the Fill Bar. Select the color you want to move and then move it up or down one place per click.

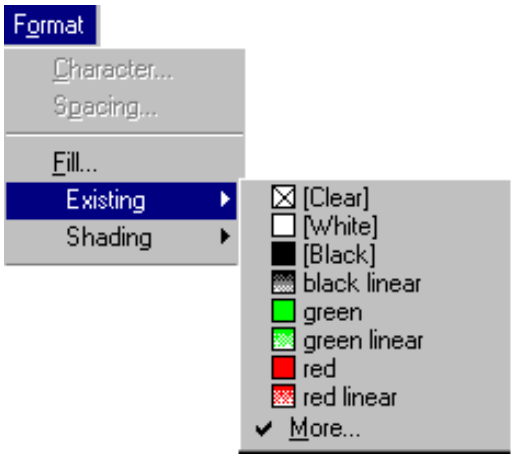
Right-click formatting menus

The Fill Manager is one of the options included on the shortcut menu that appears when you right-click on the upper part of the Fill Toolbar. The option **Remove Fill** is also available that way. The Fill Wizard can be accessed by right-clicking on either the upper or lower part of the Fill Toolbar and the three options **Apply Fill**, **Apply Line** and **Apply Fill & Line** are also available from both these right-click menus.

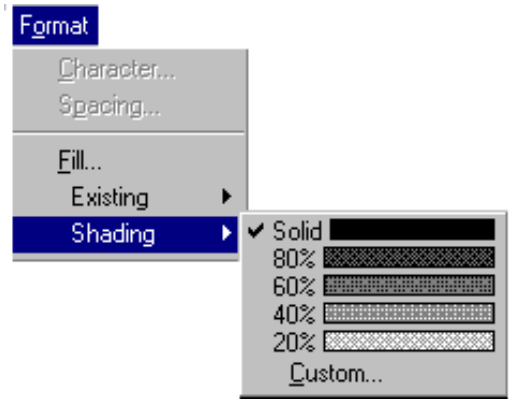
Right-clicking on the Current Fill button gives access to both the Fill Wizard and the Fill Manager and lets you perform **Edit/Fill** and **Edit/Line**.

The Format menu

A different method of changing fill and shade is given in the Format menu. With an object selected, **Format/Fill/Existing** gives a list of the first fills from the Fill Toolbar with an option to go to the Fill dialog.



Fill/Shading gives quick access to shades for the selected object. The **Custom** option opens the Fill Dialog.

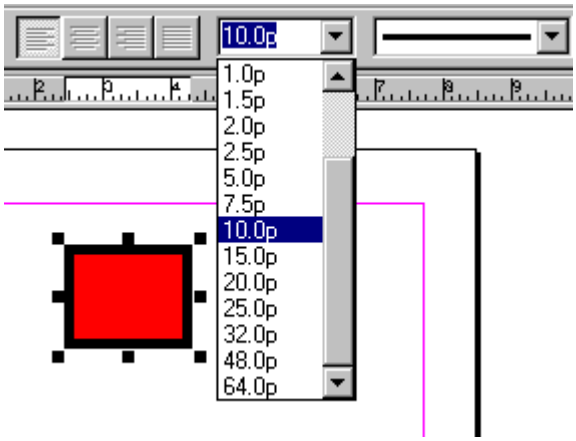


Line style

There are three properties that distinguish lines: width, style and color.

Line width and style

The measurement used for line thickness is the “point”. This is a common unit in the printing and publishing industries and there are 72 points to an inch. The quickest way to change the thickness of a line is to select the line or object concerned and click on the Line Width Combo Box on the Formatting Bar. This offers a range of options and you can of course type a value into the box if you want a width not listed.



There are two special line thickness. If you select **No line** then the object will have not outline. The object can still have an interior fill but it will have no visible outline. If you set the line thickness to **Hairline** then the line will be drawn as thin as possible on any particular printer. In other words, a hairline is just one pixel thick on any output device - which might be thinner than you expect on a high resolution printer!

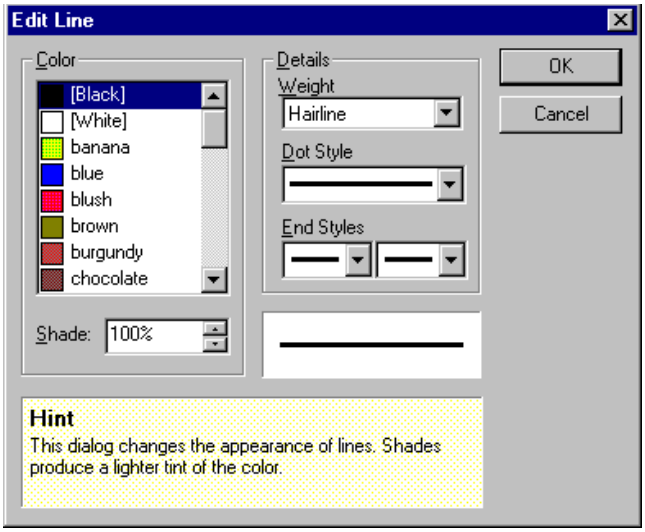
The maximum line width listed is 64p (i.e. almost an inch thick) and drawn around the same box it tends to overwhelm it. Notice that the line thickness is “added” equally on the inside and outside of the outline. You can use even thicker lines by entering larger values in the Line Width Combo Box.

The Line Style Combo Box has a drop down list with a selection of dotted and dashed lines plus variations on end points including arrows heads and tails.

The tapering line style looks very different from the others but it can be put to good use as a calligraphic pen effect.

Setting line properties

The default color for a line is black. If you look at the Current Fill box in the middle of the Fill Toolbar you will notice that it has an upper, narrow, section for displaying the current line color. The menu that pops up when you right-click the Current Fill box includes the command **Edit Line** and this is one route to the dialog box where you can set all the properties of lines.

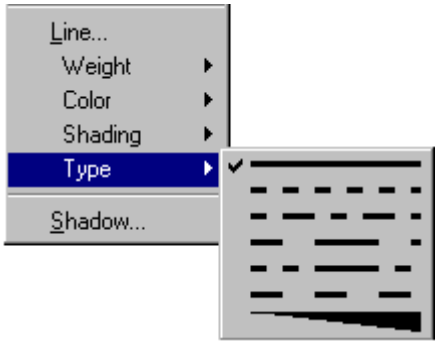


This dialog box also appears when you right-click a selected object or line and choose **Line** on the right-click menu.

One way to make a outline invisible is to set it to the same color as the interior fill.

Shade is a property you can apply to a line. You can do this quickly by right-clicking on the shade you want in the Fill Toolbar and choosing **Apply Line**.

The **Format/Line** menu has lists for each of Weight, Color, Shading and Type.

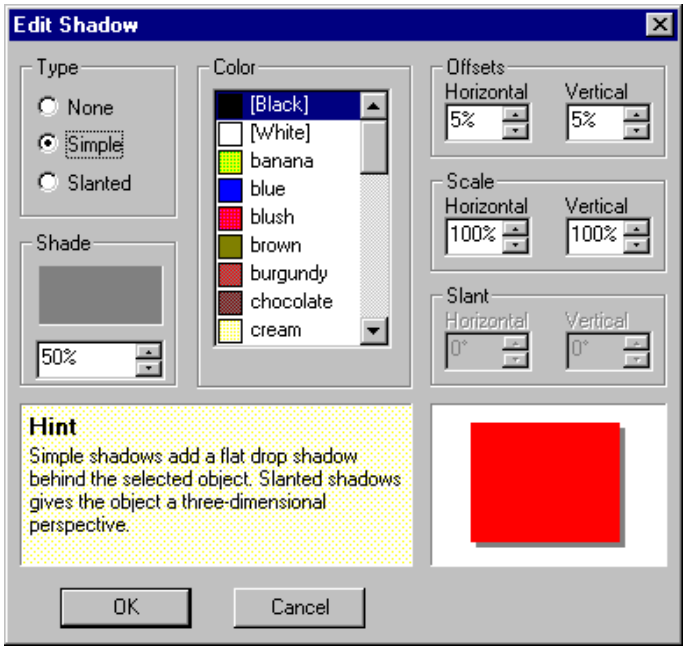


Shadow

Adding a shadow to an object can be done for a stylish effect or to add a realistic lighting effect.

 Single clicking on the Shadow button in the Standard Toolbar adds a shadow to the selected object or group and clicking again removes the shadow.

Double clicking on the Shadow button or using the **Format/Shadow** command opens the Edit Shadow dialog and here you have complete control over the appearance of the shadow added to an object.



There are three choices in the **Type** box. **None** is used to remove a shadow.

Simple is the standard shadow that the shadow tool produces at the default value. You can change the values in the **Offsets** and **Scale** boxes to deepen the shadow and determine the direction light appears to be coming from.

A **Slanted** shadow has the effect of adding depth to the object itself, making it appear three-dimensional. With the option selected you can also enter values for the amount of **Slant**.

You can see the effects of your current choices interactively in the sample at the bottom right of the dialog box.

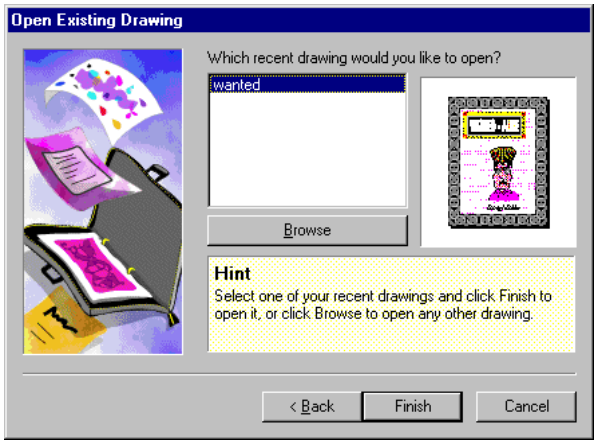
Format Painter

 If you just want to copy the properties of an object to existing objects, the solution is the Paste Format button on the Standard Toolbar. All you have to do is select the object that has the properties you want to copy and click on the Paste Format button. The cursor changes to a paint pot and any object that you then click on takes on the properties of the original object.

Back to the Poster

Armed with all the knowledge gained about objects and their properties, it's time to return to the Wanted Poster that the Wizards helped produce in the *A Wiz of Wizards* chapter and make a few improvements.

☞ **From the Startup Wizard choose Open a Drawing and open the drawing you saved earlier.**



The Open Existing Drawing window has a list of your recent work and shows you a thumbnail of the selected file. Simply click on **Finish** to open the selected file.

Looking at the poster the first point that needs attention is the headline with its surrounding border. It is not quite centered at the top of the page which calls for some sizing work.

Sizing the headline

You'll notice that the Selection Tool has been selected by default when the saved drawing was opened and so simply clicking anywhere on the Wanted-Alive Logo group (the headline) will select it.

1. Click on the headline and notice its handles appear.
2. Put the cursor over the handle in the middle of the right-hand side and notice that it becomes a size cursor.
3. Drag so that the blue line meets the outer border, leaving no gap.
4. Repeat this operation on the left side and the top.

Squaring the face

The cartoon face is longer than it is wide - the Wizard was responsible for this and it gives it “normal” proportions. However, if we constrain the face object to be square the result is an even uglier villain!

1. With the Selection Tool, click on the cartoon face.
2. Its top handles may be obscured so click and hold down the left mouse button to obtain the Move cursor.
3. Move the face down the page so that you can re-position the mouse on the handle at the top left-hand corner.
4. Holding down the **CTRL** key, drag inwards on the top-left corner to both size and shape the face.
5. You’ll need to repeat the move and size operations to adjust the position of the face until it’s in the right position with the name text above the bottom border and a gap between the face and the headline.

Adding arrows to the poster

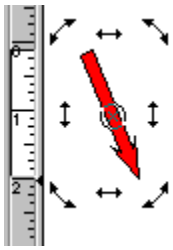
To add extra impact let’s add arrows pointing at the villain and, as there are a few operations to do before we achieve the effects we want, we’ll work on the pasteboard before transferring them to the drawing.

1. Click and hold on the QuickShape Tool to open the flyout.
2. Select the arrow (fourth in the top row) and use it to draw a long thin arrow (about 2 inches) on the pasteboard.

Look at the ruler to see its length.

3. When you release the mouse button the Node Tool will be automatically selected. Click on the Rotate Tool.

4. By dragging on the rotate handles make the arrow point down and inwards.



We now require a second arrow that is a mirror image of the first. This simply calls for a copy operation followed by a horizontal flip.

1. Choose the Selection Tool.

2. Holding down the **CTRL** key and click and drag the arrow a short distance to the right. The cursor will display “copy” as you drag.

When you release the mouse you will have two identical arrows and the one on the right will be selected.

3. Click on the Flip X button. 

At this point we have two facing arrows with just one of them selected. The next step is to select both of them as a group object and move it onto the poster.

4. Hold down the **SHIFT** key and select the other arrow.
5. Move the object consisting of both arrows so that they point to the villain's head.

A different fill and line width

When we created the arrows the default line style and fills were used. Let's add a little more interest to the drawing by using an alternative fill.

1. With the two arrows still selected, choose both a fill and a shade from the Fill Toolbar.

To make the arrows stand out more we can give them a bolder outline by increasing their line width.

2. Using the drop down list on the formatting Toolbar select 7.5p as the line width.

Shadow effects

Let's add a simple drop shadow using the Shadow button in the Standard Toolbar.

1. Select the face object.
2. Single click on the Shadow button. 

This adds a default shadow to the face object and now we'll add more elaborate shadows to the arrows.

3. Select both arrows as a single group as before.
4. Double click on the Shadow button.
5. In the Edit Shadow dialog box that appears select Slanted as the type of shadow.
6. Use the arrow keys in the Shade box to lighten the shadow by setting a value of 30%.
7. Click **OK**.

What's Next

After just a few simple editing operations we've finished the work begun by the Wizards. We have created a drawing by combining the convenience of using Wizard design elements prepared elements and the freedom provided by the many tools and features DrawPlus has to offer. Next we'll look at special objects in more detail including QuickShapes and text.

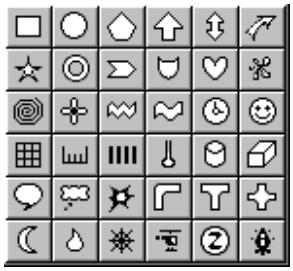
Special Objects

Introduction

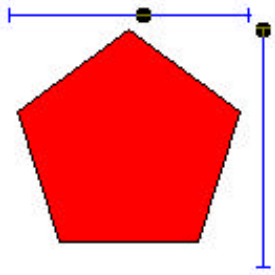
You've already seen how a DrawPlus drawing is made up of different objects. In the *Beyond Wizards* chapter we looked at QuickShape objects and saw how to change the way they look by sizing, positioning and rotating. They are, in fact, capable of much greater customization than this. We also need to explore how text can be added to a drawing and take a quick look at OLE objects that allow DrawPlus to be linked to other Windows applications.

QuickShapes

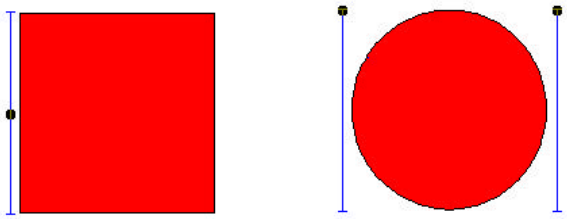
Each QuickShape in the flyout has its own intelligent properties. Some let you draw similar styled shapes like forms of transport or zodiac signs. Others let you customize a basic shape like a polygon or star.



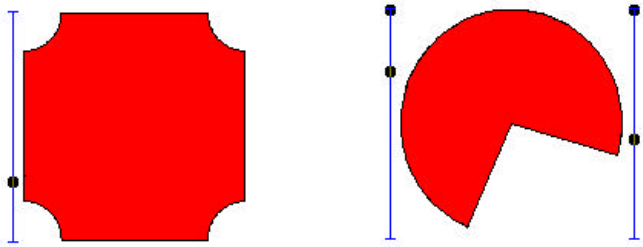
 Another big difference between one QuickShape and another is the number of node handles they have. If you draw a more complex shape, such as a QuickPolygon, the object appears and, rather than being surrounded by a selection box and handles, it is surrounded by a number of lines with node handles. Each node handle acts like a slider which controls aspects of the shape.



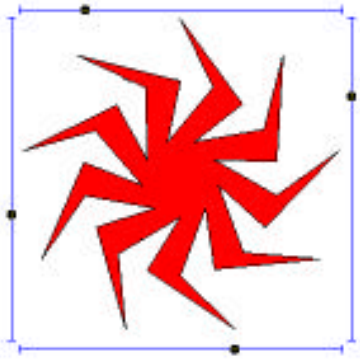
 To adjust the sliders you have to use the Node Tool which is automatically selected when you finish drawing most QuickShapes. When they are selected using the Node Tool, node handles appear on all QuickShapes.



If you drag on the QuickBox slider then you will discover that it produces round corners - either inward or outward pointing. If you drag on the first of the QuickEllipse sliders you will find that it opens up a segment and the second slider rotates the position of the “opening”.



 Some QuickShapes have more than two node handles. For example, the QuickStar has four which allow you to create everything from a traditional five pointed star to an incredible crystal snowflake!



The best way to find out about the amazing range of QuickShapes that are available is to experiment with them. You can see a brief description of what each handle does on the HintLine. Try them out and make sure you see the effect of changing each of the node handle sliders.

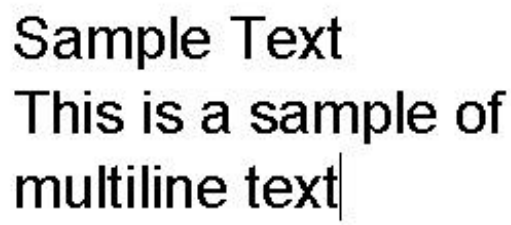
Clever though the Quickshapes are, it is worth remembering that they also behave like standard objects. You can use the Selection Tool to move, rotate, scale and change their fill and outline properties. Even after rotation and shearing, the node handles can still be used to modify the shape.

Text

Although text appears to be different from other objects, in many ways it works in a similar manner. You can place text anywhere on the page by selecting the Text Tool and clicking at the desired location. A straight line text cursor will appear and you can type what ever you want directly on the page.

If you simply click on the page with the Text tool the cursor will be at the default size, but if you click and drag you can size the text cursor before you type.

If you press the **RETURN** key then you can type multiple lines of text as a single object.



Once you have finished entering text you can select it using either the Selection Tool or the Rotate tool and modify it just like any other graphics object. You can scale it, rotate it, skew it, move it, and copy it and you can apply fills and line styles.

However, text has some properties in addition to fill and line color. If you look at the Formatting Toolbar with a text object selected you will notice that some new items are available. You can use the drop down lists to set a font type and a point size for the text. The point is a traditional measure of the size of text and there are 72 points to the inch.

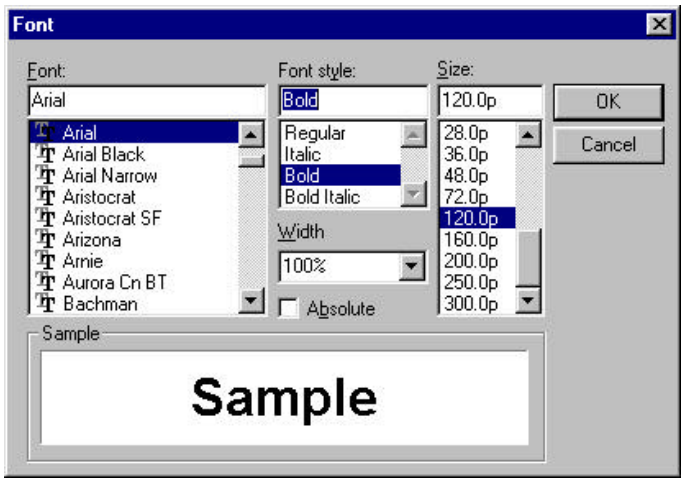
If you change the size of text by dragging its handles then you may end up with distorted text which doesn't correspond exactly to the font you have chosen at any point size.

The point size indicator on the Formatting Toolbar will still show the current vertical size of the text in points.

If you click on the Bold and/or Italic buttons then the currently selected text will be displayed with the selected effect.

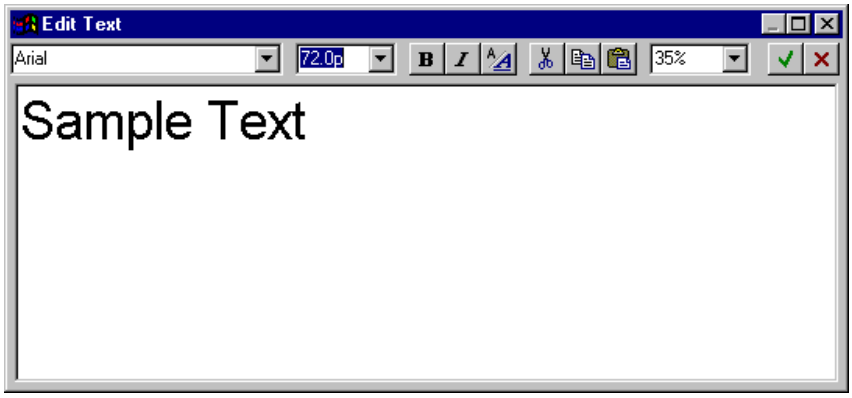
The final four buttons on the Formatting Toolbar are used to align multiple line text objects. If you click on the first button the text is left aligned, the second centers each line, the third right aligns the text and the final button justifies the text.

An alternative way of setting the text properties is to use the **Format/Character** menu command or the **Character** command on the right click menu. The dialog box that appears can be used to set the font, font style and size. You can also set the width of each character as a percentage of its standard width or in absolute units.



Editing Text

If you want to edit the content of a text object then you can either double click on it using the Selection Tool or click on it using the Text Tool. The Edit Text box opens and you can enter new text or change the existing text.



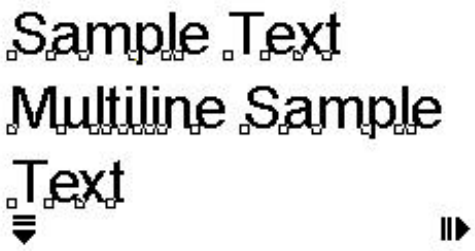
The Edit Text dialog box also allows you to apply different effects - fonts, point size, bold and italics. Select the letters or words you want to change with the cursor, just like you would in a word processor, and then use the buttons on the Toolbar to apply properties to it.

 The Draft button is used to switch between draft view, useful for viewing a lot of text at once, and formatted view which shows how the text object will look on the drawing.

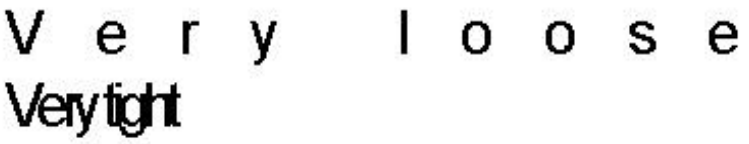
When formatted view has been selected, the Zoom box allows you to view it at a number of zoom levels.

Text Spacing

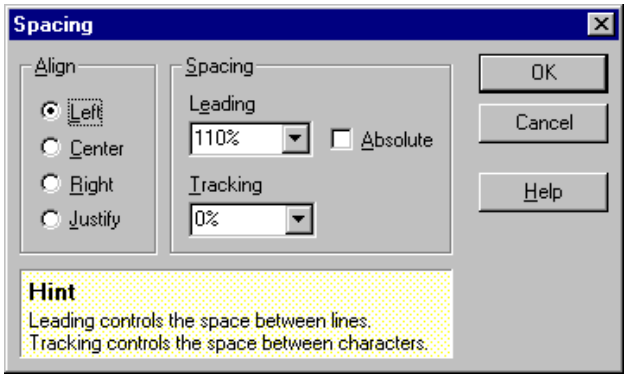
 If you click on a text object using the Node Tool you can adjust the line and letter spacing. The text object is displayed with two arrow shaped handles. The down arrow handle can be dragged to alter the line spacing and the right pointing arrow changes the letter spacing.



Line spacing is traditionally known as “leading” and altering the character spacing is called “tracking”.



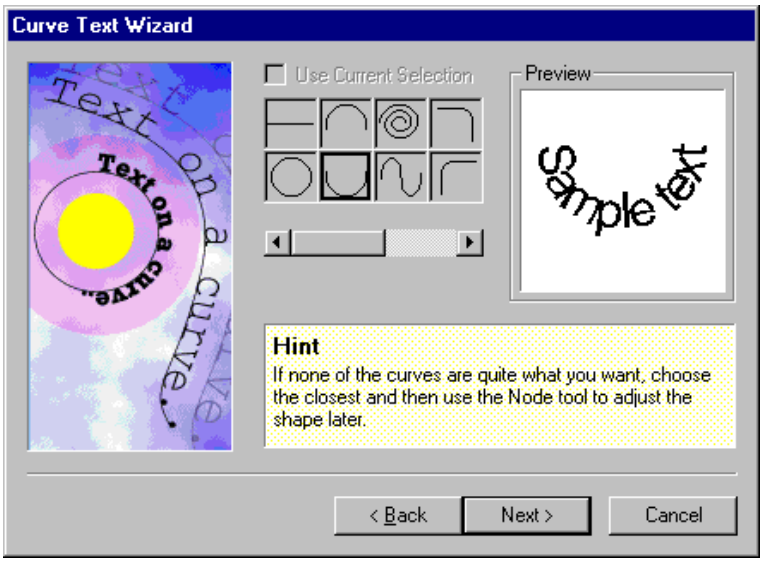
An alternative way of controlling the spacing used for a text object is to use the **Format/Spacing** menu command or the **Spacing** item in the right-click pop-up menu. The dialog box that appears allows has options for controlling alignment, leading and tracking.



If you want to control the character positioning even more precisely you can drag the small square handles at the bottom left of every character. Dragging the individual character handle allows you to position it anywhere relative to the other characters. You can also rotate each character individually by dragging the second handle at the end of the blue line that appears when you select the handle close to the character. This is great for creating special effect and logos and the text can still be edited with the Edit Text dialog box.

Text on a curve

Being able to move each character to any location is a powerful way of arranging text. However, for some special effects you want the text to follow a regular path such as a semi-circle, spiral, or ellipse. You can fit text to a wide range of regular paths using the Curve Text Wizard. Use the menu command **Tools/Curve Text Wizard**, answer all the questions and drag out the curved text effect on the page.



You can start the Curve Text Wizard with or without a text object selected.

As an alternative to the Curve Text Wizard you can fit the currently selected text object to a curve by clicking on the Curve Text flyout on the Standard Toolbar.

Using this you can quickly try out a range of different curves to fit the text to. To straighten curved text simply select the straight-line path in the Curve Text Wizard or Curve Text flyout.

Pictures

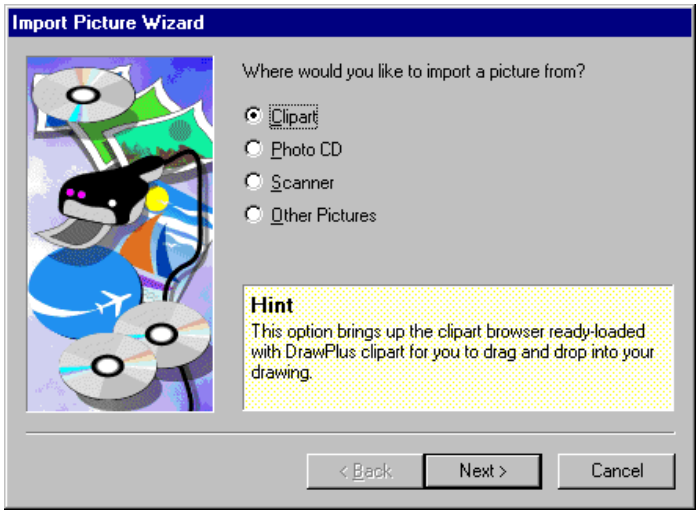
 There are two types of pictures that you can place onto a drawing. Some pictures are like DrawPlus drawings and you can edit them in the same sort of way. They are made of many individual objects grouped together.

Bitmap pictures are collections of colored dots and are not composed of graphic objects. If you can see a square in a bitmap picture it is a colored area in the shape of a square. You can't select it and change it.

You can, of course select the entire bitmap picture object and move it, scale it, shear it, rotate it and even crop it using the Envelope flyout button of the Standard Toolbar.

The Import Picture Wizard

The Import Picture Wizard will help you find a picture to include in a drawing. Click on the Import button  on the Drawing Toolbar. You can then specify where you want the picture to come from.



Clipart

Clipart is a collection of ready-drawn pictures supplied with DrawPlus. If you select this option then the Wizard will take you directly to the Serif Clipart Browser. Using this you can select the category of picture you are interested in and see thumbnail images of what is available.

Use the command **Category/Select** to select the type of clipart you are looking for.

Make a choice of category to view and click on **OK.** The Browser will re-appear filled with pictures from the chosen category. Having made a selection simply click and drag the picture you require from the Clipart Browser and drop in onto the DrawPlus page. You can then size and position the clipart using the Selection tool.

Bitmaps

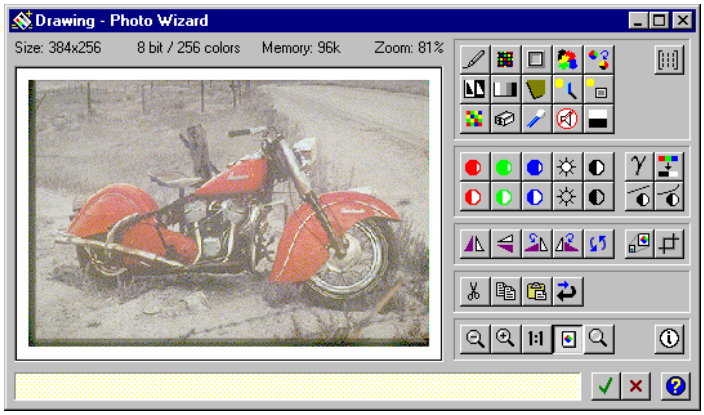
The next two choices on the Import Picture Wizard are concerned with bitmap pictures. The first is for importing from Kodak PhotoCDs and the second is for importing directly from a scanner which supports the TWAIN standard.

Existing pictures

Finally, you may already have a picture stored on your hard disk in one of the many standard formats used - TIFF, GIF, JPEG etc. To read in a picture file select the Other Pictures option and you will see the familiar Windows File Open dialog box. Some of the picture types are drawings which can be edited by DrawPlus but the majority are bitmap types which cannot. However you can apply great special effects to bitmap pictures using the Photo Wizard.

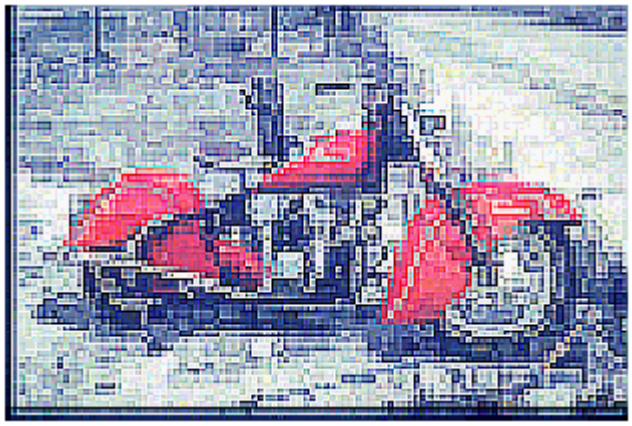
Photo Wizard

If you have inserted a bitmap drawing on the page you might not be able to edit in the same way as you can change a QuickShape but you can use the Photo Wizard to improve the way it looks and apply cool special effects. To run the Photo Wizard all you have to do is to double click on the bitmap, or select **Photo Wizard** from the pop-up menu that appears when you right-click the mouse, or access it from **Tools/Photo Wizard**.

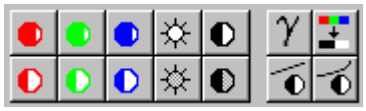


All of the tools work in the same way as DrawPlus and you can see ToolTip descriptions of them by letting the cursor hover over the relevant button for a moment. You apply a tool by clicking on its button and you can set precisely how it works by double clicking on it.

The top panel of tools are concerned with special effects and improving the look of an image. For example, the Mosaic filter will break the picture up into small squares and make it look like a tiled mosaic.



If you are trying to improve the look of a scanned in photograph then you will need to use the Sharpen filter and the Remove Noise filter. There are other filters for improving the look of photos in the second panel.



These filters control the more technical details of a photo. For example,  and  increase the brightness and contrast of the photo much as the brightness and contrast controls on your TV effect its picture. You can alter the color balance and even convert a color picture into black and white.

The third panel of buttons flip, rotate, resize and crop the photo.

The panel below are the familiar Cut, Copy, Paste and Undo tools.

The final panel controls the zoom. One of these buttons is selected according to the current zoom factor.

The tool at the far right will draw a graph of the colors in the photo. This can be a useful guide to how to adjust the color balance and contrast.

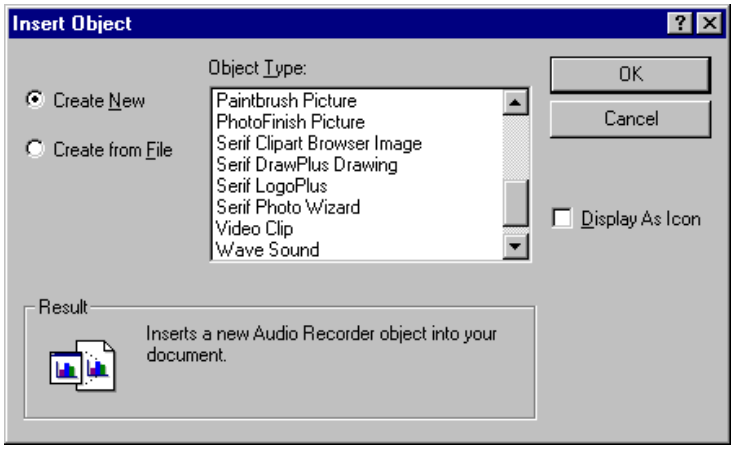
When you have finished modifying the photo click on the tick if you want to return to DrawPlus with the changes updating the photo. If you click on the cross then your changes are abandoned.

The very final button is the one to click if you need more help.

OLE Objects

As well as pictures, you can insert a very wide range of object types into your DrawPlus page. Most Windows 95 applications support a standard called OLE - Object Linking and Embedding - which allows objects created by one application to be inserted into another.

The command **Insert/Object** produces a dialog box which lists all of the OLE supporting applications installed on your machine.



You can edit an OLE object by double clicking on it. Alternatively you can use the **Edit** command which will contain a new item corresponding to the name object you have inserted.

Editing an OLE object is something that is delegated to the application that created the object. So, if you insert an Excel spreadsheet object into a page and then double click on it, Excel is started and you will see Excel's menu and commands.

DrawPlus drawings as OLE objects

As well as being able to insert OLE objects into a DrawPlus drawing, you can also insert a DrawPlus drawing into another application that supports OLE. For example, if you are preparing a document with a desktop publisher like PagePlus you can insert a drawing from DrawPlus into the layout to illustrate it. To do this you can select the entire drawing, use the command **Edit/Select All**, and then copy it to the clipboard using **Edit/Copy**. In the other application the drawing can then be inserted using **Edit/Paste** or **Edit/Paste Special**.

Alternatively, you can use the **Insert/Object** command in the other application to insert a new DrawPlus object or a drawing already saved in a file.

It doesn't matter how the DrawPlus object gets into the document, double clicking on it will start DrawPlus and allow you to edit it.

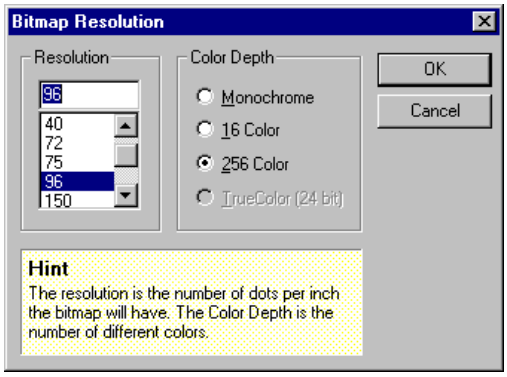
Export as picture

Although this doesn't really have anything to do with objects, exporting a drawing as a picture is one way of working with applications that don't support OLE. When you save a drawing DrawPlus uses its own format to store the information. To be able to read the drawing into another application it has to be saved in one of the many standard formats. You can do this using the **File/Export as Picture** command.

There are lots of formats to choose from but notice that in general you will not be able to read the exported file back into DrawPlus and edit as easily as the original. If you export the drawing to a bitmap picture any details of the objects it contained are lost forever. So if you want to work with your DrawPlus drawing again make sure you save it in DrawPlus format as well as exporting it in a format that the other application can use. Normally the Windows metafile format is used.

Convert to bitmap

As well as being able to export an entire drawing in bitmap format, you can also convert a single graphical object into a bitmap. Just select the object and use the **Tools/Convert to Bitmap** command. You will have to specify the **Resolution,** the number of dots per inch, and the **Color Depth**, the number of colors used.



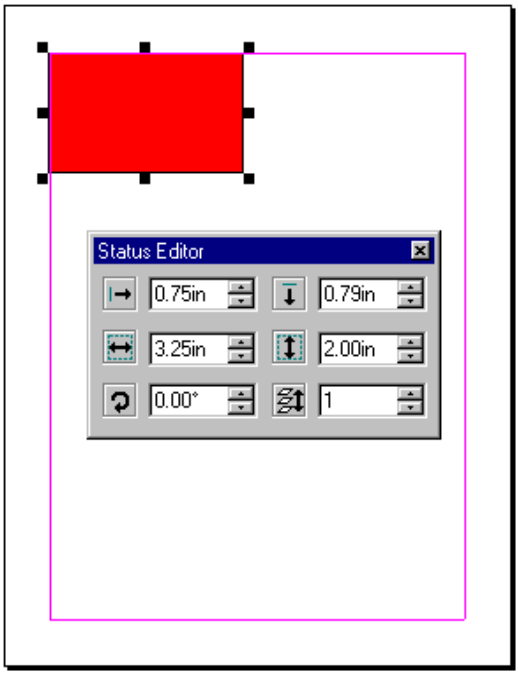
When the command has completed the object will look the same but it will not behave in the same way. For example, if you double click on it you will find that the Photo Wizard has opened to let you edit it. Being able to use the Photo Wizard is one of the main reasons for converting an object to a bitmap. As a bitmap you can apply any of the special Photo Wizard effects. Or use the Envelope flyout button of the Standard Toolbar to crop the bitmap to an interesting shape.

Business Card Tutorial

Now that we know about QuickShapes, text and importing pictures we can get down to serious work and design a business card. It's likely that you will want to work on one of your own rather than reproduce the sample we've produced. So, rather than take you through it step-by-step, we'll look first at the finished drawing and then look in detail at how it was produced.

Working to size

A typical business card is credit card sized. Working on your normal paper size, the first thing to do is to use the QuickShape Tool to draw a rectangle to the size required. Then open the Status Editor, either by clicking on the Status Editor button on the Status Bar or by using the command **View/Toolbars** and check the Status Editor box in the dialog box.



Fill in the values you require in the edit boxes in the middle row of the Status Editor, entering the width in the box and the height in the box. Close the Status Editor using the Windows close box in the top right.

You need to be able to see your business card close up as you work on it. There are a number of Zoom options on the Status Bar. Clicking the Actual Size button is one solution. The other is to click on the Zoom Tool and use it draw a box around the area that you want to fill the entire screen. This gives you a view rather larger than life-size which makes it easy to deal with fine positioning.

A suitable background

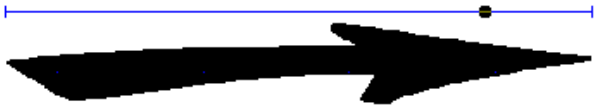
Next consider the color of the card that you are going to use when you finally print your business card. Although this background will not itself be printed it's important that you adopt a similar shade while working on the design in order to choose the correct colors and shades for other elements. Here we chose cream with a Shade of 100% from the Fill Toolbar.

It's helpful to see clearly where the edge of the card is so set the line color of the rectangle to black. One quick way to do this is to right-click the Current Fill box, choose **Edit Line** from the pop-up menu and choose Black in the Color list in the Edit Line dialog. An alternative way to the same dialog is to right-click on the rectangle itself and choose **Line** from the right click menu.

Putting QuickShapes to work

As we've discovered there's a lot more to QuickShapes than drawing simple boxes. A box can be instantly changed. To achieve rounded corners on the business card simply select the box with the Node Tool and drag the node handle that appears on a line to the left of the box upwards. If you look at the HintLine as you move the node handle it tells you the changing radius of the corner. A value of about .3 inches is what is used here.

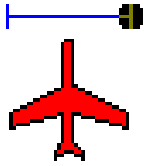
Given the company name "Arrow Air" an arrow is an obvious shape to incorporate in the design. There are various QuickShapes for arrows.



The one used here is based on the QuickArrows shape, and the Node tool was used to select one of the variations supplied. The shape was drawn on the pasteboard and appeared with the currently selected fill color, cream. Scrolling up the Fill Toolbar and clicking on Black made it look bolder. The arrow was then moved and sized until in approximately the correct position.

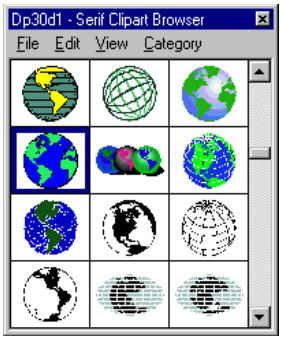
Use the Snapping button on the Status Bar to turn snapping off to give more flexibility in positioning objects in this small working area. How to control the snapping grid will be discussed in the* Control Your Drawing *chapter.

The airplane in this design is also from the QuickShape palette. Select the QuickTransport button and click with it on the pasteboard. It starts off as a car but if you then drag the node handle to the its furthest point you obtain this airplane. Give it a solid Black fill with Shade set at 50%.



Clipart is another good source of graphics for a design like this one. As explained earlier, the Import Picture Wizard can assist with this process and it opens the Serif Clipart Browser where the **Select/Category** command produces a comprehensive list of categories.

The globe used was found in Regional - World Maps and it was dragged and dropped onto the drawing ready for sizing and positioning.

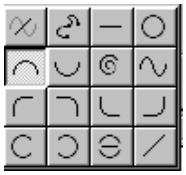


Adding Text

Text is obviously a very important element in the design. It needs to convey information clearly but can itself be decorative. The Edit Text box was used three times. The first time to enter the company name which was left at the default of 24-point Arial. The second time to enter the personal details as a four-line text object using two different fonts (Arial for the name and e-mail address and Times New Roman for the phone and fax numbers) and different point sizes, the name uses 11-point text, the phone and fax numbers are 9-point and the e-mail address is 10.5-point. Bold and italics are used throughout. Arial and Times New Roman are standard Windows fonts but if they're not available, make other selections.

On the first two occasions the text cursor was positioned where the text was required on the card. The third time the text was wanted on the pasteboard and so the Edit Text box was opened from there. The message was typed in and set to the all caps font Balloonist SF at 14-point.

The Curve Text tool was then used to give the text a semi-circular shape. It was then moved and sized into position on the drawing.



This completed the design and the business card drawing was saved to disk.

Using the design elsewhere

It is a simple matter to use the drawing as an OLE object in other applications, simply by copying it to the clipboard and then pasting it into an open document in the other application.

Although we started with the idea of creating just a business card, the design has potential for use in other documents such as letterheads, faxes, and memos etc.

What's Next?

In the next section we explore how to use the line drawing tools to create custom curves and shapes and discover that it's simple to draw a map using DrawPlus.

Curves and Shapes

Introduction

QuickShapes and Wizards are very powerful ways of creating the graphical objects you need but to edit clipart or to create your own complex drawing from scratch you need to understand how to use the fundamental drawing tools that DrawPlus provides.

Lines and curves are just the start of it. You use lines and curves to enclose an area and then fill that area to produce a solid shape. There a couple of new techniques that you need to know to make the creation and editing of filled shapes easy and simple.

The Drawing Tools

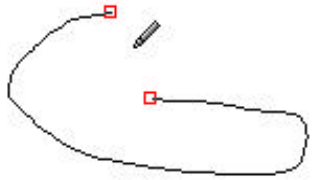

DrawPlus has three line drawing tools for drawing different types of lines in different ways. The first one is for drawing freehand lines, the second draws perfect straight-lines and the third allows you to draw accurate curves. Let's look at each one in turn.

The Freehand Tool

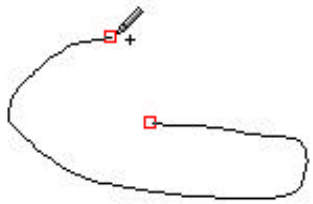

The Freehand Tool looks and works just like a pencil. You draw curves with it by moving the mouse while holding down the left mouse button.

How accurately the curve that you draw follows the mouse movement depends on how fast you move it. A fast sweep with the mouse produces a smoother curve than a slow movement that attempts to be accurate. The best way to discover how to draw with the Freehand Tool is to practice and experiment.

When you release the left mouse button the curve that you have drawn is displayed with two red handles at each end.



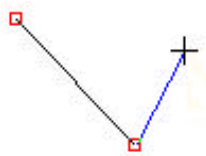
If you place the Freehand tool over either of the handles a small + sign will appear and the next curve that you draw will be a continuation of the existing one.



You can use this technique to build up a long curve and by drawing to the first handle you can close the curve. Closed curves are important because only closed curves can be filled.

The Line Tool


The Line Tool draws straight lines. You use it by clicking to set the first point on the line and then dragging to set the second. The exact position of the points is indicated by a cross shaped cursor. When you release the left mouse button the line appears with a handle at each end.

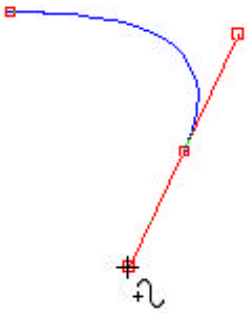


As in the case of the Freehand Tool, if you place the Line tool over a handle a plus sign appears and the new line is drawn as a continuation of the existing one.

The Curve Tool


The Curve tool is something of a mix of the other two drawing tools. It behaves like the Line tool but it also draws curves. If you select the Curve Tool and click at a location a red handle will appear defining the first point on the line. If you click a second time a straight line will be drawn to the location. Each time you click another segment of the line is added.

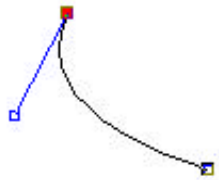
This is quite an easy way to build up a connected line but the Curve Tool has another trick. If you click and hold down the left mouse button an additional pair of handles appear and one of them will move as you drag the mouse. These node handles behave as if they attract the line and pull it off course to form a curve. The longer the line between the node handles the more the curve is attracted and pulled in the direction of the handles.



The best way to understand how this works is to try it out for yourself. After a little practice you begin to feel as if the line between the node handles has a magnetic attraction for the curve.

Drawing with the Line Tools

You can mix curved and straight-line segments when you are drawing using the Curve Tool. If you click and drag you generate a curve node. If you just click you generate a straight line node. The only complication is that if you follow a curve node by a straight-line node the line between the two is a curve. The reason for this is that the handles work in pairs to control the curve of each line segment and the first point on the segment has a handle, even though the second point doesn't.



If you draw another straight line point immediately afterwards then the next segment will be straight. In other words, a straight line needs a straight starting point and a straight finishing point.

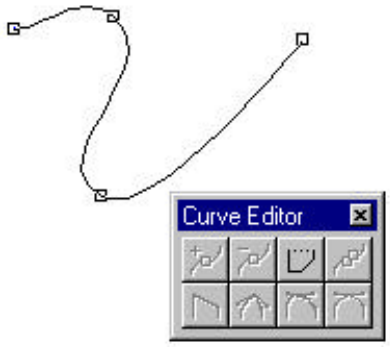
As well as mixing straight and curved segments using the Curve Tool, you can also change which tool you are using while drawing a line. For example, you could start a curve by sketching using the Freehand Tool, then you could change to the Line Tool and add some straight segments and then switch to the Curve Tool and draw some accurate curved segments and so on. Use the tool that best suits the part of the line you are drawing.

Curve Editor and Node Tool


Drawing the right curve in one go is a difficult skill to master - fortunately you don't have to! It is very easy to edit any existing line or curve to the shape that you want. In fact it is much easier to edit a curve then it is to draw the perfect curve in the first place. We have previously used the Node Tool to alter QuickShapes and adjust text, its other purpose is to edit curves.

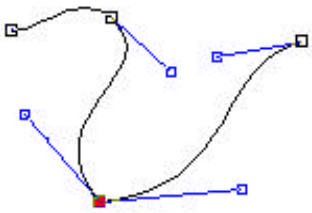
Editing Curves

If you click on an existing curve with the Node Tool the curve displays its control nodes and the Curve Editor opens.



You can see that the control nodes do govern exactly where the curve goes in the sense that it has to pass through each one. Dragging any control node to a new position will force the curve to reshape itself to pass through the new position. What the control nodes do not govern is the curvature - this is what the control handles are for. A segment of a curve between two control nodes has two control handles that determine the path it takes between them.

Once you realize that control handles work in pairs in this way it becomes easy to understand exactly how to edit a curve. If you click on a control node with the Node Tool then you will be shown both of its control handles and one of the control handles of each of the control nodes it is connected to. Why?



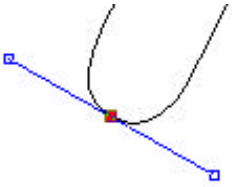
Now that you know that control handles work in pairs the answer is obvious. You can now use the Node Tool to modify the curve of the line on both sides of the control node that you clicked on by dragging the control handles shown. The first two control the line segment on one side of the control node and the next two control the segment on the other side.

Smoothing Curves

If you look at any particular control node then its handles determine how the curve will pass through it. If the two handles are in very different directions then the curve will change direction sharply as it passes through the control node.

Sometimes this is the behavior you want but if you want a smooth curve then the handles on each side of the node have to be adjusted so that the curve leaves the node at the same angle it entered it. This means that for a smooth curve the handles have to form a straight line.

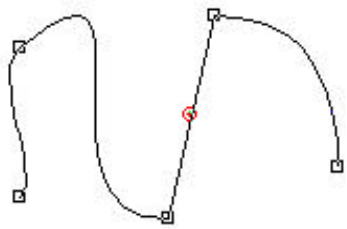
To keep the curvature the same on both sides of the control node the handles also need to be kept at the same length as well as in the same direction.



These are the three types of “corner” you can create - sharp, smooth and symmetrical.


Rather than having to minutely adjust handles individually to produce smooth and symmetric corners, DrawPlus will do the job for you. If you select a control node with the Node tool you can force its handles to produce a smooth corner by clicking on the Smooth Corner button from the Curve Editor and a symmetric corner can be produce by clicking on the Symmetric Corner button. The handles at a smooth corner rotate together but you can drag one to be longer than the other. At a symmetric node the handles not only rotate as one, they change length together. To convert a node back to a sharp corner, where the pair of handles are completely free, click on the Sharp Corner button.

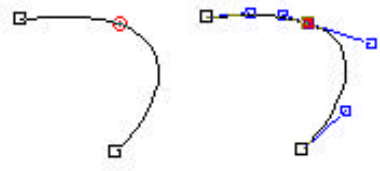

A straight line is just a special case of a sharp corner. To create a straight line between two nodes you can select the first node using the Node Tool and then click on the Straighten button tool. The only problem with this method is knowing which segment will be converted to a line. A better method is to click on the curve itself between the two control nodes, a red circle appears to indicate the position you have selected, and then click on the Straighten Line button. The segment of curve that you have selected immediately jumps to a straight line.



Adding and removing nodes

You can extend an existing curve by selecting it with the Node Tool and then starting to draw with any of the three line tools from either of its end points. This adds control nodes to the end of the curve.

 If you want to add a control node to the inner part of a curve you select the position of the new node by clicking with the Node Tool. A red circle appears to show you the selected position and if you now click on the Add Node button the new node appears with handles set to leave the curve unchanged.



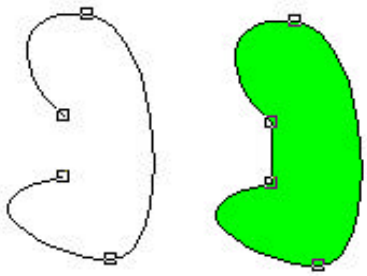
The fact that the new node is inserted in such a way as not to change the curve is something you can make use of when editing. If the curve only needs a slight change, insert a new node and then make fine adjustments to its handles.

 Sometimes it is a good idea to remove control nodes that aren't really necessary to form the shape of a curve. When you use the Freehand Tool additional nodes are often added to make the curve follow little bumps that you didn't really mean and the solution is to get rid of the unwanted nodes. To do this you select the node and click on the Delete Node button.

When the node is removed the curve is drawn between the remaining nodes without making any changes to their handles.

Closing, opening and joining curves

 Sometimes you don't know that you want a closed curve while are drawing it and occasionally it is possible to miss the first point and produce what looks like a closed curve but isn't. The solution in both cases is to use the Close Curve button from the Curve Editor. This draws a straight line between the first and last control nodes. If you don't want the curve closed by a straight line then you can use the Curve Editor to convert the control nodes to a smooth or symmetrical corner.

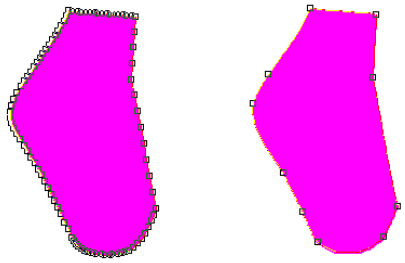


You can't use the Close Curve button to join nodes in two different curves. Instead you need to select the two curves you want to join and use the **Tools/Join Curves** menu command which will add a straight line between the last and first points of the two curves. If you want to close the resulting curve or change it in any way you can use the Curve Editor.

 Finally if you want to open a curve or break a curve into pieces you select the node where you want to create the break and click on the Break Curve button. You can use this as many times as you want to convert a connected curve into separate segments. Notice that when you first break a curve the two control nodes are in exactly the same location and so the curve may still look as if it is connected. If you drag one of the control nodes away you will quickly see that it isn't.

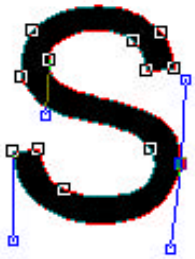
Cleaning Curves

Clipart is made up of curves that you can edit using the Node Tool. This is the best way of customizing it to fit with your drawing. The problem is that often when you ungroup a clipart drawing and try to edit the curves that make it up you discover that there are far too many nodes on even a simple curve. This over use of nodes only matters if you want to edit the curves . One solution would be to use the Node Tool to delete unnecessary nodes but this would be a difficult task. A better solution is to select the curve and use the **Tools/Clean Curves** command. This scans along the curve and removes any node that isn't really needed to determine the shape of the curve. After it is finished the result should be a curve with a smaller number of nodes and one that is much easier to work with.



Convert to Curves


Now that you know how to edit a curve you may wonder how you can do the same things to a QuickShape, or to text for that matter. The problem is that the Node Tool affects a QuickShape object and a text object in a way that is very different to its role in curve editing. Most of the time this is exactly what you want but just occasionally it would be nice to edit an outline as if it was a simple curve. The solution is the **Tools/Convert to Curves** menu command or the Convert to Curves button on the Standard Toolbar.



Once a QuickShape, or a text object, has been converted to curves you can edit its outline using the Node Tool but it loses all of its special properties. Converting text to curves is one way of incorporating letter shapes into designs and converting QuickShapes provides you with a starting point for your own shapes.

When you convert an object to curves the outline is automatically subjected to a Clean Curves operation to reduce the number of nodes and make it easier to edit.

Combining Objects (creating holes)

As you already know, you can only apply a fill to a closed curve. This is easy enough but how can you produce a shape with a hole in it? The most obvious way is to draw the hole shape inside the object and then fill it with the background color. For example, if you draw two circles, one within the other, and fill the inner one with white the result looks convincing.

As soon as you place the object over another one you quickly see that it isn't as convincing as you thought because you can't see through the "hole" - after all why should you!

 You can try variations on this theme but the only good way to make a hole in an object is to use the **Arrange/Combine** menu command or the Combine button on the Standard Toolbar.

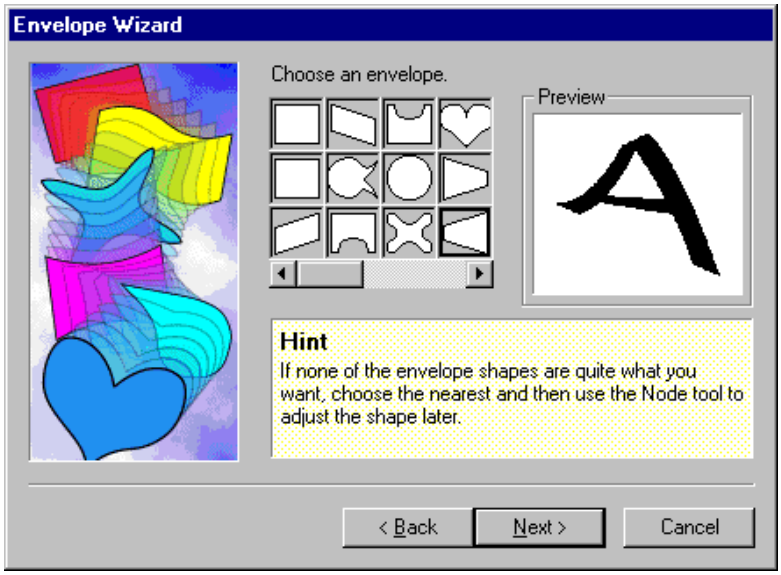
First you have to select the two objects you want to combine and then click on the Combine button. The result is that the inner object becomes a hole in the outer object and you can see through it. As a secondary effect the objects that you have combined become a single object that you can select, move, size, etc. as if it was one. The price for this convenience is that you can no longer use the Node Tool to edit the outline of the object. If you want to edit the outline of a combined object you can uncombine it by selecting it and clicking on the Combine button a second time.

You can combine more than just two objects and in this case the rule is that where an even number of objects overlap the result is a hole and where odd numbers overlap the result is the fill color.

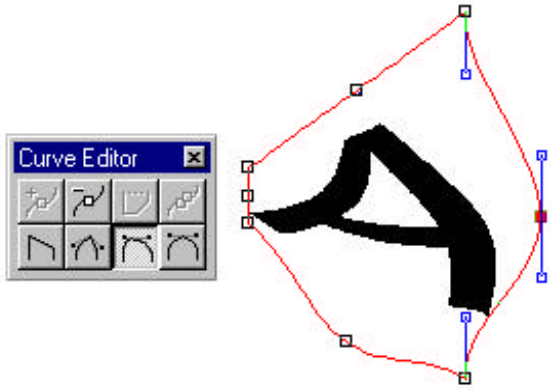
The Envelope Wizard

An envelope distortion is something that you can apply to any object to change its shape without having to edit its control nodes. To understand how an envelope distortion affects the shape of an object imagine it drawn on a rectangular rubber sheet which is stretched to the outline of the selected envelope. As you might expect, this is a very powerful feature for special effects.

The simplest way of applying an envelope distortion is to use the Envelope Wizard. Select the object or group of objects you want to distort and use the command **Tools/Envelope Wizard**. As the first step the Wizard gives you the choice of applying the distortion to the currently selected object or to some new text. The next step allows you to browse through the possible envelope shapes and see their effect in a preview.



Once you have selected the envelope you want to use and clicked on **Finish** in the final step you will see the object distorted as in the preview. The Node Tool is also automatically selected for you and you will see the object surrounded by the outline of the envelope selected. You can use the Node Tool to edit the outline by dragging the nodes. The only difference is that the reshaping changes the way the enclosed object looks.



Because you can edit the envelope so extensively, if there isn't one to suit you in the Wizard, select the closest shape and edit it to be exactly what you want.

 An alternative to using the Envelope Wizard is to click on the Envelope flyout on the Standard Toolbar. This offers you a choice of all of the standard envelopes available.

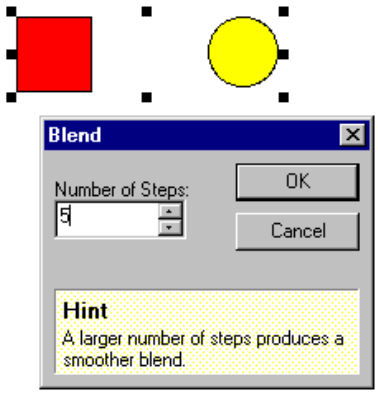
Envelope Tutorial

The Envelope tool can be very effective when you combine text with simple shapes. Here we have used the circular envelope with the company name, “Arrow Air” and placed it on an ellipse drawn with the QuickShape tool. The text was sized using the normal size handles, that is without introducing any further distortion. Add a yellow linear fill and a piece of string drawn with the Freehand Tool and you have a convincing balloon.

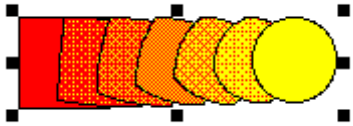
Using Blend

There is yet another powerful way to manipulate shapes - the blend command. This takes two shapes and constructs a set of shapes that transform or morph the first into the second. The two shapes are blended in the sense of creating a smooth transition from one to the other. The blending occurs in shape and in fill. The fill of each of the intermediate shapes is adjusted to slowly change from the fill of the first object to the second.

To blend from one object to another select both of them and use the **Tools/Blend** command.



If you enter the number of steps to be used to go from the first object to the second and click on **OK** the sequence of blend shapes will be generated.



You can learn a lot about blending objects by experimenting. In general blending works best with objects that have some similarity and are not too complex. If you are interested in shape blending then a small number of intermediate steps is often more impressive. For color blending the reverse is true and many steps give a smooth blend.

Curves and Shapes Tutorial

One of the best things about using DrawPlus is that even if you can't draw with pencil and paper you will be able to create drawings that look the way you imagine them. The most important thing to realize is that you don't work in the same way as a traditional artist would create the same drawing.

This may sound obvious because you are working with a computer but at first it is difficult not to think in terms of drawing and rubbing out your mistakes - don't! Using DrawPlus you assemble a drawing from small objects that you edit to make them just right. So stop worrying about how to draw like an artist and discover how to draw like DrawPlus.

A Map From Scratch

Drawing a map of where you live or work is something most of us have to do from time to time and usually in a hurry! If the idea of drawing a map sounds like hard work with lots of lines to get in the right place then don't worry because DrawPlus makes it easy.

The first part of our map is a rough sketch of the roads and for this we will need to use the Freehand tool - the one that looks like a pencil. It not only looks like a pencil - it works like one too. To draw a line you simply move the mouse while holding down the left mouse button. Try it out with a few freehand scribbles.

Scribbling is fun and easy but you also need to be able to keep it under control. Practice drawing some curves and alter the speed that you move the mouse. The slower you move, the mouse the more detailed the line becomes. Faster, larger movements produce smoother curves. Don't worry about drawing accurate curves, though, because it is very easy to edit what you have done.

When you have finished experimenting you will want to clear the page. To do this select all of your lines, use the menu command **Edit/Select All** and press the **Delete** key.

Roads under construction

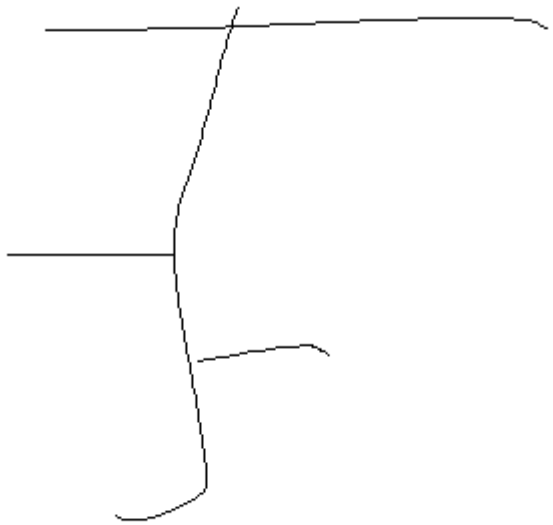
Use the Line tools to draw some lines that represent the roads close to your house or office.

 Use the Freehand tool when the roads are irregular

 and the Line tool for any roads that are regular.

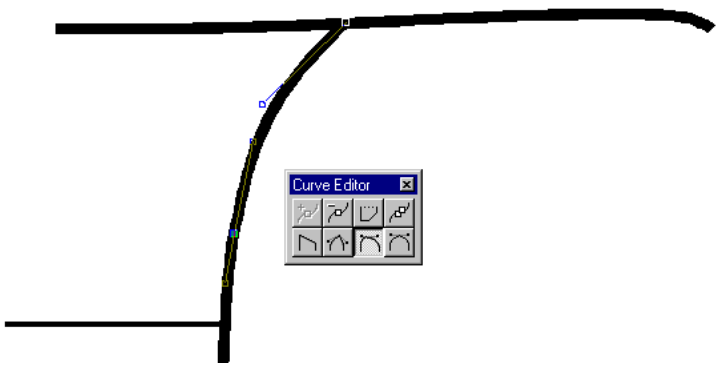
 ***Remember that holding down the* SHIFT *key constrains regular lines to angles of 15 degrees.***

Draw each road as a separate line. The result will probably not be exactly what you hoped for but don't be panicked into erasing the sketch - unlike scribble on paper it can be edited to look good!



Road improvements

Even if you are using different colors for types of road, it is helpful to use line thickness to distinguish the major roads from the minor ones. This is easily done by selecting each of the lines representing major roads and choosing a suitable thickness, such as 5pts, from the Line Width combo box on the Formatting Toolbar. Repeat for the lines representing the minor roads but using a thickness of 2.5pts.



Now we'll use the Node Tool to edit the lines to give them the correct curves and make them join at the right places. As soon as you click with the Node Tool on any of the lines you will see the nodes appear as square dots and the Curve Editor opens.

 First clean up lines that have accidental bends. The simplest way to deal with this is to delete surplus nodes. Select each of these in turn and choose the Delete Node button from the Curve Editor, which opened when you select any line with the Node Tool.

Using the Node Tool you can manually select any of the nodes and move them to change the shape of the line. So if the line doesn't stop quite where it should just pick up the end node and drag it where you want the line to finish.

House building

To show the exact location of a house or office we need a symbol for the building. You could look for one, or put one together, from QuickShapes but here we will use the Line Tool in order to demonstrate its use.

To draw a line using this you click and hold down the left mouse button at the starting point of the line and drag to its finishing point. The nodes at either end of the line appear when you release the mouse button. It is important when you are creating a closed shape from lines that they meet. DrawPlus indicates that you are starting another line from the end point of the previous one by displaying a small cross to the left and below the straight line cursor when the two end points join and displaying a small box in the same position when the final segment, that completes the closed shape, is correctly positioned.

As long as you have succeeded in creating a single, closed, object when you are finished it will automatically be given the default fill.

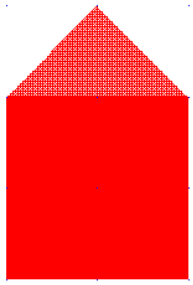
Make the snapping grid visible with* View/Layout Tools/Snapping Grid *before embarking on drawing a house. The dots will help you.

The house can be drawn anywhere on the page or pasteboard because it's easy to move it to its final position. You can also work at a zoom level that makes it easy to draw because it can be scaled to the correct final size. Objects are often easier to draw large and in this case you can use the dots of the snap grid to align the points of the house shape.

Taking the roof off

Although the house shape looks about right it would be better to fill the roof with a different color to the rest of the house. To do this we need to separate the roof from the house and then close each of the separate shapes. This is just a matter of selecting one of the nodes that join the roof to the house and clicking on the Break Curve tool. At this point you will see the house shape lose its fill since only closed shapes can be filled.

Repeat this on the second node so that the roof is completely separate. At this point you could move it away from the house shape if you wanted to. Instead close the roof as a separate object by clicking on any of its three existing lines with the Node Tool and selecting the Close Curve button and it will fill as a separate object.



Repeat the closing procedure for the house shape and it too will fill. Now you can choose a different fill for one of the objects.

What's Next

As far as the map is concerned, there's still some way to go but it will be easier with a few more of DrawPlus facilities at our disposal. We will return to this project at the end of the next section so now is the time to save your drawing and take a quick break.

Control Your Drawing

Introduction

As long as what you are drawing is composed of only a few graphics objects you can be a free spirit. You can draw how you like to your heart's content. It is one of the joys of using DrawPlus that everything is almost instantly changeable.

If you are trying to create a more complex drawing, or an accurate drawing or, just a drawing task that you have to repeat on a regular basis then you need some organization. You need techniques that allow you to position and draw accurately without effort, and tricks that enable you to organize a drawing so that you can work on one part of it without fear of changing another. And you need to set defaults that save you from having to edit every new object.

Positioning Aids

DrawPlus provides you with many aids for positioning objects accurately and in relation to one another. Many of them you have been using, perhaps without giving them a thought, from the first time you used DrawPlus.

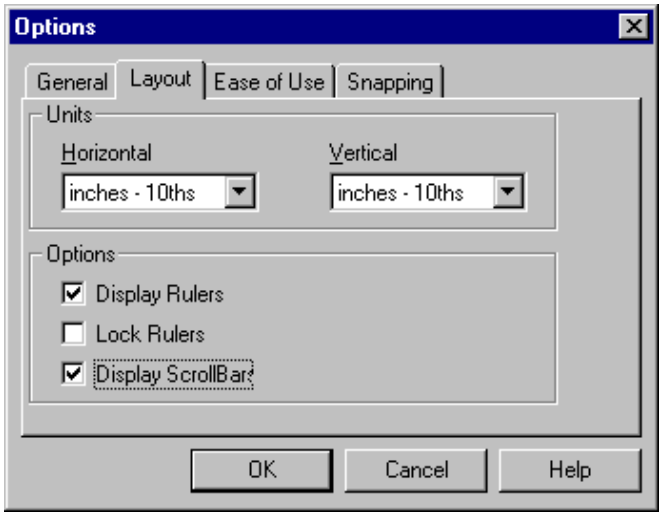
The main positioning aids are

- the rulers
- guidelines
- the snap grid

Rulers

The rulers that surround the page allow you to measure the exact position of an object. Perhaps because they are so obvious and simple, the rulers tend to be ignored - but if you know how to use them they are a powerful tool.

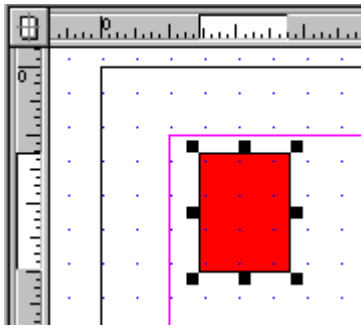
If you need to change the ruler units use the **Tools/Options** menu command and click on the **Layout** tab.



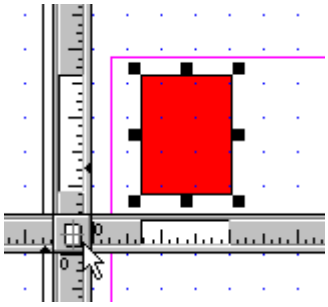
You can select the **Horizontal** and **Vertical** units separately. Notice that selecting “inches” gives a scale divided into quarters, eighths and so on by contrast with the “inches 10ths” scale which is marked up in tenths. This dialog box also lets you lock the rulers into position and remove them from the display altogether.

The size of the scale divisions that you actually see depends on the zoom factor you are using. DrawPlus selects sensible units for you and this means that if you need to do accurate work you should zoom in.

When you select an object the rulers not only show its position, but also its extent by a lighter colored area or indent.



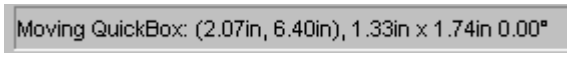
You can even move the rulers by dragging the position where they cross.



If you hold down the Shift key while you drag then the origin, the zero position, of the rulers is left fixed - otherwise the origin is moved to be where the rulers cross.

Double clicking on the cross over marker automatically makes the rulers jump to surround the currently selected object. Double clicking with nothing selected, or double clicking a second time, resets the rulers so that the origin is at the top left hand corner of the page.

If you place your cursor over the currently selected object or drag it to a new location you will also see position information in the HintLine.



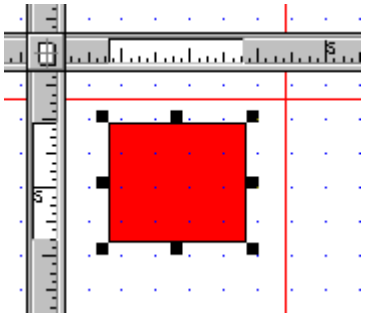
The figures in brackets give the location of the top left hand corner, the next two figures are its width and height and the last figure is its angle of rotation.

Guidelines

Although rulers are useful for gauging the size and position of objects on the page they do require you to put some work into actually positioning objects manually. If you want to repeatedly position objects on the same horizontal or vertical boundary then guidelines are much easier.

To create a guideline click on the horizontal or vertical ruler at the position you want it to appear. They do not appear on your printout.

You can reposition a guideline by dragging it wherever you want it with the Selection Tool. Dragging a guideline off the screen deletes it.



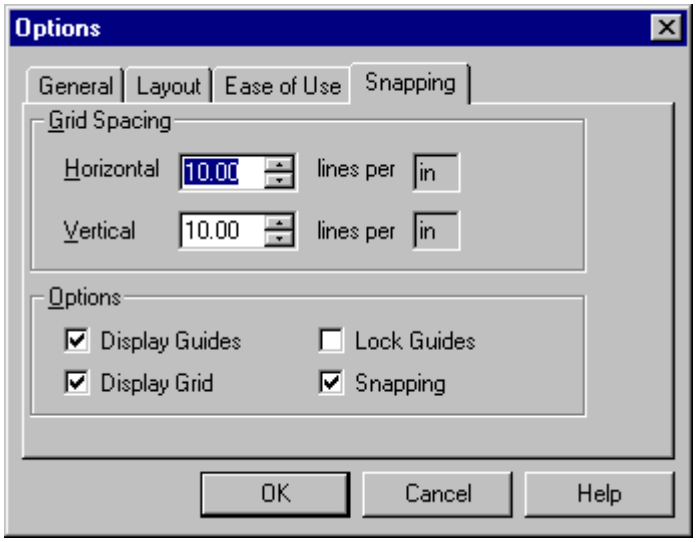
The advantage of using guidelines is that they are “sticky”. As long as you have “snapping” turned on (see later in this chapter), an object will feel as if it is attracted to a guideline as you move close. It really does feel as if the guideline and the object have a tendency to stick together and this makes placing the object on the guideline very easy. Guidelines also attract the object when you are changing its size.

The magenta lines that you see around the edges of every page are a special set of guidelines, the margins. You can set the margin size using the command **File/Page Setup**.

The snap grid

The snap grid is another aid to positioning related to the ruler settings. It is a grid of points that attract objects in much the same way as guidelines. When enabled you can only position or scale objects so that they align with the snap grid. You can think of the snap grid as setting the smallest increment of movement or scaling you can use.

The spacing of the grid can be set to any number of divisions of the ruler units using the **Tools/Options** dialog. This time you click on the Snapping tab and enter the number of snap lines per measurement unit you want. Notice that you cannot change the unit of measurement in this dialog box because this is determined by the rulers.



You can see the snap grid as blue dots. How many dots you actually see depends on the degree of zoom you have selected but the snap grid still works at the number of divisions you have selected. For example, if you are working in inches and select 10 lines per inch then the snap grid will allow you to position an object at $1/10^{th}$ inch increments irrespective of the zoom.

Notice that if enabled, you cannot position or size an object between the snap grid points. For example, if you set the snap grid to 1 line per inch and then move an object you will discover that it appears to jump one whole inch at a time.

The positioning of guidelines is also controlled by the snap grid.

Snapping

 You can turn the effect of the snapping grid and guidelines on and off in one operation. The snapping button in the Status Bar is down when snapping is on and up when it is off. When snapping is on objects snap to the grid and the guidelines.

If you find that snapping is a nuisance because it is stopping you from placing objects exactly where you want them don't just give in and turn snapping off! Snapping is your best aid in getting objects to fit together when you are assembling a drawing. For example, if you align two objects by eye and then zoom in you will quickly see that they are not accurately aligned at all!

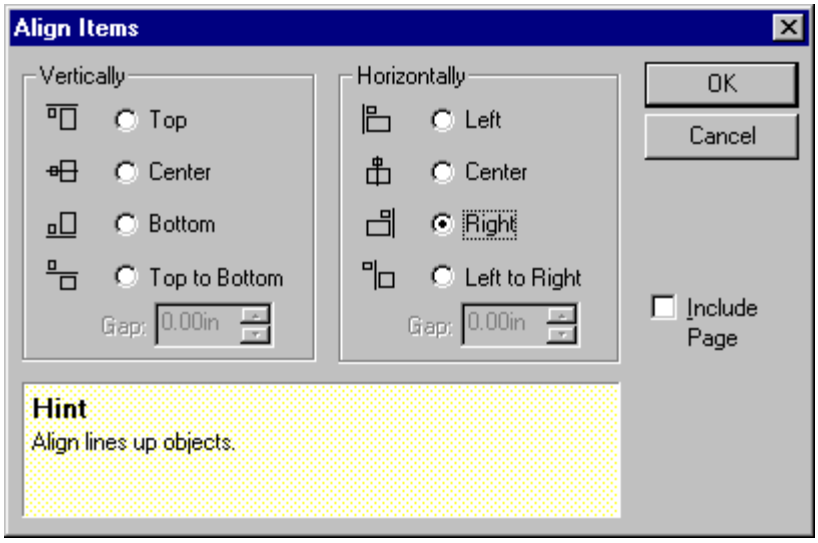
If you do find snapping a nuisance then this is a sure sign that you have the grid set too coarsely to allow you the freedom you need in your design. Use **Tools/Options** menu command to set a finer snapping grid.

The Status Editor

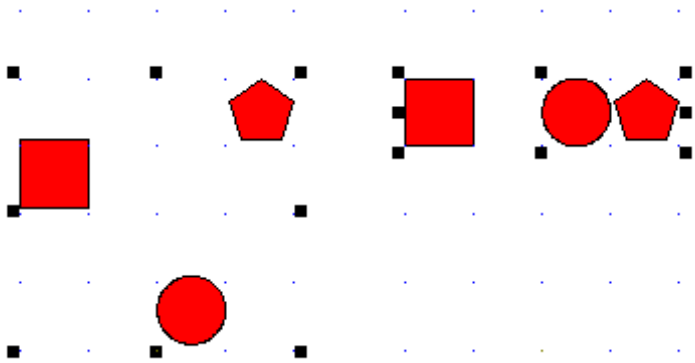
 We've already used the Status Editor when we designed a business card in the *Special Objects* chapter but it is worth looking at it again. If you want to discover or set the exact position and size of an object click on the Status Editor button. The Status Editor shows you the current position, size and orientation of an object and allows you to type into it and set the values to whatever you want them to be.

Aligning Objects

The Align Items command will take a group of selected objects and align them in one operation. You can access this either via the right mouse pop-up menu or via the **Arrange / Align Items** menu command.



The alignment operation that you choose from the Align Items dialog box is applied to all of the objects selected. The alignment is performed within the selection box that surrounds the entire group of objects. For example, if you select **Top** all of the objects align along the top edge of the selection box.



As well as solving any problems you might have with the simple alignment of objects, you can also use it to space objects out evenly. If you select the **Top to Bottom** or **Left to Right** option then you can specify the size of gap to be left between the objects. For example, if you select three objects and align them top to bottom with a gap of 1 inch they will be spaced vertically with exactly 1 inch between each one.

If you select the **Include Page** option then the page is added to the set of objects included in the alignment. In this case selecting **Top** say aligns all of the objects in the selection with the top of the page.

Grouping Objects

 You already know that you can select a number of objects and work with them as if they were a single object as a temporary group. You can also make a group permanent by clicking on the **Group/Ungroup** button on the Standard Toolbar or by using the **Group/Ungroup** command in the right click menu. Another alternative is via the **Arrange** menu. From this point on the group of objects behaves as if it was a single graphical object. The HintLine tells you when a group is selected and the **Group/Ungroup** button is down.

The advantage of converting a set of objects into a permanent group is that it is easier to select and edit. However once objects are in a group editing is also restricted in that you cannot edit any of the individual objects that make up the group. If you want to do this you have to ungroup them first, edit the objects you want to change and then group them again.

Groups can cause confusion if you aren't aware that they exist. For example, when you import clipart you have an option of importing it grouped or ungrouped. Grouped makes it easier to position and size the clipart but you have to ungroup it to edit the separate objects that make it up.

If you do ungroup a clipart image within a drawing then the problem is re-selecting all the objects that used to make it up. The solution to this is to use layers, discussed later in this section.

Groups Tutorial

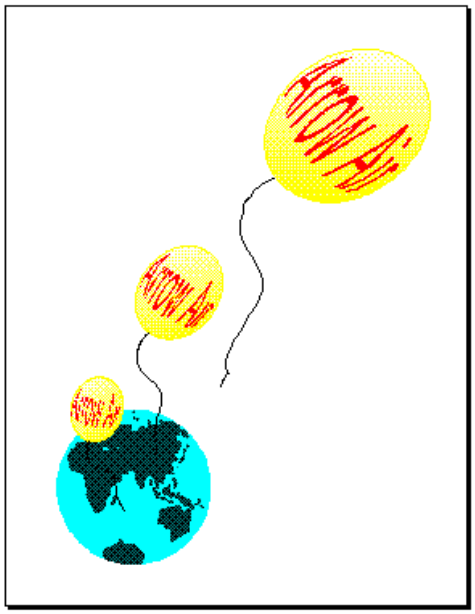
In the *Curves and Shapes* chapter we looked at a simple way to suggest the effect of text drawn on a balloon. The balloon comprised three objects - an ellipse, enveloped text and a line. If you want to use a number of these balloons in a design then using the Group tool saves a lot of effort.

Here we have created the effect of a stream of balloons floating away from the same point on the earth, which is of course the clipart symbol used in the Arrow Air business card.

First do any editing required to the original objects. Remember, having created a permanent group we will not be able to edit its individual components without ungrouping. In this case the string attached to the balloon drawn earlier was lengthened by dragging on its end control point with the Node tool. Then the three objects were grouped using the Group button on the Standard Toolbar. Now you can size the balloon to be a reasonable working size. Imported the clipart globe as described in the *Special Objects* chapter and position the end of the string at the top of the globe.

We are next going to use the Quick Copy operation introduced in *Beyond Wizards.*

Select the balloon group and then, holding down the **CTRL** key to copy at the same time as rotate, drag on the rotate handle to create two more copies both to the right of the first one.



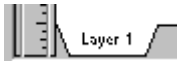
Then size and position the balloon furthest to the right making it larger than the others and higher up the page. Move the middle balloon downwards a little and shrink the balloon on the left to become smaller and move it even further down, so that it overlaps the globe. All these adjustments are easy since the balloon is a grouped object.

Turning off guides and the snapping grid using the command** View/Layout Tools **gives you a clearer view of a drawing.

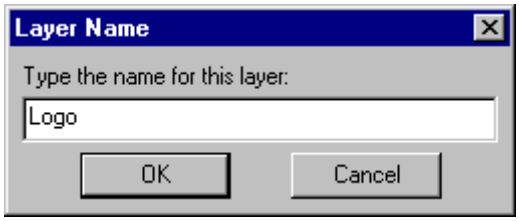
Layers

If you are drawing something simple you don't need to make use of layers and can ignore them. If you are creating something a little more tricky then layers are a vital aid in separating objects into independent sets. You can think of a layer as a transparent sheet of paper which you draw objects on. The whole drawing is produced by piling up the layers and viewing all of the objects on all of the layers. The advantage of using layers is that you can choose which layer you are editing and make changes without fear of modifying anything on another layer. By building up your drawing from multiple layers you make it much easier to edit.

When you first start a DrawPlus drawing there is only one layer as indicated by the tab in the bottom left hand corner - Layer 1.



To add another layer you use the command **Arrange/Layers/Add Layer** or select **Layers/Add Layer** command from menu that pops up when you right-click on a blank area of the page. You are given the opportunity to name the layer something meaningful, or you can just accept the default names Layer2, Layer3 and so on.



To edit the objects on the new, or any, layer all you have to do is click on the appropriate tab at the bottom left of the screen.

Objects which are on layers that are not selected are still visible but you will find that you cannot select them or edit them. This can be slightly confusing at first as you frantically click on an object to no effect!

> 🕮 ***Remember: if you can't select an object then the chances are it is on a different layer.***

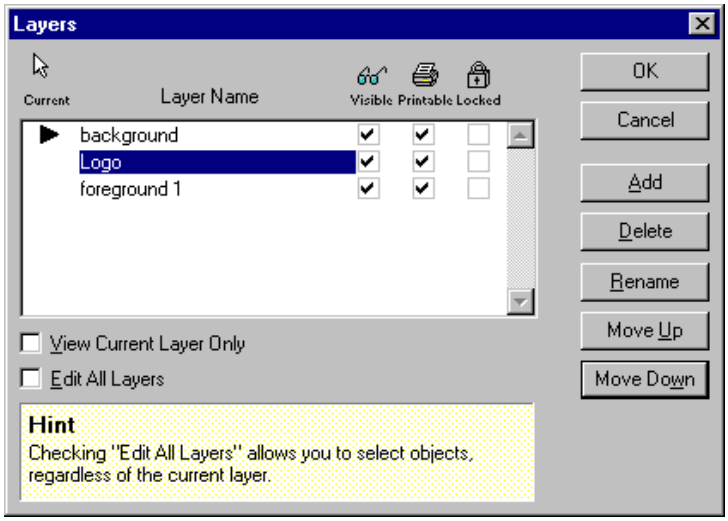
When the drawing is put together from the objects on each of the layers they are drawn in the order in which the layers were added. Put another way, the layers are drawn in the order of their name tabs from left to right. For example, if you want a layer that is to act as a background to all the other layers make sure it is the first layer.

If you want to be able to select and edit objects irrespective of the layer they are on use the **Arrange/Layers/Edit All Layers** or select **Layers/Edit All Layers** command from the right-click menu when you right-click on the page.

If you select an object on a given layer you can move it to another layer using the **Move To Layer/Move Forward One Layer** and **Move Back One Layer** commands - which are in the **Arrange/Layers** menu and the right-click menu.

Most of the time you can do everything you want to using nothing but the **Add Layer/Edit All Layers** and **View All Layers** commands. If you need a closer control of the layers that make up a drawing then you need to call on the Layer Manager. The easiest way to get to the Layer Manager is to double click on any of the layer tabs. You can also use the **Arrange/Layers/ Layer Manager** menu command or the **Layers/Layer Manager** command in the right-click menu.

The Layer Manager allows you to add a new layer, rename an existing layer, delete an existing layer and alter the order of the layers by way of the **Move Up** and **Move Down** buttons. If you delete a layer all of the objects on it are lost. So if you want to keep any of them, move them to another layer first.



In addition to modifying the layer structure of a drawing, you can also use the Layer Manager to select which layers are visible by clicking on its Visible box. The Printable box allows you to select which layers will be printed and allows you to create layers which are “for information only”. Finally the Locked check box can be used to freeze a layer and make it uneditable.

Even if you don’t want or need to make use of layers some of the Wizards do. For example, the Watermark and Background Wizard adds a “Paper” layer to your drawing as the first layer to act as a “background” to your drawing.

Locking an object

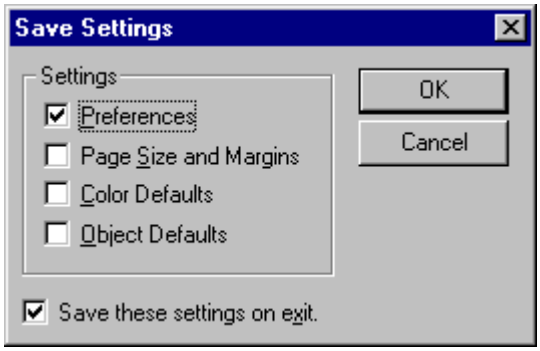
There are occasions when you don’t want to lock an entire layer but one or two objects should remain fixed. The solution is to use the **Arrange/Lock** menu command which freezes the currently selected objects. You know that an object is locked because when you try to select it the cursor changes to a lock symbol. To unlock an object select it and use the **Arrange/Unlock** command.

Object Defaults

When you create an object it is formatted with the default fill and line style. When you create a text object it also has a default font, point size, color, etc. Normally it isn’t worth changing these defaults but if you are creating a lot of objects in the same style then it might be. To change the defaults use the command **Tools/Defaults**.

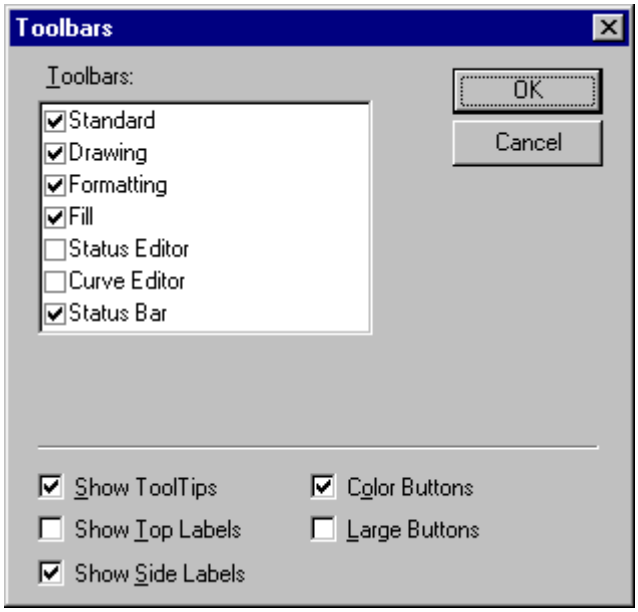
If you have an object selected you can use its properties to set the defaults. This is an easy and quick way of changing defaults to be like a specific object you have selected. Alternatively you can set the defaults property by property.

If you want the defaults and your other selected options to be remembered next time you use DrawPlus, you can save them using the **Tools/Save Settings** command.



Toolbars and Views

You can control which toolbars are on view using the **View/Toolbars** command.

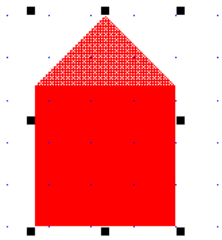


Simply select which of the DrawPlus toolbars you want to see by ensuring there is a tick next to their names.

You can also control other aspects of how DrawPlus looks. For example, if you are using a portable computer you might want to select Large Buttons to make the tools easier to select.

Layers Tutorial

We left the sketch map at a very basic stage. We had roads and a single symbol for a house made up of two filled shapes - a roof and walls. Having completed the operations that needed to be done on these two objects as individual items, that is giving them contrasting fills, the **Arrange/Group** can be used to turn them into a single combined object.

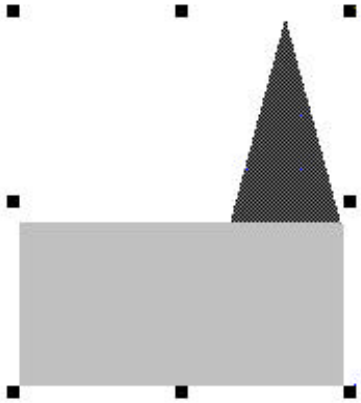


The final house object can now be selected and sized and if you want more houses it can simply be copied. For now though leave it on the pasteboard.

Adding a church

To show just how useful graphics objects are, let's add a church to the map as a landmark. If at this point you are starting to work out how to draw a church from scratch you're not thinking hard enough about reusing objects.

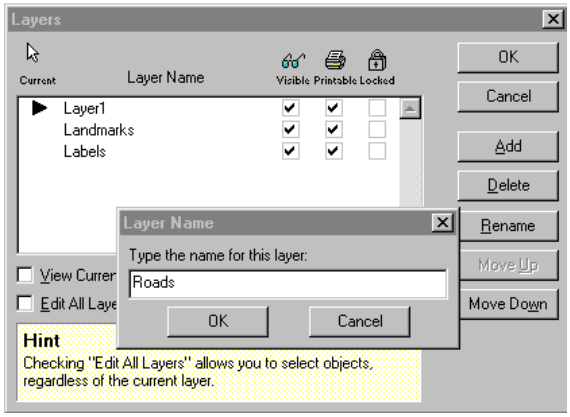
To create a church from the house object all we have to do is make a copy of the house and then ungroup it using the **Arrange/Ungroup** command or the Group/Ungroup tool. Now you can edit the roof separately from the body of the house. Select the roof and squash it and stretch it by dragging on the handles of its outline box until it looks like a steeple. Select and stretch the body of the building in the same way and the final result, after another grouping operation to make it a single object, is a church symbol.



Layers for different purposes

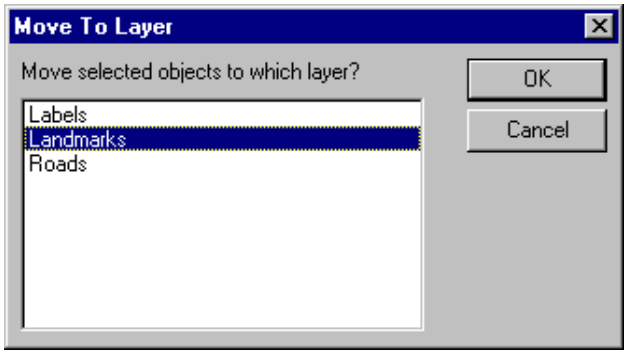
Before we move any of the building symbols off the pasteboard and onto the page let's consider how layers might help in drawing a map that is suitable not just for one purpose but for reuse. How often have you drawn a map assuming that a visitor is coming from the North only to discover that they have decided to approach from the East. The roads stay the same but the landmarks they will be aware of are different. Or you draw one map to show the way to your house and realize that something almost the same would serve for visitors to your office - but without the quirky comments! So let's use the existing layer for the parts that don't change - the roads, railways, rivers and so on, add one layer for landmarks and have another layer for labels, comments and other text items.

First rename Layer 1. The Layer Name dialog opens from the right-clicking menu but as we want to add two more layers we need the Layer Manager and the quickest route to this is to double click on the layer tab. Use the Add Layer button for the new layers, giving them meaningful names. The Layer Name box lets you type these in.



When you return to the page notice that there are now extra tabs for the new layers.

Now it's time to place the symbols on the map, but they were originally drawn on the Roads layer. The solution is to select all of the symbols on the Road layer that should be on the Landmarks layer and use the command **Arrange/Layers/Move To Layer**.



Now you can select the Landmarks layer and move the house and church symbols into place secure in the knowledge that you are not going to disturb the road layout. Then you can proceed to the Labels layer to add text.

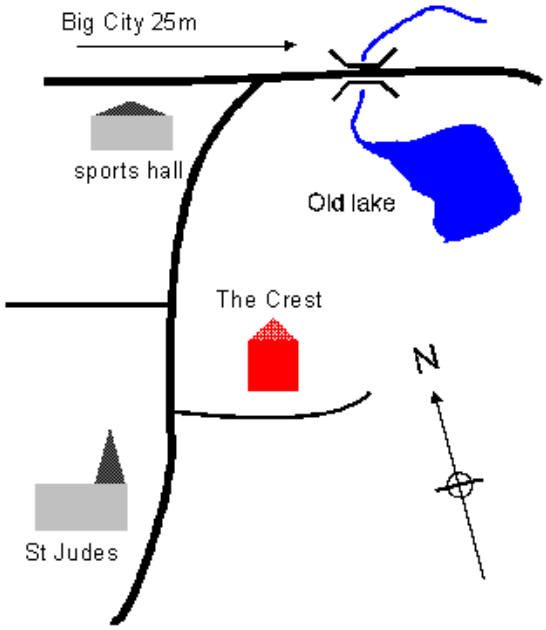
A compass point

You can carry on adding details to your map for a long time but one refinement shows just how easy drawing is with DrawPlus if you think about it in the right way. To help people know which way North is, it would be a good idea to place a compass arrow on the Roads layer.

If you are thinking about drawing the arrow at the correct angle and then drawing the cross at the center and so on you are still thinking about drawing on paper. Using DrawPlus you assemble the compass arrow more or less automatically.

First draw a long vertical line and select a suitable arrow head for it. Then draw a short horizontal line and a circle using the QuickEllipse tool. If you hold down the **SHIFT** key while drawing the lines it will be easy to make them perfectly vertical and horizontal. Holding down the **CTRL** key while drawing the QuickEllipse gives you a perfect circle. Don't worry about trying to make the parts of the compass arrow line up. Simply select them all as a temporary group and use the **Align Items** command to center them horizontally and vertically. The result is a perfect compass arrow which you then can make into a single group.

Finally add the "N" in the correct size, use the Align Items command to center it on the point of the arrow. Group all of the objects to make one single composite compass arrow and rotate it to the correct angle.



You can carry on adding to your map until it is good enough to use. Don't forget to save it because you are sure to need to use it and modify it in the future.

What's Next?

In the final section of this book we'll take a quick look at some of the special creative effects that are simple to achieve with DrawPlus and cover the basics of typography.

Gallery

Introduction

Design is something that you can't teach as a set of rules but it is easy enough to improve your skills just by looking at what other people produce. DrawPlus has stacks of design knowledge built in as part of its Wizards and these can always be used to provide a good starting point for your own drawings. Sometimes though the really impressive effects come from a creative combination of the tools that you have at your disposal. Here we look at how tools and properties can be mixed in ways that you might not have thought of.

Text

Although you might think of text as just being the boring informative part of your design it is often has a key role to play in setting the tone. The basic shapes of the letters are controlled by the typeface that you select. A typeface is a family of fonts in different sizes and typestyles - bold, italic, etc. You can categorize typestyles in many ways but a simple one is to divide them into serif, sans-serif and decorative. A serif font has short lines at the end of each longer line that makes up the letter. Serif fonts are generally regarded as the traditional fonts where sans-serif fonts are the newcomers. Sans serif fonts look modern, mechanical and clean. Serif fonts look authoritative, traditional, the original text book style! Often a sans-serif font and a serif font are used in pairs with the sans-serif being used for headings and the serif font for large blocks of text.

The serif vs. sans-serif choice very much represents the situation before computers came along and made the choice of fonts simpler and wider. In the days when every font was equivalent to hundreds of small lead blocks it wasn't easy to experiment. Using DrawPlus selecting a font is easy and you can try out the large number of "decorative" fonts which are often neither serif or sans-serif and even if they can be categorized this isn't their major feature.

The most commonly used sans-serif font is Helvetica which is available as Arial in Windows 95 and the most used serif font is Times Roman which is available as Times New Roman under Windows 95. There is no "most used" decorative font - it's up to you to decide on your favorite!

Arial a san-serif font
Times New Roman a serif font
Gelfling & a decorative script font

You can be fairly free in your choice of fonts when creating a drawing but there are some points to remember.

Try to remember the following rules:

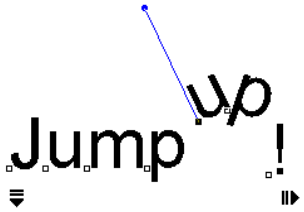
- Don't use too many fonts. It makes a design look messy and difficult to understand.
- Make sure that important text is readable. Never sacrifice legibility for design.
- Choose fonts that work together. Look at your entire design and see if any font looks as if it belongs to another drawing.

Once you have selected a font you also need to think about how best to arrange the text on the page. Most of the time you can let DrawPlus set the distances between letters and words but sometimes it is worth moving a pair of letters closer or further apart to create an effect. This is called “kerning” and to do it in DrawPlus you use the Node Tool to manually adjust the letter positions.

To make the job easier, remember to hold down the **SHIFT** key after selecting a letter to move. This restricts it to move only horizontally or vertically. If you want to move a group of letters select them one at a time with the **SHIFT** key held down.

You can take the positioning of letters within text one stage further and move letters off the baseline and rotate them. This produces effects similar to the Curve Text Wizard but with more control. The disadvantage is that arranging text this way is more work!

To move and rotate letters use the Node Tool and drag the letter where you want it and rotate it using the blue handle that appears.



Another very simple and often overlooked technique is to vary the point size within a line of text. You can do this using the Edit Text box by selecting just the characters you want to change the size of.

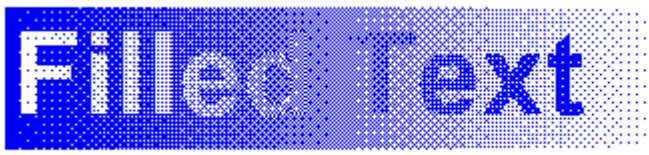
The biggest danger in altering the natural position of letters within text is that you will make the text unreadable. Does the example above read “Jump up” or “up Jump”?

Don’t forget that you can also apply shadowing to text and this can produce a good 3D effect.

Graduated fills

When if comes to producing stunning effects graduated fills are a reliable source of inspiration. You can apply a graduated fill to any object including text.

If this effect isn't striking enough then you can always place the text against a background with the same graduated fill at a different angle.



The contrast effect can be modified by altering the angle between the two fills.

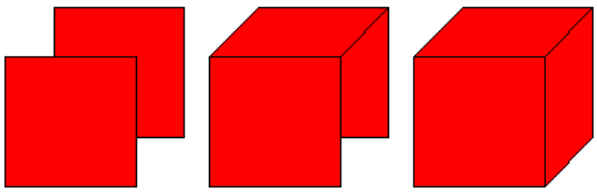
The range of fill types that you can produce is very large. Just break a shape down into smaller parts and then fill each part with a different gradient fill. As long as you remember to remove the outline of the component shapes and position them accurately the result will look like a single shape with an impossible fill pattern.

3D Effects

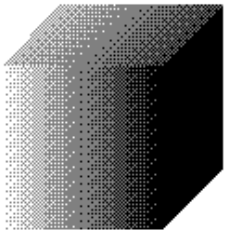
Graduated fills have the power to create strong 3D effects simply by copying the effects of light. However, to apply the gradients to a shape so that it appears to have surfaces at different angles to the light, it is often necessary to draw it in ways that you might not expect.

For example, let's draw a 3D cube. If you only want a 3D cube in a single color fill then you can use the QuickCube - but the way that this is drawn you cannot apply a fill to each face separately. To do this you have to draw the cube manually.

First draw two squares and position them as the back and front face of the cube. Next use the line tool to draw in the top face as a single shape and the side face as a single shape. When you have finished you can delete the back face if you want to - it was just there as a guide.

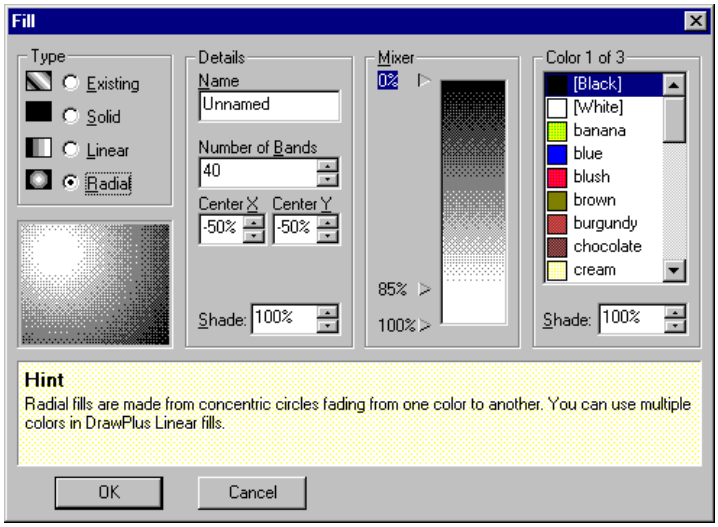


Now that you have a cube drawn with three shapes for faces you can fill each one with a gradient fill adjusted so that the angle suggests where the light is coming from.

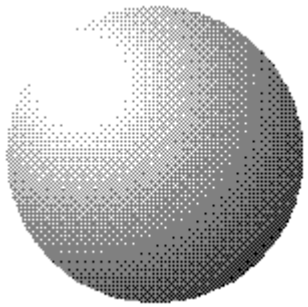


For a good effect set the line width to “no-line”. Notice that the graduated fill for the top is at a different angle to the one on the front face! In practice you might want to make the graduation go from 20% to 80% to suggest more even lighting conditions.

Producing the same effect for a 3D sphere is even easier. All you have to do is draw a circle and create a radial fill to give the correct lighting effect.

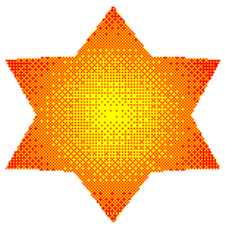


Use a third color marker to set the size of the highlight on the sphere and use the offset to place the highlight where the light is coming from.

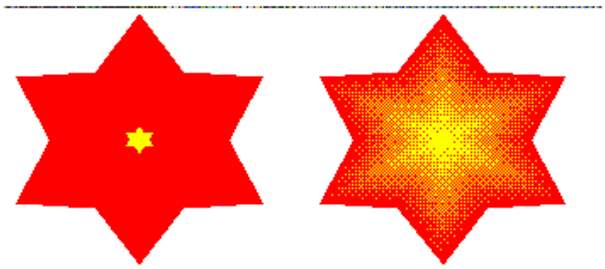


Blend fills

The blend command enables you to change any shape into any other shape in a specified number of steps. You can think of this as a morphing tool. However its ability to blend one color into another is almost as useful. It provides yet another way to extend the range of graduated fills that we can use. For example, if you have just drawn a QuickStar, and have filled it using a graduated fill that follows the shape of the outline without using a blend the best you can achieve is a radial fill.



To use a blend fill all you have to do is make a copy of the shape, shrink it, assign the final color of the blend to it and place it at the center of the original object. Now you can select both and use the **Tools/Blend** command to create intermediate shapes with intermediate colors.



If you use the same technique on text then the effect is 3D.

What's Next

That's entirely up to you. With DrawPlus the learning and inventing never has to stop so explore, experiment and, most of all, have fun!

INDEX

E

F

G

H

I

J

L

M

N

O

P

Q

R

S

T

U

W

Z