Squiggle® 5
for Windows

User's Manual

Proprietary Statement

Insight Development Corporation has prepared this manual for use by its personnel, licensees, and customers. The information contained herein is the property of Insight Development and shall neither be reproduced in whole nor in part without prior written approval from Insight Development.

Insight Development reserves the right to make changes without notice to the specifications and materials contained herein, and shall not be responsible for any damages caused by reliance on the material as presented, including, but not limited to, typographical, arithmetic, and listing errors.

Contacting Insight Development

On the World Wide Web: www.insightdev.com

Customer Service
+925.244.2000
FAX +925.244.2020

Technical Support
+925.244.2000
FAX +925.244.2020
support@insightdev.com

Postal Address
Insight Development Corporation
2420 Camino Ramon, Suite 202
San Ramon, CA 94583
USA

TABLE OF CONTENTS

List of Illustrations

Introducing Squiggle

Thank you for choosing Squiggle 5!

What Is Squiggle?

Squiggle 5 is the answer to frequent complaints about the dry nature of computer line drawings. With Squiggle 5, you can make your graphics more spontaneous and just plain fun. Clients will immediately see that your ideas are exciting.

Squiggle 5 is perfect for anyone who uses CAD programs to produce their designs; for example:

- Building and landscape architects.
- Urban planners.
- Ad designers.
- Interior designers.
- Theatrical set designers.
- Furniture manufacturers.
- Mechanical and industrial designers.
- Technical illustrators.
- Artists and other creative professionals.
- Home hobbyists.

Modern illustration tools and imaging technology provide a level of detail and precision that more traditional methods cannot match. Ironically, this very level of precision can impart a cold, "machine-generated" character to a designer's work that a client may find off-putting.

Figure 1-1. Typical CAD Drawing -- Before Squiggling

When you use an ink pen on a piece of paper, the strokes are thicker where the grain absorbs more ink, corners don't quite meet or cross, straight lines aren't quite straight and so on.

How Does Squiggle Work?

Squiggle 5 takes the lines in your drawings and applies random changes to them -- in a fraction of the time it would take to achieve this effect with a pen! Each line comes out slightly different so the results are not predictable. After all, neither is the human hand.

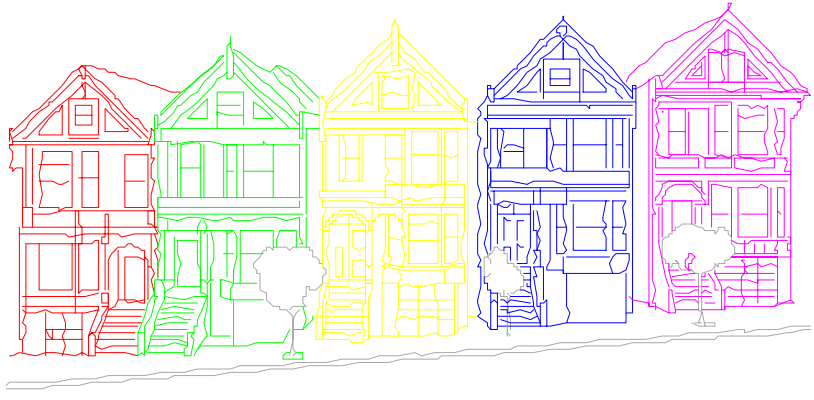


Figure 1-2. Typical CAD Drawing -- After Squiggling

Features

Squiggle 5 boasts many new features and performance enhancements, including:

- **Increased drawing support:** Except for the Squiggle algorithms themselves, Squiggle 5 has been completely rewritten. Squiggle 5 supports both DWG and DXF files created with all versions of AutoCAD® from Release 2.5 onward.
- **Improved exporting capabilities:** In addition to the BMP, GIF, TIFF and JPEG formats previously supported, Squiggle 5 adds support for Portable Network Graphics (PNG), the AutoCAD Drawing Web Format (DWF), and the increasingly-popular Scalable Vector Graphics (SVG) format. New exportable features include a user defined image size (in pixels), selectable number of colors (bits per pixel) and the ability to export GIF or PNG images with a transparent background.
- **Squiggle style settings based on pens or layers:** Squiggle 5 offers greater control over the results by enabling you to apply Squiggle styles to layers as well as to pen types (as in previous versions). If you have a drawing with two or more layers that use the same pen, you can Squiggle each layer independently to contrast them.
- **Ability to save squiggled drawings back into DWG or DXF formats:** Not only can you convert your DWG files to DXF and vice versa, but now you can save your squiggled drawing back to a DWG or DXF for use with your main CAD application.
- **Custom Squiggle styles stored as small files:** Easily move your custom Squiggle styles from one machine to another. Custom Squiggle styles are now saved as small individual files. This allows co-workers or others to quickly import your custom made styles.
- **Custom Pen Templates stored as small files:** Easily move your custom pen templates from one machine to another. Custom pen templates are now saved as small individual files. This allows co-workers or others to quickly import your custom made pen templates.
- **Improved handling of HPGL and HPGL/2 plot files:** Squiggle 5 offers greatly improved support for plot files in both HPGL and HPGL/2 formats.
- **A more consistent user interface:** We have streamlined the user interface of Squiggle 5 so that you can find the features you need more quickly and easily.

- **Squiggled entity selection:** With Squiggle 5, you can turn squiggling on or off for supported entity types (LINE, CIRCLE, ELLIPSE, ARC, POLYLINE, LWPOLYLINE and BLOCK/XREF).
- **Insight Plot Style Tables:** Insight Plot Style Tables let you override the pen properties defined in your drawing file before sending it to a plotter. For example, you can create an Insight Plot Style Table that uses custom lineweights not defined in the drawing file.

System Requirements

Squiggle 5 requires the following minimum system configuration:

- Windows 9x/ME/NT/2000/XP
- A 450-MHz or faster processor
- 128 MB RAM
- 20 MB disk space
- Pointing device (mouse, tablet etc.)
- A Windows-compatible printer or plotter

Less capable machines can run Squiggle 5, but the results may be less than ideal. Sufficient swap space is also required to handle any data or drawing files saved. Additional memory and/or a faster processor will directly improve performance and capacity.

Getting Started with Squiggle 5

This section guides you through the Squiggle 5 installation process and includes a brief "quick-start" procedure to help you familiarize yourself with the program.

Installing Squiggle 5

To install Squiggle 5:

1 **Download Version:** Locate the file you downloaded (**Squiggle5Setup.exe**) and double-click on its icon to launch the setup program. Continue with Step 3;

- OR -

CD-ROM Version: Insert the application CD-ROM into your CD drive. If your system is configured to auto-run CD-ROM discs, the Squiggle 5 setup program will launch automatically. Continue with Step 3.

2 Locate the file named **Autorun.exe** on the Squiggle 5 CD and double-click on its icon to launch the setup program.

3 Click the **Install Squiggle** button.

4 When the setup program Welcome Screen appears, click **Next**.

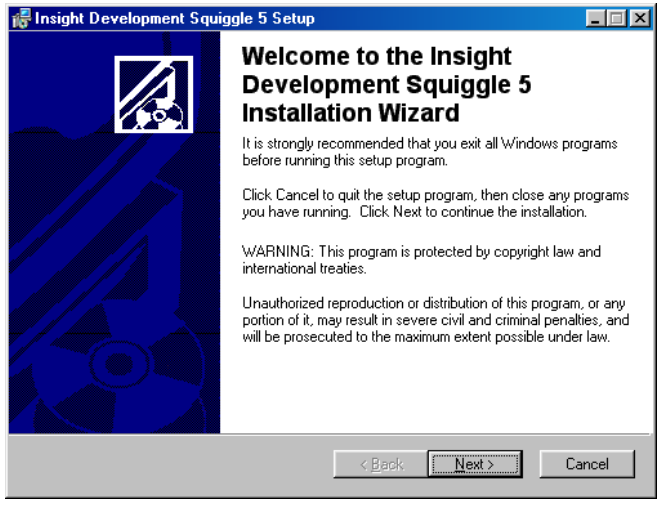


Figure 2-1. Squiggle 5 Setup Program - Welcome Screen

5 Read the Squiggle 5 license agreement and indicate your acceptance of its terms by clicking the top radio button.

6 Click **Next**.

7 Review the Squiggle 5 ReadMe file for up-to-date information about the specific version of Squiggle you are installing. Then, click **Next**.

8 Personalize your copy of Squiggle 5 by entering your full name and organization name.

9 Select a destination folder for Squiggle 5, or use the default destination (C:\Program Files\Insight Development\Squiggle\).

10 Click **Next** twice.

11 When the setup program finishes copying the program files to your system, click **Finish**.

Activating Squiggle 5

If you have access to the Internet, the easiest way to register and activate your copy of Squiggle 5 is by using our online registration form. Otherwise, you can call Insight Development Technical Support to obtain an Unlock Code that will allow you to activate the product.

You can also transfer your Squiggle 5 license to another machine. Refer to *Transferring A Licensed Copy of Squiggle 5 To Another Machine* for instructions.

Online Activation

To activate your copy of Squiggle 5 via the Internet:

1 Connect to the Internet, if you aren't already connected.

2 Launch Squiggle 5 by double-clicking the shortcut placed on your desktop during installation. Or, from the Start Menu, select **Programs -> Insight Development -> Squiggle -> Squiggle 5**.

3 When the Register Screen appears, **make a note of the serial number** displayed in the upper-right corner of the screen.

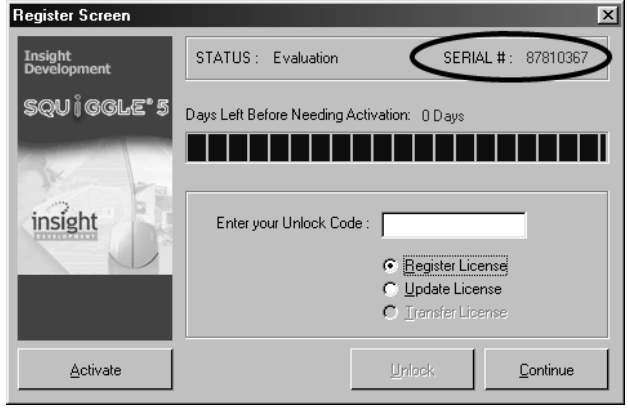


Figure 2-2. Squiggle 5 Register Screen

4 Click the **Activate** button.

5 Fill out the online registration form and click the **Submit** button.

6 When your registration information has been submitted successfully, you will see a confirmation message, along with instructions for completing the activation process. Follow the instructions on this page, then click the **Close** button.

7 Click **Continue** to begin using Squiggle 5!

Offline Activation

To activate your copy of Squiggle 5 offline:

1 Launch Squiggle 5 by double-clicking the shortcut placed on your desktop during installation. Or, from the Start Menu, select **Programs -> Insight Development -> Squiggle -> Squiggle 5**.

2 When the Register Screen (Figure 2-2) appears, **make a note of the serial number** displayed in the upper-right corner of the screen.

3 Call Insight Development at +925.244.2000 to obtain an Unlock Code. (You will be asked for your serial number.)

4 Enter the Unlock Code in the box provided.

5 Click the **Register License** radio button.

6 Click the **Unlock** button to begin using Squiggle 5!

Transferring A Licensed Copy of Squiggle 5 To Another Machine

To transfer your licensed copy of Squiggle 5 to another machine:

1 Launch Squiggle 5 by double-clicking the shortcut placed on your desktop during installation. Or, from the Start Menu, select **Programs -> Insight Development -> Squiggle -> Squiggle 5**.

2 Press and hold down the **<Shift>** key to display the Register Screen (Figure 2-2).

3 Click the **Transfer License** radio button.

4 Enter the current serial number in the box provided.

5 Click the **Transfer** button.

6 An alert appears, displaying a new, unique Unlock Code. **Make a note of the new Unlock Code** and click **OK**.

7 Make a note of the new serial number associated with the new Unlock Code.

8 Click the close ("X") button in the upper-right corner of the Register Screen, or the **Continue** button.

You can now install this copy of Squiggle 5 on another machine, using the new Unlock Code.

Quick Start

This section introduces you to Squiggle 5 by guiding you through some simple Squiggle operations.

1 From the File menu, select **Open...**

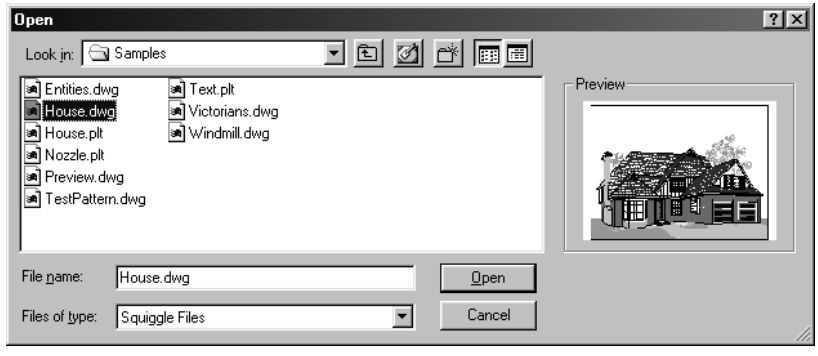


Figure 2-3. Squiggle 5 File Open Dialog

2 Select the sample file named "House.dwg" and click **Open**.

3 Do any of the following:

- Press **F5** on your keyboard;
- Click the Squiggle icon ( ) in the Toolbar;

- Select **Squiggle...** from the Tools menu;
- Right-click on the drawing window and select **Squiggle...** from the pop-up menu.

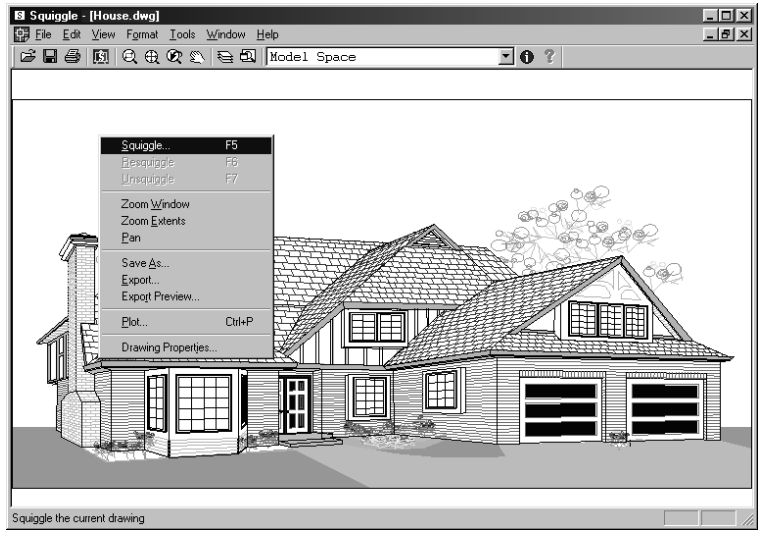


Figure 2-4. The Squiggle Right-Click Menu

4 Check the **Select All** box.

5 Right-click anywhere in the Style column and select the "Shaky" style.

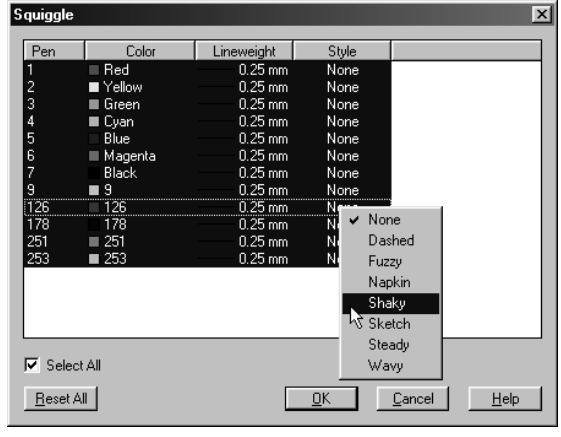


Figure 2-5. Applying the "Shaky" Style to All Pens

6 Click **OK** to see the effect of this style on the drawing.

Figure 2-6. Sample Drawing After "Shaky" Squiggling

7 If you like the overall effect of this style but want to see a variation:

- Press **F6** on your keyboard;
- Select **Resquiggle** from the Tools menu;
- Right-click on the drawing window and select **Resquiggle** from the pop-up menu.

8 To try a different style, repeat Steps 3 through 6 and select another style.

9 Once you are satisfied with the results, your Squiggle output is ready to use. You can send it to a printer or plotter, save the image as a squiggled DWG or DXF file or export the image in one of several popular file formats.

Congratulations! You have just squiggled your first project. To explore the powerful capabilities of Squiggle 5 in greater depth, continue with the next section.

Uninstalling Squiggle 5

Should you need to remove Squiggle 5 from your system for any reason:

1 From the Start Menu, select **Settings -> Control Panel**.

2 Double-click on **Add/Remove Programs**.

3 In the list of installed programs, scroll downward until "Insight Development Squiggle 5" is visible.

4 Click on "Insight Development Squiggle 5" to select it, then click **Add/Remove...**.

3 Squiggle Basics

Squiggling A Drawing

Select **Squiggle...** from the Tools menu to apply a Squiggle style to one or more pens (or layers) in your drawing. To choose a Squiggle method (by pens or by layers), select **Options...** from the Tools menu and click on the Squiggle tab.

Squiggling by Layers

If you have chosen Squiggle by Layers in the program options dialog, the Squiggle dialog looks like this:

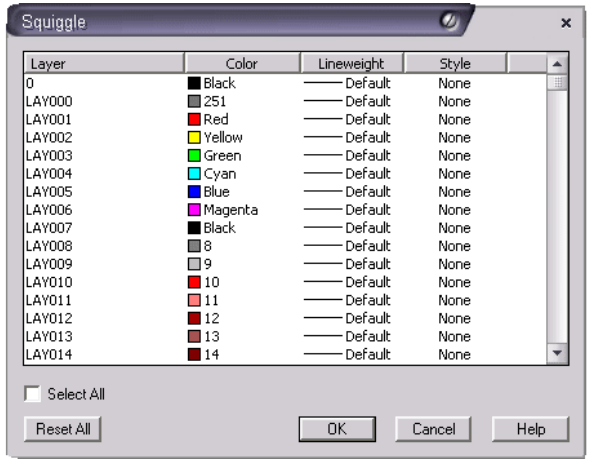


Figure 3-1. Squiggle By Layers Dialog

To Squiggle one or more layers:

1 Click on a layer name to select it. To select multiple layers, hold down the **<Ctrl>** or **<Shift>** key and click. To select all layers, check the **Select All** box.

   For each layer you wish to Squiggle, you can substitute a different color and/or lineweight for the output than that defined in the drawing for that layer.

   If you plan to use different colors, lineweights and/or styles on each Squiggled layer, select one layer at a time, make your choices and repeat as needed for the other layers.

2 Click on the **Color** column to select a new color for a layer.

3 Click on the **Lineweight** column to select a new lineweight for a layer.

4 Click on the **Style** column to select a Squiggle style for a layer.

Tip

To edit the Squiggle settings of a layer, left-click to bring up a dialog box, or right-click to bring up a pop-up menu.

To edit the Squiggle settings of multiple layers, hold down the ***<Shift>*** *key and left-click to bring up a dialog box, or right-click to bring up a pop-up menu. This will apply your choice to all selected layers.*

When you are finished, click **OK** to Squiggle your drawing.

Squiggling by Pens

If you have chosen Squiggle by Pens in the program options dialog, the Squiggle dialog looks like this:

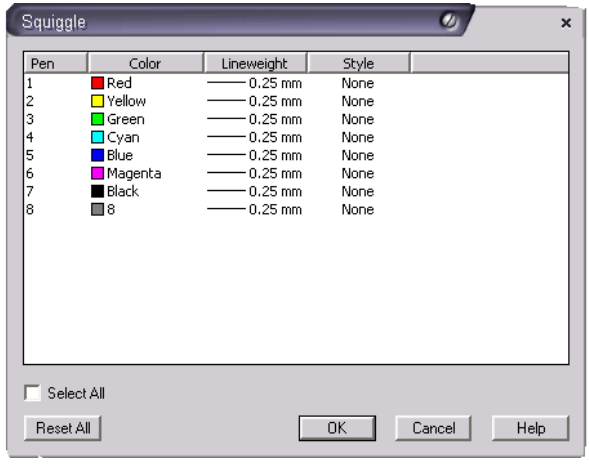


Figure 3-2. Squiggle By Pens Dialog

To Squiggle one or more pens:

1 Click on a pen number to select it. To select multiple pens, hold down the **<Ctrl>** or **<Shift>** key and click. To select all pens, check the **Select All** box.

   For each pen you wish to Squiggle, you can substitute a different color and/or lineweight for the output than that defined in the drawing for that pen.

   If you plan to use different colors, lineweights and/or styles on each Squiggled pen, select one pen at a time, make your choices and repeat as needed for the other pens.

2 Click on the **Color** column to select a new color for a pen.

3 Click on the **Lineweight** column to select a new lineweight for a pen.

4 Click on the **Style** column to select a Squiggle style for a pen.

Tip

To edit the Squiggle settings of a pen, left-click to bring up a dialog box, or right-click to bring up a pop-up menu.

To edit the Squiggle settings of multiple pens, hold down the ***<Shift>*** *key and left-click to bring up a dialog box, or right-click to bring up a pop-up menu. This will apply your choice to all selected pens.*

When you are finished, click **OK** to Squiggle your drawing.

Resquiggle/Unsquiggle

If you are generally satisfied with your Squiggled output, but want to see a variation on the style(s) you have chosen:

- Press **F6** on your keyboard;
- Select **Resquiggle** from the Tools menu;
- Right-click on the drawing window and select **Resquiggle** from the pop-up menu.

To restore a drawing to its pre-squiggled state, do one of the following:

- Press **F7** on your keyboard;
- Select **Unsquiggle** from the Tools menu;
- Right-click on the drawing window and select **Unsquiggle** from the pop-up menu.

Style

Select **Style...** from the Format menu to create, edit or import Squiggle styles.

Squiggle 5 provides seven preset Squiggle styles:

- Dashed
- Fuzzy
- Napkin
- Shaky
- Sketch
- Steady
- Wavy

You can apply one of these, create custom styles yourself or import styles created by other Squiggle 5 users.

Each Squiggle 5 style consists of a series of actions.

Dashed: The Dashed style looks like a fragmented, wiggled line. The style is comprised of three Squiggle actions:

Slide - 10, 0

Sputter - 20, 10

Wiggle - 50, 17

Figure 3-3. The "Dashed" Squiggle Style

Fuzzy: The Fuzzy style is an abstract multiple stroke line. The style is comprised of three Squiggle actions:

Sputter - 20, 10

Wiggle - 3, 40

Slide - 80, 0

Figure 3-4. The "Fuzzy" Squiggle Style

Napkin: The Napkin style looks like you are using a felt tip pen on a paper napkin. The style is comprised of three Squiggle actions:

Slide - 10, 10

Wiggle - 65, 16

Thicken - 30, 60

Figure 3-5. The "Napkin" Squiggle Style

Shaky: The Shaky style looks like you need to switch to decaf coffee. The style is comprised of two Squiggle actions:

Tilt - 10, 5

Wiggle - 45, 30

Figure 3-6. The "Shaky" Squiggle Style

Sketch: The Sketch style looks like a wiggled line with small inkblots at the ends of the lines. The style is comprised of three Squiggle actions:

Slide - 10, 0

Thicken - 5, 50

Wiggle - 45, 17

Figure 3-7. The "Sketch" Squiggle Style

Steady: The Steady style looks like an architect's steady hand. The style is comprised of one Squiggle action:

Wiggle - 47, 18

Figure 3-8. The "Steady" Squiggle Style

Wavy: The Wavy style looks like curving, bending lines. The style is comprised of two Squiggle actions:

Tilt - 5, 5

Bend - 30, 30

Figure 3-9. The "Wavy" Squiggle Style

Squiggle Actions

A Squiggle style consists of a sequence of one or more of the following actions:

- Bend
- Slide
- Sputter
- Thicken
- Tilt
- Wiggle

Each action is defined by two variables whose values range from 0 to 100. The higher the value, the more exaggerated the effect of that action will be. (Refer to *Tips and Tricks for Squiggle Actions* for some general action definition guidelines.)

Bend

Bend can waver or curl like an unsteady hand. Your original line is replaced by a series of lines that curve up (**Rise**) or down (**Fall**) along the same path.

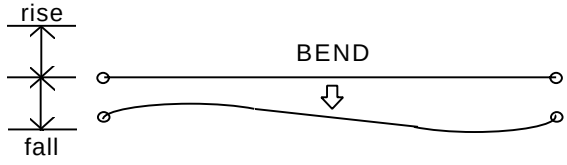


Figure 3-10. The "Bend" Action

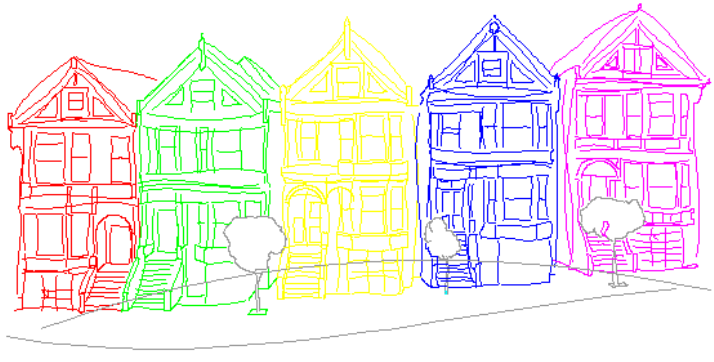


Figure 3-11. Typical Drawing After Applying the "Bend" Action

Slide

Slide looks like the stylized sketch where lines cross or don't quite meet. The ends of your original line are pulled back (**Under**) or pushed out (**Over**).

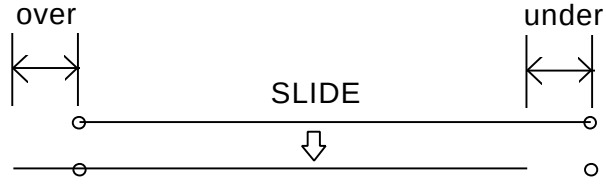


Figure 3-12. The "Slide" Action

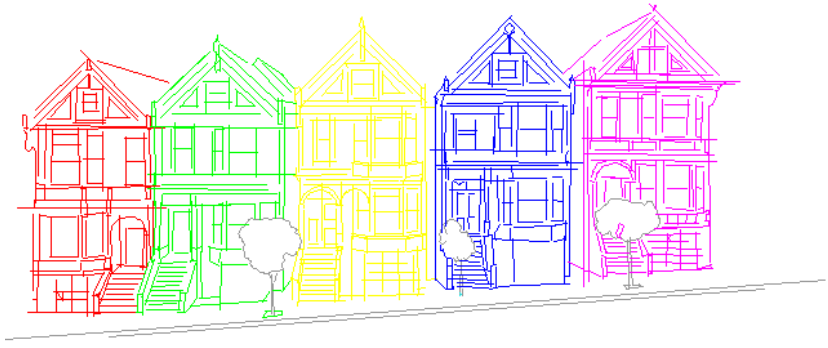


Figure 3-13. Typical Drawing After Applying the "Slide" Action

Sputter

Sputter looks like a scratchy pen that is running out of ink or can't write across a waxy spot on a piece of paper. Your original line is broken into a series of lines (**Draw**) and empty spaces (**Miss**).

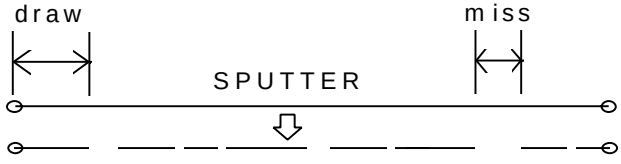


Figure 3-14. The "Sputter" Action

Figure 3-15. Typical Drawing After Applying the "Sputter" Action

Thicken

Thicken looks like pen work on absorbent paper where lines are thicker as you start and stop. The ends of your original line are more or less darker and thicker. Specify the maximum thickness (**Spread**) and the range over which Thicken applies (**Length**).

Figure 3-16. The "Thicken" Action

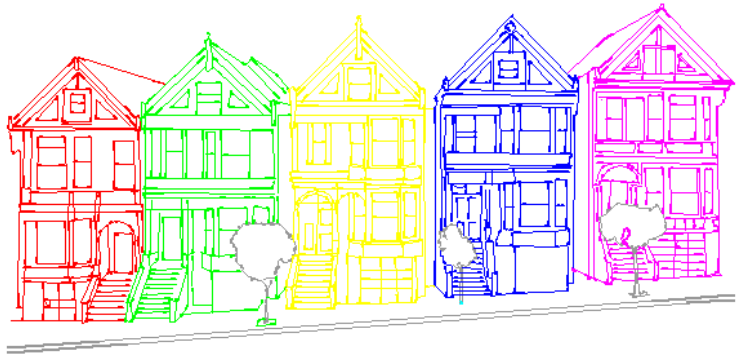


Figure 3-17. Typical Drawing After Applying the "Thicken" Action

Tilt

Tilt looks like a quick sketch done without a parallel rule. The ends of your original line slide along the line itself and tilt perpendicularly away from it.

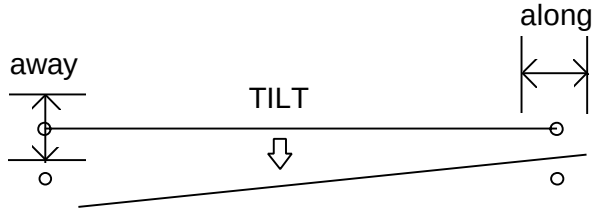


Figure 3-18. The "Tilt" Action

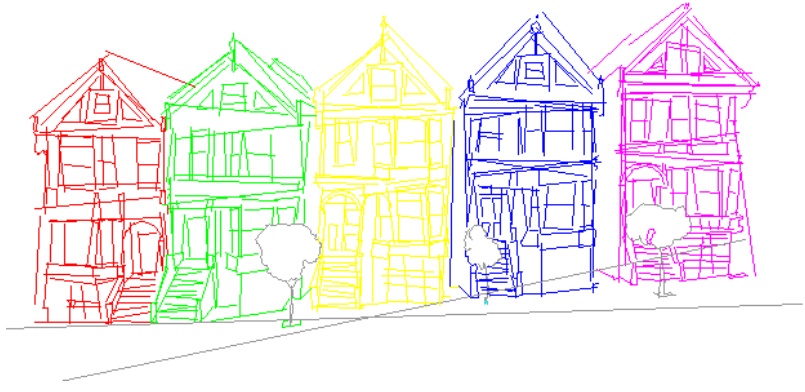


Figure 3-19. Typical Drawing After Applying the "Tilt" Action

Wiggle

Wiggle looks like a sketch done in a car as it bounces and sways. Your original line is broken into a series of lines. The shared ends of those new lines are then moved up or down perpendicular to the original line. Specify the Wiggle maximum draw range for the new lines (**Breakup**) and the maximum range of movement for the new line ends (**Bounce**).

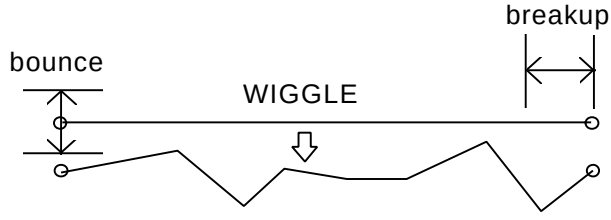


Figure 3-20. The "Wiggle" Action

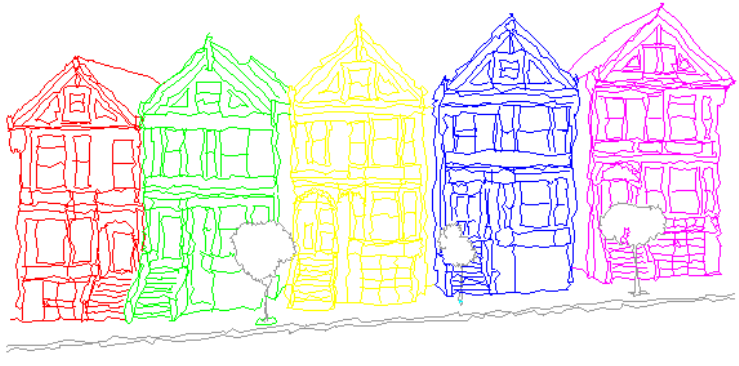


Figure 3-21. Typical Drawing After Applying the "Wiggle" Action

Tips and Tricks for Squiggle Actions

When you Squiggle a drawing, Squiggle 5 reads the list of actions for the selected style. The first action is performed and the results are passed along to the next action. In other words, **the action order is important!**

Picture a long straight line. If you use Slide then Wiggle, the result is a row of irregular lines longer overall than the original. If you use Wiggle then Slide, the result is a row of irregular lines with overlapping ends or ends that don't meet.

To see this for yourself, try changing the action order for the "Napkin" style.

1 Select **Style...** from the Format menu.

2 Select the "Napkin" style in the **Name:** drop-down menu.

3 Select the first action, Slide, in the action order list.

4 Click **Move Down** button.

5 Notice how the sample graphic reflects this change.

The best way to determine the action settings and action order that give you the results you want is through trial and error. To maximize trial and minimize error, here are some guidelines:

Bend: Set Rise or Fall to 0 for a scalloped effect. Set both greater than 0 for wavy effects.

Apply other actions like Wiggle or Sputter before Bend. Because Bend produces lots of little lines to make up the curves, subsequent actions will seem to have little (if any) effect on each of those little lines.

Slide: Set Under to 0 for an architectural drafting style where lines always meet or cross at intersections. Set Over to 0 so that no lines ever quite meet.

Tilt: Set Away to a high number and Along to 0 when you want to preserve the length of original lines but scatter them like straw.

Wiggle: Set Bounce to a high number and Breakup to a low number when you want to crumple lines like accordion pleats.

Viewing Your Drawing

Layouts

Select **Layouts...** from the View menu to switch between layouts defined in the drawing file. Highlight the layout you wish to use and click **OK**.

You can also use the Layouts drop-down menu in the standard toolbar.

Named Views

Select **Named Views...** from the View menu to switch between named views defined in the drawing file. (You can also click on the Named Views icon () in the standard toolbar.)

Highlight the named view you wish to use and click **OK**.

Zooming, Panning and Rotating

Select **Zoom**, **Pan** or **Rotate** from the View menu to view your drawing from various distances, locations and/or angles. (You may find it easier to use the Squiggle Toolbars to perform these actions.)

Layer

Select **Layer...** from the Format menu to manage drawing layers and adjust layer properties.

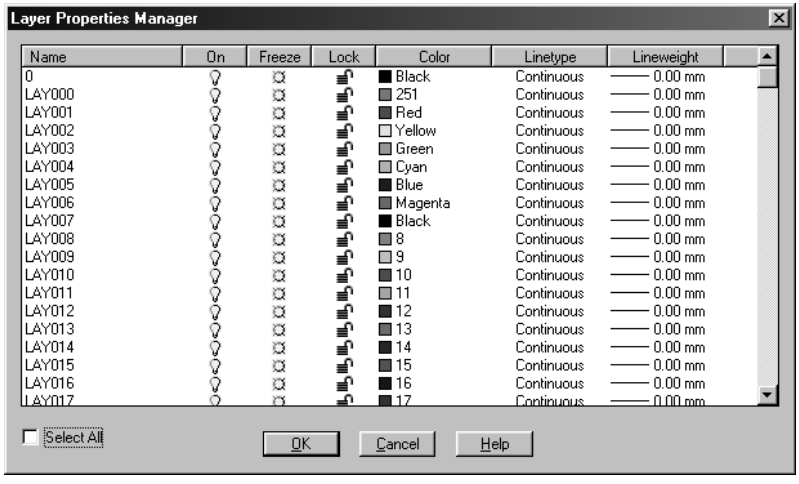


Figure 4-1. Layer Properties Manager Dialog

Click on a layer name to select it. To select or change display properties for multiple layers, hold down the **<Ctrl>** or **<Shift>** key and click. To select all layers, check the **Select All** box.

This dialog box gives you the following options:

On: Click on this column to show ( ) or hide ( ) a layer.

Freeze: Click on this column to freeze ( ) or thaw ( ) a layer. Squiggle 5 hides frozen layers and ignores the data on them whenever it needs to recalculate the on-screen image. This can help speed up screen redraws.

Lock: Click on this column to lock ( ) or unlock ( ) a layer.

Color: Click on the **Color** column to select a new color for a layer.

Linetype: Click on the **Linetype** column to select a new linetype for a layer.

Note

Squiggle 5 only works with linetypes stored in the drawing. It cannot add new linetypes.

Lineweight: Click on the **Lineweight** column to select a new lineweight for a layer.

Tip

To edit the properties of a layer, left-click to bring up a dialog box, or right-click to bring up a pop-up menu.

*To edit the properties of multiple layers, hold down the **<Shift>** key and left-click to bring up a dialog box, or right-click to bring up a pop-up menu. This will apply your choice to all selected layers.*

Lineweight

Select **Lineweight...** from the Format menu to set the default lineweight and change how lineweights are displayed.

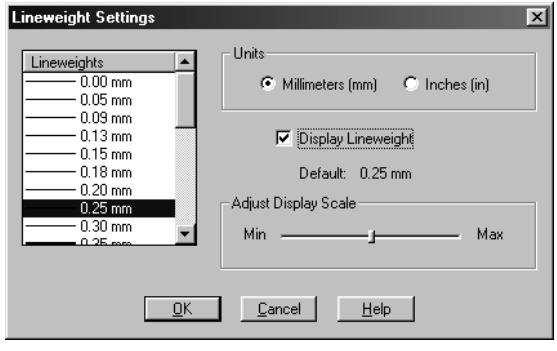


Figure 4-2. Lineweight Settings Dialog

To make such changes globally, use the Squiggle 5 program options dialog.

Outputting from Squiggle

Export

Use the **Export** command to convert a Squiggle drawing to another format. To preview the exported image and adjust the export settings beforehand, use the Export Preview command.

Export Preview

The **Export Preview** command shows you beforehand what your exported image will look like, and allows you to optimize the image to maximize the quality while minimizing the size of the exported file.

Format: Choose the desired format for the exported image -- BMP, GIF, PNG, JPEG, TIFF, DWF or SVG.

Colors: If you know that your drawing contains fewer than 256 colors (or 216, in the case of the Web palette), you can reduce the exported file size by selecting a subset of the chosen palette.

Dither: Dithering creates adjacent pixels of different colors to simulate a new color. Dithering creates the appearance of more colors and more detail in an image, but may also result in a larger file.

If your drawing has lots of continuous-tone colors (gradients), it may require dithering to prevent color banding and loss of detail in the exported image. Drawings consisting mainly of solid colors generally do not require dithering.

Scale: Click and drag on the **Percent** slider to reduce or enlarge the exported image. To retain the aspect ratio (proportions) of the original, leave the **Constrain** box checked.

Enlarging the exported image will result in a loss of resolution.

Pan/Zoom: To position the desired viewing area in the preview window, click the **Pan** button, then click and drag with the mouse in the window.

To zoom in on the preview image, click the **Zoom** button, then click repeatedly on the preview window. Or, to zoom in or out, use the drop-down menu to select a zoom level.

Note

Zooming in or out on the preview image does not affect the exported results.

When you are satisfied with the preview, click the **Export...** button. In the dialog that appears, type a name for the file (you can omit the extension), select a destination and click **Save**.

Viewing Exported DWF and SVG Files: The Autodesk Drawing Web Format (DWF) and the Scalable Vector Graphics Format (SVG) are two popular standards for displaying and manipulating vector-based graphics within a web browser. Squiggle 5 can export drawing files in either format.

Doing so allows you to share squiggled drawings with colleagues who don't use CAD software; they need only a web browser and the necessary third-party software:

- For viewing exported DWF files: a stand-alone viewer such as Volo™ View Express or a browser plug-in such as the WHIP! ActiveX Control will suffice. Both are freely available from Autodesk.
- For viewing exported SVG files, Adobe Systems offers an SVG Viewer Plug-In on its web site.

The Squiggle 5 CD-ROM includes installer programs for both the WHIP! ActiveX control and the Adobe SVG Viewer Plug-In.

Save As

Use the **Save As** command to save a Squiggle document (DXF, DWG or PLT) as either a DWG or DXF file.

Save As allows you convert files to a format recognized by older CAD programs (for example, AutoCAD Release 2.5 and later), should you need to do so.

The default file format for the **Save As** command is AutoCAD 2000/ 2002 DWG. To change this, use the program options dialog.

Copy to Clipboard

The Edit menu has a single command: Copy to Clipboard. From the Clipboard, your Squiggled drawing can be pasted into most Windows applications.

Plot

Use the **Plot** command to adjust plotting options and plot your drawing. (To preview the plotted image before sending it to the plotter, use the Plot Preview command.)

Plot Settings:

- **Paper Size/Units:** Select a paper size for your output. The available choices may vary from one plotter model to another.
- **Drawing orientation:** Select Portrait or Landscape orientation for your output. To plot the drawing upside-down, check the box.
- **Plot Area:** Choose **Extents** to scale the plotted image to fit within the page margins. Choose **Display** to plot what is currently displayed on the screen.
- **Options:** To plot the drawing in black and white, check the box.

Click **OK** to send your drawing to the plotter.

Plot Preview

The **Plot Preview** command shows you beforehand what your plotted image will look like, and gives you the following output options:

Plot Area: Choose **Extents** to scale the plotted image to fit within the page margins. Choose **Display** to plot what is currently displayed on the screen.

If both the Squiggle program window and the drawing window are maximized, both of these settings produce the same output.

Drawing orientation: Select Portrait or Landscape orientation for your output. To plot the drawing upside-down, check the box.

Options: To plot the drawing in black and white, check the box. For multiple copies, enter a new value in the box labeled **Number of copies**.

Click the **Plot** button to send your drawing to the plotter.

Page Setup

Use the **Page Setup** command to select a plot device and set other default output options.

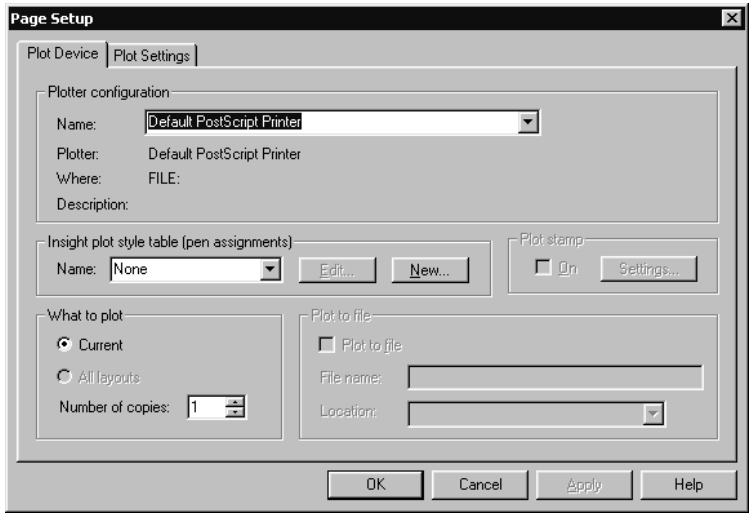


Figure 5-1. Page Setup Dialog - Plot Device Options

Plot Device Options:

- **Plotter configuration:** This area of the dialog shows you the currently-selected output device, the output destination (printer port or file) and a description of the device, if one was entered when the device was installed on your system.

  Use the drop-down menu to select a different output device.

- **Insight Plot Style Table:** Insight Plot Style Tables let you override the pen properties defined in your drawing file before sending it to a plotter. For more about plot style tables, refer to *Insight Plot Style Tables* in Chapter 6, *Customizing Squiggle*.

- **What to plot:** For multiple copies, enter a new value in the box labeled **Number of copies**.

Click **OK** to save your settings.

6 Customizing Squiggle

Custom Styles

If a preset Squiggle style doesn't give you the results you want, you can create your own. (Refer to *Tips and Tricks for Squiggle Styles* for some general style creation guidelines.)

To create a custom Squiggle style:

1 Select **Style...** from the Format menu. Or, select **Squiggle...** from the Tools menu and left-click anywhere in the Style column.

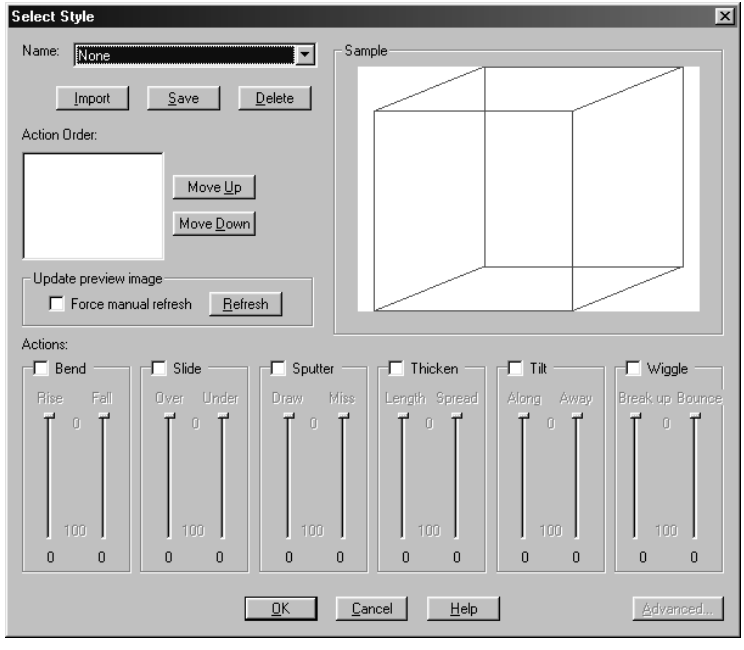


Figure 6-1. Select Style Dialog

2 Select an action by checking the box next to its name.

3 To adjust the parameters for that action, drag the sliders using the mouse. Notice how the sample image is redrawn to give you an idea of the effect of the action.

*To force the preview image to be refreshed manually, check the **Force manual refresh** box. Subsequent changes to the action order or action settings are not reflected in the preview image until you click the **Refresh** button.*

4 Repeat Steps 2 and 3, as desired.

5 To change the order in which Squiggle 5 performs the actions, select one in the **Action Order:** list and click the **Move Up** or **Move Down** button.

6 When you are finished defining your custom style, click **Save**.

7 In the dialog box that appears, type a name for the style definition file (you can omit the extension), select a destination and click **Save**.

Tips and Tricks for Squiggle Styles

Squiggle styles always produce random effects. However, certain kinds of input data will influence the way these styles look on your data.

Line Lengths: The longer the lines in your input data, the less effect you'll see after squiggling. The opposite is also true. A style that has little or no apparent effect on longer lines will appear "busy" on very short ones.

Line Direction: All lines have a start and a finish. Squiggle 5 applies a style starting at one end of each line and continues to the end. Some Squiggle styles will look different on two parallel lines that were drawn in opposing directions.

Data Complexity: If your drawing contains lots of lines that are close together, the effect may look more jumbled than it would on simpler, more sparse data.

Realism: Finely-drafted and very accurate objects may quickly become unrecognizable with the more exuberant styles. To retain this quality, consider creating a custom style consisting of fewer and/or more subtle actions.

Importing Squiggle Styles

You can also import styles created by other Squiggle 5 users. Squiggle 5 saves style definitions as small files with an ".sqg" extension.

To import a Squiggle style:

1 Select **Style...** from the Format menu. Or, select **Squiggle...** from the Tools menu and left-click anywhere in the Style column.

2 Click the **Import** button.

3 Locate the style definition file on your local machine or network using the dialog.

4 Highlight the file and click **Open**. The imported style will be available to you the next time you Squiggle.

Pen Templates

Pen templates are a simple yet powerful way to establish drafting or presentation standards.

A pen template defines a standard set of pens in terms of RGB color value, lineweight and Squiggle style. Once you create a pen template, you can apply it to each new file in a project or make it available to anyone who is working on similar documents.

You can establish pen templates as office standards for different drawing sizes or design phases, brochures or other publications.

To create, edit or import pen templates, select **Pen Templates...** from the Format menu. Squiggle 5 provides a default "AutoCAD" pen template. You can also import pen templates created by others, or create your own.

To create a new pen template:

1 Click **New...**

2 Enter your name (and/or company name) and a short description of your pen template.

3 Click **OK**.

4 Type a name for the pen template file and click **Save**.

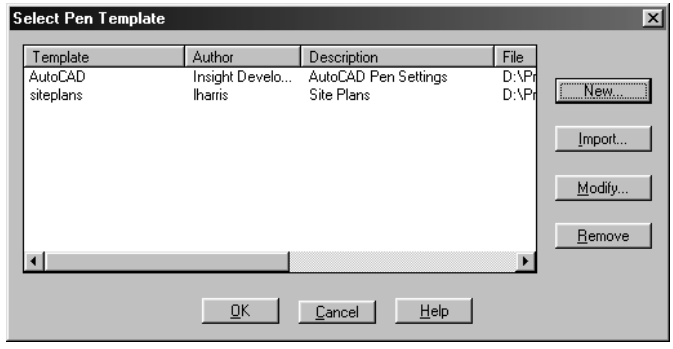


Figure 6-2. Select Pen Template Dialog

5 Select the pen template you just created and click **Modify...**

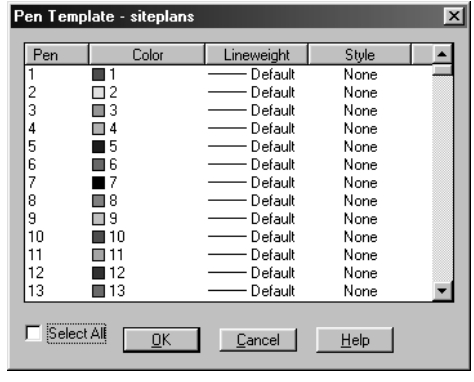


Figure 6-3. Pen Template Editor Dialog

6 Click on a pen number to select it. To select multiple pens, hold down the **<Ctrl>** or **<Shift>** key and click. To select all pens, check the **Select All** box.

7 Click on the **Color** column to select a new color for a pen.

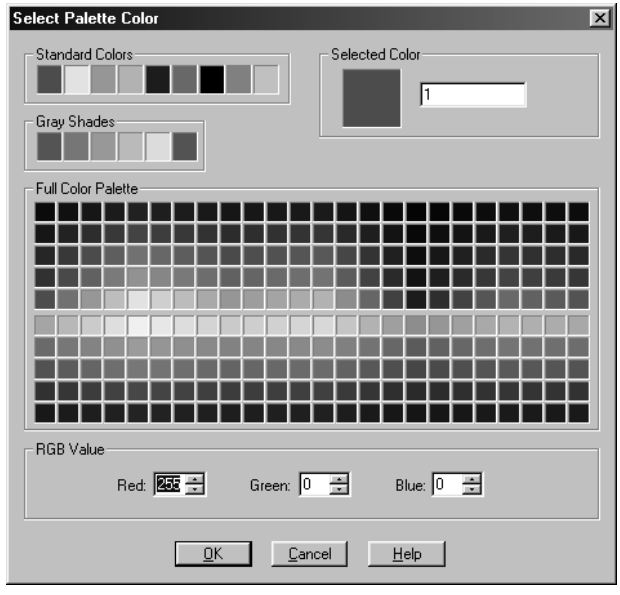


Figure 6-4. Pen Template Editor - RGB Color Picker Dialog

8 Click on the **Lineweight** column to select a new lineweight for a pen.

9 Click on the **Style** column to select a Squiggle style for a pen.

Tip

To edit the properties of a pen, left-click to bring up a dialog box, or right-click to bring up a pop-up menu.

*To edit the properties of multiple pens, hold down the **<Shift>** key and left-click to bring up a dialog box, or right-click to bring up a pop-up menu. This will apply your choice to all selected pens.*

When you are finished, click **OK** to save the changes to your pen template.

To make the pen template you just created active, select it in the list and click **OK**.

Insight Plot Style Tables

Insight Plot Style Tables let you override the pen properties defined in your drawing file before sending it to a plotter. For example, you can create an Insight Plot Style Table that uses custom lineweights not defined in the drawing file. Doing so does not alter the original drawing file in any way.

Overriding pen lineweights can affect the results of certain actions. For example, the "Fuzzy" and "Sketch" styles use the Thicken action, which in turn changes the lineweight of a squiggled line.

To create an Insight Plot Style Table:

1 Click **New...** in the Page Setup dialog to display the Plot Style Table Editor.

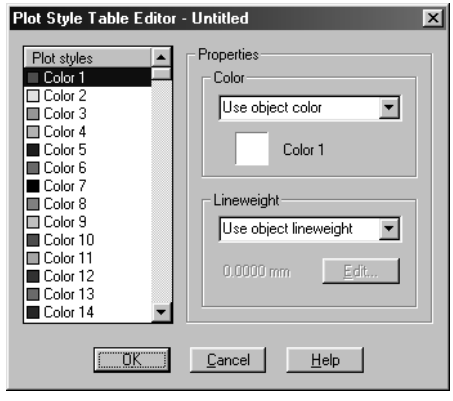


Figure 6-5. Plot Style Table Editor Dialog

2 Select a pen in the list on the left.

3 To substitute a different pen color, select one using the **Color** drop-down menu. (Select **Custom Color** to specify an RGB value.)

4 To substitute a different lineweight, select "Custom Lineweight" using the **Lineweight** drop-down menu. Click **Edit...** and enter the desired lineweight for that pen.

5 Repeat Steps 2 through 4, as desired. When you are finished, click **OK**.

6 In the dialog that appears, type a name for the plot style file (you can omit the extension), select a destination and click **Save**.

To use the new plot style table, select it using the drop-down menu. To make further changes to it, click the **Edit...** button.

Entity Types

Select **Entity Types...** from the Format menu to enable or disable Squiggling of all entities of a given type in the current drawing. (To make such changes globally, use the Squiggle 5 program options dialog.)

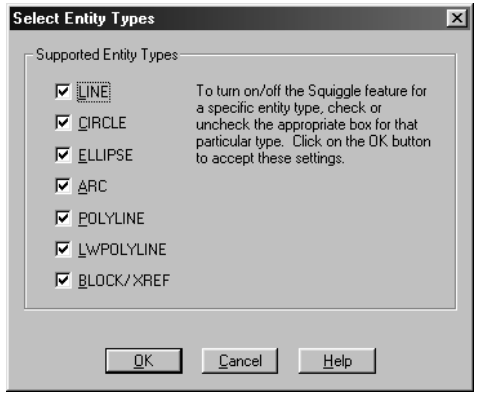


Figure 6-6. Select Entity Types Dialog

By default, Squiggle 5 acts on all entity types in a drawing. To exclude all entities of a given type from Squiggling, uncheck the box for that entity type.

Click **OK** to confirm your selections.

Options

Select **Options...** from the Tools menu to configure global Squiggle 5 program options. These options will be saved and used the next time you use Squiggle.

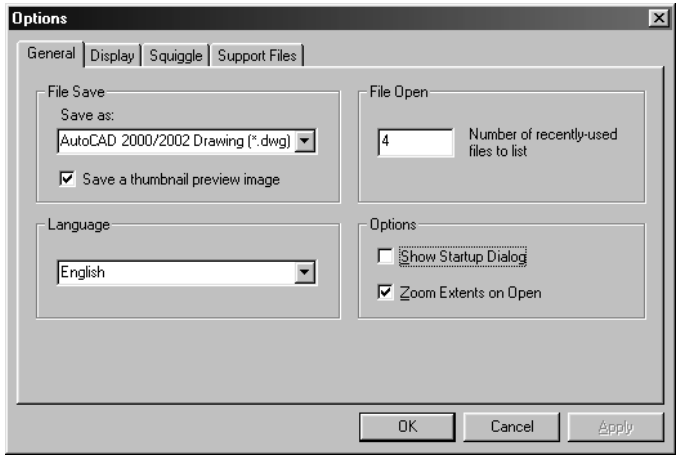


Figure 6-7. General Options Dialog

General: This dialog provides the following options:

- **File Save:** Select a default file format for the **Save As...** command. (You can still select a different format each time you save a drawing.) To save a thumbnail preview image with the drawing, check the box so labeled.
- **File Open:** Specify how many recently-opened files you want to appear in the **File** menu. The default is 4.
- **Options:** If you want to zoom to the drawing extents when you open it, check the box. Similarly specify whether or not you want Squiggle 5 to display the startup dialog when you launch the program.

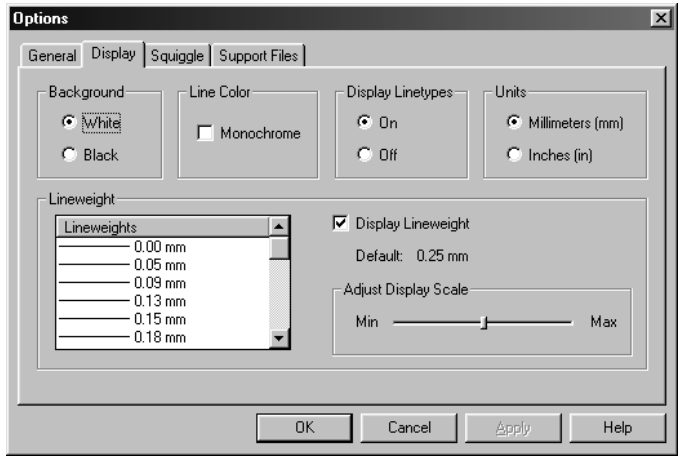


Figure 6-8. Display Options Dialog

Display: This dialog provides the following display-related options:

- **Background:** Choose the desired background color (white or black).
- **Line Color:** Check the **Monochrome** box to suppress display of line colors.
- **Display Linetypes:** To turn the display of linetypes on or off, click the appropriate radio button.
- **Units:** To specify lineweights in millimeters or inches, click the appropriate radio button.
- **Lineweight:** Use these options to change the default lineweights or adjust the display scale to affect how lineweights are displayed.

The "Adjust Display Scale" setting has no affect on printed output.

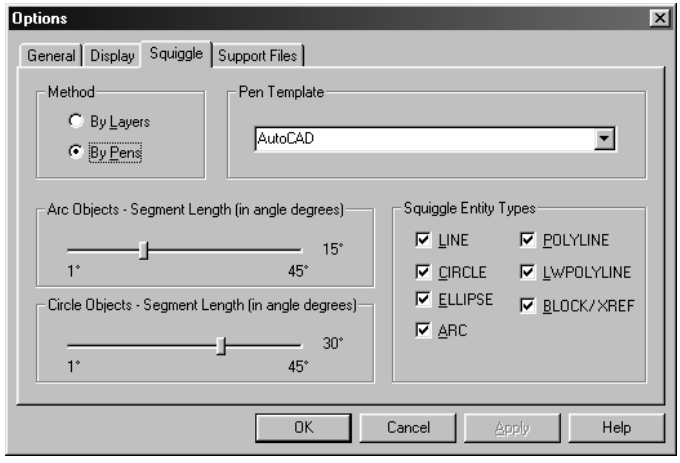


Figure 6-9. Squiggle Options Dialog

Squiggle: Use this dialog to control the behavior of the Squiggle function. It provides the following options:

- **Method:** Choose **By Pens** if you want to apply Squiggle styles to all lines drawn with a given pen (regardless of the layer on which they appear).

  For greater control over the results when working with multi-layered drawings, choose **By Layers**. Unlike squiggling by pens, squiggling by layers allows you to contrast multiple layers that use the same pen type.

- **Pen Template:** Select a pen template to use as a basis for identifying pens in the Squiggle dialog.

- **Arc Objects - Segment Length:** Use this slider to increase or decrease the effect of squiggling on arc objects. A small value produces a more obvious result than a larger one.

  For example, with the default setting of 15 degrees, Squiggle 5 treats a semicircle as 12 curved line segments. The maximum value (45 degrees) causes Squiggle to treat that same semicircle as four curved line segments, resulting in a more subtle effect.

- **Circle Objects - Segment Length:** Use this slider to increase or decrease the effect of squiggling on circle objects. A small value produces a more obvious result than a larger one.

  For example, with the default setting of 30 degrees, Squiggle 5 treats a circle as 12 curved line segments. The maximum value (45 degrees) causes Squiggle to treat that same circle as eight curved line segments, resulting in a more subtle effect.
- **Squiggle Entity Types:** By default, Squiggle 5 acts on all supported entity types in a drawing. To exclude all entities of a given type from Squiggling, uncheck the box for that entity type.

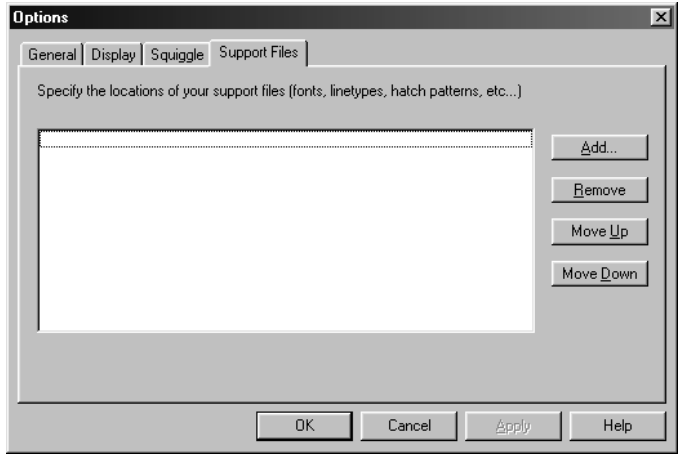


Figure 6-10. Support Files Options Dialog

Support Files: If necessary, indicate the location(s) of the support files (fonts, linetypes, hatch patterns and such) associated with your CAD program. To change the order in which Squiggle 5 searches these locations for the support files it needs, use the **Move Up** and **Move Down** buttons.

Click **OK** to save your option settings.

Troubleshooting

We have tried to make using Squiggle 5 as easy and trouble-free as possible.

If you do run into problems that you cannot resolve on your own, contact the Insight Development Technical Support Group via e-mail at **support@insightdev.com**, or call +925.244.2000.

Common Squiggle 5 Issues

Here are some common issues that you may encounter with Squiggle 5, along with their suggested corrective action(s).

IMAGE Entities In A Drawing Are Not Visible

Squiggle 5 does not currently support the IMAGE entity. Although this entity will still be part of the drawing, it will not be visible. If you need this capability, save your squiggled drawing back to a DWG or DXF file and use your original CAD application to work on the drawing.

Text and Hatch Patterns Do Not Squiggle

Squiggle 5 does not support modifying all AutoCAD entities. When using a drawing in Squiggle that contains unsupported items you wish to modify (such as text or hatch patterns), the best solution is to generate a plot file and open the HPGL or HPGL/2 file in Squiggle. Or, use the "explode" feature of AutoCAD to convert unsupported entities into lines which can then be modified by Squiggle.

Squiggling Produces Very Large Files

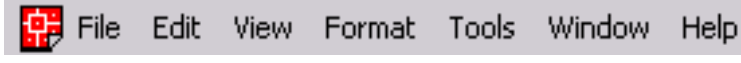
It is normal behavior for Squiggle 5 to produce a file that is larger than the input one. In extreme cases, however, this may overflow your plotter or printer. If this occurs, try again with a less complex Squiggle style.

Squiggle 5 Menus, Toolbars and Keyboard Shortcuts

This Appendix provides an overview of the Squiggle 5 menus, toolbars and keyboard shortcuts.

Squiggle Menus

Squiggle 5 commands and functions are grouped into seven menus:



You can access a subset of the commands in these menus by right-clicking on a Squiggle drawing window.

You can use these menus to interact with Squiggle 5, or if you prefer, you can use the toolbars and/or keyboard shortcuts.

Squiggle 5 Menu Command Summary

Menu	Description		Keyboard Shortcut
File	Manage basic Squiggle processes.		
	Open...	Open a drawing file.	**<Ctrl>+O**
	Close	Close the current drawing file.	
	Close All	Close all open files.	
	Save As...	Save current drawing as a DWG or DXF file.	
	Export...	Convert current drawing to another format.	
	Export Preview...	Adjust export settings, preview image and convert current drawing to another format.	
	Plot...	Adjust plotting options and plot a drawing.	**<Ctrl>+P**

Squiggle 5 Menu Command Summary (continued)

Menu	Description		Keyboard Shortcut
	Plot Preview...	Adjust plotting options, preview output and plot a drawing.	
	Page Setup...	Select a default output device, plot style table and other output options.	
	Drawing Properties...	View information about the current drawing file.	
	(recently-opened files)	Quickly access recently-opened files.	
	Exit	Exit Squiggle 5.	
Edit	Copy to Clipboard	Copy the current drawing to the Windows clipboard.	**<Ctrl>+C**

Squiggle 5 Menu Command Summary (continued)

Menu	Description		Keyboard Shortcut
View	View your drawing from various distances, locations and/or angles; show/hide toolbars.		
	Redraw	Refresh the display.	
	Regen	Regenerate the drawing and refresh the current view.	
	Zoom	Change the apparent size of objects in the drawing window.	
	Pan	Change the viewable area of the drawing in the window.	
	Rotate	Rotate the drawing.	
	Layouts...	View or switch between layouts defined in the drawing file.	
	Named Views...	View or switch between named views defined in the drawing file.	
	Toolbar	Show or hide the Standard, Pan, Zoom and Rotate toolbars.	
	Status Bar	Show or hide the Status bar.	

Squiggle 5 Menu Command Summary (continued)

Menu	Description		Keyboard Shortcut
Format	Manage styles, pen templates, layers and other drawing elements.		
	Style...	Import, create, edit or delete Squiggle styles.	
	Pen Templates...	Import, create, edit or delete pen templates.	
	Entity Types...	Enable or disable the Squiggle function for specific entity types.	
	Layer...	View and change drawing layer properties.	
	Lineweight...	Set the default lineweight, lineweight display options and lineweight units.	
Tools	Set default Squiggle 5 options; manage/apply Squiggle styles.		
	Squiggle...	Squiggle a drawing file.	**F5**
	Resquiggle	Repeat last Squiggle operation.	**F6**
	Unsquiggle	Restore a drawing to its "pre-squiggled" state.	**F7**
	Options...	Configure Squiggle 5 default settings.	**F10**

Squiggle 5 Menu Command Summary (continued)

Menu	Description		Keyboard Shortcut
Window	Arrange open drawing windows within the Squiggle program window.		
	Cascade	Arrange windows in an overlapping fashion.	
	Tile Horizontally	Arrange windows top to bottom.	
	Tile Vertically	Arrange windows side by side.	
	(list of open files)	Switch from one open drawing to another.	
Help	Information and resources for Squiggle 5 users.		
	Squiggle Help...	Access Squiggle 5 online help.	**F1**
	What's New	View brief descriptions of new features in Squiggle 5.	
	Getting Started...	Helpful information for users new to Squiggle 5.	
	Support	Squiggle 5 technical support resources.	
	Insight on the Web	Go to the Insight Development web site.	
	About Squiggle...	View information about your version of Squiggle.	

Squiggle Toolbars

If you prefer, you can use Squiggle 5's numerous toolbars to get around the program. Select **Toolbar->** from the View menu to show or hide the individual toolbars.

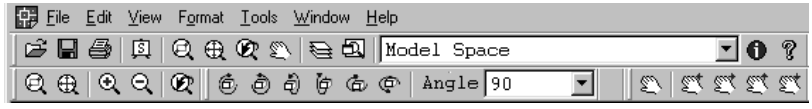


Figure A-1. Squiggle Toolbars

Standard

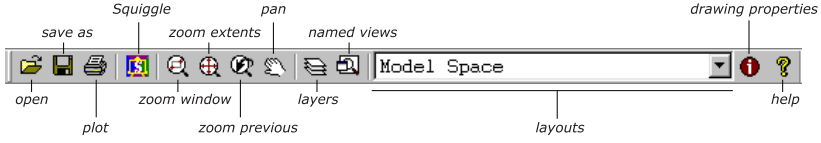


Figure A-2. Standard Toolbar

Zoom

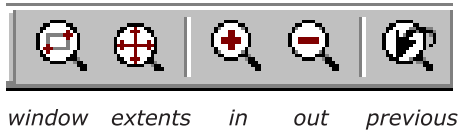


Figure A-3. Zoom Toolbar

Pan

Figure A-4. Pan Toolbar

Rotate

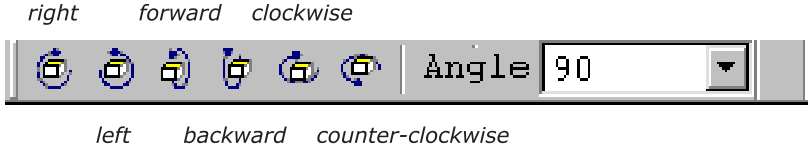


Figure A-5. Rotate Toolbar

Keyboard Shortcuts

Here are some additional keyboard shortcuts you may want to keep in mind, in addition to those listed at the beginning of this section:

- To switch between open document windows, press **<Ctrl>+<Tab>**. Or, use **<Alt>-W** followed by the window number shown in the Window menu (for example, 1 for the first drawing you opened).
- To switch between "layers" in tabbed dialog windows (such as the Tools -> Options dialog), press **<Ctrl>+<Tab>**.
- All Squiggle 5 commands have been implemented as "Alt" key sequences; for example:
  - Drawing Properties = **<Alt>-F-I**
  - Show/Hide Toolbars = **<Alt>-V-T**
  - Squiggle = **<Alt>-T-S**
  - Unsquiggle = **<Alt>-T-U**

  In each sequence, the first keystroke after the **<Alt>** key represents the menu; the second represents the command or sub-menu. For each menu and command name, the corresponding **<Alt>** keystroke is underlined (for example, "F<u>o</u>rmat").

Index