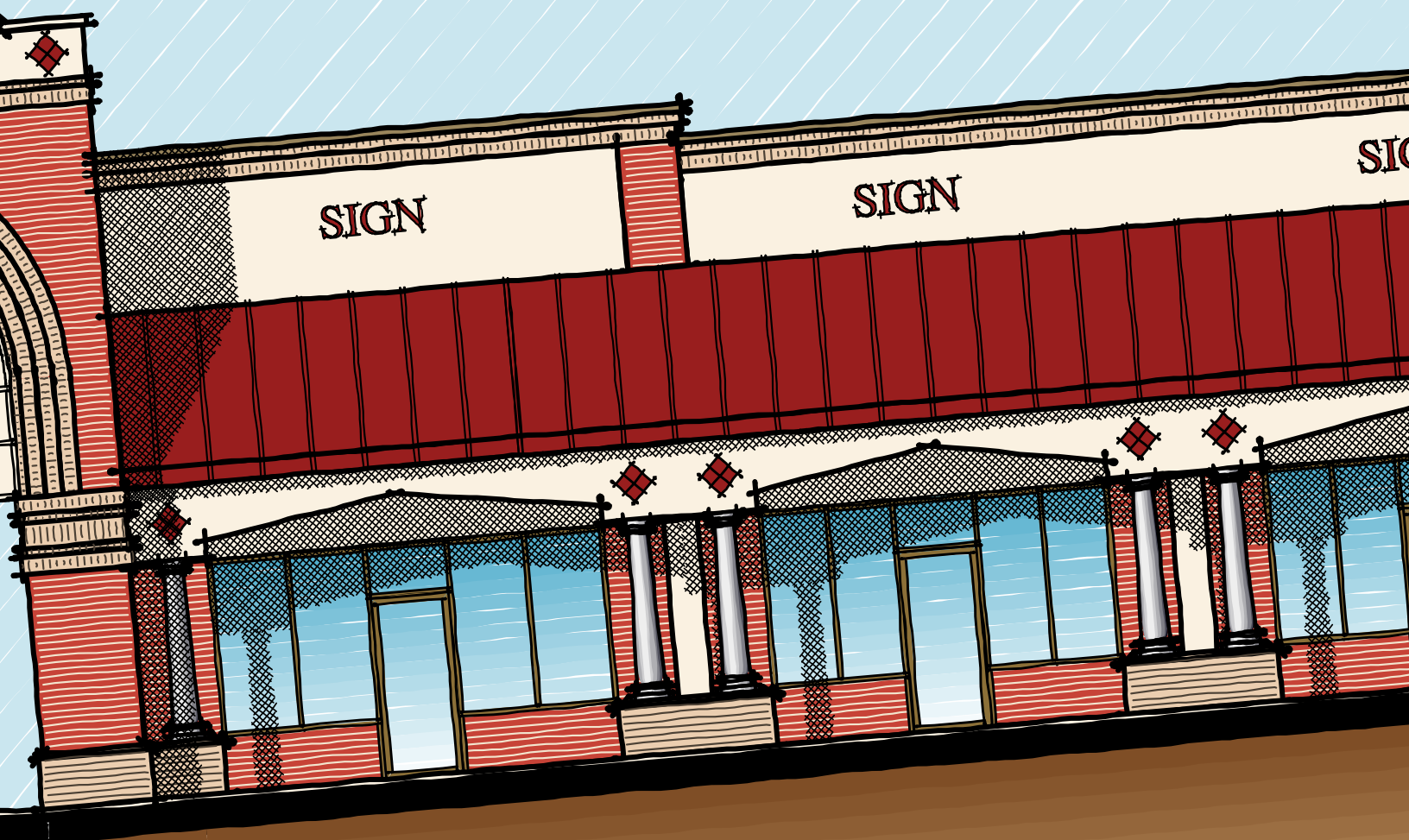


PanzerCAD



**Plug-in Version 11  
For VectorWorks 11, 12, 2008, 2009 or 2010**



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## **WHAT'S NEW IN DOODLE! 11:**

Preview Doodle Style:

Shows a preview image of the desired Doodle Style.

Doodle Pen Color Option:

Allows a custom pen color for all doodled lines (including doodle hatch lines).

More “human” Doodle Hatches and Marker Fills. The hatch lines and marker strokes are not perfectly parallel creating a bit more of a human look.

## **REQUIREMENTS:**

1. Macintosh Version: Vectorworks 11, 12, 2008, 2009, or 2010 for Macintosh

Windows Version: Vectorworks 11, 12, 2008, 2009, or 2010 for Windows

2. Since Doodle is run directly inside Vectorworks, it uses the same RAM that Vectorworks uses. The required RAM partition for Vectorworks is dependent on the size and types of drawings, and the amount of effects used in Doodle.

NOTE: The “Pen Hatch” and “Marker Fill” effects are very processor intensive. Doodle time and RAM requirements can be considerably higher when using these effects.

## **INSTALLATION:**

Make sure you have Vectorworks installed on your computer before installing Doodle.

1. Quit Vectorworks if it is running.
2. Open the folder named “Copy CONTENTS to Vectorwks Fldr”.
3. Select the “Doodle! 11 Folder” and copy it to the Vectorworks folder. Although the “Doodle! 11 Folder” can be moved to any location on your hard disk, we recommend the Vectorworks folder because it’s a convenient place to access the “Doodle Styles”.
4. Open the folder named “Copy CONTENTS to Plug-ins Fldr”.
5. Select all the items in the folder and copy them to the “Plug-ins” folder located inside the Vectorworks folder.

## **ADDING THE DOODLE! COMMANDS TO YOUR WORKSPACE:**

Before running Doodle, the commands must be added to a pull-down menu in Vectorworks. To do this run Vectorworks and follow these steps:

1. Start Vectorworks.
2. Go to the “File” pull-down menu and select “Workspace Editor” under the “Workspaces” submenu.
3. Select the “Edit the current workspace” Option and click “OK”.
4. In the Workspace Editor: In the list to the left, open the “Doodle!” Category. In the list to the right, open the desired pull-down menu item (we recommend “Tool”). Add the “Doodle!” and “Doodle Paper Texture” commands from the left list (in the “Doodle!” Category) to the desired menu on the right. Click “OK” and you’re finished. You should now see the “Doodle!” and “Doodle Paper Texture” commands available under the pull-down menu in which you placed it.

For more information on using the Workspace Editor, refer to the Vectorworks manual.

## USING DOODLE!:

Doodle on a copy of the original file:

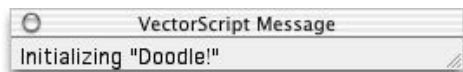
Although this step is not necessary, it is recommended to work on a copy of a file to ensure that original information is not lost.

Delete all unnecessary data:

On the copy of your file, you may want to delete all unnecessary objects, layers, etc. Doodled files can grow large; so try to strip the file down to help keep the file size to a minimum. Doing a “Purge unused objects” in Vectorworks can help strip out any unused symbols, layers, classes, etc. Refer to your Vectorworks manual for more information on Purging.

Doodle! it:

After adding the “Doodle!” menu command to your workspace, you simply run “Doodle!” from the pull-down menu in which you’ve placed it. Throughout the Doodle process, a message box will appear on the left-hand side of your screen. This message box informs you as to where the doodle process currently is currently.



Message Box

1. In Vectorworks, open the document that you wish to doodle.
2. Select desired objects for doodling. We recommend selecting a small number of objects to experiment with different settings until you get desired results.
3. Select the “Doodle!” menu command from the pull-down menu.

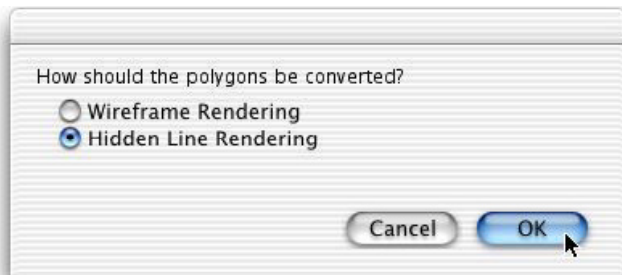
NOTE: The first time Doodle is run (after installation) a registration dialog will ask you to register Doodle. Simply enter your name, company, serial number and click “OK”.

4. Enter desired settings (see the “ Settings” sections for details) and select “OK”

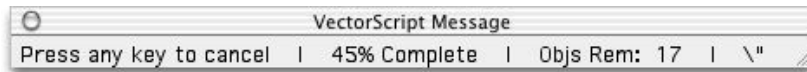
NOTE: We recommend trying some pre-saved “Doodle! Styles” first. To do so, refer to the section “Using Doodle! Styles” in this manual.

5. Doodle begins by preparing the selected objects. If any 3D objects are selected for doodling, some standard Vectorworks dialog boxes may come up. If this happens, keep the default setting (hidden line rendering) and click “OK”. If you choose “Cancel”, the same dialog box will come up again.

You may see the same dialog box come up several times. This is normal. If objects are nested within other objects (e.g.: objects in symbols, groups, symbols in walls, etc.) Doodle first breaks down the outermost object in order to process the objects within it. The amount of repeating dialog boxes depends on the number of nested objects.



6. Once you see this message (below), the process will run unattended until it is complete.



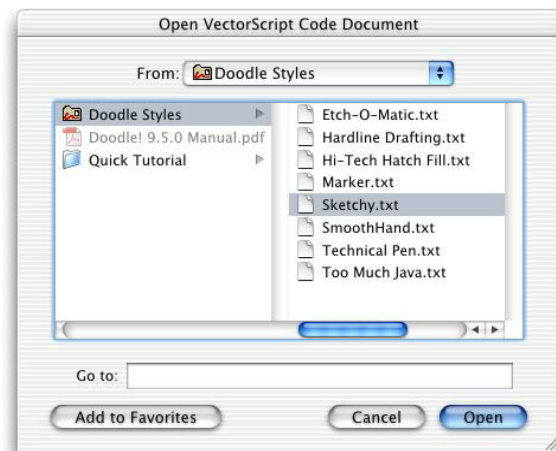
7. Upon completion, your new doodle will be placed as a group object on the layer specified in Doodle. In addition, the “Layer Options” in Vectorworks are automatically set to “Active Only”, allowing you to see the resulting doodled objects.

## **DOODLE! STYLES:**

A “Doodle! Style” contains all of the settings within a particular style row except for class assignments. Each individual style can be saved to disk for later use.

**Opening a Doodle Style:** After selecting the objects to doodle, run the “Doodle!” command. When the Doodle dialog appears, click the “Open” button in the style row you wish to load a new style. A standard “Open” dialog will ask you to locate and open a Style. Open the “Doodle Styles” folder inside the “Doodle 11 folder”. Here you will see some Doodle Styles to get you started. Select one and click “Open”. All settings in that style row will update to match the saved style.

**Saving a Doodle Style:** Saving a Doodle Style will take all of the current settings in a particular style row and save them as a Doodle Style. Once you have entered the desired settings, click the “Save” button in the desired style row. A standard “Save” dialog will ask you to locate and name your custom Style.



“Open Style” dialog

## **DOODLE! BATCHES:**

A “Doodle! Batch” contains all of the settings within Doodle. This includes Doodle Layer, Doodle Styles and Style Class Assignments. After setting all of the desired settings in Doodle, saving a Doodle Batch allows you to recall all of the settings for later use. This gives revisions to a project (or similar future projects) the same look.

## **SETTINGS EXPLAINED:**

When Doodle is run, the main dialog will appear. The settings you enter here will tell Doodle what effects to use.

All settings are scaled to the page, not the world. This means that any doodled layer, regardless of scale, will have the same doodled look when printed on paper. For example: If you have a layer with a scale of 1:1 (full scale) and another at a scale of 1:96 (1/8” = 1’- 0”) and you use the same settings in Doodle on objects on both layers, the doodle effect will be the same.



## THE SETTINGS:

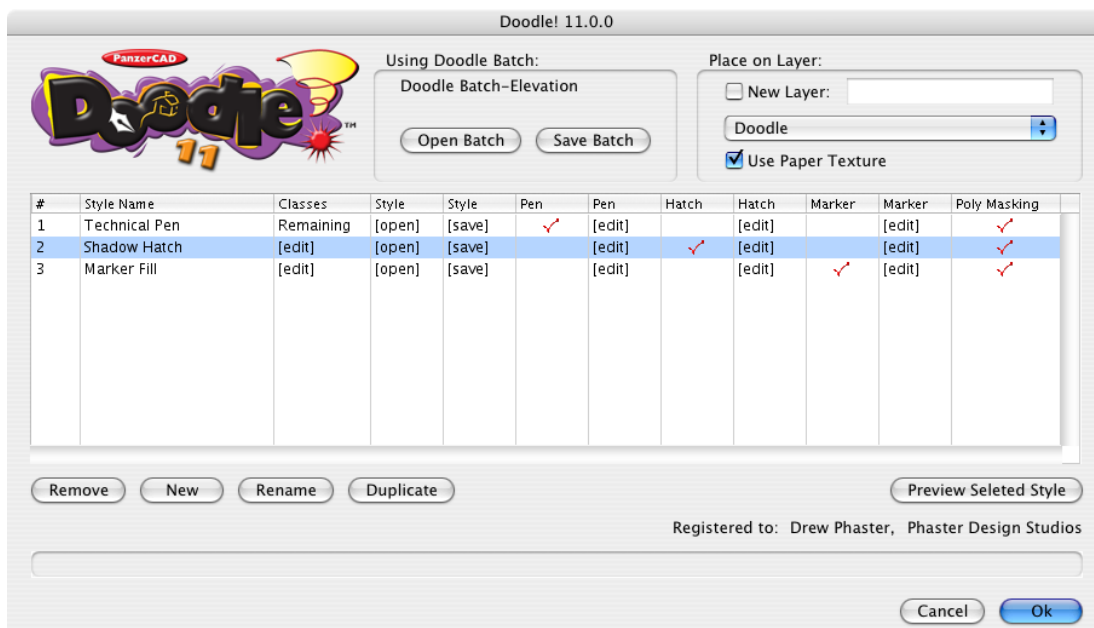
### ALL DIALOGS:

**Help Box:** There's a help box near the bottom of each dialog box that describes each dialog item when the cursor is moved over it.

**“Cancel” Button:** This button cancels any changes made to the current dialog box. If you're in the Main Doodle Dialog, then Doodle will Quit.

**“OK” Button:** This button accepts all current changes in the current Dialog. If you're in the Main Doodle Dialog, then Doodle will begin processing.

### MAIN DIALOG:



### Using Doodle! Batch (group-box):

The name of the current Doodle Batch in use will be listed at the top of this group-box

**“Open Batch” Button:** This button allows a pre-saved “Doodle Batch” to be opened. A “Doodle Batch” is a file containing all of the settings for Doodle. These settings include Doodle Layer and Style Class assignments.

**“Save Batch” Button:** This button allows the current settings to be saved as a “Doodle Batch” file. This allows you to have many different batches saved on disk for later use.

### Place on Layer (group-box):

**New Layer (checkbox & field):** Select this checkbox to create a new layer for the doodle. Type the new layer name in the field to the right of the checkbox.

**Layer Pop-up Menu:** This determines where the newly created doodle will be placed. A pop-up menu will list all possible layers to place the doodle. Only layers of the same scale as the active layer will be listed.

**Use Paper Texture (checkbox):** Select this checkbox to use a previously placed paper texture. This ensures any masking to match the attributes of the paper texture on the layer chosen. NOTE: This option will be greyed out if no paper texture resides in the layer chosen (from the Layer Pop-up Menu).

### Styles (group box):

This is where all the styles are listed for the current Doodle Batch. A Doodle Batch can have up to 10 styles in it. This is where styles can be opened, saved, and edited. This is also where multiple styles can be assigned to different classes. **NOTE:** Any text within brackets (ie: “[edit]”) behave as buttons when clicked. The headings for each column are as follows:

**# & Style Name:** These show the number and name of the each style.

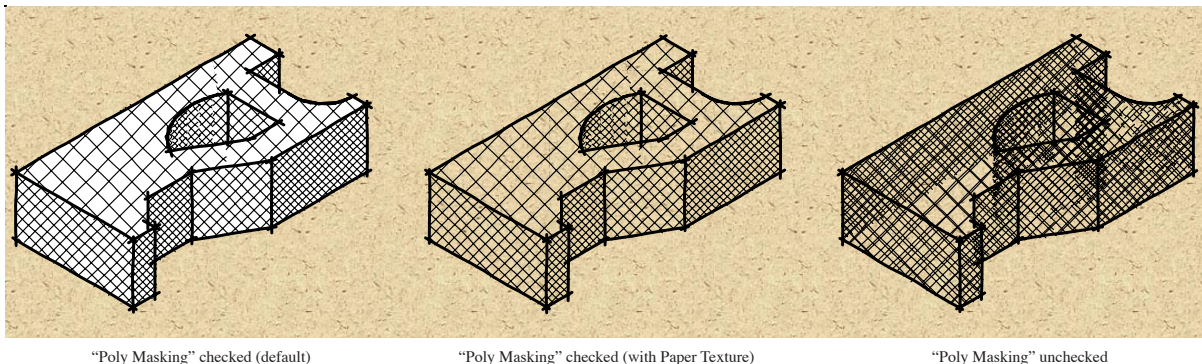
**Classes:** This is where classes are assigned to the styles. If there’s only one style listed, “All Classes” in the document will be doodled with that style. If multiple styles are used, any “Remaining Classes” that are not assigned to other styles (through the “Edit” button under the “Classes” heading) will be doodled with the first style.

**Style [open] Button:** This button allows a pre-saved “Doodle Style” to be opened. A “Doodle Style” is a file containing all of the settings for that style. These settings include Pen, Hatch, Marker & Polygon Masking settings.

**Style [Save] Button:** This button allows the corresponding style to be saved as a “Doodle Style”. This allows you to have many different styles saved on disk for later use.

**Pen checkbox & [Edit] button:** The checkbox enables the “Doodle Pen” effect. This is the main Doodle engine. Everything selected will be doodled with the current settings. The **[Edit]** button opens the “Pen Settings” dialog (explained later).

**Hatch / Marker (checkbox & [Edit] button):** The “Hatch” and “Marker” checkboxes enable the corresponding fill effects to filled polygons using the current settings. These effects simulate hand-drawn hatching and markers for coloring and shading effects. The **[Edit]** buttons open the Settings dialog (explained later) for the corresponding effect. NOTE: These effects can be processor intensive so try use them sparingly.



**Poly Masking (checkbox):** When using the Hatch or Marker effects, Doodle can mask behind each polygon so that overlapping polygons show correctly. This is checked by default. Unchecking “Poly Masking” can give a transparent effect because the hatches or marker strokes will show through each other. A good use of this effect is to hatch polygons for shadows so that you can see the objects behind the hatch lines. The example above shows how a 3D object that has many polygons masking one another will look transparent with “Poly Masking” unchecked.

### Style Modification Buttons (below the list of styles):

These buttons act upon the selected style. To select a style, click on the name of the desired Style in the list.

**Remove (button):** Removes the selected Doodle Style from the list. **NOTE:** The first Style in the list cannot be removed. This is to prevent confusion over class assignments.



**New (button):** Adds a new Style to the list. A maximum of 10 Styles can be used.

**Rename (button):** Renames the selected Style.

**Duplicate (button):** Creates a duplicate copy of the selected Style.

**Preview (button):** This will bring up a preview image (of the selected style) in your drawing window. The image will be zoomed to fit the document window. A dialog will tell you the style name and the zoom percentage so you can get a feel for what the selected style settings look like. Click “OK” in this dialog to go back to the Main Doodle Dialog.

## PEN SETTINGS DIALOG:

Doodle Pen Settings

☐ Use Pen Color: 053

Scale Lineweights 175 %

Smooth Polygon Angles <= 29° °

Extend Lines 1 x LW (Min.) To 2 x LW (Max.)

Doodle Length 5 mm (Max.) w/ 75 % Consistency

Doodle Width 0.2 mm (Max.) w/ 0 % Consistency

☒ Endpoint Effects

☒ Pen Soak ☐ Double Stroke

Soak Length 6 x LW (Max.) w/ 50 % Consistency

Soak Width 3 x LW (Max.) w/ 50 % Consistency

☒ Pen Skip

Dash Length 300 x LW (Max.) w/ 50 % Consistency

Skip Length 5 x LW (Max.) w/ 50 % Consistency

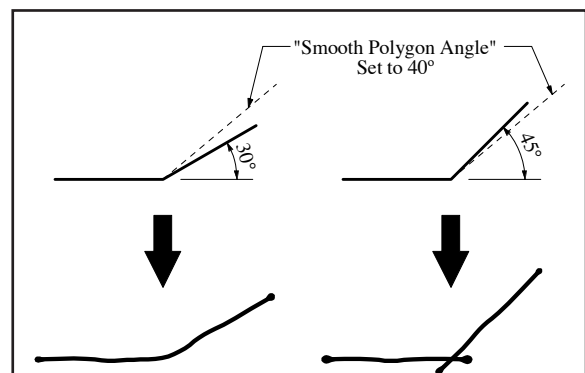
Cancel Ok

**Use Pen Color (checkbox & color pop-up menu):** When “Use Pen Color” is checked, all lines will be doodled with the color selected in the color pop-up menu. This pen color will also be used in doodle hatches (if selected).

**Scale Lineweights (%):** This tells Doodle the scaling factor for line thickness.

**Example:** If you have a value of “100”, there will be no change in line thickness from the original to the doodle. If you have a value of “200”, all doodled lines will be twice as thick as the originals. Moreover, if you have a value of “50”, all doodled lines will be half the thickness of the originals.

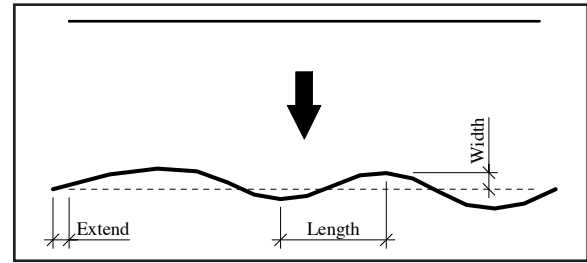
**Smooth Polygon Angles <= (degrees):** This tells Doodle how sensitive to be at corners when drawing polygons. If the angle change between two adjacent polygon seg-



ments is greater than the Smooth Angle, then Doodle will define the corner by extending the segments passed the corner. However, if the angle is less than the Smooth Angle, then Doodle will curve through the corner.

**Extend Lines (x linewidth):** This defines the minimum and maximum distance to extend lines past their original endpoints. The values are multiplied by the thickness of the line being doodled. **NOTE:** If a negative number is entered, the lines will fall short from their original endpoints.

**Example:** A 5 mm thick line can extend five times as far past the original endpoints as a 1 mm line.



**Doodle Length:** This defines the maximum length of a doodle curve. The larger the Doodle Length, the longer the doodle curves will be along a line.

**Doodle Width:** This defines the maximum width of a doodle curve. The larger the Doodle Width, the farther the doodle will stray from the original line.

**% Consistency:** This defines how consistent the distances are from one curve to the next. The closer to “100” this value is, the more consistent the curves will look.

**Endpoint Effects:** This gives an “ink soak” or “double stroke” effect at the ends of doodled lines. See “Endpoint Effects & Pen Skip Settings” section for details.

**Pen Skip:** This leaves gaps along doodled lines as if the pen were skipping. See “Endpoint Effects & Pen Skip Settings” section for details.

## HATCH SETTINGS DIALOG:

**Doodle Hatch Settings**

☐ Use fill color as hatch color    ☐ Keep fill color behind hatch

☒ Single Hatch    ☒ Vary spacing w/ fixed linewidth of

☐ Crosshatch    ☐ Vary linewidth w/ fixed spacing of

Hatch angle     Brightness  %

☐ Relate angle to poly    Contrast  %

Extend Lines  x LW (Min.) To  x LW (Max.)

Doodle Length  mm (Max.) w/  % Consistency

Doodle Width  mm (Max.) w/  % Consistency

☐ Endpoint Effects

☒ Pen Soak    ☐ Double Stroke

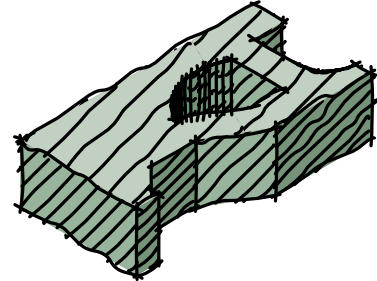
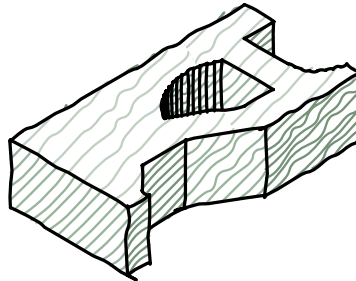
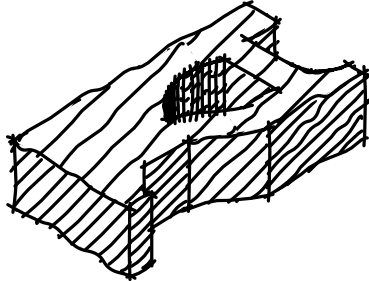
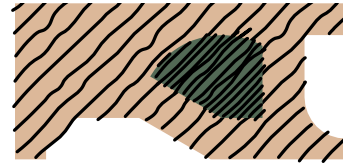
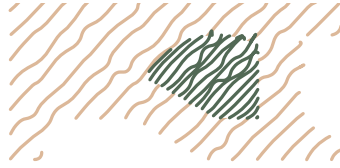
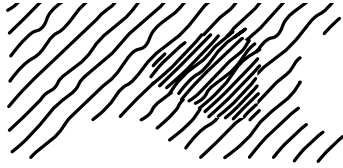
Soak Length  x LW (Max.) w/  % Consistency

Soak Width  x LW (Max.) w/  % Consistency

☐ Pen Skip

Dash Length  x LW (Max.) w/  % Consistency

Skip Length  x LW (Max.) w/  % Consistency



Default Hatch Color (Black)

Use Fill Color as Hatch

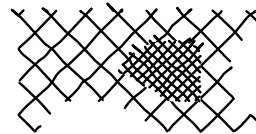
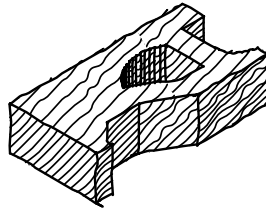
Keep Fill Color behind Hatch

**Use Fill Color as Hatch Color (checkbox):** This changes the hatch pen color to match the color of the polygon being hatched. **NOTE:** Cannot be used with “Keep Fill Color behind Hatch”

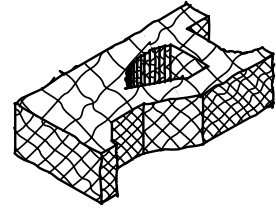
**Keep Fill Color behind Hatch (checkbox):** This changes the hatch background fill color to match the color of the polygon being hatched. **NOTE:** Cannot be used with “Use Fill Color as Hatch Color”



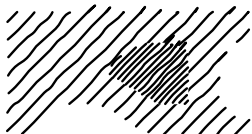
Single Hatch



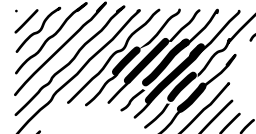
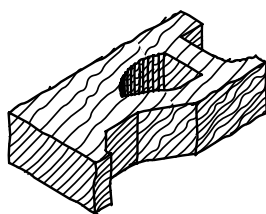
Cross Hatch



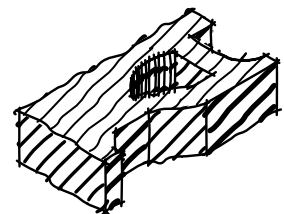
**Single Hatch / Crosshatch (radio buttons):** This determines whether to create a single line hatch or a crosshatch.



Vary Offset



Vary Lineweight

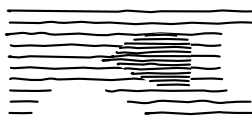


**Vary Offset w/ Fixed Lineweight of (mm):** This simulates the lightness of polygon fills by varying the offset of the hatch lines. The linewidth entered will stay the same. This is the same technique used on many hand drawn pen & ink drawings.

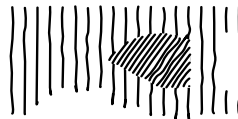
**NOTE:** The smaller the pen size, the more lines will be needed to simulate a given lightness. Additionally, the more lines you have, the longer it takes to doodle, and the larger the file size will become.

**Vary Lineweight w/ Fixed Offset of (mm):** This simulates the lightness of polygon fills by varying the Lineweight of the hatch lines. The offset entered will stay the same. This gives an interesting look to the doodle.

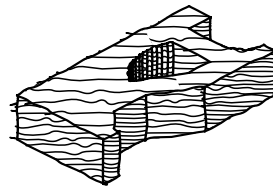
**NOTE:** The smaller the offset, the more lines will be needed to simulate a given lightness. Additionally, the more lines you have, the longer it takes to doodle, and the larger the file size will become.



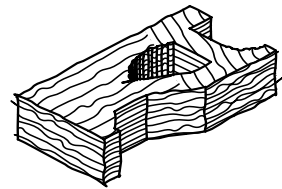
Hatch Angle = 0°



Hatch Angle = 0°  
w/ Relate Angle to Poly



Hatch Angle = 0°



Hatch Angle = 0°  
w/ Relate Angle to Poly

**Hatch Angle (degrees):** This defines the angle for all hatches to be drawn.

**Relate Angle to Poly (checkbox):** This attempts to relate the hatch angle (above) to the each polygon. This can give a contoured look to the image.

**Brightness (%):** This adjusts the perceived brightness of the hatches in the doodle.

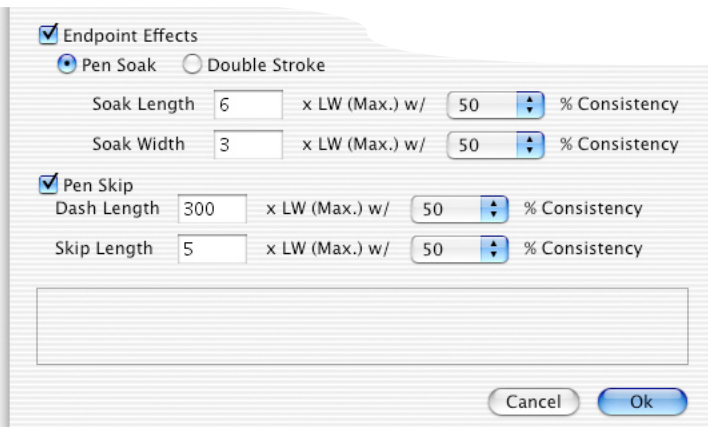
**Contrast (%):** This adjusts the perceived contrast of the hatches in the doodle.

**The Following Settings are the same as in the “Pen Settings Dialog”**

(refer to the “Pen Settings Dialog” section for details):

- **Extend Lines**
- **Doodle Width**
- **Endpoint Effects**
- **Doodle Length**
- **% Consistency**
- **Pen Skip**

## PEN SOAK & PEN SKIP SETTINGS ( PEN & HATCH DIALOGS ):



**Endpoint Effects:**

**Pen Soak:**



**Soak Length (x lineweight):** This defines the maximum length of the Pen Soak. The value is multiplied by the thickness of the line to keep correct proportions.

**Soak Width (x lineweight):** This defines the maximum width of the Pen Soak. The value is multiplied by the thickness of the line to keep correct proportions.

**% Consistency:** This defines how consistent the Pen Soaks are from one endpoint to the next. The closer to “100” this value is, the more consistent the Pen Soaks will look.

**Double Stroke:** 

**Stroke Length (x line weight):** This defines the maximum length of the Pen Soak. The value is multiplied by the thickness of the line to keep correct proportions.

**Stroke Width (x line weight):** This defines the maximum width of the Pen Soak. The value is multiplied by the thickness of the line to keep correct proportions.

**% Consistency:** This defines how consistent the Double Strokes are from one endpoint to the next. The closer to “100” this value is, the more consistent the Double Strokes will look.

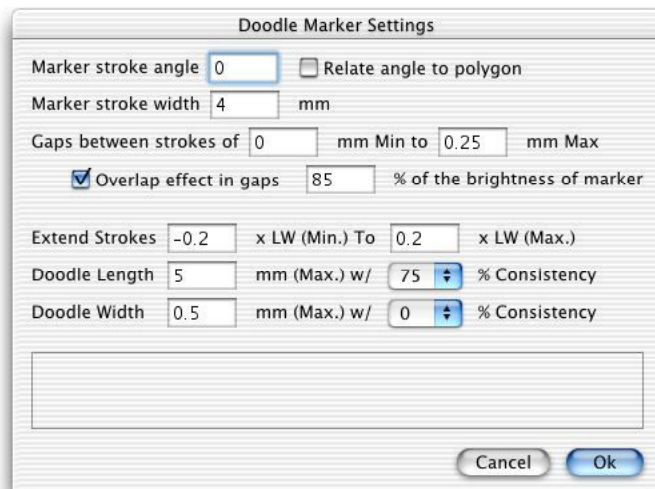
**Pen Skip:** 

**Continuous Line Length (x line weight):** This defines the maximum length for a doodled line before gaps occur. The value is multiplied by the thickness of the line being doodled. Example: A 5 mm thick line can continue five times as far as a 1 mm line before a gap.

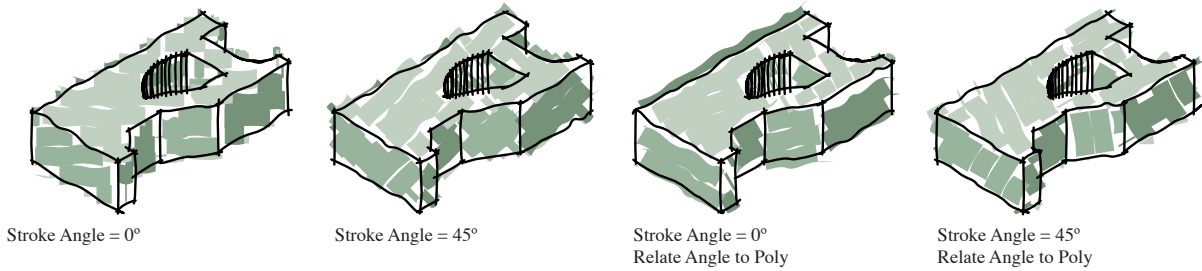
**Gap Size between Lines (x line weight):** This defines the maximum length for gaps in a doodled line. The value is multiplied by the thickness of the line being doodled. This keeps the gaps in proportion to the line thickness.

**% Consistency:** This defines how consistent the distances are from one gap to the next. The closer to “100” this value is, the more consistent the gaps will look.

## MARKER SETTINGS DIALOG:





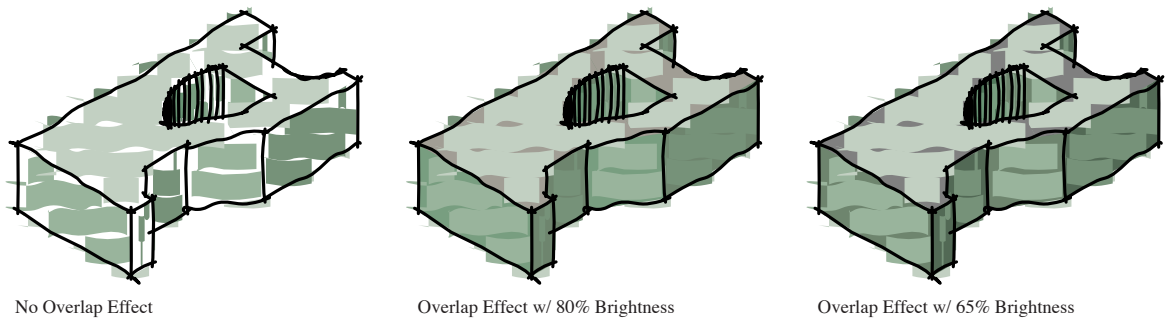


**Marker Stroke Angle (degrees):** This defines the angle for all Marker Strokes to be drawn.

**Relate Angle to Poly (checkbox):** This attempts to relate the Marker Stroke Angle (above) to the each polygon. This can give a contoured look to the image.

**Marker Stroke Width (mm):** This defines the width of the Marker Strokes (nib size).

**Gaps Between Strokes (mm):** This defines the offset between Marker Strokes.



**Overlap Effect in Gaps:** This simulates the overlapping of Marker Strokes by creating a darker shade between the strokes. **NOTE:** Doodle is limited to the 256 color palette in Vectorworks so Doodle attempts to find the closest color for this effect. Results may vary. The “% of the Brightness of Marker Color” value determines how much darker (or brighter) the overlap effect is. **NOTE:** If a value over 100% is entered, the overlap color will be lighter than the marker color.

**Extend Strokes (mm):** This defines the minimum and maximum distance to extend strokes past the fill area border. **NOTE:** If a negative number is entered, the strokes will fall short of the fill area border instead extending past.

**Doodle Length (mm):** See the “Pen Settings Dialog” section (above).

**Doodle Width (mm):** See the “Pen Settings Dialog” section (above).

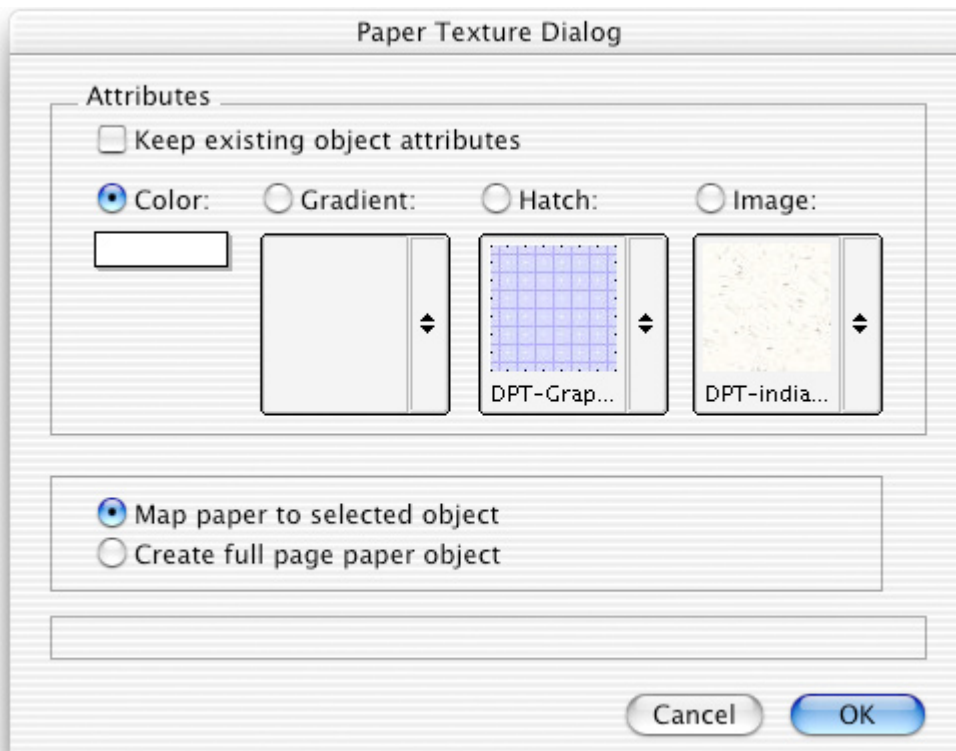
**% Consistency:** See the “Pen Settings Dialog” section (above).

## **PAPER TEXTURES:**

Paper textures can now be created by using the gradient, image or hatch attributes in Vectorworks. A paper texture is nothing more than a 2D object (rectangle, polygon, arc, etc.) placed on the target layer with one of the above attributes assigned to it. In order for Doodle to recognize which of the documents’ attributes are paper textures, the name of these attributes must begin with “DPT-”. A file called “Doodle Paper Textures.mcd” (located in the “Doodle 11 Folder”) contains some paper texture attributes that can be imported into your Vectorworks file. If creating your own attributes, remember to begin the name with “DPT-” so the “Doodle Paper Texture” command recognizes it.

To create a paper texture, make the target layer for your doodle active. Your “target” layer is the layer you plan to place your doodled objects. If the layer doesn’t exist, create one and make it the active layer. Run the “Doodle Paper Texture...” command from the pull-down menu. The command can either turn an existing (selected) compatible object into a paper texture or it can create a “full page” rectangular paper texture. Once the paper texture object is created, it can be reshaped and moved as desired. The attributes can also be adjusted as desired. Since Doodle names the object to tag it as a paper texture, if the object is copied, the copy will not retain this tag as a paper texture. If this happens, simply select the object and run the “Doodle Paper Texture...” command again. **NOTE:** If the target layer contains more than one “paper texture”, Doodle will use the bottom most “paper texture” object. To make sure the desired object is at the bottom, select it and use the “Send to Back” command in the “Tool” menu.

## PAPER TEXTURE DIALOG:



**Keep existing object attributes (checkbox):** This retains an existing selected object’s attributes and simply tags it as a paper texture.

**Color (radio button & color picker):** Clicking on the color picker allows you to select a custom solid color as your paper texture. This creates a “solid” gradient that is not limited to the documents color palette.

**Gradient (radio button & pop-up menu):** Clicking on the pop-up menu allows you to select existing gradients in the current document for your paper texture. The pop-up menu only displays gradients with names starting with “DPT-”.

**Hatch (radio button & pop-up menu):** Clicking on the pop-up menu allows you to select existing hatches in the current document for your paper texture. The pop-up menu only displays hatches with names starting with “DPT-”.

**Image (radio button & pop-up menu):** Clicking on the pop-up menu allows you to select existing images in the current document for your paper texture. The pop-up menu only displays images with names starting with “DPT–”.

**Map paper to selected object (radio button):** This maps the paper texture to the currently selected object.

**Create full page paper object (radio button):** This creates a new paper texture object the same size as the document’s page size.

## **VIEWPORTS AND DOODLING:**

### **Viewports set to Top/Plan View:**

There is no way to doodle an actual viewport in Top/Plan mode. Vectorworks give no way of breaking down a viewport into objects that Doodle can work with. You can, however, doodle the objects (on the design layers shown in the viewport) to another design layer and display it in a viewport.

### **Viewports set to a 3D Rendered View:**

Selecting a rendered viewport and using the “Convert to Group” command (in the “Organize” menu), will decompose the viewport into one of three object types. The object type is dependant on the rendering mode of the viewport. **IMPORTANT NOTE:** Using “Convert to Group” on a viewport will replace the selected viewport with the resulting objects. If you wish to keep the original viewport, make a copy of the viewport before you use “Convert to Group”.

Using “Convert to Group” on one of the following viewport render modes will result in a group of lines and/or polygons creating a 2D “snapshot” of the rendered view (Any of these can be doodled):

- Wireframe
- Hidden Line
- Dashed Hidden Line
- Unshaded Polygon
- Shaded Polygon
- Shaded Polygon No Lines
- Final Shaded Polygon

Using “Convert to Group” on one of the following viewport render modes will result in a bitmap of the rendered view (None of these can be doodled, however, they can be used behind doodled lines of the same view):

- OpenGL
- Fast Renderworks
- Fast Renderworks with Shadows
- Final Quality Renderworks
- Custom Renderworks
- Artistic Renderworks

We recommend creating a bitmap by using any Renderworks or OpenGL mode, then, overlaying doodled lines on the bitmap. Try the following steps:

1. Create a new sheet layer for the doodle to be placed (call it “Doodle Layer” for now).
2. Once you have a viewport with the 3D view you want, make two copies of it on top of each other.
3. Select one of the viewports and render it with any Renderworks or OpenGL mode. If using Artistic Renderworks Mode, the styles Contour, Hatch, Oil Painting or Stipple work best.  
NOTE: The resolution of the bitmap is determined by the viewport’s Sheet Layer DPI settings. The DPI setting is located in the “Layers...” dialog.

4. With the rendered viewport selected, “Convert to Group”. The viewport should now be a bitmap object. With the bitmap object still selected, send it to the “Doodle layer” through the Object Info Palette’s layer menu.
5. Select the remaining copy of the viewport, choose the “Hidden Line” render mode and update.
6. With the viewport selected, “Convert to Group”.
7. Doodle the resulting group of lines and choose “Doodle Layer” in the “Place on Layer:” section of the Doodle dialog box. Click “OK” and see the results.

You should now have the rendered bitmap image with doodled lines on top. The results can be even better by pasting the rendered image into an image application (ie: PhotoShop), using filters to soften the image, then pasting it back into renderworks behind the doodled lines.

## **DOODLING 3D OBJECTS:**

Once you obtain the desired 3D view of your 3D objects, select all objects in the view and use the “Convert Copy to Polygons” command in Vectorworks. This command is in the “Tools” menu in Vectorworks. The result is a grouped object. Select this object and run Doodle. If you run Doodle directly on a 3D object without converting to polygons, any lighting and rendering settings may be lost.

NOTE: Using “Open GL” or “Renderworks” rendering modes will not give expected results. Vectorworks bases the “Convert Copy to Polygons” command on “Polygon” rendering modes so use these modes to give you a more accurate preview.

NOTE: When Vectorworks breaks down 3D objects, all 3D faces are converted into polygons including ones not visible. Because of this, all faces, whether you see them or not, are doodled resulting in a much larger file (and a longer doodle time) than you may expect.

## **DOODLING TEXT:**

If you would like to create a small amount of doodled text you can do so by selecting the desired text and use the “ TrueType to Bezier” command in the Vectorworks “Tools” menu. After the conversion, you can set whatever colors, lineweights and fills for the text.

## **TROUBLESHOOTING:**

### Vectorworks Crashes:

- The objects you're trying to doodle may require more RAM to doodle than Vectorworks has allocated to it. To allocate more RAM to Vectorworks refer to your Vectorworks User Manual.
- If you're selecting any large Bitmap, EPS, or PICT objects when doodling, Doodle will copy them to the new doodled object. If these objects are large, Vectorworks may run out of RAM. Try to leave these objects out of the doodle process. You can always move them over after the doodle is finished.

### "File not found" & "Pref. file missing or damaged" Errors:

- The "Doodle!.pref" file is missing or damaged. If this occurs, Doodle will try to write a fresh "Doodle!.pref" file and will require you to run the Doodle command again and to enter registration information. Have your serial number handy. If you continue to have problems, try deleting the "Doodle!.pref" file from the "Plug-ins" folder located in the Vectorworks folder and run Doodle again.

### Custom Workspaces:

There are some required menu-items for doodle. If you're using a custom workspace and are experiencing problems, try switching to a standard Vectorworks workspace and add the Doodle menu commands to it.



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## **CONTACTING PANZERCAD:**

**If you have any questions / comments / suggestions, please send them to:**

E-mail: [info@panzercad.com](mailto:info@panzercad.com)

Mail: 509 Benforest Drive  
Severna Park, MD 21146  
USA

Fax: (410) 544-5000

**For information and updates, visit our web sight at:**

[www.panzercad.com](http://www.panzercad.com)

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