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# Introduction

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## The Video Tutorials

The best way to learn about the features of SaviDraw is to watch the video tutorials. It's very hard to write a description of the dynamic actions that take place when using SaviDraw. We recommend that you use the video tutorials as your primary way to learn the details of how SaviDraw works.

## Touch versus Mouse

Having a touch screen allows you to interact directly on the screen with your finger or a stylus. This is especially useful for drawing directly on the screen. It also can be faster to use one hand to tap and then draw with the other. For example, you can tap on a tool with a finger on the left hand, then immediately start drawing with a finger or stylus using the right hand.

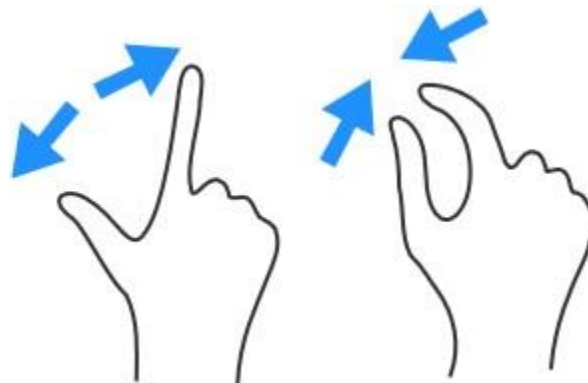
Some mouse actions are replaced with gestures when using touch:

Click:	The equivalent in touch is a tap. Throughout this user manual we will use the term click to mean a click or a tap.
Drag:	A drag with a mouse consists of holding the mouse button down and moving the mouse. The equivalent is holding your finger or a stylus on the screen and moving it on the screen.
Right-click:	We don't use right-click for anything in SaviDraw. Generally, though, the equivalent in Windows 10 touch is a "long-press."
Double-click:	The equivalent is a double-tap.

## Zoom and Pan

When you're using a mouse, there is a button at the top to bring out the Zoom slider (see below for details). With touch, you can use a pinch gesture (place two fingers on the screen and move them in and out) to zoom in and out and you can drag two fingers to move the view around (to pan).

To pan the view with a mouse, of course you can use the scroll bars, but an easier way in SaviDraw is to hold down the space bar (you'll see the on-screen cursor change to a Hand) and press the mouse button and drag. This doesn't apply when you're editing text – pressing and releasing the space bar will put in the space character.

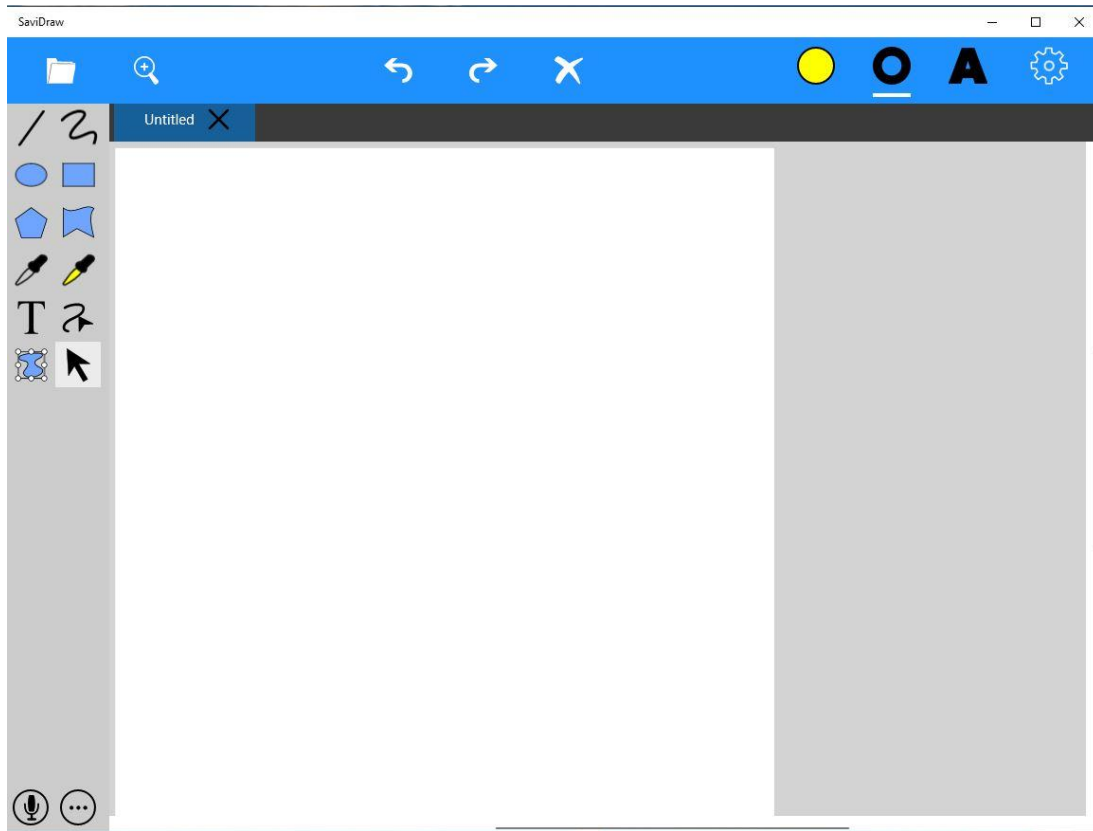


Zoom out

Zoom in

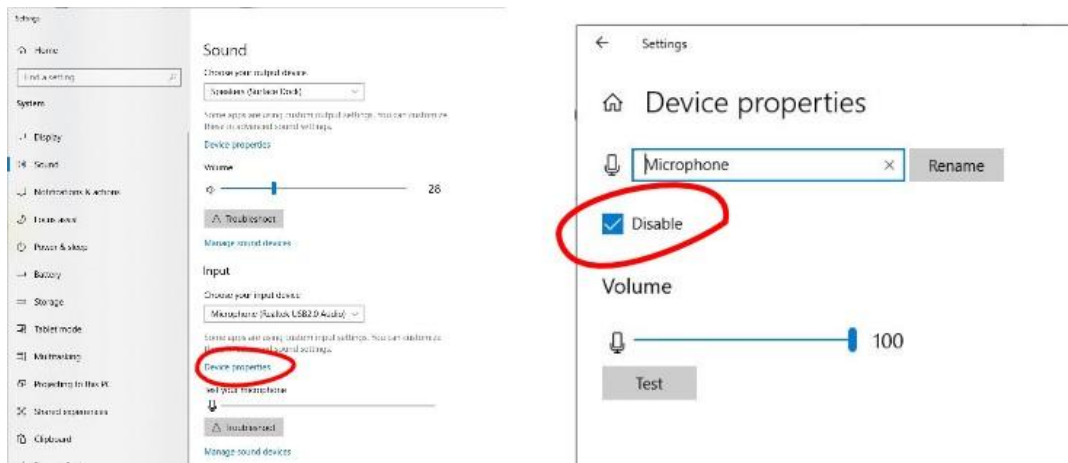
# Chapter I – The Interface: Where to find things

When you launch the program, you'll see the three permanent panels: the Top panel; and right below it the Documents panel; and on the left side, the Tools panel.

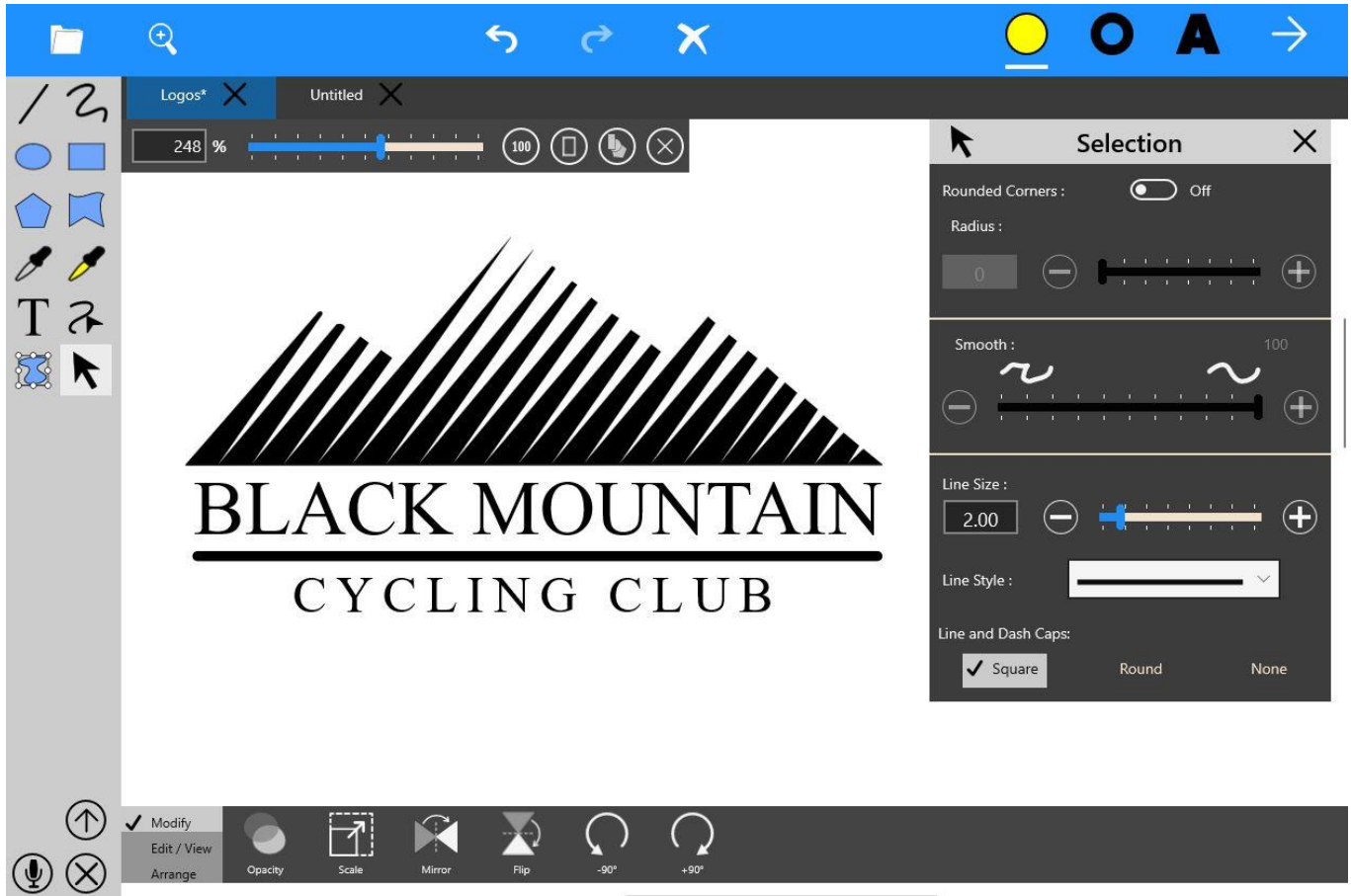


The very first time that you open SaviDraw (and anytime that the program is updated by Silicon Beach Software), Windows 10 will ask you if it's OK to access the Microphone. Answer yes so that you'll be able to use the Voice commands.

If you answered No and then want to use the Microphone, go to Settings – Sound, click on Device Properties, then Enable the Microphone.



SaviDraw has other panels that are not open at startup. These include the Settings Panel on the right side, the Commands panel at the bottom, the File Menu (not shown), and the Zoom panel (under the Documents panel).



## The Top Panel



From left to right, the Top panel contains the following:

### ***File Menu***



Click on the Folder icon to open and close the File Menu. The File Menu contains things like Save, Export, and Page Size. For more details, see Chapter V – The File Menu.

*Keyboard shortcut:* F (opens and closes the File Menu)  
*Voice shortcuts:* File menu (opens and closes the File Menu)

## Zoom Panel

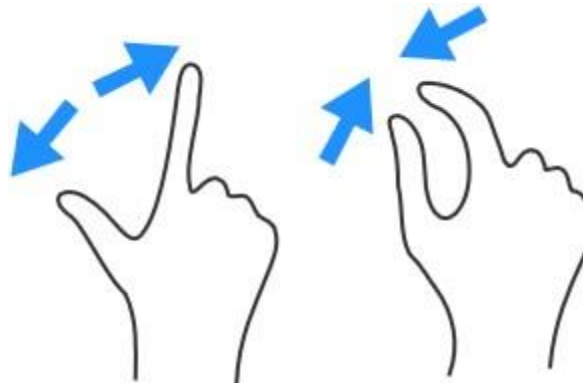


Click on the Magnifying Glass icon to open and close the Zoom panel, which will appear just below the Top panel. Moving the slider zooms in and out on the document. There are three shortcut buttons on the Zoom panel. The first button zooms to show the document at 100%. The second button zooms to show the entire document, and the third button zooms to show enough of the document to see all graphics that are in the document. The X closes the panel. The panel can also be closed by clicking on the Zoom panel button again.

If you are using a “wheel mouse” (one that has a wheel in the middle of it), moving the wheel will zoom in and out.



To zoom with touch, use a two-finger pinch gesture. Pinching in and out will zoom in and out.



Zoom out

Zoom in

### Keyboard shortcuts:

Ctrl 1	Zoom to 100%
Ctrl 2	Zoom to show entire document
Ctrl 3	Zoom to show all objects in the document
Ctrl 4	Zoom In
Ctrl 5	Zoom Out
Wheel Mouse	Spin the wheel and it zooms in or out.

### Voice shortcuts:

Zoom <number> percent	< > means a number is required.
Zoom to page	Show the entire document.
Zoom All	Show just enough of the document to see all the graphics.
Zoom In	
Zoom Out	
Open Zoom	Opens the Zoom panel.
Close Zoom	Closes the Zoom panel.

## Undo



Clicking on the Undo button goes back one step.

*Keyboard shortcut:* Ctrl Z

*Voice shortcuts:*

Undo (*number*) For example, “Undo 5” will go back 5 steps. Saying “Undo” without a specified number will go back one step. The maximum number is 100.

Go back (*number*) Parentheses ( ) mean that something is optional (in this case, the number).

## Redo



After using the Undo command, clicking on the Redo button goes forward one step, reinstating whatever you had undone.

*Keyboard shortcut:* Ctrl Y

*Voice shortcut:* Redo (*number*) The number is optional, and the maximum is 100.

## Delete

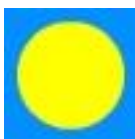


When objects are selected (using the Selection tool), the Delete button becomes active and clicking on it deletes all those objects that are selected.

*Keyboard shortcut:* Backspace; Delete

*Voice shortcut:* Delete

## Fill Color



Clicking on the Fill Color button opens and closes the Fill Color panel. The Fill Color button changes its color to show whatever the current Fill Color is. If one of the other Color panels is open (Line or Text), then clicking on the Fill Color button changes the Color panel to show the Fill Color panel. See Chapter IV – Color.

*Keyboard shortcut:* Ctrl [

*Voice shortcuts:* Open Colors; Close Colors

## Line Color



Clicking on the Line Color button opens and closes the Line Color panel. The Line Color button changes its color to show whatever the current Line Color is. If one of the other Color panels is open (Fill or Text), then clicking on the Line Color button changes the Color panel to show the Line Color panel. See Chapter IV – Color.

*Voice shortcuts:* Open Colors; Close Colors

## Text Color

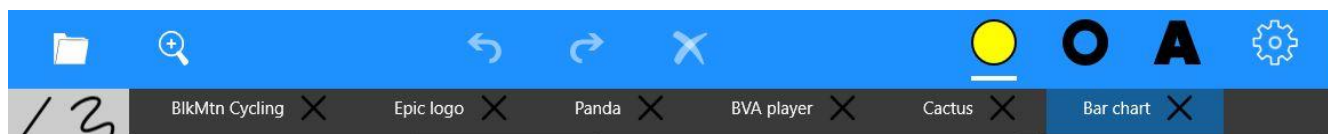


Clicking on the Text Color button opens and closes the Text Color panel. The Text Color button changes its color to show whatever the current Text Color is. If one of the other Color panels is open (Fill or Line), then clicking on the Text Color button changes the Color panel to show the Text Color panel. See Chapter IV – Color.

*Voice shortcuts:* Open Colors; Close Colors

## The Documents Panel

You can open more than one document at a time in SaviDraw. When you do, the names of the documents appear in tabs in the Documents panel.



You can switch from one document to another by clicking on a tab. You can close a document by clicking on the X next to its name. You can change the order of the document tabs by dragging a tab to the right or to the left (when using touch, do a ‘long-press’ on the document name first, then drag).

## The Settings Panel



Clicking on the Settings panel button, the Gear icon, opens and closes the Settings panel. The settings that are displayed are for the currently selected tool. The Settings panel changes each time you change to a different tool.  
See Chapter II – The Tools and Their Settings

*Keyboard shortcut:* Ctrl /  
*Voice shortcuts:* Open Settings; Close Settings

## The Commands Panel



Clicking on the Commands panel button opens and closes the Commands panel. See Chapter III – The Commands Panel.

*Keyboard shortcut:* Ctrl . (period)  
*Voice shortcuts:* Open Commands; Close Commands

## The Voice Commands



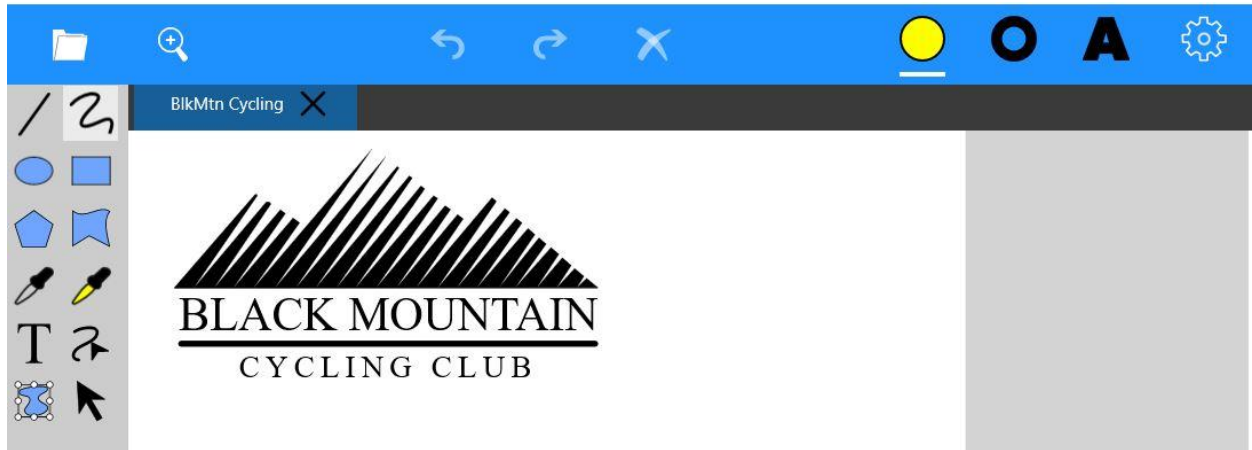
Clicking on the Voice Commands button (the Microphone icon) starts and stops SaviDraw listening for voice commands. If you are using a battery-powered device, having listening turned ON uses more battery, so it's recommended that you turn Voice Commands off when not using them.

<i>Keyboard shortcut:</i>	V
<i>Voice shortcut:</i>	(none)

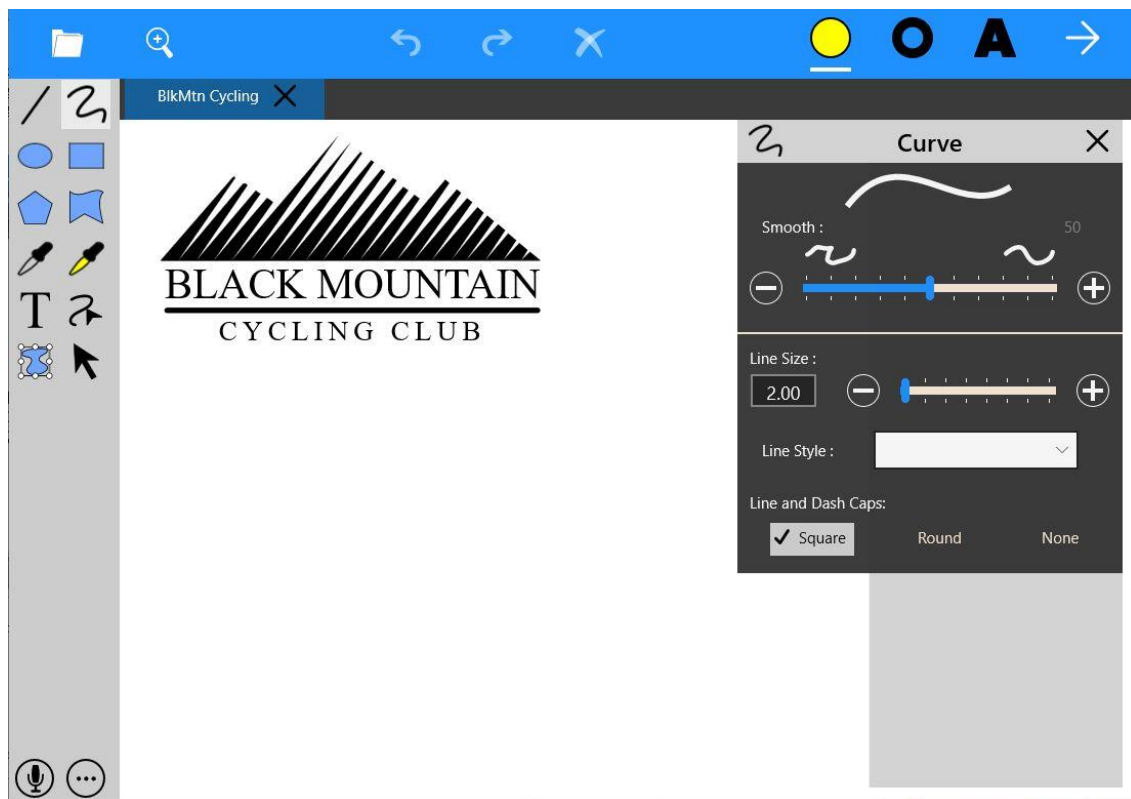
# Chapter II – The Tools and Their Settings



Every tool has its own settings. These are available in the Settings panel. When SaviDraw starts up, the Settings panel is closed.



It is opened by clicking on the Settings panel button (the Gear icon) in the upper right. When a tool is chosen by clicking on it, the Settings panel changes to the settings for that tool. The settings panel is closed by clicking on either the Right Arrow in the upper right, or the X next to the Tool name.



*Keyboard shortcut:*

Ctrl /

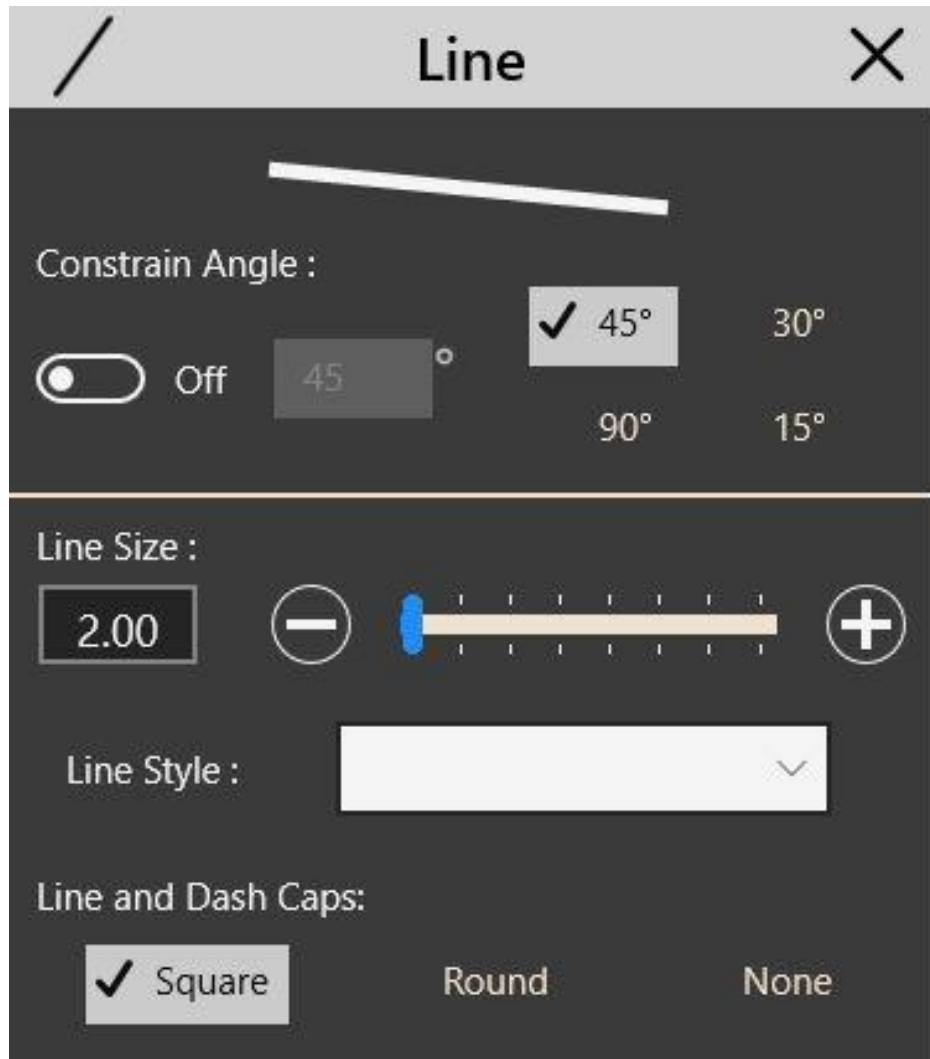
*Voice shortcuts:*

Open Settings; Close Settings

## Line Tool



Choose the Line tool by clicking on it, then drag anywhere on the document to create a straight line. The starting point of the line is where you start dragging, the end point is where you release the dragging.



### **Constrain Angle**

If you know you want a specific angle on a line, turn on Constrain Angle by clicking on the On/Off button, which will be pre-set at 45°. When you drag out a line, it will only change in increments of 45°. You can choose 90, 30 or 15 degrees with one of the radio buttons, or you can input any angle you want into the text box before you draw. Turn off Constrain Angle when you're done using it.

### **Line Size**

Before drawing a line, you can set the size of the line (in pixels) by dragging the slider, entering a pixel size in the text box, or clicking on the plus or minus button (which increases or decreases the size by one pixel). To change a line size after it's been drawn, use the Selection tool.

## Line Style

Lines can have dashes. You can choose a pattern for a dashed line from the drop-down menu. To change this setting on an existing line, use the Selection tool.

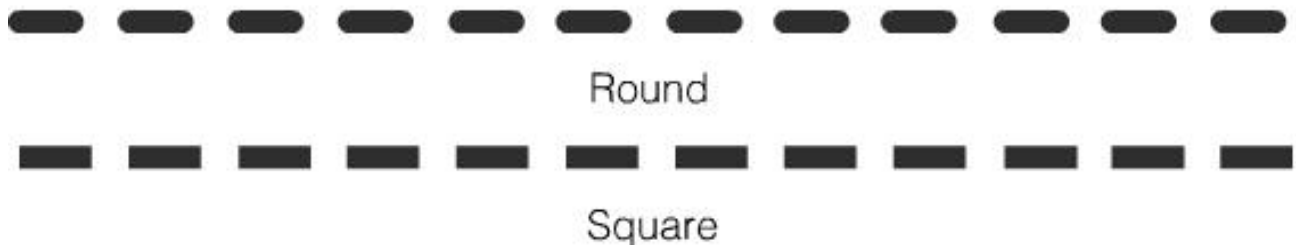
## Line and Dash Caps

The ends of lines can be set Square, Round, or None. This also applies to all of the ends of the dashes in a dashed line. These are called End Caps. Here's a look at the differences:



The gold line in the middle indicates the true length of the line. By choosing Round or Square, length is added. If you change a line from Square to None, it will become a little shorter.

The Dash Caps setting will have an effect like this on dashed lines:



To change these settings on an existing line, use the Selection tool.

## Shortcuts

*Keyboard shortcut:*

L (Note: press the L key, when not in text-edit mode.)

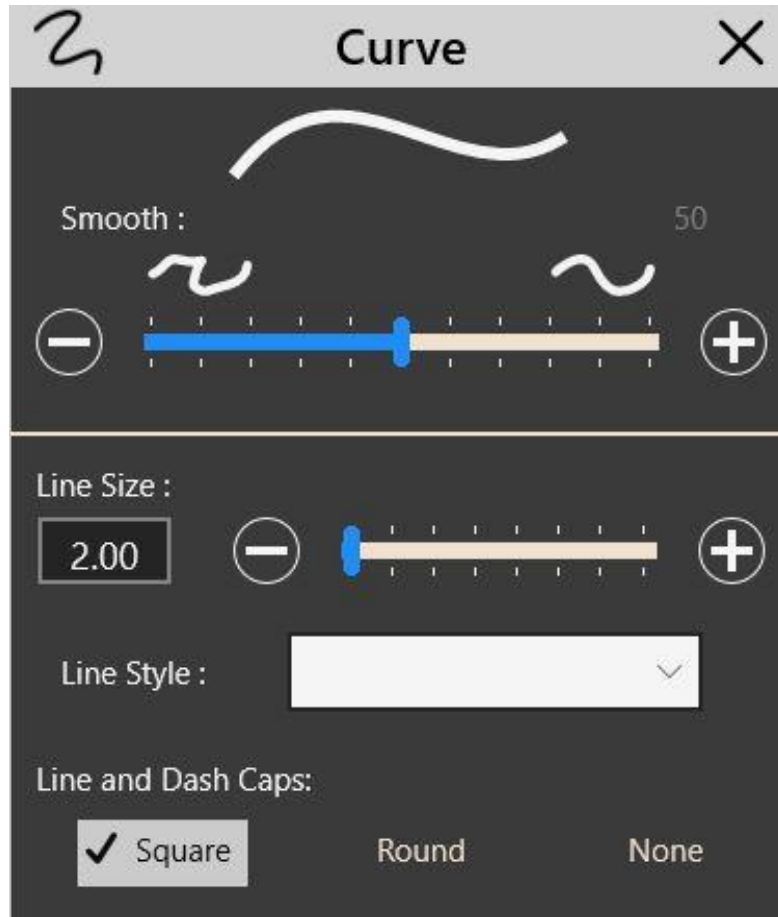
*Voice shortcuts:*

Line tool

## Curve Tool

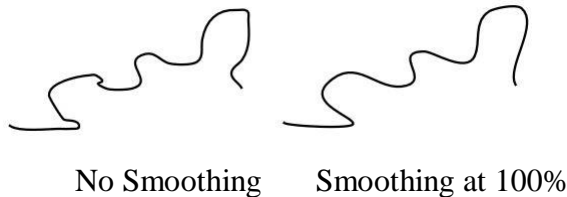


Choose the Curve tool by clicking on it, then drag anywhere on the document to create a curved line.



### **Smooth**

Lines can be automatically smoothed as they are being drawn. Set the degree of smoothing by dragging the slider. Drag the slider to the left for less smoothing, to the right for more smoothing. If you are going to trace a pixel image that you've brought into the document, sometimes you'll need to set smoothing very low.



To change smoothing after a curve has been drawn, use the Selection tool.

### **Line Size**

Before drawing a line, you can set the size of the line (in pixels) by dragging the slider, entering a size in pixels in the text box, or clicking on the plus or minus button (which increases or decreases the size by one pixel). To change a line size after it's been drawn, use the Selection tool.

## Line Style

Curved lines can have dashes. You can choose a pattern for a dashed line from the drop-down menu. To change this setting on an existing curved line, use the Selection tool.

## Line and Dash Caps

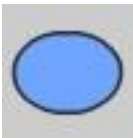
You can set how the end of lines look, choosing Square, Round, or None. This also applies to the ends of dashes in a dashed line. See the Line tool settings above for more details.

To change these settings on an existing curved line, use the Selection tool.

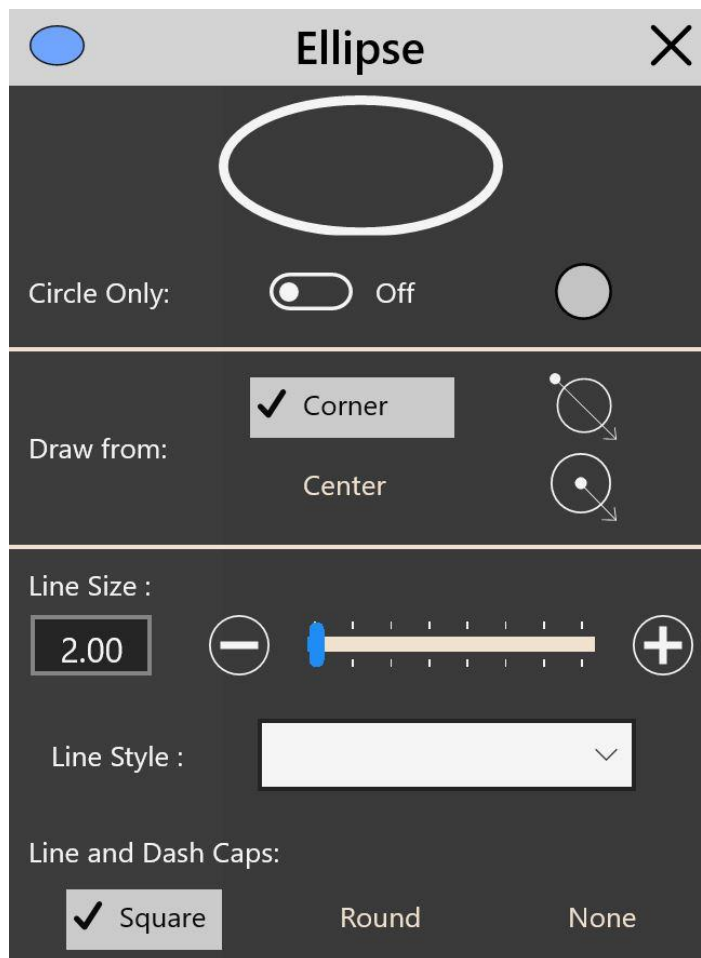
## Shortcuts

*Keyboard shortcut:* C (Note: press the C key, when not in text-edit mode.)  
*Voice shortcut:* Curve tool

## Ellipse Tool



Choose the Ellipse tool by clicking on it, then drag anywhere on the document to create an ellipse.



### ***Circle Only***

Turn this setting On to constrain to a circle as you draw. Holding the Shift key while drawing with the Ellipse tool will also constrain to a circle.

### ***Draw from***

You can draw from the top left corner or from the center. The Ellipse tool is automatically set to draw from the corner. Click on the word *Center* to change to drawing from the center.

### ***Line Size***

Before you draw an ellipse, you can set the size of the line, in pixels, by dragging the slider, or entering a size in the text box, or by clicking on the plus or minus button (to increase or decrease the size by one). To change a line size after an ellipse has been drawn, use the Selection tool.

### ***Line Style***

You can set your lines to be drawn with dashes. You choose a pattern for a dashed line from the drop-down menu labeled Line Style. To change a dashed-line setting on an existing ellipse, use the Selection tool.

### ***Dash Caps***

You can set how dashes look, choosing Square, Round, or None. See the Line tool settings above for more details.

To change dash caps on an existing ellipse, use the Selection tool.

### ***Shortcuts***

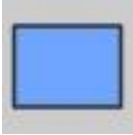
*Keyboard shortcut:* E      Note: press the E key, when not in text-edit mode.

*Constrain to circle:* Shift      (hold down while dragging)

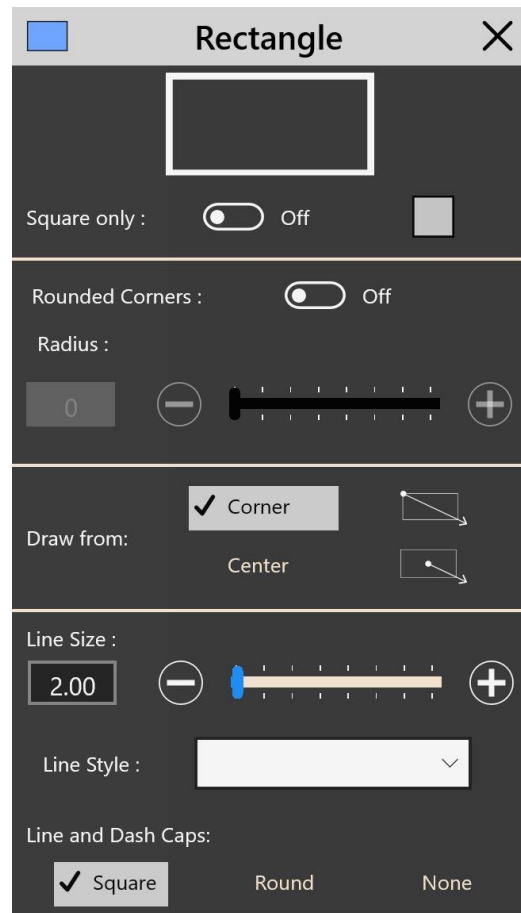
*Voice shortcut:* Ellipse tool

*Voice shortcut:* Circle tool      (chooses the Ellipse tool and turns On the *Circle Only* setting)

# Rectangle Tool



Choose the Rectangle tool by clicking on it, then drag anywhere on the document to create a rectangle.



## ***Square Only***

Turn this setting to On to constrain to a square as you draw. Holding the Shift key while drawing with the Rectangle tool will also constrain to a square.

## ***Rounded Corners***

Turn this setting to On and when you draw a rectangle or square it will have rounded corners. The amount that the corners are rounded is set by using the slider. To adjust rounded corners on an existing rectangle, use the Selection tool.

## ***Draw from***

You can draw from the top left corner or from the center. The Rectangle tool is automatically set to draw from the corner. Click on the word *Center* to change to drawing from the center.

## ***Line Size***

Before you draw a rectangle, you can set the size of the line, in pixels, by dragging the slider, or entering a size in the text box, or by clicking on the plus or minus button (to increase or decrease the size by one).

## Line Style

You can set your lines to be drawn with dashes. You choose a pattern for a dashed line from the drop-down menu labeled Line Style.

## Dash Caps

You can set how the ends of each dash look, choosing Square, Round, or None. To change any settings on an existing rectangle, use the Selection tool.

## Shortcuts

*Keyboard shortcut:*  
*Constrain to square:*

4      Note: press the 4 key, when not in text-edit mode.  
Shift    (hold down while dragging)

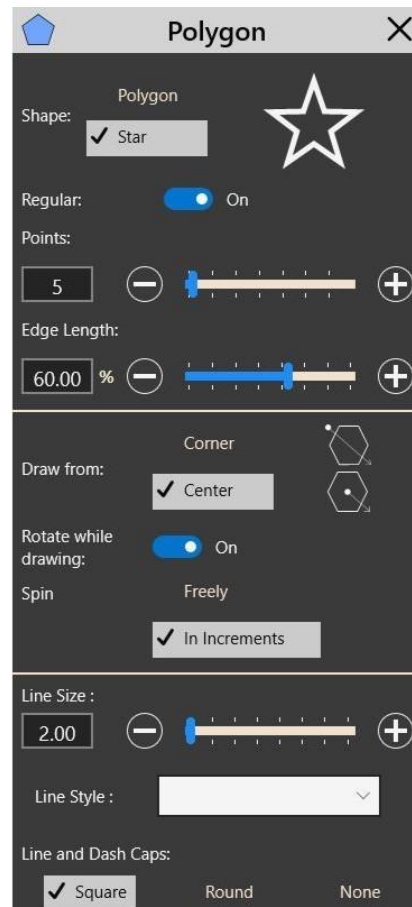
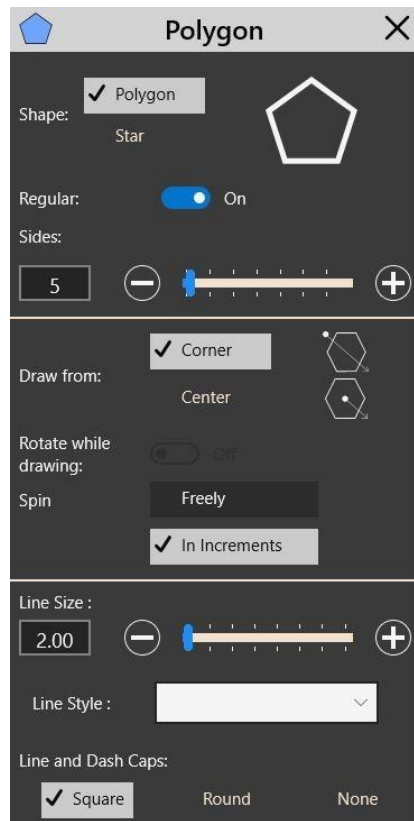
*Voice shortcut:*  
*Voice shortcut:*

Rectangle tool (rounded corners)  
Square tool (rounded corners) (chooses the Rectangle tool, sets it to Square Only, and optionally, turns On the Rounded Corners setting)

## Polygon Tool



Choose the Polygon tool by clicking on it, then drag anywhere on the document to create a polygon. The Polygon tool is also used to draw stars. We recommend watching the video tutorial to learn about this tool.



## **Shape**

This starts out set to Polygon. To draw a Star, click on the word *Star*.

## **Regular**

When Regular is On, the polygon that is drawn is one that has sides that are equiangular and equilateral (the angles and sides are all equal). The polygon shown in the Settings panel above is a regular polygon. If you turn Regular Off, then the sides and angles can be different and will be determined by where you drag.

Here are examples:



## **Sides**

Use this setting to determine the number of sides for a Polygon or a Star. As you change the number, the preview image in the upper right will change to give you an idea of what it will look like.

## **Draw from**

You can draw from center or draw from the top left corner. The Polygon tool is automatically set to draw from the upper left corner of where you start dragging. Click on the word *Center* to change to drawing from the center.

## **Rotate while drawing**

When Regular is On, and Draw from Center is selected, you can turn On the option of letting the polygon or star rotate while you are drawing it.

## **Spin**

When Rotate while drawing is On, you can choose Freely or you can choose to rotate In Increments, which will snap in a specified degree increment as you are drawing.

## **Line Size**

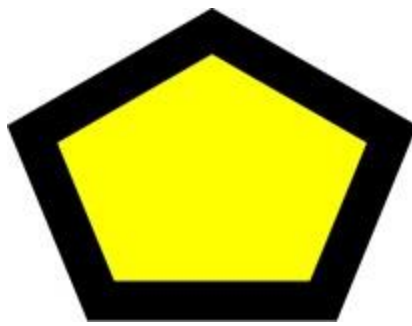
Before you draw a polygon, you can set the size of the line, in pixels, by dragging the slider, or entering a size in the text box, or by clicking on the plus or minus button (to increase or decrease the size by one). To change a polygon's line size after it has been drawn, use the Selection tool.

## **Line Style**

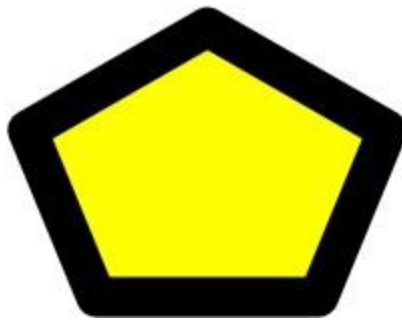
You can set the lines of the polygon to be drawn with dashes. Choose a pattern for a dashed line from the drop-down menu labeled Line Style. To change a dashed-line setting on an existing polygon, use the Selection tool.

## **Dash Caps and Line Joins**

You can set how the dashes look on the outside lines, Square, Round or None. This setting also applies to how it looks where lines join. For the Line Joins, the lines have to be somewhat thick for it to be noticeable which setting is chosen. Here's an example:



**Square**



**Round**



**None**

To change any settings on an existing polygon or star, use the Selection tool.

## Shortcuts

*Keyboard shortcut:*

N

Note: press the N key, when not in text-edit mode.

*Voice shortcuts:*

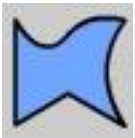
Polygon tool (<number> sides)

Note: Specifying the number of sides is optional. The number must be between 3 and 100.

Star tool (<number> sides)

Note: Specifying the number of sides is optional. The number must be between 3 and 100.

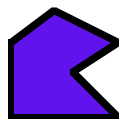
## Path Tool



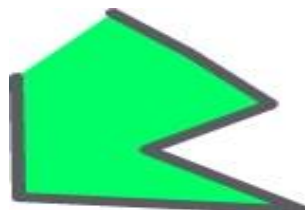
The Path tool is used to create shapes that have combinations of straight lines and curved lines (in the technical jargon, these are called paths). It can also be used to create a series of lines, straight and curved, with no fill color. For this tool, we highly recommend watching the video tutorial.

Choose the Path tool by clicking on it. To initiate drawing, you can click or you can drag. To create a series of straight-line segments, start with a click. A green circle will appear at that point. Then click somewhere else and the original green circle changes to red, a line is drawn, and the end point of this first line has a green circle on it. Then click somewhere else and a new line is made, with the green circle on the end of that line, and the red circle stays at the original point. Complete the drawing of the shape in one of three ways:

- 1) Click on the original start point, the red circle, and a final line is drawn to it.
- 2) Double-click somewhere on the document, which creates a new line to that point. A line will be automatically created from that point to the start point, finishing the shape.



- 3) Double-click on the current end point (the green circle), which will make that the last point. If Fill Color is On, the shape is filled with the current color and is left with one side open. Here's an example of what that may look like:

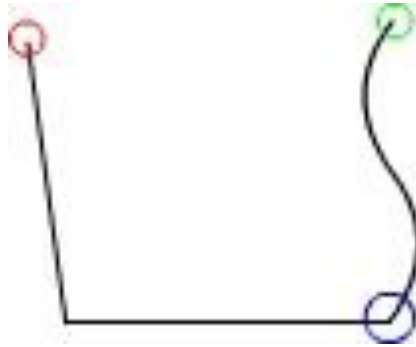


Additionally, instead of clicking at a new end point to make another line, you can press the mouse button down and drag and you will see the line segment moving around, so that you can choose the appropriate end point (with touch, just press your finger or stylus and drag). When you release, the new line will be drawn.

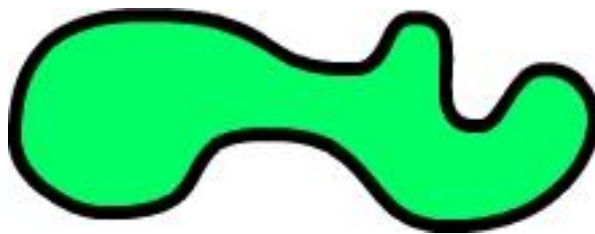
To combine straight-line segments and curved-line segments, start with a straight or curved line. To start with a straight-line segment, you do it as described above. To start with a curved line, you just start dragging and draw the curve. Once you've released the drag, the start point will have the red circle on it, the end point will have the green circle on it.

Anytime you want the next segment to be a curved line, start dragging from directly on top of the current end point, where the green circle is. A curved line will be created exactly where you drag. For example, in the image below, a click initiated the drawing, then another click made the first line, then another click made the second line. Then, the curved line was made by dragging from where the blue circle is (which at the time was where the green circle was) along the path you see that ends at the green circle (the blue circle would never appear, it's just there for this illustration). You would end this shape in one of four ways. The first three are described above.

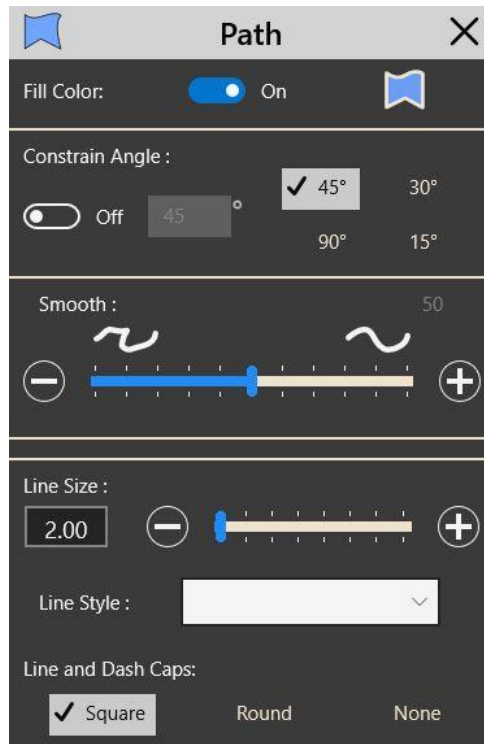
- 4) Drag a curve from the green circle to exactly on top of the red circle.



You can start a drag and make any shape you want by dragging around and then come back to the start point to end the shape. You can think of this as a freeform shape.



We certainly recommend watching the video to learn how to use this tool!



### ***Fill Color On/Off***

This is the most important setting for the Path tool. With Fill Color On, the shape will have a fill color. For a simple sequence of lines with no fill color, turn this setting to Off; double-click or double-tap on the green circle to end the shape without a line that closes the shape.



Fill Color On



Fill Color Off

For an enclosed shape with no fill color, you can have Fill Color Off, and it is the same as drawing any shape and using the None color, which is transparent. You can always go back later and add a fill color to anything created with the Path tool.

### ***Constrain Angle***

If you know you want a specific angle on a line, turn on Constrain Angle. It is pre-set at 45°. When you click to create a straight line, it can only be at 45°, so SaviDraw will draw it to a point near where you clicked. You can choose 90, 30 or 15 degrees with one of the radio buttons, or you can input any angle you want into the text box before you draw. Turn off Constrain Angle when you're done using it.

### ***Smooth***

Set the degree of smoothing that is applied to a curved line by dragging the slider. Drag the slider to the left for less smoothing, to the right for more smoothing. If you are going to trace a pixel image that you've brought into the document, be aware that there may be times when you'll need to set this to a very low smoothing.

To change smoothing after a shape or series of lines have been drawn, use the Selection tool.

## Line Size

Before you draw, you can set the size of the lines, in pixels, by dragging the slider, or entering a size in the text box, or by clicking on the plus or minus button (to increase or decrease the size by one). To change a line size after it's been drawn, use the Selection tool.

## Line Style

You can set the lines of the paths to be drawn with dashes. Choose a pattern for a dashed line from the drop-down menu labeled Line Style. To change a dashed-line setting on an existing shape, use the Selection tool.

## Dash Caps and Line Joins

You can set how the dashes look on the outside lines, Square, Round or None. This setting also applies to how it looks where lines join. For the Line Joins, the lines have to be somewhat thick for it to be noticeable which is chosen (see the Dash Caps and Line Joins section in the Polygon tool, above).

## Shortcuts

*Keyboard shortcut:*

P

Note: press the P key, when not in text-edit mode.

*Voice shortcut:*

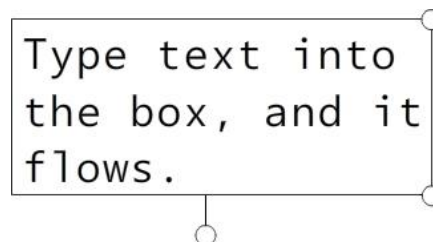
Path tool

# Text Tool



The Text tool is used to type in text and to edit text. The best way to learn how to use this tool is to watch the video tutorial.

To use the Text tool, click on it. Then click anywhere in the document and a text box will appear, or, drag out a text box as wide as you want it to be. When you've done this, a cursor is flashing in the left side of the box, although it is not readily apparent. Start typing to enter text.

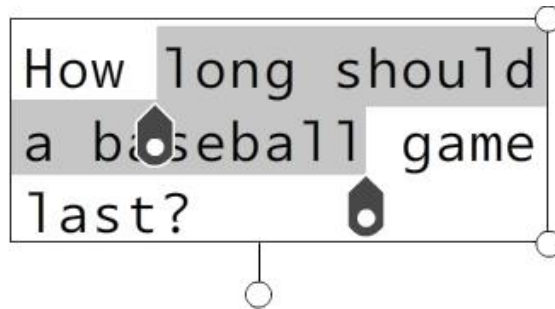


The text box is fixed-width, so when you reach the end of the box, the text will wrap around to the next line and the text box will expand down. If no text is typed in, or only spaces are typed in, when you click outside the text box it will disappear (in other words, there are no such things as empty text boxes).

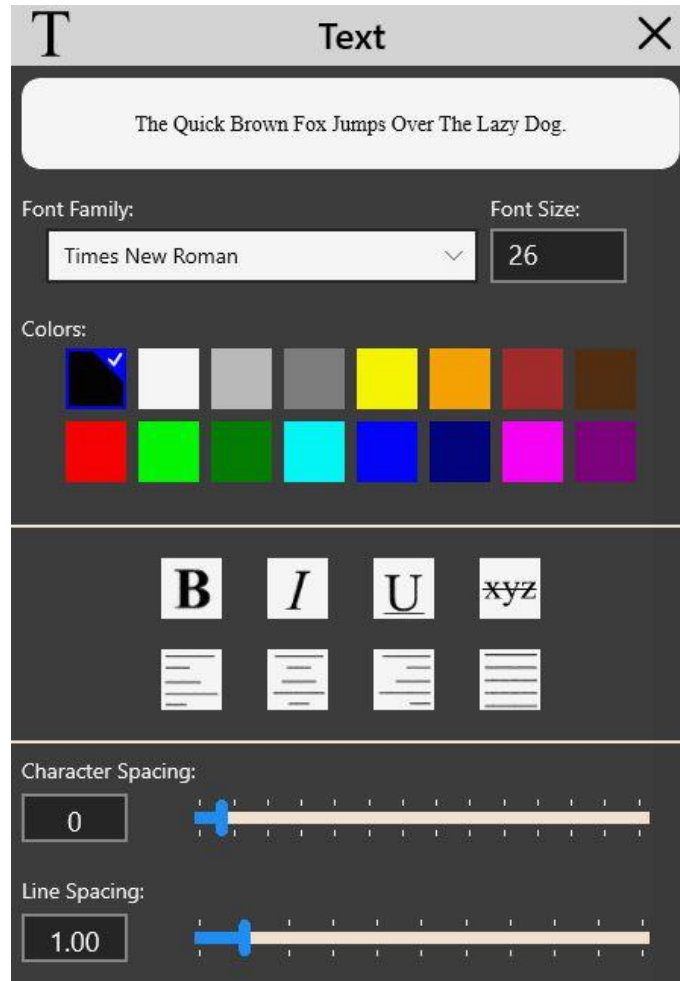
To expand the width of the text box, drag one of the two circular handles on the right side of the box. The text will reflow and you'll still be in text-edit mode. To move the text box while in text-edit mode, drag the circular handle that sticks out from the bottom. You can also move a text box around with the Selection tool when you're not in text-edit mode.

To initiate editing of text, choose the Text tool and then click inside the text box. You'll be in text-edit mode and a flashing cursor will appear at the location of your click. You can also initiate text editing with the Selection tool by double-clicking in the text box.

To make changes like Font size, color, bold, italic, etc., select the text you want to change. You do this by dragging inside the text box, starting where you want and ending where you want the selection to end. Handles will appear that can be dragged to adjust the selection of text.



Once text has been selected, changes can be made in the Text Settings panel or with keyboard shortcuts.



### **Font Family**

This drop-down menu will present all the fonts available. Choose one of the fonts and any selected text will change to the new font. An example of what that font looks like appears at the top of the panel.

### **Font Size**

Enter the desired font size into this text box and hit the Enter key.

### **Colors**

A small number of basic colors are available in the Text Settings panel, as a convenience. Click on the color to apply it to selected text. Any color and gradient color can be applied to text; see Chapter IV – Color.

## Emphasis

There are four buttons to apply emphasis. They are: Bold, Italic, Underline and Strikethru. When one is applied, the button has a check mark on it to show this. To take the emphasis off, just click on the button again. The emphasis will be removed and the button will no longer be checked.

## Text Alignment

Alignment is applied to the entire text box, so text does not have to be selected. The alignments are: Left Align, Center Align, Right Align, and Justify.

## Character Spacing

Character spacing applies only to selected text. Move the slider to the right to increase the gap between each character.

## Line Spacing

Line spacing applies to the entire text box, so text does not have to be selected. By moving the slider to the right, you increase the spacing between each line of text.

## Shortcuts

Keyboard shortcut:	Y	Note: press the Y key, when not in text-edit mode.
Voice shortcut:	Text tool	

Keyboard shortcuts while in text-edit mode:	Note: these ONLY apply in text-edit mode. Note: this is not the full list.
---	---

Ctrl A	Select All	Ctrl L	Align Left	Ctrl Z	Undo
Ctrl B	Bold On/Off	Ctrl E	Center Align	Ctrl X	Cut
Ctrl I	Italic On/Off	Ctrl R	Right Align	Ctrl C	Copy
Ctrl U	Underline On/Off	Ctrl J	Justify	Ctrl V	Paste
Backspace	Delete to left				
Delete	Delete to right				

Double-click	Select a word
Shift-click	Extend selection
Arrow keys	Move the cursor in the direction of the arrow

See Appendix 2 – List of Keyboard Shortcuts for the full list of keyboard shortcuts for editing text.

*Voice shortcuts while in text-edit mode:*

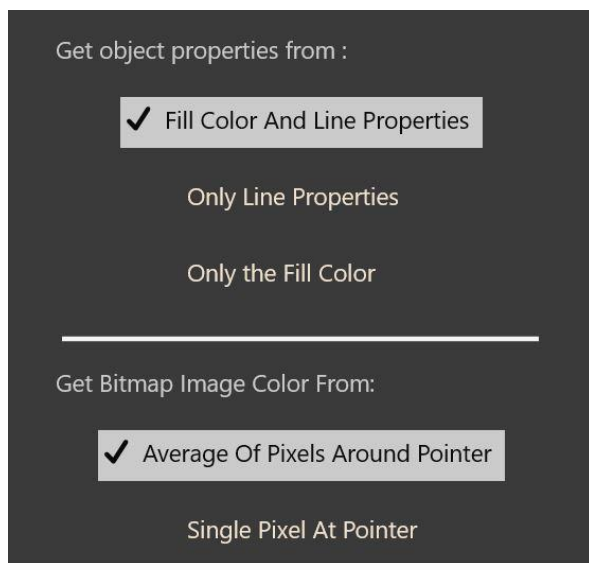
Copy	Paste	Cut
Delete	Redo	Undo; Go back
Select all	Select everything	
Font size	<number>	

## Get Tool



The Get tool is used to pick up the properties of an object. Choose the Get tool by clicking on it, then click on any object in your document and the properties of that object become the current settings used by SaviDraw. These properties include: the Fill color; and for lines: line color, line size, line style, line and dash caps. You can also click or tap on a pixel image to get the color from the location of the click or tap.

Typically you'll pick up properties with the Get tool, then switch to the Apply tool and click on another object to drop those properties onto that object.



### Settings

In the Settings panel for the Get tool, you can choose to pick up the properties from:

Fills and Lines	Get the Fill <u>and</u> Line properties.
Only Lines	Get <u>only</u> the Line properties, Fill color is ignored.
Only Fills	Get <u>only</u> the Fill color, Line properties are ignored.

To pick up a color from a bitmap (pixel) image, choose to take the color from one single pixel at the location of the click or tap, or use the preset *Average of Pixels Around the Pointer*. This will produce the best result most of the time.

### Shortcuts

*Keyboard shortcut:*

G

Note: press the G key, when not in text-edit mode.

*Voice shortcut:*

Get tool

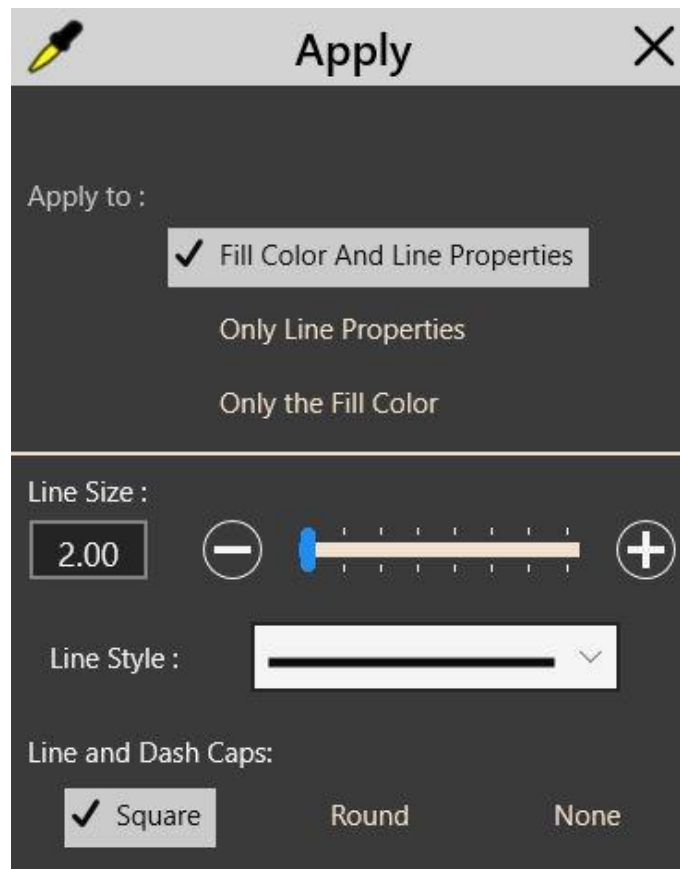
## Apply Tool



The Apply tool is used to apply current properties to an object. Choose the Apply tool by clicking on it, then click on any object in your document to apply the settings to the object.

For example, if you use the Get tool and click on an object that has a red fill, a line size of 5, a line color of yellow and has dashed lines, those are the current settings. You can then switch to the Apply tool and with *Fills and Lines* as the setting, click on some other object and the object will then have a red fill, a line size of 5, a line color of yellow and dashed lines.

The properties that can be applied include: the Fill color; and for lines: line size, line style, and line and dash caps.



### Settings

Before using the Apply tool, you can change the settings that you see in the Apply tool settings panel. And, you can also change the current Fill color in the Color panel. Once those changes have been made, click on the object that will get these properties and they will be applied.

### Shortcuts

Keyboard shortcut:

A

Note: press the A key, when not in text-edit mode.

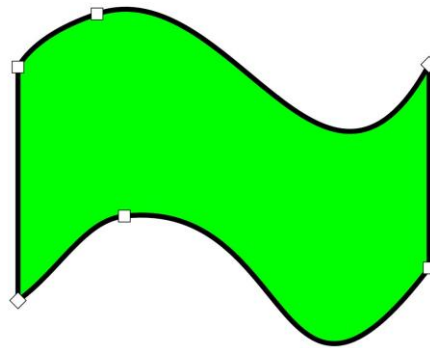
Voice shortcut:

Apply tool

## Reshape Tool

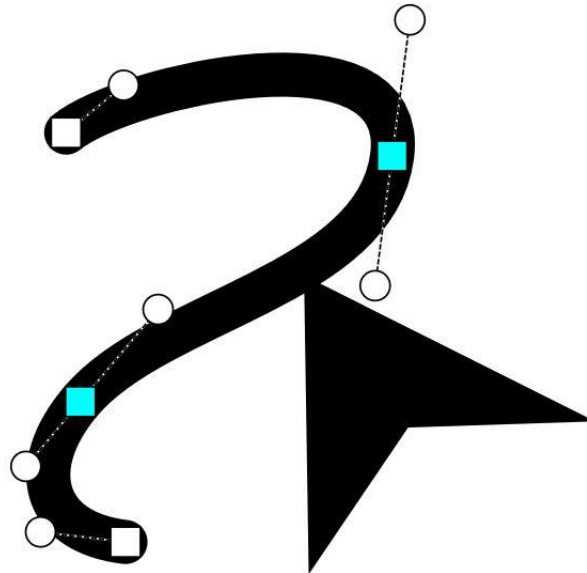


The Reshape tool allows you to reshape a straight line, a curve or the lines of a shape. Click on the Reshape tool in the Tools panel, then click on an object that you want to change (Reshape is not relevant to text boxes). You will see rectangles and diamonds embedded in the lines of the object, as shown below. These are called nodes and they represent the end points of curves and straight lines. Rectangles are at the end of curves, diamonds are at the end of straight lines.



At any time, you can drag these node points to change a shape. Once an object has been selected with the Reshape tool, you can also press and drag from anywhere along a line, whether it's a straight line or curve, and reshaping will occur. Often this will provide enough precision.

To get more precision, click on any node. It will be selected, indicated by a light blue color in it. Circular handles will appear at the end of dashed lines that emanate from the node, and handles will also appear on the adjacent nodes. Drag on these handles to reshape curves. Through experimentation you will learn how this works. To turn straight lines into curves, first drag somewhere along the line and it will instantly be converted to a curve.

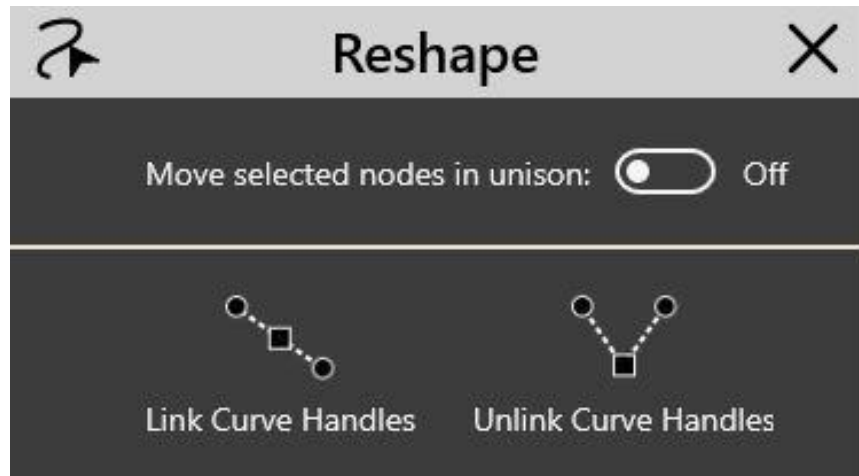


To select all nodes when an object has been selected with the Reshape tool, the keyboard shortcut is Ctrl-A; the Voice command is “select all” or “select everything.” To deselect a node that is selected (for example, when things get a bit cluttered with nodes and handles), click on the node. To deselect all nodes that are selected, the keyboard shortcut is Ctrl - (Ctrl and the minus key); the Voice command is “unselect” or “deselect”.

To add a node, double-click or double-tap at the location on a line where you want to add the node. To delete a node, select it (click on it) and then click on the Delete button at the top, next to Undo and Redo, or press the Delete key.

When using the Reshape tool, you will often want to be zoomed in on the selected object. With touch, a pinch gesture will zoom in and out; if the object gets unselected in this process (it may, if you touch the screen with just one finger at some point), just tap on the object again. If you're using a wheel mouse, spin the wheel to zoom in and out. Using a mouse with no wheel, open the Zoom panel by clicking on the Magnifier icon in the upper left of SaviDraw.

## Settings



When multiple nodes are selected and you drag on one node, only the node being dragged will move. If you want to move two (or more) selected nodes at the same time, turn on *Move selected nodes in unison*. The arrow keys on the keyboard and the Nudge command will always move all selected nodes.

When a node has two handles (sometimes there will be one or none), the handles move independently. To link them together, click on a node then click on *Link Curve Handles*. When linked, the lines between the two handles will always make a straight line, and the two handles will always be the same distance from the node. This will have a big effect on reshaping curves when you drag one of the handles and the other moves to stay in that linked position. Experiment to see how this works. This setting is actually the default setting for most vector drawing programs, so you may have experienced it before. To unlink the handles, click on the node and then click on *Unlink Curve Handles*.

*Note:* When you reshape a primitive shape (straight line, ellipse, rectangle or polygon), it is changed to a path shape and no longer is the primitive shape it originally was.

*Note:* When you reshape any line or curve, it loses all the information that was there for Smooth to work in the Selection tool settings.

We highly recommend watching the training video for the Reshape tool.

## Shortcuts

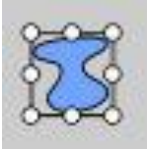
### Keyboard shortcuts:

R	Note: press the R key, when not in text-edit mode.
Ctrl-A	Select all nodes (when nodes are showing)
Ctrl -	Unselect all nodes (when nodes are showing)

### Voice shortcuts:

Reshape tool	
Select All	(when nodes are showing)
Unselect	(when nodes are showing)

# Transform Tool



To use the Transform tool, click on it and then click on an object or objects in the document. The Transform tool is used to resize and rotate objects. It may also be used to apply a Slant transformation. Objects can be moved with the Transform tool, before or after selecting them.

## *The Bounding Rectangle and Its Handles*

When selected with the Transform tool, objects will be surrounded by a bounding rectangle, and that rectangle has handles on it that can be dragged.



Clicking on other objects or Groups includes them in the bounding rectangle. There is always just one bounding rectangle. Clicking on an object that is already selected removes that object, and the bounding rectangle is adjusted accordingly. Clicking anywhere in the drawing area that is empty deselects all selections. Choosing any other tool deselects all objects.

You can also select multiple objects by choosing the Transform tool and then dragging across the drawing. You will see a rectangle made with dashed lines as you drag. Any objects (including groups) that are touched by this dragging will be included in the bounding rectangle. Finally, you can also select objects with the Selection tool, then change to the Transform tool and those objects will still be selected (and vice versa, you can select objects with the Transform tool and then change to the Selection tool).

The Transform tool is not used to select objects in order to apply Commands to them, or to change colors. The only Command that works when objects are selected with the Transform tool is Select Next.

When an object is made smaller, some handles will disappear when they can't all fit. The first to go are those in the middle and the rotate handle (the rotate handle disappears at the same time as the upper and lower middle handles). When there isn't enough space to show the four corner handles, only the lower-right-corner handle is shown, along with the proportional handle. Zooming in will make the handles re-appear.

## Scaling

To scale (resize) the objects that have been selected, drag the handles. The corner handles change the sizing in two directions – up/down or left/right. The middle handles change the sizing in only one direction – the top and bottom ones change only the up/down, while the left and right side handles change only right/left.

There are three ways to make resizing proportional.

1 – Dragging the dangling handle in the lower right will change the sizing proportionally. The upper left corner will be anchored when you do this.

2 – To anchor a different corner, hold down the Shift key while dragging any of the four corners. The diagonal handle will be anchored.

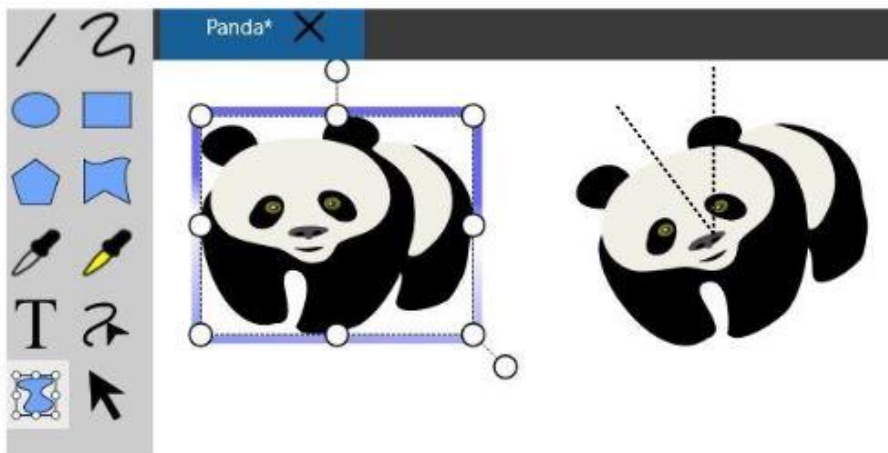
3 – You can also turn Proportional Resizing to On, and only proportional resizing will be allowed.

While dragging any handle, the handles disappear but the bounding rectangle and the actual objects remain visible so you can line up edges when needed. After dragging any handle, the objects remain selected, with a new bounding rectangle.

There are two more ways to resize one or more selected objects. The Scale command has a slider to make objects bigger or smaller, always proportional. The XY Info command brings out a flyout that allows you to enter in numeric values for the width and height.

## Rotating

Any objects that have been selected with the Transform tool can be rotated by dragging the Rotation handle that is just above the bounding rectangle.



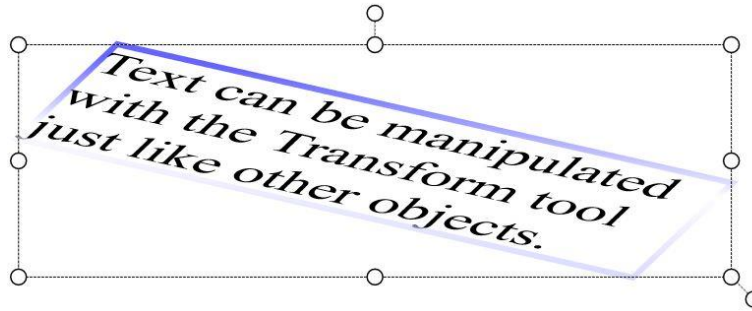
Objects rotate around the center of the object. While an object is being rotated, there are two dashed lines that show how much rotation has taken place (the angle). Upon release, these lines disappear. When multiple objects are selected and rotated, rotation occurs around the center of the bounding rectangle.

Objects can also be rotated by entering a numeric value in the Rotation section of the Transform tool settings panel. This allows you to input a precise number of degrees.

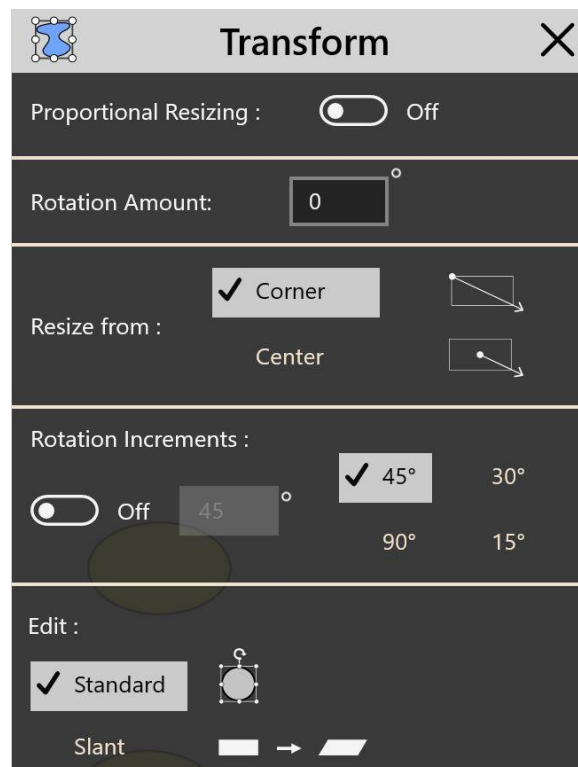
When an object is selected with the Transform tool, the object can be moved by dragging anywhere in the area of the fill color. If the fill color is None (transparent), you must drag on the line of the object.

## Text and Transform

Text boxes can be manipulated with the Transform tool. You can resize, you can rotate, you can apply Slant.



After transforming a text box, it can still be edited. When a text box is made bigger, the font size is not changed, it is “transformed” to look bigger.



### Proportional Resizing

When turned On, this ensures that any resizing will be proportional. For example, if the width is 80 pixels and the height is 40 pixels, and you drag it to be twice as large, the width will be 160 pixels and the height will be 80 pixels.

### Rotation

Click in the numeric text entry box and enter an exact value (in degrees) to rotate.

### Resize from Corner/Center

To choose, click on either *Corner* or *Center*. If you choose to resize from the corner, this will anchor the handle that is opposite of the one being dragged, or, if you choose to resize from center, the resizing will be from the center no matter which handle is being dragged.

## Rotation Increments

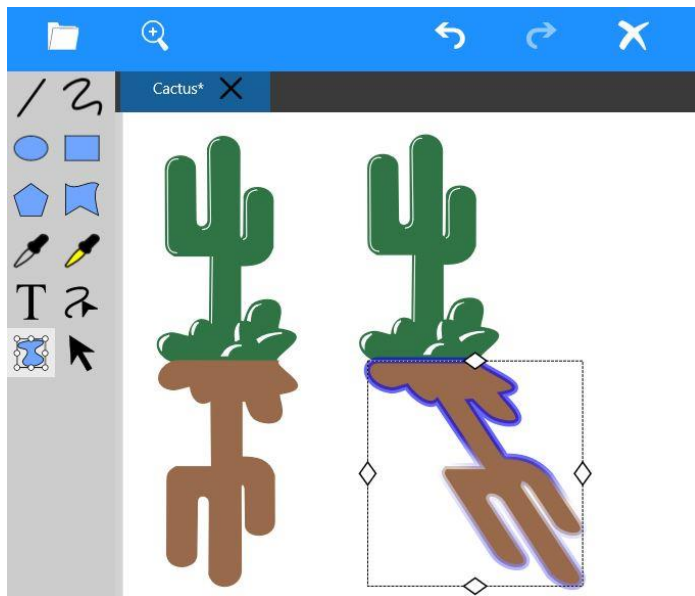
This allows you to set the minimum amount of rotation while dragging. Click on the button to turn the constraint On or Off. For example, if you turn it On and have it set to 35 degrees (by entering 35 into the box), when you drag the rotation handle, nothing will happen until you reach 35 degrees, at which time it will snap to that amount of rotation. If you keep dragging, nothing will happen until you get to 35 degrees more, and it will snap to that increment – you would then be at 70 degrees of rotation in total.

## Edit

There are two settings:

- |                 |  |
|-----------------|--|
| <i>Standard</i> | This produces everything described above.  |
| <i>Slant</i>    | When this setting is chosen, there will only be four diamond-shaped handles on the bounding rectangle. Dragging one of the handles produces an effect that looks like the object has been slanted. In the example below, the bottom handle was dragged to the right. |

When you leave the Transform tool and come back, the Slant setting is no longer chosen.



## Shortcuts

*Keyboard shortcut:*

T	Note: press the T key, when not in text-edit mode.
Shift	(hold down while dragging a handle to keep proportional)

*Voice shortcuts:*

Transform tool

Rotate (minus) <number> degrees

Scale <number> percent

The number can be from 1 to 400.

## Selection Tool

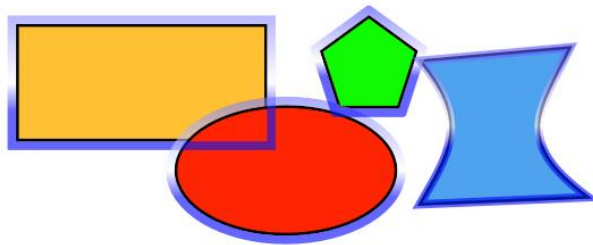


The Selection tool is used to select objects, move objects, and to change some of the properties of objects.

### **Selecting Objects**

Select an object by clicking on it. When you click on one object and then click on another, both will be selected. You can also select multiple objects by dragging across the drawing. As you do so, you'll see a rectangle made with dashed lines, which is referred to as a marquee (pronounced 'mar-key'). Any objects (including groups) that are touched by this rectangle will be selected. You can tell when objects are selected because they will have a shimmering line around the outside of them.

If you have many objects selected and want to unselect one of them, just click on that object to unselect it. To unselect all objects, you can simply click anywhere in the document that is blank. If there is no blank spot showing, you can use the Unselect All command (see Chapter III – The Commands Panel).



Note: for those of you familiar with other vector drawing programs, this behavior is different. (But don't worry, you'll get used to it quickly.) All other programs have you hold down the shift key to select multiple objects one by one. We have taken this different approach with SaviDraw because it is designed for mouse **and** touch. Sometimes when using touch, you may not have a keyboard attached. So, for this reason, nothing in SaviDraw requires a keyboard.

### **Moving Objects**

The Selection tool is also used to move objects around. Objects do not have to be selected to move them. Just drag the object; it remains unselected after dragging. If objects are selected, after moving them they remain selected. If one or more objects are selected, and you move a different object that is not selected, the previously selected objects will be unselected and only the second object that is being dragged will be moved. If you want to move two or more objects at the same time, select them first, then move them.

### **Changing Properties**

The Selection tool can also be used to change the properties of any objects that are selected. Click on objects to select them, then change properties in the Settings panel. Changes will be made in real-time so you can see what's happening. For example, if you drag the slider for Line Size, the line size for all the selected objects will change as you drag the slider.



Any combination; also only Ellipse



Polygons only



Curves and Paths only



Rectangles only

If you select a number of different types of objects (for example, a line, an ellipse, a path and a polygon), only properties that are shared by all the objects can be changed. This will typically end up being just the Line Size, Line Style, and Dash Caps. If you select just one object, you will get the most properties that can be changed for that kind of object. For example, in the screenshots above which list the various possible combinations of objects selected, you can see that if just a polygon is selected, there are many properties that can be changed.

Note: Fill color, Line color, and Text color are changed by opening the Color panel when objects are selected and clicking on a different color, or using a Voice command shortcut.

## Shortcuts

*Keyboard shortcut:*

S Note: press the S key, when not in text-edit mode.

*Voice shortcuts:*

Selection tool

Select <all, everything>

Select next <up, down>

Line size <number>

Line color <color>

Fill <color>

(changes the Fill color)

Color <color>

(changes the Fill color)

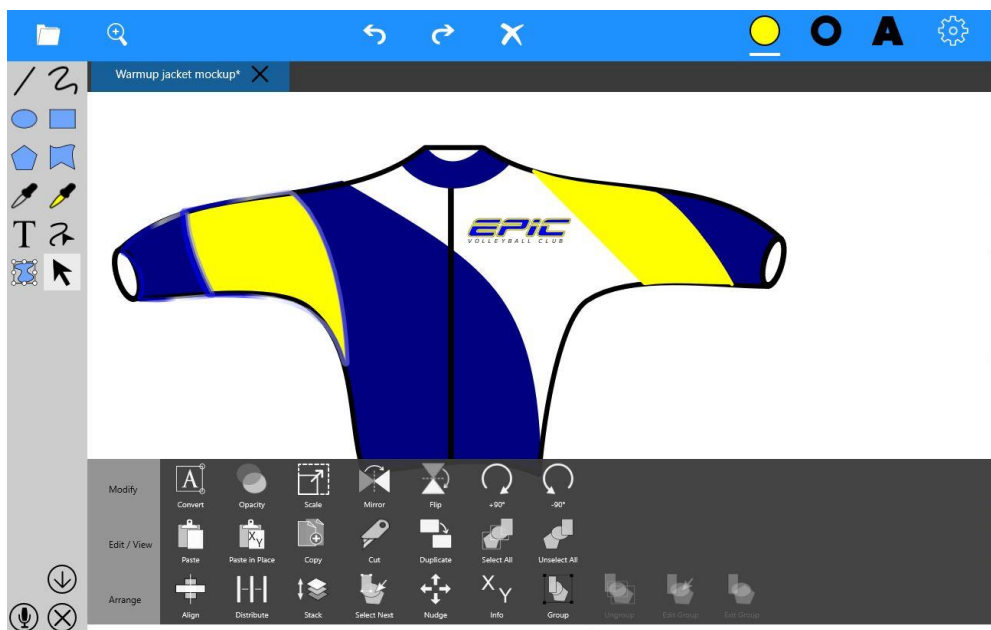
# Chapter III – The Commands Panel



The Commands panel is opened by clicking on the button in the lower left that has three dots in it (ellipsis). When the Commands panel opens at the bottom of the document, it first shows just one of the three panels, the Modify panel.



To change to one of the other panels, click on its name on the left side. You can show all three panels at the same time by clicking on the button that has an up arrow in it. To view just one panel, click on the same button, which will be showing a down arrow. To dismiss the Commands panel, click on the Close button (the one with the X in it, where the ellipsis originally was).



# The Modify Panel

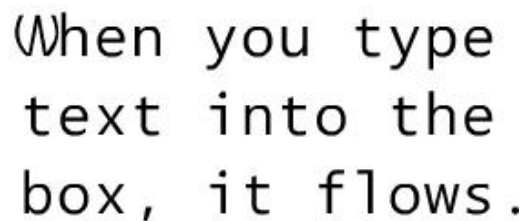
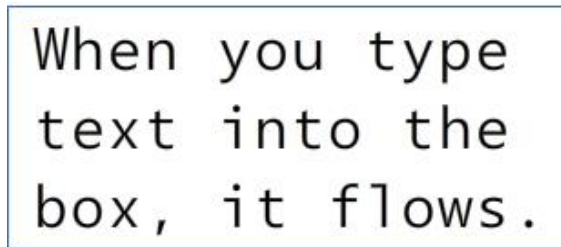


## Convert Text



This command converts text into paths. Select a text box, then click on Convert Text. Each character in the text is converted to an object that can be edited like any other shape, and all the objects are in a group. Use the Ungroup command to get rid of the grouping, or Edit Group to go into the group and edit the objects.

The text is no longer editable text, although it might look the same. All the lines are paths that can be reshaped. In the example below, the text was first selected (left side of image), then Convert Text changed everything to paths, and the W was reshaped with the Reshape tool (right side of image).



*Voice shortcut:*

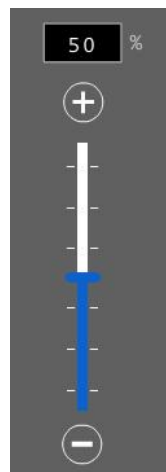
Convert text

## Opacity

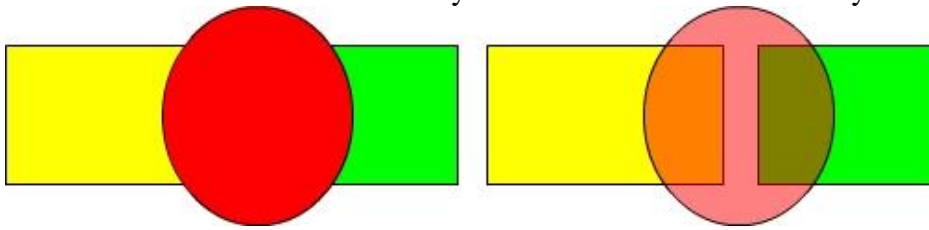


Opacity refers to how transparent an object is, including the Fill color and Line. At 100% opacity, it is fully opaque. At 0% opacity, it is fully transparent, which makes it invisible (but it's still there). At 25% it is much more transparent than at 75%.

To change the opacity of an object or objects that are selected, click on the Opacity command, which will bring out a slider. Drag the slider up or down: down for more transparency, up for less transparency. The flyout will go away when you click outside the flyout.



In the example below, the red ellipse is changed from 100% (left) to 50% opacity (right). You can see through it, and the colors below look different because they are a combination of red and yellow or red and green.



The Opacity command works on Grouped objects – the opacity of all objects inside the Group are changed, even objects in nested sub-groups. To change the opacity of certain objects inside the group, Edit the group (go inside the group) and change just the ones you want.

*Voice shortcut:*

Opacity <number> percent

The number can be from 0 to 100.

## Scale



This command alters the size of an object to be bigger or smaller, always proportional from the upper left corner. Select objects, then click on the Scale command. A flyout will appear, with a slider. Drag the slider up to make the object bigger, down to make it smaller. This exists as a separate command to allow specifying an exact percent to scale an object or objects. The flyout will go away when you click outside the flyout.



*Voice shortcut:*

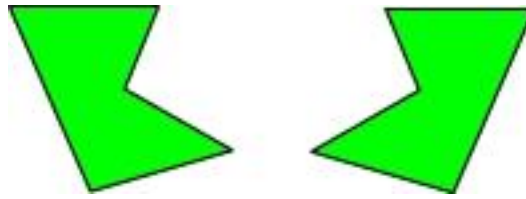
Scale <number> percent

The number can be from 1 to 400.

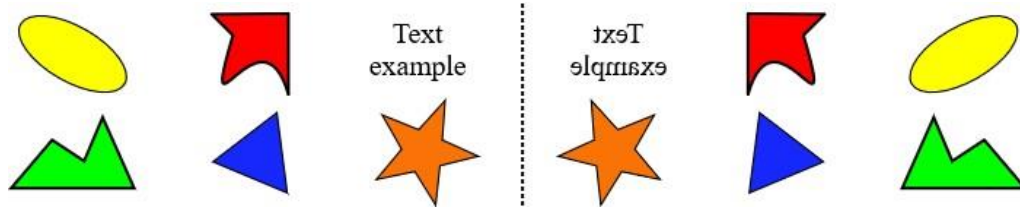
## Mirror



This command reverses an object (the left side flips over to be the right side). Select an object or objects, then click on the Mirror command. The example below shows an object that has Mirror applied to it. The object stays in the same place when Mirror is applied.



If multiple objects are selected, each individual object is mirrored, and all the objects are mirrored in relationship to each other.



*Keyboard shortcut:* Ctrl M  
*Voice shortcut:* Mirror

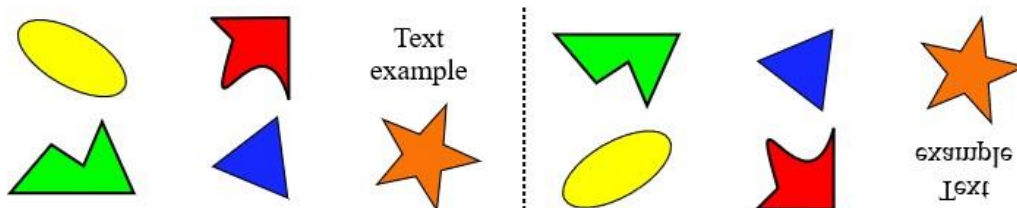
## Flip



This command flips an object vertically (the top becomes the bottom and vice versa). Select an object or objects, then click on the Flip command. The example below shows a Flipped object. The object stays in the same place.



If multiple objects are selected, each individual object is mirrored, and all the objects are mirrored in relationship to each other.



There will be many times that you'll want to apply both Mirror and Flip. Here's an example:



*Keyboard shortcut:* Ctrl F  
*Voice shortcut:* Flip

## **-90°**



Select an object or objects, then click on the -90° command. This will rotate an object -90°, or 90 degrees counterclockwise.



*Keyboard shortcut:*

Ctrl 0 (zero)

*Voice shortcuts:*

Rotate minus 90 degrees

Rotate 90 degrees counterclockwise

## **+90°**



This command rotates an object +90°, or 90° clockwise. Select an object or objects, then click on the +90° command.



*Keyboard shortcut:*

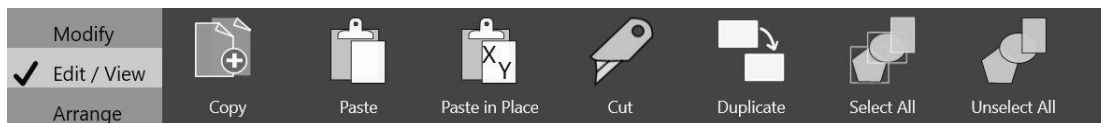
Ctrl 9

*Voice shortcut:*

Rotate 90 degrees

Rotate 90 degrees

## **The Edit/View Panel**



### **Copy**



The Copy command makes a copy of selected objects or text and puts that copy on the clipboard.

*Keyboard shortcut:*

Ctrl C

*Voice shortcut:*

Copy

### **Paste**



The “clipboard” is where things get copied to. If something has been copied to the clipboard, the Paste command is enabled. Click on Paste to have SaviDraw place the contents of the clipboard in the middle of the current view of the document.

If it's text that has been copied, there are two possibilities. If you copied an entire text box while it

was selected with the Selection tool (not while in text-edit mode), then the entire text box is pasted into the document.

If, while in text-edit mode, you selected some text and then did a Copy command, to paste this text you'll have to be in text-edit mode in a text box. The text from the clipboard will be pasted at the flashing cursor.

You can copy something in one document, then switch to another document and paste into that document.

*Keyboard shortcut:* Ctrl V

*Voice shortcut:* Paste

Note: this works for pasting text while in text-edit mode.

## **Paste in Place**



Paste in Place works just like the Paste command, with one difference. When a graphic object (not text) is copied, its location on the document is tracked. When you click on the Paste in Place command, the object or objects will appear in the same location that they were originally copied from. This is very useful when you are making documents that are very similar and you want to put various items in the exact same place in a second document.

For text, Paste in Place will paste text into a text box at the location of the flashing cursor.

*Keyboard shortcut:* Ctrl-Shift V

*Voice shortcut:* Paste in place

## **Cut**



The Cut command works like Copy with one major difference. When you click on Cut, this puts the objects that are selected on the Clipboard, and then deletes all those objects from the drawing. It removes them out of the document.

*Keyboard shortcut:* Ctrl X

*Voice shortcut:* Cut

## **Duplicate**



Select one or more objects and click on the Duplicate command. This will make a copy of the objects and place them to the right of the original objects. Clicking on the Duplicate command only makes one copy of each object. But, the Voice command for Duplicate is very powerful and has many more options.

*Keyboard shortcut:* Ctrl D

*Voice shortcuts:* Note: see how to read this in Appendix 1 – List of Voice Commands

Duplicate (*number*) (*direction*) (spacing <*number*>)

*number* (how many): 1 to 100 If no number is specified, the number is one.

*direction:* right, left, up, down If no direction is specified, it is 'right'.

*number* (pixels): 1 to 500 ?? If no number is specified, the number is 10.

Examples: duplicate 9 down

This makes 9 copies going down.

duplicate 4 up

This makes 4 copies going up.

duplicate 9 right spacing 50

This makes 9 copies to the right, spaced 50 pixels apart.

## Select All



Click on this command to select all objects in the document (including text objects).

*Keyboard shortcut:*

Ctrl A (A for all)

*Voice shortcuts:*

Select all; select everything

## Unselect All



Click on this command to unselect all selected objects. This is useful when many of the objects are obscured.

*Keyboard shortcut:*

Ctrl - (minus key)

*Voice shortcuts:*

Unselect; deselect

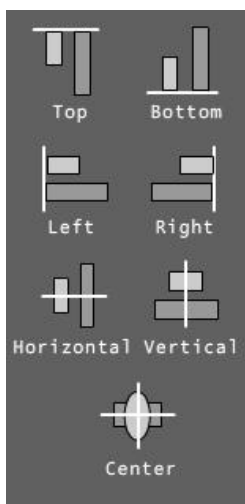
## The Arrange Panel



### Align



The Align command is used to line up objects that are selected. Click on the Align command to bring out the flyout. Click on one of the alignment choices and the objects will move. The flyout will go away when you click outside the flyout.



*Voice shortcut:*

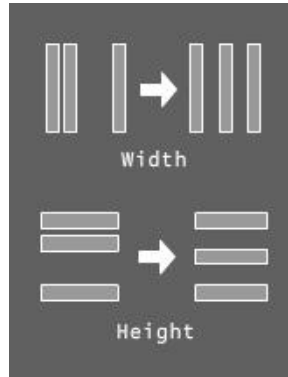
Align <top(s), bottom(s), left; right, center(s), horizontal, horizontally, vertical, vertically>

## Distribute



The Distribute command will evenly space out three or more objects. There are two options. Width will space objects horizontally (left and right), and Height will space them evenly vertically (up and down). Click on Distribute to bring out the flyout. The options in the flyout are not enabled until three objects or more are selected.

The voice commands for Distribute include “space evenly” as an alternative to “distribute” because “space evenly” is much easier to say.



<i>Keyboard shortcuts:</i>	Ctrl-Shift D	Distribute width
	Ctrl-Shift H	Distribute height

*Voice shortcuts:* Distribute <height, width, horizontal, horizontally, vertical, vertically>  
Space evenly ((right (and) left), up (and) down, horizontal, horizontally, vertical, vertically, height, width)

Note: If not specified, it is ‘right and left’.

Note: horizontal is ‘right and left’, vertical is ‘up and down’.

## Stack

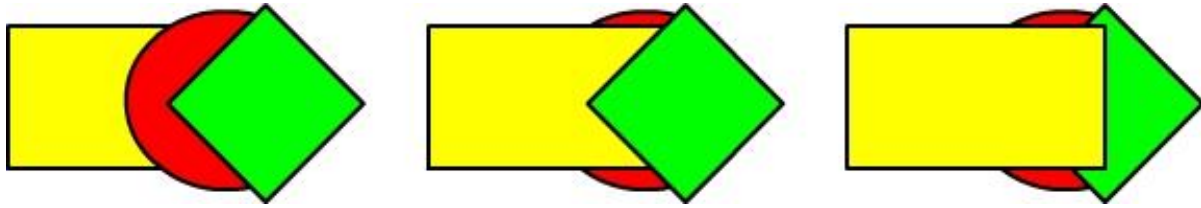


The first object created is automatically at the bottom of the stack. The next object created will be on top of that first object. The third object created will be on top of the second and the first. This is referred to as the stacking order. The Stack command is used to change this order.

Select an object or objects, then click on the Stack command and a flyout with a slider will appear above it. Dragging the slider up will move objects higher up in the stacking order, i.e. they will move on top of other objects. Dragging the slider down moves objects lower in the stacking order.



In the example below, the yellow rectangle starts at the bottom of the stacking order. In the second image it has been moved up one in the stacking order, and in the third image it has been moved up one more, or it was moved to the ‘top’ of the stacking order.



The slider works well for seeing movement in a large stack of objects. But for moving up or down one, the most efficient way will be to use a keyboard shortcut (Ctrl plus the Up or Down Arrow key). The quickest way to move to the top or to the bottom is probably the Voice command.

There are a number of variations for Voice. Bring and Send are commands that have been used in many previous vector drawing programs, so these are included as a convenience for anyone who has used other programs.

The flyout will go away when you click outside the flyout.

*Keyboard shortcuts:*      Ctrl UpArrow      (move the object up one in the stacking order)  
                                  Ctrl DownArrow      (move the object down one in the stacking order)

*Voice shortcuts:*      Move <forward, backward, to front, to top, to back, to bottom>  
                                  Bring <forward, to front>      (only moves up)  
                                  Send < forward, backward, to front, to back >

## Select Next



When an object is partially or completely hidden from view by other objects, it is useful to be able to select an object close to it in the stacking order, then use the Select Next command to switch which object is selected.

Select an object, then click on the Select Next command and a flyout with a slider will appear.

Dragging the slider up will change the selection to the next object above in the stacking order.

Dragging the slider down will change the selection to the next object below in the stacking order.

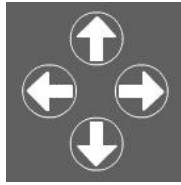


*Keyboard shortcuts:*      Alt UpArrow      (select the next object up one in the stacking order)  
                                  Alt DownArrow      (select the next object down one in the stacking order)  
*Voice shortcut:*      Select <next, previous, up, down, first, last, back, front >

## Nudge



This command moves an object or objects one pixel on the screen. Select an object, then click on the Nudge command and a flyout with four arrows will appear.



Click on an arrow and the selected object moves one pixel in that direction. The most efficient way to do this is to use the keyboard arrow keys as shortcuts. You can hold down an arrow key (or press the mouse button down on one of the four arrows in the Nudge flyout) and the object will continue to move until you release. The flyout will go away when you click anywhere outside the flyout.

If the movement seems too large and you want more fine control, simply Zoom In. The Nudge and arrow keys move one pixel on the screen. When you're zoomed in, one pixel is much less actual distance than when you are zoomed out.

*Keyboard shortcuts:* UpArrow; DownArrow; LeftArrow; RightArrow

*Voice shortcuts:* Nudge < up, down, left, right >

## XY Info



This command is used to change the size and/or the location of an object or objects. Select an object, then click on the XY Info command and a flyout appears.

To change the size, click in either of the numeric values boxes under the Size label and enter a number. If you want to keep the objects proportional, turn Proportional to On. If you want to change each of the values independently, turn Proportional to Off.

To change the location of objects in the document, click in either of the numeric values boxes and enter a number. The numbers specify the X and the Y coordinate of the location on the document. The X and Y location is based on the upper-left corner of the bounding rectangle of an object or objects.

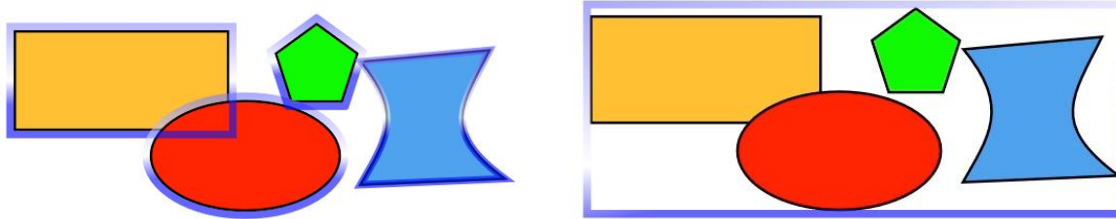
Choose the unit of measurement (Pixels, Inches or Millimeters) by clicking on the word.

Size:		Position:		Units:
→	50.5	X	1,323.6	<input checked="" type="radio"/> Pixels
↓	150.25	Y	78.0	<input type="radio"/> Inches
Keep Proportional:				<input type="radio"/> Millimeters
<input checked="" type="checkbox"/> On				

## Group



To put objects together into one group, first select the objects, then click on the Group command. When you do this, the objects will change from having a selection marquee around each object to having just one selection marquee around all of the grouped objects. See the example below.



The grouping of objects is a very important function. After combining selected objects into a group, that group functions as if it is one object. Some examples:

- Select a group, click on the Delete button – the entire group of objects is deleted.
- Select a group, move it up or down in the stacking order – the entire group moves.
- Move a group (selected or not) – all the objects move together

Objects can be grouped together inside of an existing group. In technical terms, they can be 'nested'. So you could have a group, and inside that group you can have a second group, and inside of that second group you could have a third group, etc.

*Keyboard shortcut:*

Ctrl G

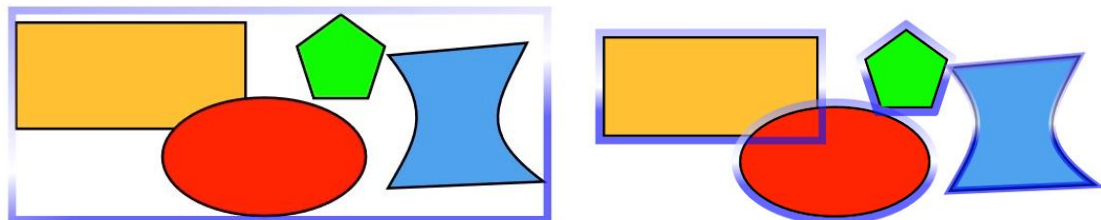
*Voice shortcuts:*

Group; make a group

## Ungroup



To ungroup the objects in a group, select the group, then click on the Ungroup command. The opposite of using the Group command will happen. The single group will be dissolved and all the objects will be individually selected, as shown in the example below.



*Keyboard shortcut:*

Ctrl U

*Voice shortcut:*

Ungroup

## Edit Group



If you want to edit objects in a group (move things around, draw new objects, delete objects, etc.), use the Edit Group command. Select a group, then click on the Edit Group command. You'll notice that all other objects in the document that are not inside that group become dim – they are

unavailable for editing. If you have a group inside of a group, that second group will not be dimmed. To edit that group, you have to select it and use the Edit Group command – or double click on it – and you’ll go inside that group.

We recommend that using the shortcut to go into a group and edit: double-click on it.

<i>Keyboard shortcut:</i>	Ctrl E	or	Double-click on the group
<i>Voice shortcut:</i>	Edit group		

## ***Exit Group***



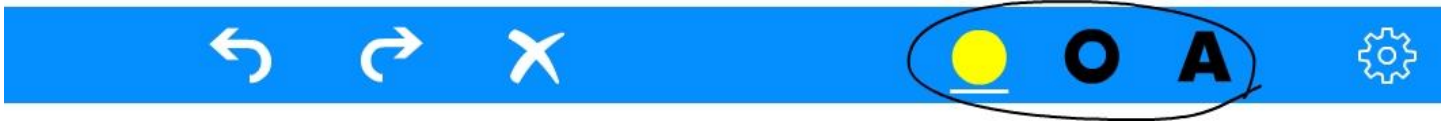
Once you’re done editing a group, click on the Exit Group command. If you’re in a sub-group, you’ll go back up one and be editing the first group. To exit that group, you click on Exit Group again.

We recommend using the shortcut, which is double-click somewhere outside of the boundary of the group.

<i>Keyboard shortcut:</i>	Ctrl W
<i>Voice shortcut:</i>	Exit group

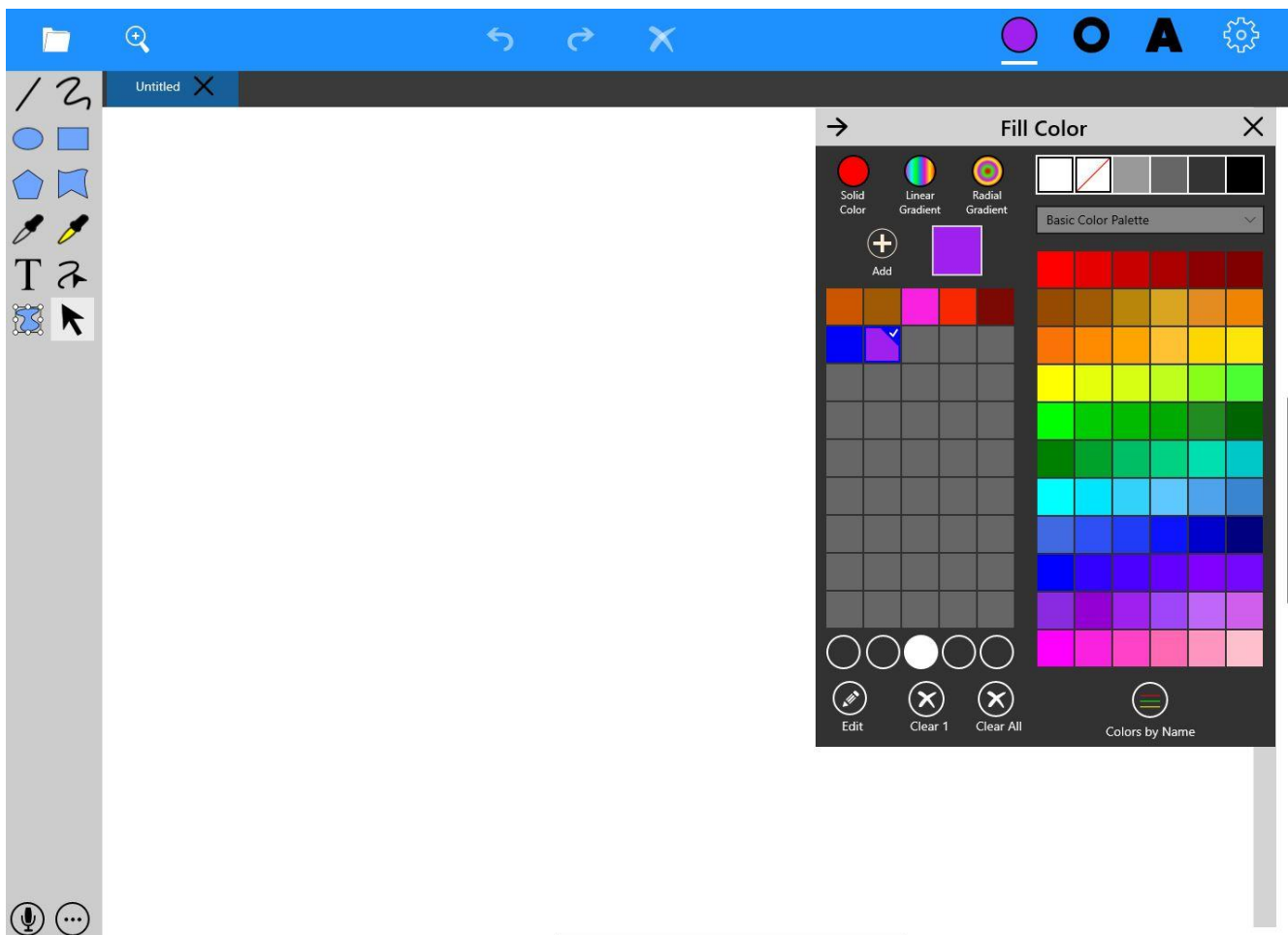
# Chapter IV – Color

## The Fill Color, Line Color and Text Color buttons



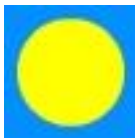
The three buttons circled above open and close the Color panel. Click on the first button to open Fill Color, the second to open the Line Color, or click on the third to open the Text Color. Clicking the same button a second time will close the Color panel.

If the panel is already open and you click on a different one of the buttons, it doesn't close, but rather changes to Fill, Line or Text color, whichever you clicked on. For example, if the Fill Color is open, clicking on the third button (the letter A icon) will change the panel to Text Color.



*The Color panel, set to Fill Color*

## **Fill Color Button**



Clicking on the Fill Color button opens and closes the Fill Color panel. The Fill Color button changes its color to show what the current Fill Color is – it starts out as yellow when SaviDraw is launched.

*Keyboard shortcut:* Ctrl [  
*Voice shortcuts:* Open Colors; Close Colors

## **Line Color Button**



Clicking on the Line Color button opens and closes the Line Color panel. The Line Color button changes its color to show what the current Line Color is – it starts out as black.

*Keyboard shortcut:* Ctrl [  
*Voice shortcuts:* Open Colors; Close Colors

## **Text Color Button**



Clicking on the Text Color button opens and closes the Text Color panel. The Text Color button changes its color to show whatever the current Text Color is – it starts out as black.

*Keyboard shortcut:* Ctrl [  
*Voice shortcuts:* Open Colors; Close Colors

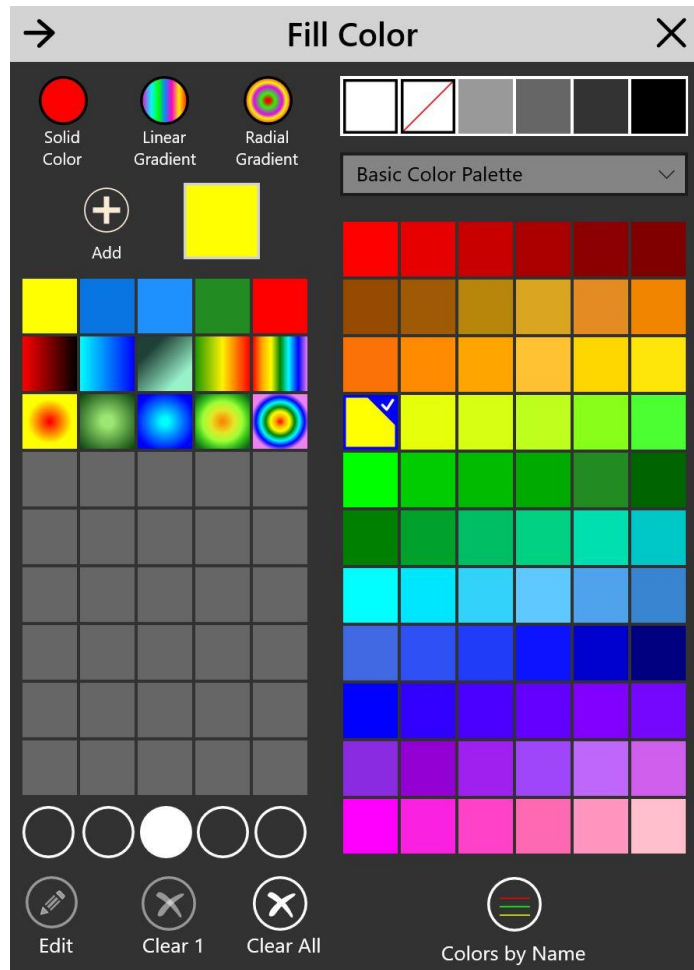
## **Which color, Fill, Line or Text?**

The Color panel looks the same for all three options, Fill, Line and Text. The one being used is indicated in two places. At the top of the Color panel, there is a label that says: Fill Color, Line Color or Text Color. The second place is under the current button, where there is a white line. This is useful in order to glance up and see which color you're about to change when the Color panel is open.

# The Color Panel

## ***The Basic Color Palette – Choosing a Color***

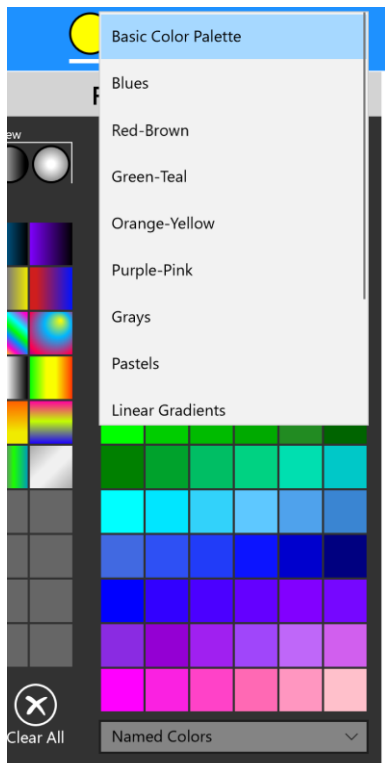
When you open the Color panel, you will see a palette of colors on the right side. This palette is intended to cover the basic range of colors. To choose a color, click on the color you want. A small check mark appears in the upper-right corner of the rectangle which is the currently selected color. The current color is also shown in the square next to the Add button, and it is shown at the top, in the buttons that open and close the Color panel.



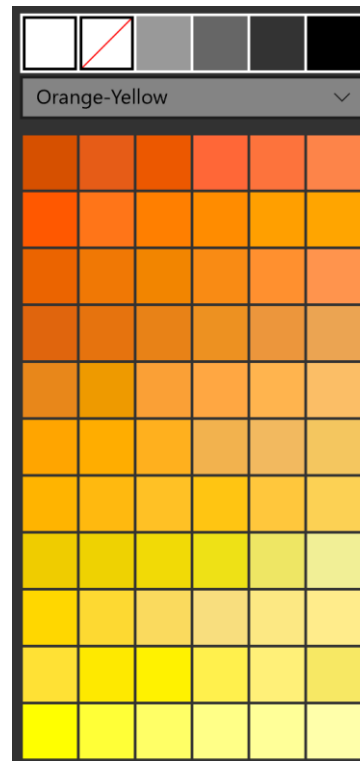
If you have an object or objects selected when you click on a different color, the change will be made immediately on the objects. You can always Undo this.

## ***Changing Color Palettes***

The label that says *Basic Color Palette* is part of a drop-down list. Click on the drop-down to see a list of other palettes. Click on the name of another palette to choose it. The example below shows the drop-down menu on the left, and the Orange-Yellow palette on the right. We have these palettes in SaviDraw to make it easy for you to find lots of different colors.



The Color palettes drop-down list



The Orange-Yellow palette

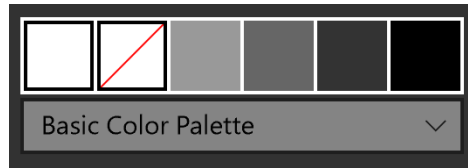
There is one more way to see a big list of colors. At the bottom right, there is a button labeled *Colors by Name*. Click on the button and a large flyout appears. The colors are sorted by name. You can click on *Sort by Color* to have them displayed by color rather than by name. This list contains all the official HTML colors.



**Note:** All these colors are available using voice commands.

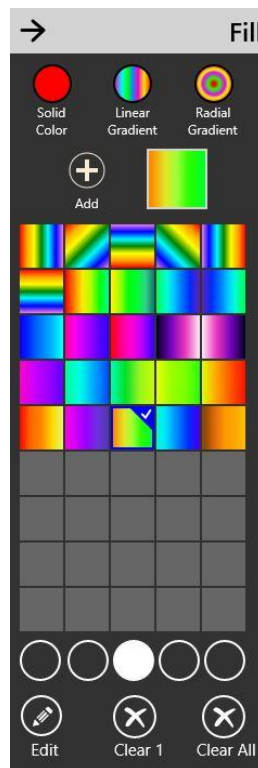
## The Permanent Colors

At the top of the Color panel, you'll see six permanent colors. The first is white. The second is None, or Transparent, and has the red line through it. Then there are three shades of gray and finally, black. These are always available, since white, black and None are used so frequently.



## The User Palette in the Color Panel

The User Palette is where you keep colors that you have created or chosen. The colors in the User Palette stay the same whether you're choosing Fill Color, Line Color, or Text Color. Initially you will see 45 boxes for colors, but there are four more palettes of 45 colors available. You can switch between these five palettes by clicking on one of the five circles below the last row in the User Palette.



There are two ways to add colors to the User Palette. The first is to click on the Add button at the top. The 'current' color will be added in the next available box. The second way is to make a New color and click OK. (See *Creating New Colors*, below.)

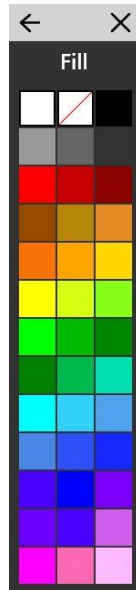
To delete a single color from the User Palette, click on the color to select it (which will make it the current color), then click on the Clear 1 button at the bottom. There is no Undo for this, but if you clicked it by mistake, that color will still be the current color and you can click on the Add button to add it back to the User Palette.

To clear all the colors from the currently active User Palette, click on the Clear All button at the bottom. A flyout will appear that will ask, "Clear all cells in this User Palette?". To complete clearing the palette, click on the Yes button; to cancel, click on the No button. If you clear it, there is no Undo for this action.

This clears all 45 colors in the currently active palette, not all five user palettes. To clear the other four, you have to clear each one separately.

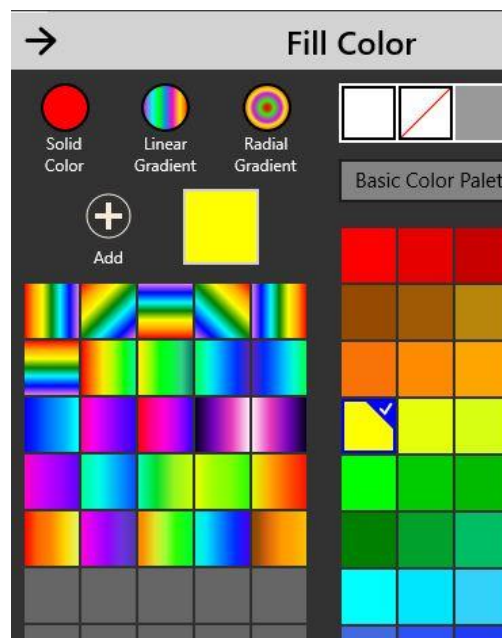
## The Mini Color Panel

If you only need a few basic colors, you can use the Mini Color panel. Click on the arrow that points to the right which is located in the top left of the Color panel and the Mini Color panel will appear. To bring back the full Color panel, click on the arrow in the upper left that points to the left.



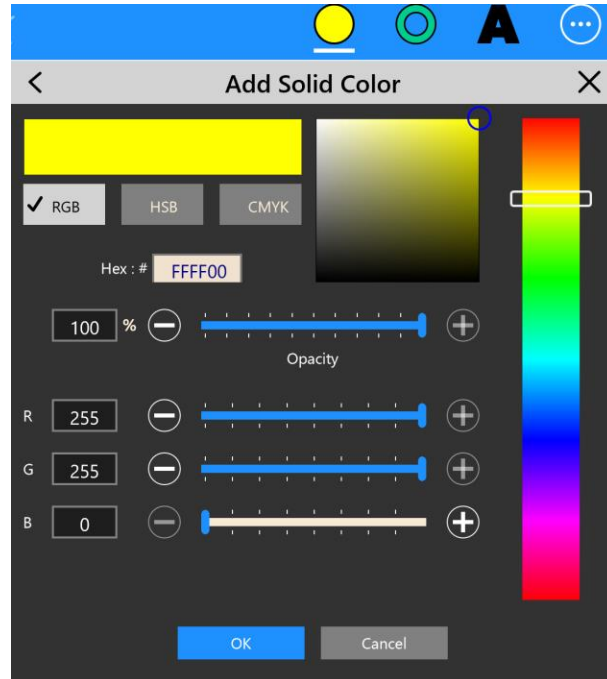
## Creating new colors

There are three buttons that can be used to make a new color. They are located in the top left of the Color panel. The first is for making a solid color, the second is for making a linear gradient and the third is for making a radial gradient. When you have completed your editing of a new color, click OK and that color will then be added to the User Palette. If you click Cancel, your work will be abandoned and no new color will be added to the User Palette.



## ***Solid.***

To create a new solid color, click on the button labeled Solid Color. The Add Solid Color panel appears.



On the right, there is an up and down slider that picks a color, or Hue. The big rectangle at the top, just to the left of the Hue slider, is used to adjust the Saturation and Brightness by dragging the circle that starts in the upper right corner. Dragging to the left reduces the Saturation while dragging down reduces the Brightness. This is just another way to find the color you're looking to create.

When the Add Solid Color panel is opened, it starts out set to RGB (red, green, blue). You can drag the appropriate slider to change the value of R, G, or B, changing the mix of these three colors. The range is 0 to 255. You can also click in one of the three text boxes to the left of the sliders to type in the value that you want. Often, you'll come across descriptions of a color that includes the RGB value, and this makes it easy to plug in those values.

HSB stands for Hue, Saturation and Brightness. When you choose this option, you get three sliders and their text boxes, but each slider changes the color in different ways than RGB. Hue is specified as an angle between 0 and 360 degrees, while Saturation and Brightness are percentages between 0 and 100.

CMYK stands for Cyan, Magenta, Yellow and Key (which is black). In traditional offset printing, ink of these four colors was mixed. Black was referred to as K, from 'key', the shorthand for a key plate. These are here mainly so that if you come across a color and are given the CMYK values, then you can easily input them.

Another way to specify a color is with Hex code, short for Hexadecimal. This is a six-character combination of letters and numbers. Programmers understand how this works, but us mere mortals, not so much. Again, you will sometimes encounter a Hex number for a color you want to use, and it's easy to just type it into the Hex box.

Finally, there is an Opacity slider. It starts at 100%, which makes the color fully opaque (not transparent at all). You can change the percentage with the slider or by entering a number in the text box. The lower the percentage, the more transparent the color becomes. There is one big difference between using this to change opacity and using the Opacity command in the Modify command panel.

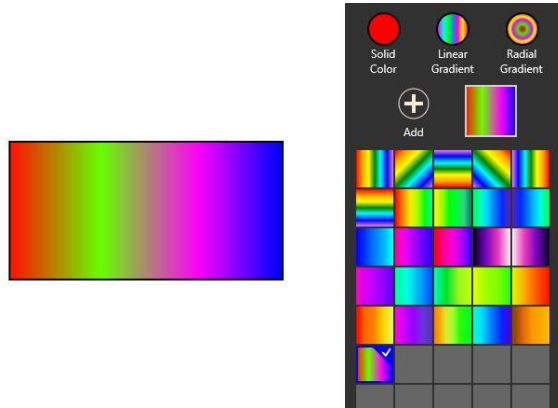
The Opacity command changes the opacity (transparency) of both the Fill color and Line color of an object. So if you want an object to have a Fill color that has transparency, but you want the Line color to be 100% opaque (not transparent at all), then you have the Line color be a normal solid color and the Fill color have

transparency that has been created in this Add Solid Color panel. This color will be in the User Palette after you click OK. (No colors in the other palettes have any transparency.)

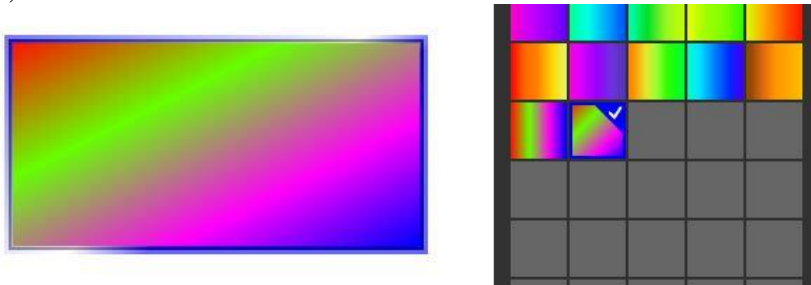
We recommend watching the video tutorial for this section.

## ***Linear Gradient***

Gradients are a combination of colors that shift from one color to another. Minimally there are two colors, a Start color and Stop color. If there are more in between the first and last, those are also referred to as Stop colors. Below is an example of a linear gradient with four different colors.



Linear gradients go in a straight line, changing from one color to the next. But they don't have to be exactly left to right, like the example above. You can change the angle of a linear gradient and the same colors can look like the image below, at 45°.



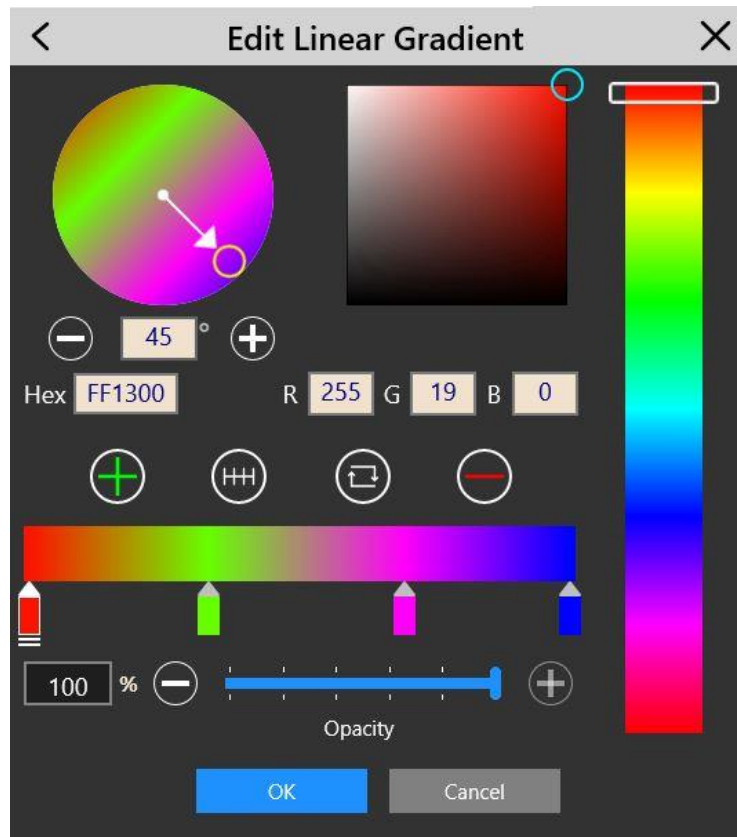
To create a new linear gradient, click on the Linear Gradient button. The Add Linear Gradient panel appears. Two things are the same as the Add Solid Color panel, the Hue slider on the right and the Saturation and Brightness box next to it (move the small circle left and right for Saturation, up and down for Brightness).

The large circle in the upper left gives a preview and is used to change the angle. To change the angle, drag the small white circle around, or enter a value in the text box.

Below the circle, there are text boxes to enter a Hex number for a color. Next to that are text boxes to enter RGB values for a color.

Below that is a long rectangle that shows the stop colors. What this rectangle looks like at first depends on the current color. If it's a solid color, the first color will be that same color and the last color will be an opposite color (in technical terms, the XOR value). If the current color is a gradient (linear or radial), the stops begin in the same pattern as that currently selected gradient color. You can then edit everything.

Below is an example of a linear gradient with four colors set to a 45° angle. There are four stops, which look like pencils. One is highlighted, meaning that it is selected, and it is the one that will be changed when you change the color, using any of the ways to make changes (Hue slider, Saturation and Brightness, Hex or RGB). Click on a different pencil to select it. Slide a stop (drag it) to change its location.



There are four buttons above the preview rectangle: Add a stop; spread the stops out evenly; flip the order of the stops; and remove a stop.



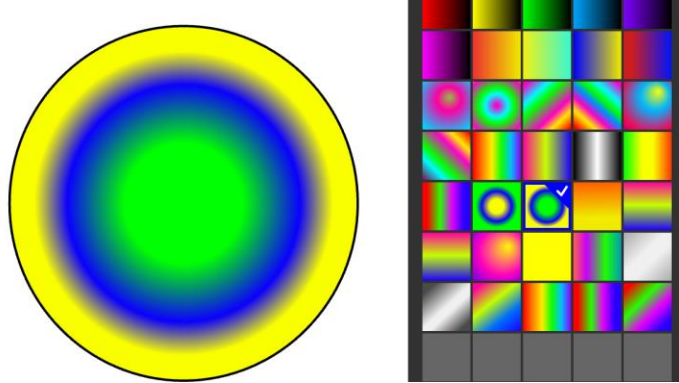
- Add a stop: this adds a stop that is the same color as the currently selected stop. So you'll likely need to change that color.
- Space out the stops: this spaces out the stops evenly.
- Flip the order: this reverses the order of the stops.
- Remove a stop: use this to remove the currently selected stop (when only two stops are left, you can't remove them).

Below the preview rectangle there is an opacity slider. Changing the opacity will affect only the currently selected (highlighted) stop, not all of them.

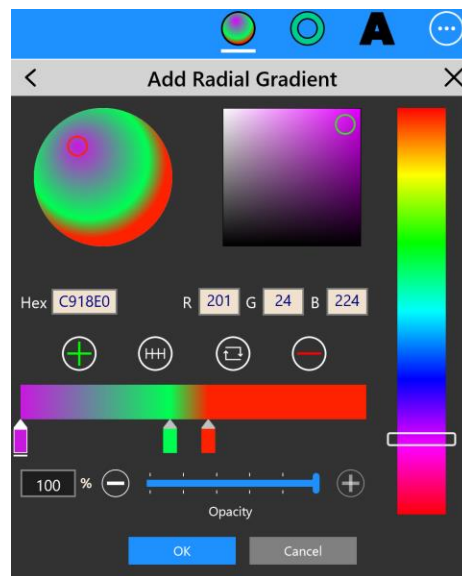
Finally, when you're done, click OK and this new color will be added to the User Palette. If you click Cancel, no changes are made and no color is added to the User Palette.

## Radial Gradient

Radial Gradients start from a center point and radiate outward.



To create a new one, click on the Radial Gradient button at the top. The Add Radial Gradient panel appears.



All the functions in this panel are the same as for Linear Gradients, except one. Inside the preview at the top left, you'll see a small circle which changes color so that it is visible no matter what color it is on top of. Drag that small circle to change the center point. In the example above it has been dragged up and to the left.

When you're done creating a new radial gradient, click OK and it is added to the User palette.

## Edit an Existing Color in the User Palette

You can edit any color that is in the User Palette, whether it's Solid, Linear or Radial. You can only edit colors in the User palette. If you want to start with a color from any of the other palettes, choose that color to make it the 'current' color, then click on the Add button in the top left to put it in the User Palette, then edit it.

To start the edit process, click on the color you want in the User palette to select it (it will have the check mark on it). Then click on the Edit button in the lower left (the Pencil icon). The Edit Color panel will appear and it will be Solid, Linear or Radial depending on what you selected.

From here, everything functions the same as described above. The only difference is that when you finish and click OK, the selected color will be altered. A new color is not created.

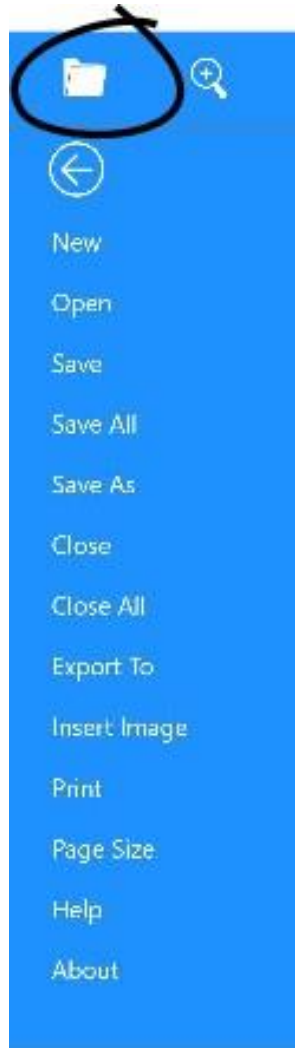
## Shortcuts

<i>Keyboard shortcuts:</i>	Ctrl [	Open Color panel
<i>Voice shortcuts:</i>	Open Colors	
	Close Colors	
	Color <i>&lt;color&gt;</i>	(see full list of colors in Appendix)
	Fill color <i>&lt;color&gt;</i>	
	Line color <i>&lt;color&gt;</i>	

# Chapter V – The File Menu

---

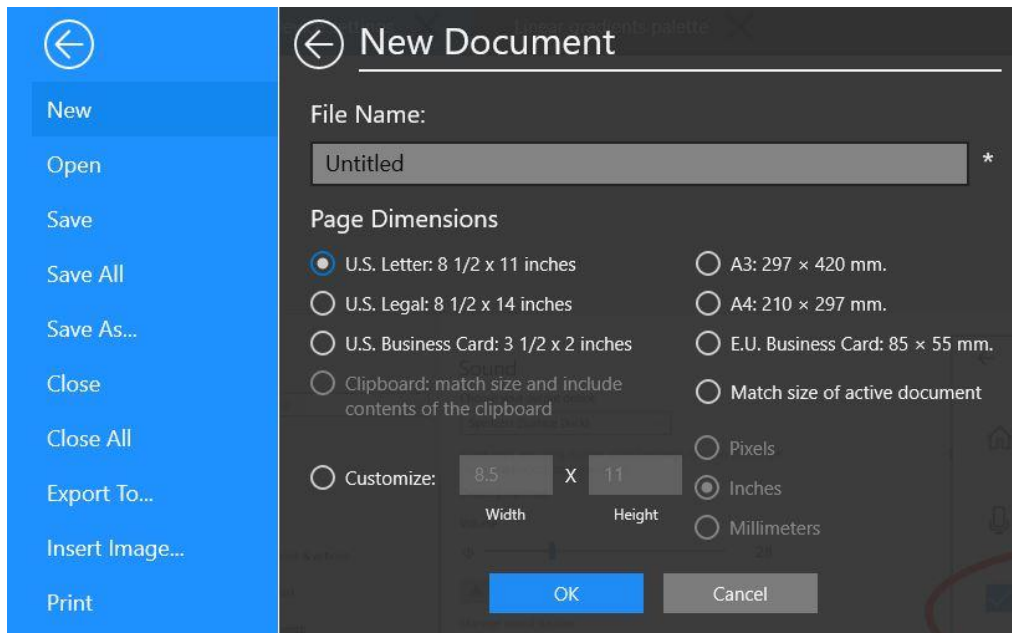
Click on the File Menu button in the upper left corner to open it. The File Menu can be closed by clicking on the same button again, or by clicking on the arrow which points to the left, just below the button. To select one of the items in the menu, just click on the name.



<i>Keyboard shortcut:</i>	F
<i>Voice shortcut:</i>	File Menu

## New

Click on *New* to open the dialog box for creating a new document in SaviDraw. When you are finished making your choices in the dialog box, click OK to create the document.



### File Name

Type in a File Name for the new document. The first time you Save, the Save As dialog box will appear, with the name you chose, and you'll specify where to save the file on your drive.

If you don't enter any name, the document will automatically be named "Untitled". Subsequently, the first time you use the Save or Save As command, you will have to give the document a name.

Certain characters and strings of characters are not allowed in Windows 10 document names. They are:

< > : " / \ | ? \* CON, PRN, AUX, NUL, COM 1-9, LPT 1-9.

### Page Dimensions

Choose one of the radio buttons to specify the dimensions of the new document. Choose "Customize" to enter any dimensions that you want and you can make those dimensions pixels, inches, or millimeters.

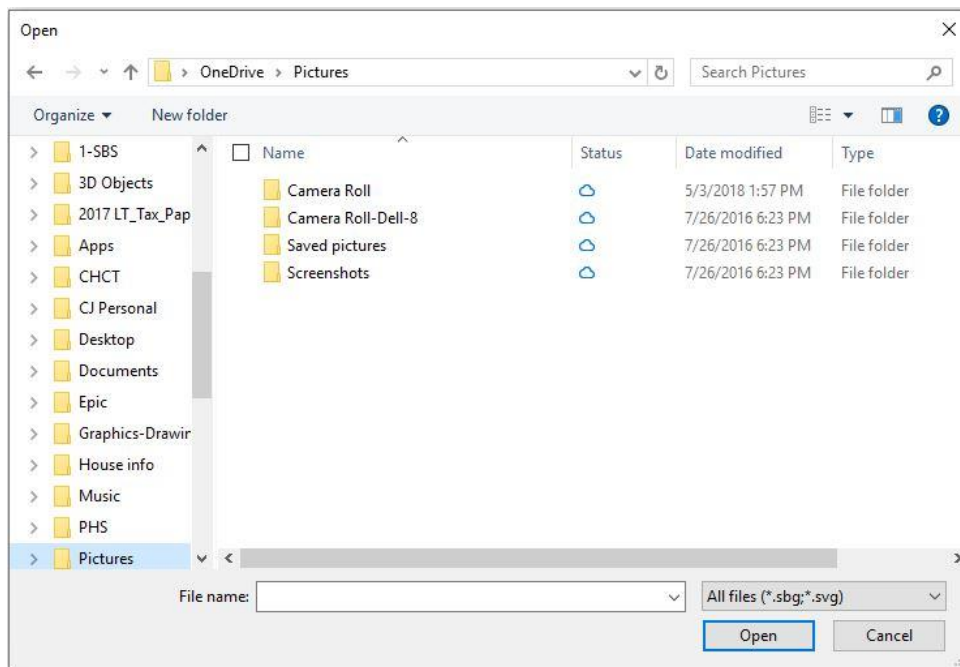
*Match contents of clipboard:* This option will create a new document that is exactly big enough for what is on the clipboard and when the document is created, the contents of the clipboard will appear in the document.

*Match contents of active document:* The new, empty document will be exactly the same size as the document that you are currently editing. This is useful for when you are creating multiple documents that are similar.

*Keyboard shortcut:* Ctrl N  
*Voice shortcut:* File New

## Open

Click on *Open* to bring out the dialog box which is used to open documents.



Navigate through the file system to find the document you want to open, select it, and then click on the Open button at the bottom. You can have more than one document open at the same time. The names of all documents that are open appear in the Documents panel.

*Keyboard shortcut:*      Ctrl O                      (the letter O, not zero 0 )  
*Voice shortcut:*          File open

## Save

Click on *Save* to save the document you are currently working on. We recommend using the keyboard shortcut, Ctrl-S.

If you didn't give the document a name when you first created it using the File-New command, and the document is named "Untitled", the first time you do a Save you'll get the Save As dialog box so that you can give the document a name other than "Untitled".

The file format extension for SaviDraw files is ".sbg" which is short for Silicon Beach Graphics. This file format is based on the industry-standard SVG 2.0 standard, with a few things added in.

*Keyboard shortcut:*      Ctrl S  
*Voice shortcut:*          File save

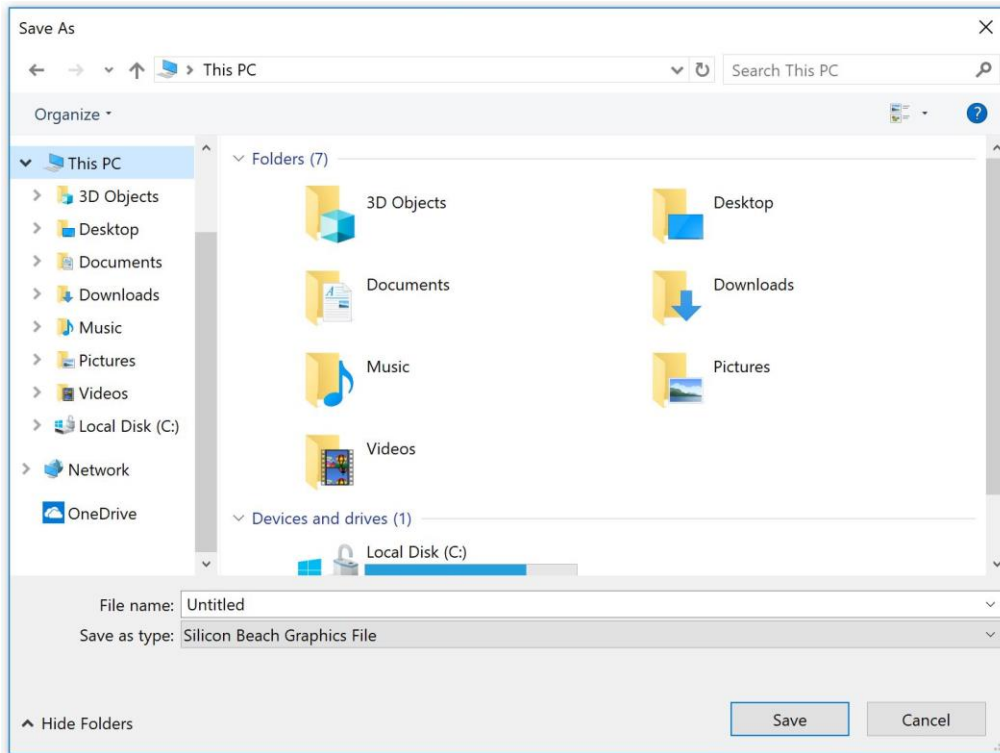
## Save All

Click on *Save All* and all the documents you have open at the time will be saved (the list of open documents can be seen in the Documents panel). If it's the first time saving any of the documents the Save As dialog will appear for those documents.

*Keyboard shortcut:*      Ctrl-Alt S  
*Voice shortcut:*          File save all

## Save As...

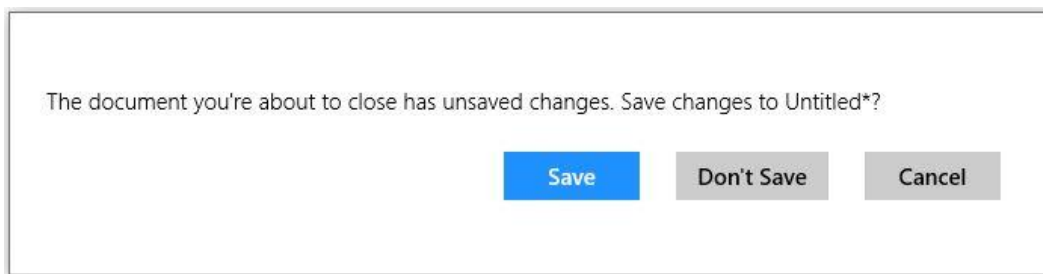
Click on *Save As* to save a copy of the current file using a new name. This will open the Save As dialog box. First type in a name in the “File Name:” box and click on Save. This new document will then be the current document that you are working on and its new name will be seen in the Documents tab in place of the old name. The file you were just working on will still be on your disk under its original name.



*Keyboard shortcut:*      Ctrl-Shift S  
*Voice shortcut:*          File save as

## Close

Click on *Close* to close the current document that you’re working on. If changes have been made since the last time you saved this document, you’ll get an alert asking you if you want to save your changes and then close.

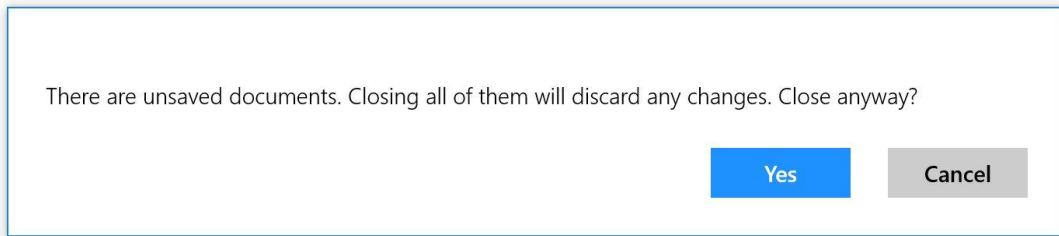


A document can also be closed by clicking in the X by its name in the Documents panel. You can tell if a document has changes that are not yet saved if there is an asterisk next to its name in the Documents panel.

*Voice shortcut:*          File close

## Close All

Click on *Close All* to close all documents that are currently open. If changes have been made to any one of the documents and those changes have not already been saved, you'll get an alert warning that you'll lose changes if you choose Yes.

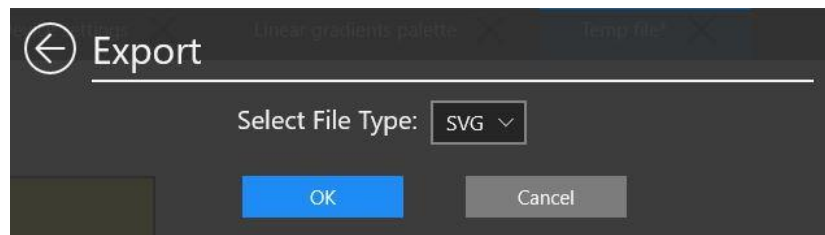


*Voice shortcut:*

File close all

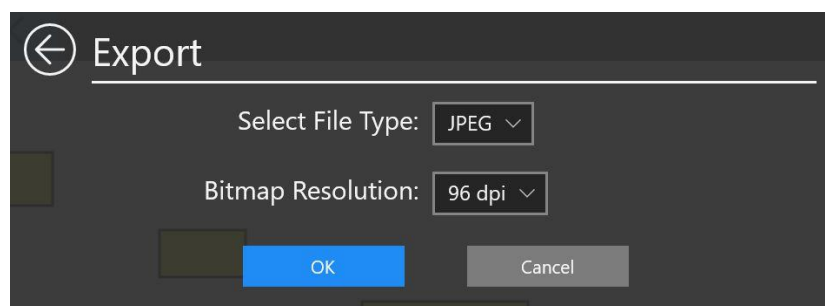
## Export To

Click on *Export To* in order to save your document in a file format other than SaviDraw's (which is .sbg).

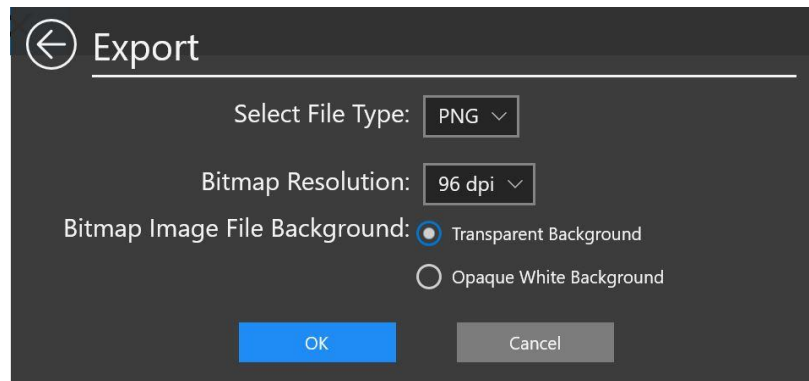


In the drop-down menu, the choices include:

- SVG      This is an industry-standard file format for vector graphics that is used to pass files to other vector drawing programs. It is also the best way to add graphics created with SaviDraw to web pages. Give the file a name and click on OK. The “.svg” extension will automatically be added to the filename.
- JPEG      This is an industry-standard file format for bitmap graphics (pixel-based, not vectors). The Bitmap Resolution can be changed in the drop-down menu – the options are 72, 96, 150, 300 or 600 dpi (dots per inch). When you click on OK, you'll get the Save As dialog box where you give the file a name and click on OK. The “.jpeg” extension will automatically be added to the filename.

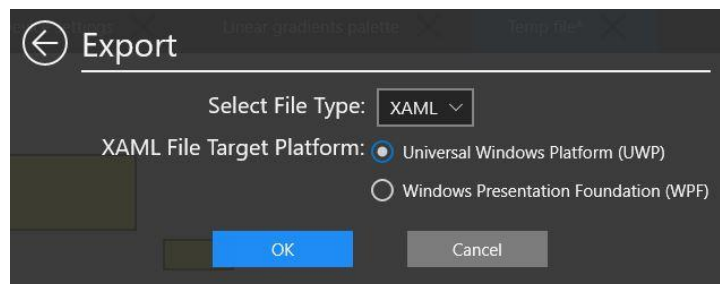


**PNG** This is another industry-standard file format for bitmap graphics. You can change the Bitmap Resolution in the drop-down menu. There are two options for the background. Choose either Transparent Background or Opaque White Background, using the radio buttons. When you click on OK, you'll get the Save As dialog box where you give the file a name and click on OK. The ".png" extension will automatically be added to the filename.



**GIF** This is another industry-standard file format for bitmap graphics. You can change the bitmap resolution in the drop-down menu. For the GIF file format, there are two options for the background which are identical to the choices for PNG, shown above. Choose either Transparent Background or Opaque White Background, using the radio buttons. When you click on OK, you'll get the Save As dialog box where you give the file a name and click on OK. The ".gif" extension will automatically be added to the filename.

**XAML** This is a file format from Microsoft that is used to place graphics into programs by programmers. Programmers know what this is and when to use it. There are two options, either UWP (Universal Windows Platform) or WPF (Windows Presentation Foundation). Choose one by clicking on a radio button. Click OK to complete the process of saving out a XAML file. The .xaml file extension will automatically be added to the filename.

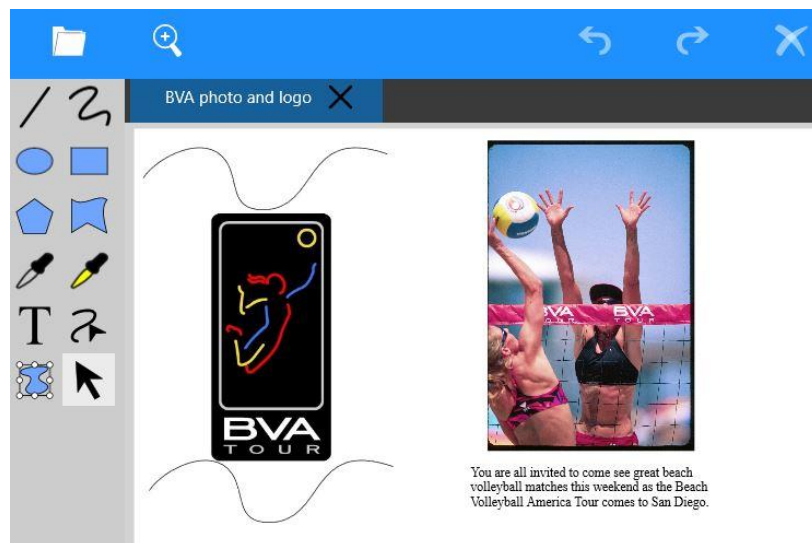


*Keyboard shortcut:* Alt E  
*Voice shortcut:* File export (to)

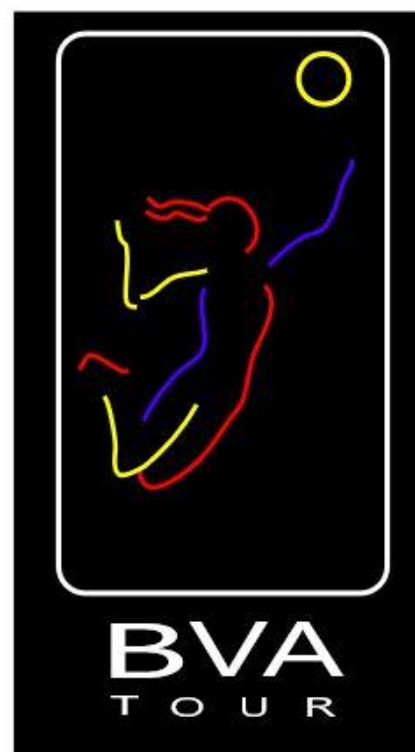
## Insert Image

SaviDraw is not a program to edit pixels, but bitmap graphics in the JPEG, PNG, and GIF format can be placed into a SaviDraw document using this command. Click on *Insert Image* and you'll get a dialog box that looks just like the one for File-Open. Choose a JPEG, PNG, or GIF file then click OK and the graphics in that file will be placed into your current SaviDraw document as one object.

This new object can be moved with the Selection tool, it can be changed with the Transform tool, its Stacking order can be changed, and it can be deleted. But, the pixels cannot be edited. Placing a bitmap graphics image into SaviDraw allows you to include photos in a drawing.



This can be very useful for tracing over an existing bitmap image to create a vector image. In the example below, the BVA logo was a JPEG file placed into SaviDraw. The outline of the player was traced in green, then the colors of the lines were changed to match the original. Finally, a black rectangle was drawn and placed behind the tracing

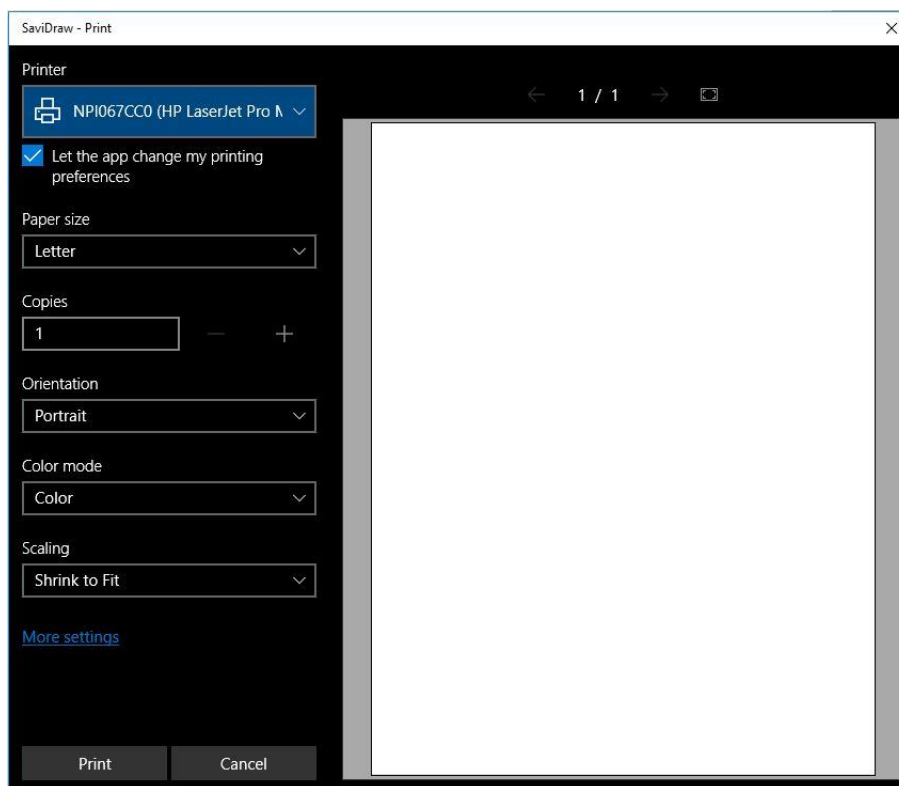


Keyboard shortcut:  
Voice shortcut:

Alt I  
File insert image

## Print

To print a document, click on *Print* in the File menu or press Ctrl-P. You'll see the standard Print dialog box for Windows 10. SaviDraw is a one-page graphics editor. You work on one page, you print one page. It is not a multi-page editor, like Microsoft Word or Publisher, for example.



You can choose which printer to use (if you have more than one) from the drop down menu at the top left; you can change the Paper Size; you can specify the number of copies you want printed; and you can choose Landscape mode instead of the standard setting of Portrait.

Portrait mode is where the paper is in an up-and-down orientation, like the first page shown below, while Landscape refers to the paper being held sideways, like the second one.



### Important Note:

Printers do not print to the very edge of a piece of paper. They all have some little bit of boundary that they cannot print on. The amount of boundary varies from printer to printer. If you experience that your graphics are getting cut off at the edge, resize everything in the document a little bit smaller so that the image doesn't extend into that boundary area where nothing can be printed.

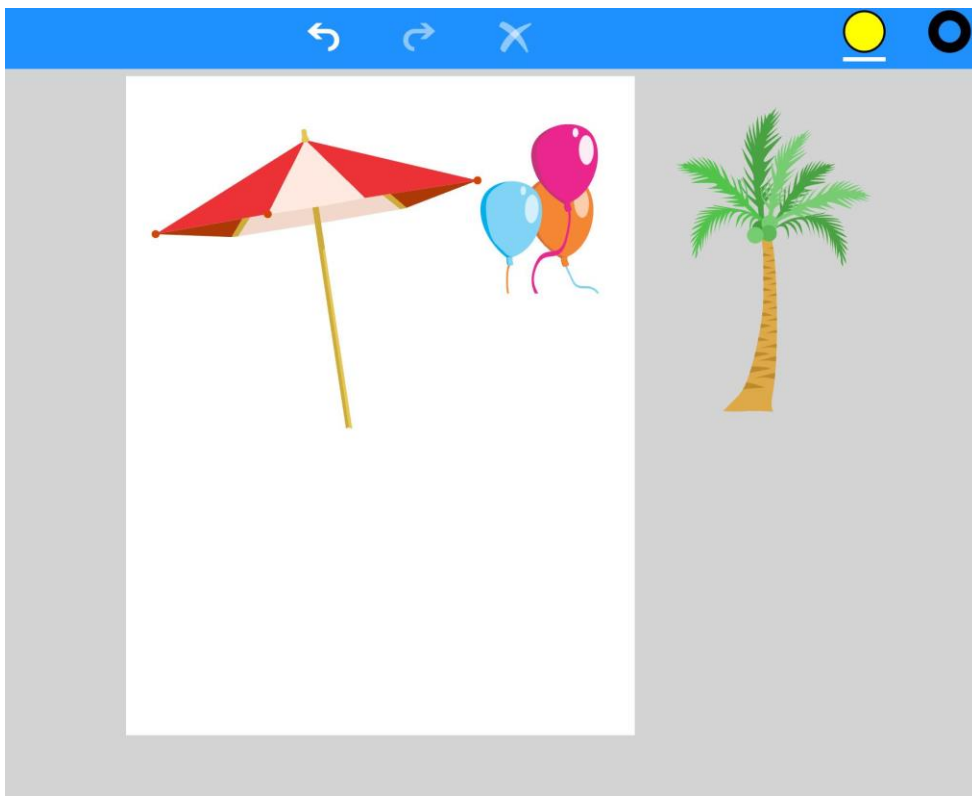
*Keyboard shortcut:*      Ctrl P  
*Voice shortcut:*        File print

## Page Size

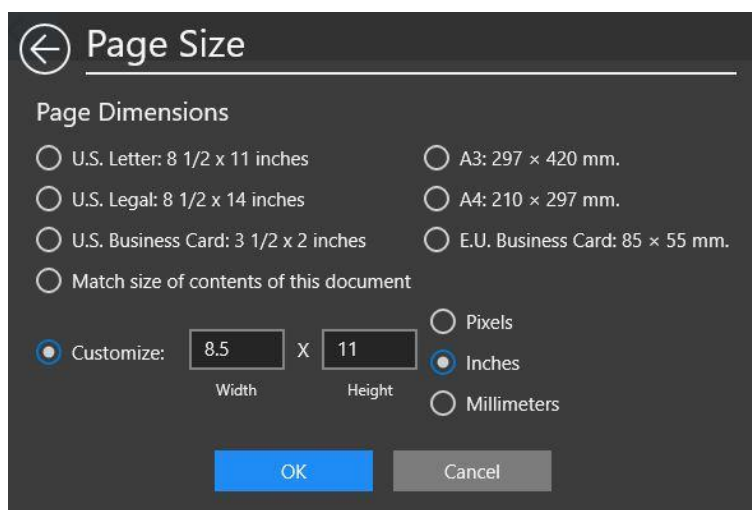
The Page Size defines the size of the drawing area, the area that is white. When you are zoomed out, you will see a gray area outside of the "page." Objects can be drawn off the page, in this gray area.

**IMPORTANT:** Objects drawn off the "page" will not be printed when you use the Print command and they will not be saved into any files created with the Export command (SVG, JPEG, PNG, GIF or XAML).

Only objects on the page will be printed and exported. If an object is half on, half off the page, only the half that is on the page will be printed or exported. The area outside the page can be useful as a holding area for graphics until you decide to include them or not.



Click on *Page Size* in the File menu to change the page size of the current document.



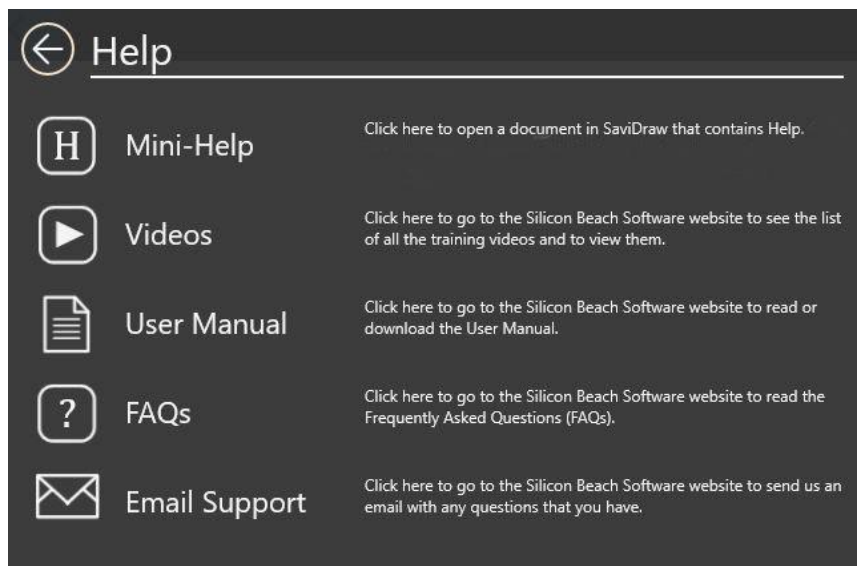
In the panel, choose one of the options and click its radio button. There are six preset sizes, see above. Another option is to make the page size fit exactly to the current contents of the document: *Match size of contents of this document*. The final option is to *Customize* the page size by typing in dimensions. Those dimensions can be pixels, inches or millimeters.

The times that you will most likely want to change the Page Size of a document are when you are exporting. If you have a large page size but only a small image, then when you Export, that new file will have a large page and have a lot of white space in it. If you place that image in some other program, for example Microsoft Word, then that white space will be included. In order to minimize the white space of the image to be placed, it is best to make the Page Size be equal to the contents of the document.

*Keyboard shortcut:*      Alt P  
*Voice shortcut:*        File page size

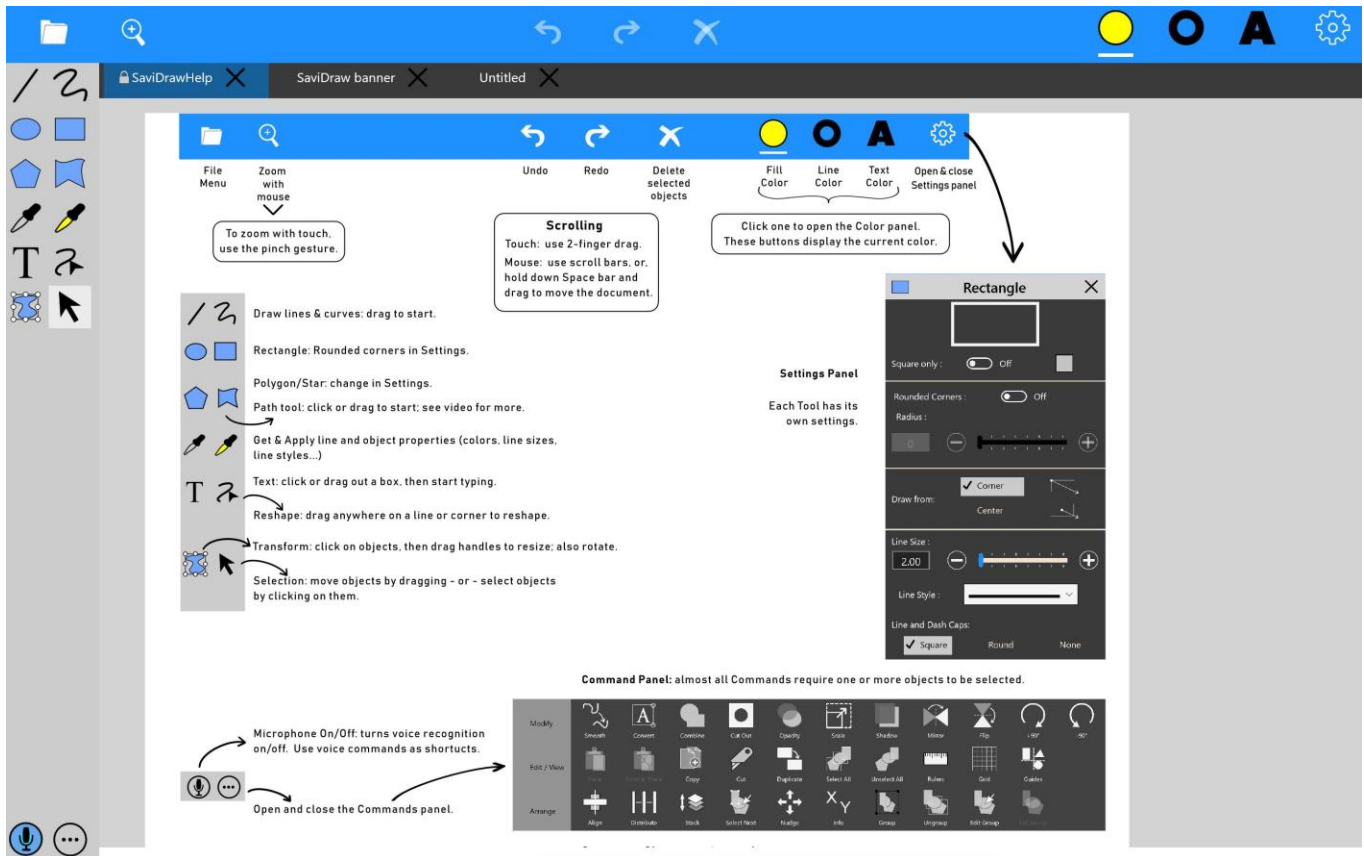
## Help

Click on *Help* to open the Help panel. To close the panel, click on the arrow in the upper left that points to the left. You have four choices in the Help panel.



## Mini-Help

Click on the button with the letter H in it to open a SaviDraw document that contains lots of information about the basic functionality. But, keep in mind that Mini-Help can only provide a little bit of detail. And, you will need to scroll down to see all of the document.



Keyboard shortcut: H  
Voice shortcut: File help

## About

The About panel gives information about who worked on SaviDraw.

(No shortcuts)

# Chapter VI – Voice Commands

---

## Why Use Voice Commands

Voice commands are very useful as shortcuts. For example, instead of opening the Commands panel, then clicking on Arrange to choose that panel, then clicking on Align to open the flyout, and then clicking on Top, you can just say “Align Top.” As you become familiar with the various voice commands, you’ll find yourself using them a lot.

## How to Use Voice Commands

To use Voice commands, you have to turn On the microphone. To do this, click on the microphone button in the lower left. It pulsates when it is turned on. To turn it off, just click on it again. If you are using a device that is running on a battery, it’s good to turn it off when you’re not using it because it uses up a little more battery when turned on.



The Voice commands don’t use Artificial Intelligence, you have to say the commands exactly as we list them. For example, it won’t work to say, “Let’s change the Opacity to 50 percent”. You have to say exactly: “Opacity 50 percent”. Also, don’t speak slowly on purpose, just speak at a normal rate.

There are times where little extras can actually be ignored when the speech is being *parsed* (that’s the jargon for when our programming goes thru the text that the speech recognition engine in Windows 10 sends to our program). In some instances we can ignore “the” or “a” or plural “s” so that you can speak a little more naturally. For example, “Align the Tops” will work. “Align Top” will also work, it doesn’t have to be “Tops.” Unfortunately, it’s not possible for us to document every little nuance like this. So, you should just try to use the commands pretty much exactly as they are listed.

## How to Read the Descriptions

The key to mastering the Voice commands is to understand how we write them out. Because some commands can have a lot of variation, we use some notational devices, a bit like what is used in programming and in linguistics. There aren’t too many notational devices, and it’s not really that complicated, but it might not be obvious at first how it works, so read this carefully.

( )	Parentheses ( ) indicate the item is optional.
< >	The ‘less than’ and ‘greater than’ characters indicate the item is required.
,	Commas are used to separate items in a list; only one would be used.
<i>Italics</i>	Italics indicate that the name is a placeholder for a list; the list will be shown underneath.

### Parentheses

These indicate that the item is optional. Examples:

Make (a) group	You can say “make a group” or just “make group”.
Space evenly right (and) left	You can say “space evenly right left” or “space evenly right and left”.

## Less than, greater than < >

These indicate that something inside them is required. Examples:

Select <all, everything>

You have to say either “Select all” or “Select everything.”

Just saying “Select” won’t do anything.

Rotate <number> degrees

You have to say a number.

## Commas

Commas are used to separate items in a list of possibilities. When there is a list, you can only choose one of the items in the list. Examples:

Bring <forward, to front>

You say “Bring” and then must choose either “forward” or “front.”

Nudge <left, right, up, down>

You say “Nudge” followed by only one of the four choices.

## Italics

When a word is in italics (*this is italics*), it means that the name is a placeholder for a list. The list will be shown on the next line. Examples:

Rotate <number> degrees

*number* 1 to 359

The number can only be between 1 and 359.

Undo (*number*)

The number is optional.

*number* 1 to 100

The number can only be between 1 and 100.

## The Two Complex Voice Commands

There are only two Voice commands that are complex: Draw and Duplicate. Master these two and you will have no problem with all the others.

Draw (*size*) (*color*) <*shape*>

*size*: small, medium, large

If not specified, it is medium.

*color*: [See the list of color names at the end]

If not specified, it is the current fill color.

Note: the line color will be the current line color.

*shape*: ellipse, circle, rectangle, square,  
polygon ((with) <number> sides),

If not specified, it’s the current setting for  
number of sides.

star ((with) <number> sides)

If not specified, it’s the current setting for  
number of sides.

*number*: 3 to 100

So, we see that Size and Color are optional, and we see what happens if they are not specified. Saying the name of a Shape is required, and polygons and stars can have the number of sides specified, and that number can be between 3 and 100.

draw circle

draw polygon

These will be drawn as medium size, using the current Fill color and the polygon will have the number of sides that is currently in the settings for a Polygon.

draw large green star seven sides

draw a large green star with seven sides

draw small red square

The first and the second line produce the same result. These two commands have one of everything: the size 'large', the color 'green', the shape 'star' and the star has '7 sides.' Since "with" is optional, the first one doesn't have it. "With" is included as an option because sometimes it will be easier to remember this way, and because if you're showing someone, it will be easier for them to understand what you're saying. Note that the second line has "draw a". This is one of those times where we allow a small something extra.

The star will have seven sides and the number of sides in the Polygon tool settings panel will change to seven. If you then say: "draw a star", the star will be medium size, have the current Fill color, and have seven sides. It will have seven sides because you didn't specify how many sides, and seven is the current setting.

draw a medium purple square  
draw a rectangle

If you say these in this order, the second one will be a square because the previous command turned On the setting 'Square Only.' The Square will be filled with the current color, which would be purple. If you know you don't want a square for the second one, you can turn off the 'Square Only' by saying "Rectangle tool."

The second voice command that can be a bit complicated is Duplicate.

Duplicate (*number*<sup>1</sup>) (*direction*) (spacing < *number*<sup>2</sup>>)

<i>number</i> <sup>1</sup> (how many):	1 to 100	If no number is specified, the number is one.
<i>direction</i> :	right, left, up, down	If no direction is specified, it is 'right'.
<i>number</i> <sup>2</sup> (spacing):	1 to 300	Pixels. If no number is specified, the number is 10.

You can say which direction to duplicate, how many to make, and how far apart they are (in pixels) each time a new duplicate is made. And, all of these parameters are optional.

duplicate	one copy is made, and it is placed to the right, 10 pixels apart.
duplicate 5 down	5 copies are made, each new one is below the previous one, 10 pixels apart.

duplicate 9 right spacing 50  
select all  
duplicate 9 down spacing 50

Starting with just one object in the document which is currently selected, this series of three voice commands quickly creates a matrix of 100 objects. First, 9 more objects are created making it 10 across, then the whole row of 10 objects is selected, and then 9 more copies of the row are made, each below the previous one, making a total of 10 rows down. The spacing is 50 pixels apart. Yes, it's that easy!

duplicate left scale 200 percent	makes one copy, places it to the left, and makes it twice as big.
duplicate 2 rotate 90 degrees	makes two copies to the right, rotating the first one 90 degrees and rotating the second another 90 degrees.

Now go try out a few of your own. Some trial and error will go a long way. Experiment. After all, there is always Undo.

## Appendix 1 List of Voice Commands

How to read:

- ( ) Parentheses ( ) indicate the item is optional.
- < > Less than and greater than characters indicate the item is required.
- Italics* Italics indicate that the name is a placeholder for a list, which will be shown underneath.
- Commas Items in a list are separated by commas; only one would be used.

For example:

Rotate <number> degrees (clockwise, counterclockwise, anticlockwise)

*number:* 1 to 359

[If the direction is not specified, it is 'clockwise.']

The number of degrees must be specified and is between 1 and 359; one of the three items in parentheses can be used, but if nothing is specified, then it is 'clockwise.'

---

### A

Align <location>

*location:* top(s), bottom(s), left, right, center(s), horizontal, horizontally, vertical, vertically

Apply tool

### B

Bring <forward, to front> [See also, Send and Move]

### C

Circle tool [This command chooses the Ellipse tool and sets it to 'Circle Only.']

Close Colors [This closes the Color Panel.]

Close Commands [This closes the Commands panel.]

Close Settings [This closes the Settings panel.]

Close Zoom [This closes the Zoom panel.]

Color <color> [See also, Fill.]

*color:* [See the list of color names.]

Copy [Copy to the clipboard.]

Create (a) Group [See also, Group and Make Group]

Curve tool

Cut [Cut to the clipboard.]

### D

Delete

Deselect [See also, Unselect.]

Distribute <height, width, horizontal, horizontally, vertical, vertically> (see also, Space Evenly)

Draw (*size*) (*color*) <*shape*>

*size:* small, medium, large If not specified, it is 'medium.'

*color:* [See the list of color names.] If not specified, it is current fill color.

*shape:* ellipse, circle, rectangle, square,  
polygon ((with) <number> sides),  
triangle, diamond, pentagon  
star ((with) <number> of sides)

*number:* 3 to 100

Duplicate (*number*<sup>1</sup>) (*direction*) (spacing < *number*<sup>2</sup>>)

*number*<sup>1</sup> (how many): 1 to 100

*direction* right, left, up, down

*number*<sup>2</sup> (spacing): 1 to 400

If no number is specified, the number is one.

If no direction is specified, it is 'right'.

If no number is specified, the number is 10.

## E

Edit group

Ellipse tool

Exit group

## F

File menu [Opens and closes the File Menu.]

File <*function*>

*function*: New, Open, Save, Save All, Save As, Close, Export, Insert Image, Print, Page Size, Help, About

Fill <*color*> [See also, Color.]

*color*: [See the list of color names.]

Flip

Font Size <*number*>

## G

Get tool (*options*)

Go back (*number*) (*all*) [See also, Undo.]

*number*: 1-100 [If no number is specified, the number is one.]

Group [See also, Make Group and Create Group.]

## L

Line tool

Line size <*number*>

## M

Make (a) Group [See also, Group and Create Group.]

Mirror

Move <forward, backward, to top, to front, to back, to bottom> [See also, Bring and Send]

## N

Nudge < left, right, up, down >

## O

Opacity <*number*> percent

*number*: 0-100

Open Commands [This opens the Commands panel at the bottom.]

Open Colors

Open Settings

Open Zoom

## P

Paste

Paste in place

Path tool

Polygon tool (<number> sides)

*number:* 3 to 100

## R

Rectangle tool (rounded corners) [This chooses the Rectangle tool and, optionally, turns ‘Rounded Corners’ to ON.]

Redo (*number*) (*all*)

*number:* 1 to 100

[If not specified, the number is one.]

Reshape tool

Rotate (minus) <number> (degrees)

## S

Scale <number> percent

*number:* 1 to 400

Selection tool

Select <all, everything>

Select <next, previous, up, down, first, last, back, front >

(“select next” always selects up)

Send < backward, to back, forward, to front >

[See also, Bring and Move]

Smooth <number> percent

*number:* 0 to 100

Space evenly

optional: right (and) left, up (and) down, horizontal, horizontally, vertical, vertically

Note: If not specified, it is ‘right and left.’

Square tool (rounded corners)

[This chooses the Rectangle tool and sets it to ‘Square only’ and, optionally, turns ‘Rounded Corners’ to ON.]

Star tool (<number> sides )

*number:* 3 to 100

## T

Text tool

Transform tool

## U

Undo (*number*) (*all*)

[See also, Go back.]

*number:* 1 to 100

Ungroup

Unselect

[See also, Deselect.]

## Z

Zoom <in, out, all, to page, <number> percent>

*number:* 1 to 400 ? ? ?

## Appendix 2 List of Colors Recognized by Voice Commands

Transparent	Cafe au Lait	Dark Turquoise
Aero	Cafe Noir	Dark Violet
African Violet	Camel	Debian Red
Alice	Camouflage Green	Deep Pink
Amber	Canary	Deep Sky Blue
Amethyst	Candy Apple Red	Desert
Android Green	Capri	Dim Gray
Antique White	Cardinal	Dirt
Apricot	Carrot Orange	Dodger Blue
Aqua	Charcoal Gray	Dutch White
Aquamarine	Chartreuse	Ebony
Army Green	Chartreuse Yellow	Eggshell
Artichoke	Cherry	Egyptian Blue
Auburn	Cobalt Blue	Electric Blue
Avocado	Cocoa	Electric Crimson
Azure	Coconut	Electric Green
Azure Blue	Coffee	Electric Indigo
Baby Blue	Cool Gray	Electric Purple
Baby Pink	Copper	Electric Violet
Banana Yellow	Coral	Emerald
Battleship Gray	Coral Pink	Fern Green
Beige	Coral Red	Ferrari Red
Bisque	Coral Reef	Field Drab
Black	Corn	Fire Engine Red
Blanched Almond	Cornflower Blue	Firebrick
Blood Red	Cornsilk	Flamingo Pink
Blue	Crimson	Floral Lavender
Blue Gray	Cyan	Floral White
Blue Green	Dark Blue	Forest Green
Blue Sapphire	Dark Brown	Fuchsia
Blue Violet	Dark Chocolate	Fuchsia Pink
Brick Red	Dark Cyan	Fuchsia Purple
Bright Green	Dark Goldenrod	Gainsboro
Bright Pink	Dark Gray	Ghost White
Bronze	Dark Green	Ginger
Brown	Dark Khaki	Gold
Brunswick Green	Dark Magenta	Golden Brown
Burgundy	Dark Moss	Golden Yellow
Burlywood	Dark Olive Green	Goldenrod
Burnt Orange	Dark Orange	Grape
Butterscotch	Dark Orchid	Gray
Cadet Blue	Dark Powder Blue	Gray Blue
Cadmium Green	Dark Red	Green
Cadmium Orange	Dark Salmon	Green Yellow
Cadmium Red	Dark Sea Green	Grizzly
Cadmium Yellow	Dark Slate Blue	Han Blue
	Dark Slate Gray	Han Purple

Harlequin  
Harvest Gold  
Heidelberg Red  
Honey Dew  
Honolulu Blue  
Hot Magenta  
Hot Pink  
Hunter Green  
Imperial  
Imperial Blue  
Imperial Purple  
Imperial Red  
India Green  
Indian Red  
Indigo  
Iris  
Ivory  
Jade  
Jasmine  
Jasper  
Jelly Bean  
Jungle Green  
Kelly Green  
Khaki  
Lava  
Lapis Lazuli  
Lavender  
Lavender Blue  
Lavender Blush  
Lawn Green  
Lemon  
Lemon Chiffon  
Lemon Lime  
Lemon Meringue  
Lemon Yellow  
Licorice  
Light Blue  
Light Brown  
Light Coral  
Light Cyan  
Light Goldenrod Yellow  
Light Gray  
Light Green  
Light Grey  
Light Pink  
Light Salmon  
Light Sea Green  
Light Sky Blue  
Light Slate Gray  
Light Steel Blue

Light Yellow  
Lime  
Lime Green  
Linen  
Lincoln Green  
Magenta  
Magnolia  
Mahogany  
Manatee  
Mandarin  
Mardi Gras  
Marigold  
Maroon  
Maya Blue  
Medium Aquamarine  
Medium Blue  
Medium Orchid  
Medium Purple  
Medium Sea Green  
Medium Slate Blue  
Medium Spring Green  
Medium Turquoise  
Medium Vermilion  
Medium Violet Red  
Melon  
Microsoft Blue  
Midnight Blue  
Mint  
Mint Cream  
Misty Rose  
Moccasin  
Mustard  
Navajo White  
Navy  
Nickel  
Ocean Green  
Ochre  
Old Gold  
Old Lace  
Olive  
Olive Drab  
Olive Green  
Onyx  
Orange  
Orange Red  
Orange Soda  
Orchid  
Pacific Blue  
Pale Blue  
Pale Brown

Pale Goldenrod  
Pale Green  
Pale Lavender  
Pale Turquoise  
Pale Violet  
Pale Violet Red  
Pansy Purple  
Papaya Whip  
Paradise Pink  
Pastel Blue  
Pastel Brown  
Pastel Gray  
Pastel Green  
Pastel Magenta  
Pastel Orange  
Pastel Pink  
Pastel Purple  
Pastel Red  
Pastel Violet  
Pastel Yellow  
Peach  
Peachpuff  
Pear  
Pearl  
Pearl Aqua  
Periwinkle  
Peru  
Pewter Blue  
Picton Blue  
Pine Green  
Pink  
Pistachio  
Platinum  
Plum  
Powder Blue  
Prune  
Psychedelic Purple  
Puce  
Pullman Brown  
Pumpkin  
Purple  
Purple Plum  
Quartz  
Queen Blue  
Raisin Black  
Raspberry  
Raspberry Pink  
Raw Sienna  
Raw Umber  
Red

Red Brown  
Red Orange  
Red Purple  
Red Violet  
Redwood  
Rifle Green  
Roast Coffee  
Robin Egg Blue  
Roman Silver  
Rose Pink  
Rose Quartz  
Rose Red  
Rosewood  
Rose  
Rosy Brown  
Royal Azure  
Royal Blue  
Royal Fuchsia  
Royal Purple  
Royal Yellow  
Ruby  
Ruby Red  
Russet  
Rust  
Rusty Red  
Saddle Brown  
Safety Orange  
Saffron  
Sage  
Salmon Pink  
Sand  
Sand Dune  
Sandstorm  
Sandy Brown  
Sangria  
Sapphire  
Sapphire Blue  
Scarlet  
School Bus Yellow  
Sea Blue  
Sea Foam Green  
Sea Green  
Seal Brown  
Seashell  
Sepia  
Shadow Blue  
Shamrock Green

Shocking Pink  
Sienna  
Silicon Beach Blue  
Silver  
Silver Chalice  
Silver Lake Blue  
Silver Sand  
Sizzling Red  
Sky Blue  
Slate Blue  
Slate Gray  
Smoke  
Smokey Black  
Snow  
Spanish Blue  
Spanish Carmine  
Spanish Crimson  
Spanish Green  
Spanish Orange  
Spanish Pink  
Spanish Red  
Spanish Violet  
Spanish Viridian  
Spring Green  
Steel Blue  
Steel Pink  
Steel Teal  
Straw  
Strawberry  
Sugar Plum  
Sunglow  
Sunset  
Super Pink  
Sweet Brown  
Tan  
Tangelo  
Tangerine  
Tango Pink  
Taupe  
Taupe Gray  
Tea Green  
Tea Rose  
Teal  
Teal Blue  
Teal Green  
Telemagenta  
Terra Cotta

Thistle  
Tiffany Blue  
Tomato  
Topaz  
Tractor Red  
Tropical Violet  
Tulip  
Turquoise  
Turquoise Blue  
Turquoise Green  
Turtle Green  
Tuscan  
Tuscan Brown  
Tuscan Red  
Tuscan Tan  
Twilight Lavender  
Tyrian Purple  
Ultra Pink  
Ultramarine  
Ultramarine Blue  
Umber  
United Nations Blue  
Vanilla  
Vegas Gold  
Venetian Red  
Verdigris  
Vermilion  
Veronica  
Violet  
Violet Blue  
Violet Red  
Viridian Green  
Viridian  
Vista Blue  
Wheat  
White  
Whitesmoke  
Wild Orchid  
Wild Strawberry  
Windsor Tan  
Wine  
Wood Brown  
Yellow  
Yellow Green  
Yellow Orange  
Yellow Sunshine  
Zaffre

## Appendix 3 List of Keyboard Shortcuts

Ctrl	A	Select All	Ctrl-Alt	S	Save All
Ctrl	C	Copy	Ctrl-Alt	W	Close all documents
Ctrl	D	Duplicate	Alt	E	Export
Ctrl	E	Edit Group (also, double-click)	Alt	I	Insert To
Ctrl	F	Flip	Alt	P	Page Size
Ctrl	G	Group	Alt	Up	Select Next Up (Up arrow)
Ctrl	M	Mirror	Alt	Down	Select Next Down (Down arrow)
Ctrl	N	New			
Ctrl	O	Open	Backspace		Delete (selected objects)
Ctrl	P	Print	Delete		Delete (selected objects)
Ctrl	S	Save			
Ctrl	U	Ungroup	Up Arrow		Nudge Up
Ctrl	V	Paste	Down Arrow		Nudge Down
Ctrl	W	Exit Group [also, double-tap off]	Left Arrow		Nudge Left
Ctrl	X	Cut (selected objects)	Right Arrow		Nudge Right
Ctrl	Y	Redo			
Ctrl	Z	Undo	A		Apply Tool
			C		Curve Tool
Ctrl	Up	Move up in Stack (Up arrow)	E		Ellipse Tool
Ctrl	Down	Move down in Stack (Down arrow)	F		Open/Close File Menu
Ctrl	/	Open/Close Settings	G		Get Tool
Ctrl	.	Open Close Commands	H		Help
Ctrl	,	Open/Close Zoom panel	L		Line Tool
Ctrl	[	Open Colors	N		Polygon Tool
Ctrl	–	Unselect All	P		Path Tool
Ctrl	1	Zoom-100%	R		Reshape Tool
Ctrl	2	Zoom-Document	S		Select Tool
Ctrl	3	Zoom-Show All	T		Transform Tool
Ctrl	4	Zoom In	V		Voice Control On/Of
Ctrl	5	Zoom Out	Y		Text Tool
Ctrl	9	Rotate 90			
Ctrl	0	Rotate -90	4		Rectangle Tool
Ctrl-Shift	D	Distribute Width			
Ctrl-Shift	H	Distribute Height			
Ctrl-Shift	S	Save As			
Ctrl-Shift	V	Paste-in-Place	Space		Hand tool (Pan)
Ctrl-Shift	W	Close document	Shift		Circle; Square; Transform-proportional

## **Text Edit Mode**

Ctrl A	Select All Text
Ctrl B	Bold On/Off
Ctrl E	Align-Center
Ctrl I	Italic On/Off
Ctrl J	Align-Justify
Ctrl L	Align-Left
Ctrl R	Align-Right
Ctrl U	Underline On/Off
Ctrl X	Cut Selected Text
Backspace	Delete to left
Delete	Delete to right
Ctrl Backspace	Delete word to left
Ctrl Delete	Delete word to right
Select one word	Double-Click
Select to cursor	Shift Click

### *Extend selections:*

Shift Click	To click location
Shift RightArrow	One character right
Shift LeftArrow	One character left
Ctrl-Shift RightArrow	To end of word
Ctrl-Shift LeftArrow	To start of word
Shift DownArrow	Down one line
Shift UpArrow	Up one line
Ctrl-Shift DownArrow	To end of paragraph
Ctrl-Shift UpArrow	To start-paragraph
Ctrl-Shift Home	To start of text box
Ctrl-Shift End	To end of text box

### *Move cursor:*

LeftArrow	One character left
RightArrow	One character right
Ctrl Home	To start of text box
Ctrl End	To end of text box

Ctrl-Shift <	Decrease font size 1
Ctrl-Shift >	Increase font size 1