TouchDraw for Android

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1. Introduction

This is the home of the **TouchDraw for Android (version 1.x)** documentation. The layout of the pages and information displayed in this documentation is based on the User Interface (UI) structure. It is broken down into five main sections with pages describing each potion of the interface and available functionality:

Section Name	Description
Preface	The **Preface** section contains necessary legal and acknowledgement information regarding TouchDraw for Android.
Getting Started	The **Getting Started** section contains information for launching TouchDraw and beneficial web page links.
Drawing Chooser	The **Drawing Chooser** section can be used to learn about the chooser interface, file management, sharing/importing drawings, and backing up/restoring data within TouchDraw.
Drawing Editor	The **Drawing Editor** section can be used to learn about the editor interface and the many features made available when working with a drawing in TouchDraw.
Tips and Techniques	The **Tips and Techniques** section can be used to learn about using the Function Key Feature to perform specific actions within TouchDraw.
Miscellaneous	The **Miscellaneous** section contains additional information outside of the main UI structure of the application such as file importing and exporting formats.

The information shown in the **Drawing Chooser** and **Drawing Editor** sections, in particular, is organized based on the layout of each components interface. For example, to find information about changing the text properties of a figure in the editor, go to the Drawing Editor section, expand these pages, and then select **Text**. To find information about importing or sharing a drawing, go to the Drawing Chooser and select one of these pages.

Each of these documentation section begins with pages describing the basic features of their user interface and subsequent pages provide further details about a particular feature. Use the links on a page to navigate to additional information about a particular subject or expand the pages to find a particular section. The search feature can be also be used to find an item. Simply type in a keyword and a list of pages will appear for

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Special thanks to Jutta, Rafe, Nico, Don and Carol for their support during the development process. TouchDraw wouldn't be possible without their continued support.

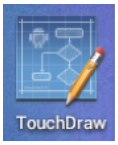
Additional thanks to all of our beta testers and users who have supplied endless amounts of great feedback and suggestions to help shape TouchDraw into what it is today.

3. Getting Started

TouchDraw supplies everything you need to create structured 2D vector graphics on the go with your Android device. Create charts, graphs, floor plans, architecture drawings, illustrations or most anything else you can image. Not only does TouchDraw make it easy to quickly create your drawings, it also delivers a simple to use environment where you will enjoy changing and manipulating each drawing.

3.1. Launching TouchDraw

After you have purchased and installed TouchDraw, the following application icon will appear on your Android device:



Simply tap once on this icon to launch TouchDraw.

After launching TouchDraw, you will be presented with the Drawing Chooser.

3.2. Useful Links

Elevenworks Website

Useful links on the Elevenworks.com website.

Description	Link
Elevenworks Main Website	https://www.elevenworks.com/
TouchDraw Main Web Page	https://www.elevenworks.com/touchdraw
TouchDraw Documentation	https://www.elevenworks.com/documentation

To get support and/or to provide feedback on TouchDraw 2, you can contact Elevenworks via our Contact Form or at the following email address: support@elevenworks.com.

TouchDraw on Twitter

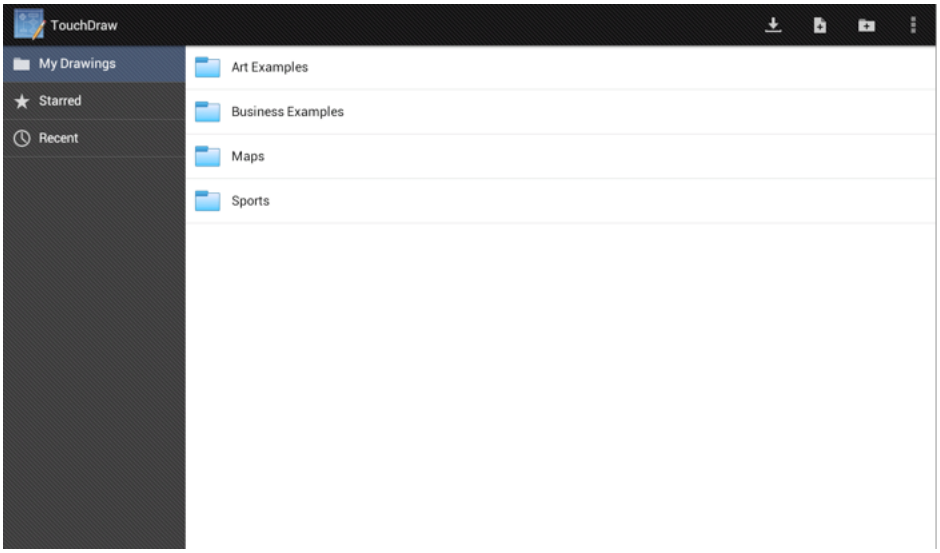
TouchDraw also has a page/stream on Twitter where you can receive updates and/or have an open dialog with the TouchDraw developers.http://twitter.com/touchdraw

TouchDraw on YouTube

TouchDraw also has a page on YouTube where example "how to" videos have and will be posted.http://www.youtube.com/user/touchdraw

4. Drawing Chooser

The **Drawing Chooser** is the first screen to open after TouchDraw finishes launching and is the user interface for managing all drawings stored on the device. It is split into two views with the View List residing on the left and the File List residing on the right hand side. The **Drawing Chooser** will appear as shown below:

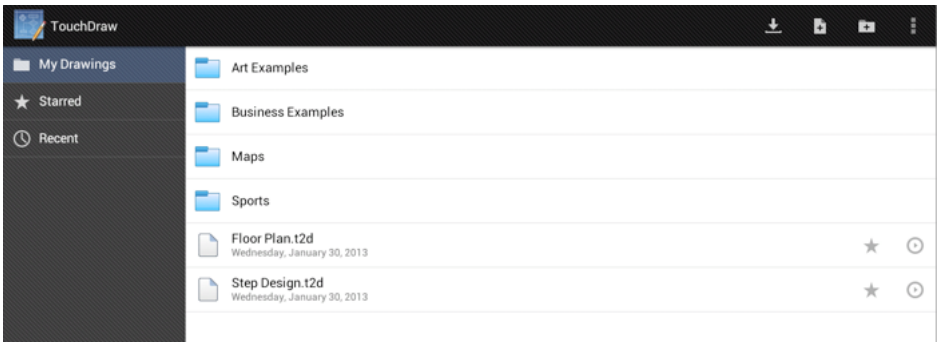


The **Toolbar** located at the top of the **Drawing Chooser** is used to create new drawings and can be put into Edit Mode to make changes to saved files. Use the **View List** to choose between viewing the files in a directory, recently edited documents, or starred/favorites. The **File List** shows all available folders and files within a chosen directory and is used to select a file for opening or editing.

Toolbar items at the top of the drawing chooser may reside in the Drawing Chooser Overflow Menu when the device is used in portrait mode.

4.1. Drawing Chooser User Interface

The **Drawing Chooser** is divided into three sections: Top Toolbar, View List, and the File List. It can be used to create and manage drawings (or folders) within TouchDraw.

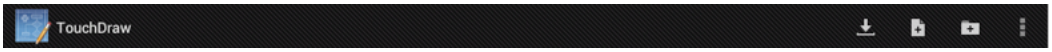


Click or Tap on the Drawing Chooser section to learn more about its features.

Section Name	Description
Top Toolbar	The **Top Toolbar** provides access to file management functions and preferences within the TouchDraw application.
View List	The **View List** is located on the left hand hand side of the Drawing Chooser and can be used to access saved, starred, or recently opened drawings.
File List	The **File List** is located on the right hand side of the Drawing Chooser and shows all folders and drawings within a selected parent directory (My Drawings, Starred, or Recent).

4.1.1. Top Toolbar

The **Top Toolbar** provides access to file management functions and preferences within the TouchDraw application. It appears as shown below when in Normal Mode:

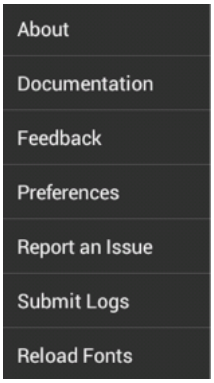


Click or Tap on the Top Toolbar option name to learn more about its functionality.

Icon	Button Name	Description
	Import Drawing	The **Import Drawing Button** can be used to import supported file types (VDX, SVG, etc.) from a cloud storage provider or a local device storage source such as the File Manager or Photo Gallery into TouchDraw.
	Create Drawing	The **Create Drawing Button** is used to open a new file within the Drawing Editor.
	Create Folder	The **Create Folder Button** is used to add a folder to a directory within the Drawing Chooser.
	Overflow	The **Overflow Button**opens a menu with options for sending feedback to the TouchDraw development team and can be used to access general application preferences.

4.1.1.1. Drawing Chooser Overflow Menu

When the **Overflow Button** is pressed in the Top Toolbar, the Drawing Chooser Overflow Menu will appear as shown below:



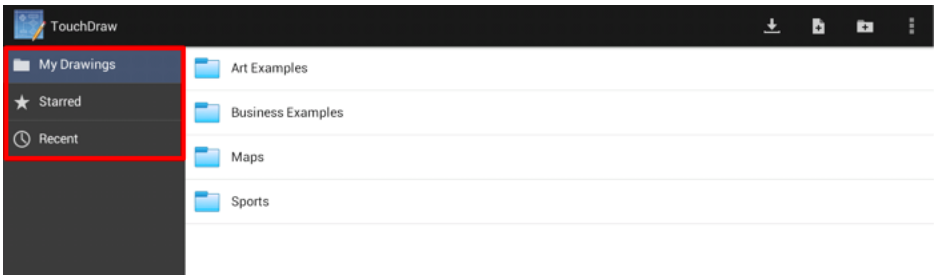
Click or Tap on the corresponding Drawing Chooser Overflow Menu item name to learn more about what the option does.

Option Name	Description
About	The **About** option opens a window with general information about the TouchDraw application.
Documentation	The **Documentation** option will launch a web browser and open the TouchDraw Documentation web page, where the latest version of the documentation as well as other information can be downloaded as a PDF.
Feedback	The **Feedback** option opens a window for sending feedback (bugs, suggestions, comments, etc.) via email or by another sharing source to the TouchDraw development team without leaving the application. Choose **Gmail** to open the email composition view and look at the subject line to determine the version of TouchDraw currently running on the Android device.
Preferences	The **Preferences** option opens a window for viewing and managing application specific preferences.
Report an Issue	The **Report an Issue** option opens a window for reporting problems within the application via mail or by another sharing source to the TouchDraw development team without leaving the application.
Submit Logs	The **Submit Logs** option sends the local log files for TouchDraw to the support team for analyzing problems experienced during use of the application.
Reload Fonts	The **Reload Fonts** option forces TouchDraw to reload the fonts list at runtime. This option can be used in instances where a new font has been added to TouchDraw while

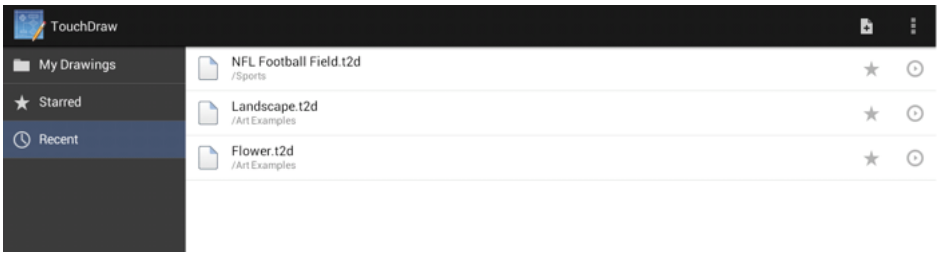
Option Name	Description
	the application is running and does not appear in the provided fonts list.

4.1.2. View List

The **View List** is located on the left hand side of the Drawing Chooser and can be used to access saved, starred, or recently opened drawings.



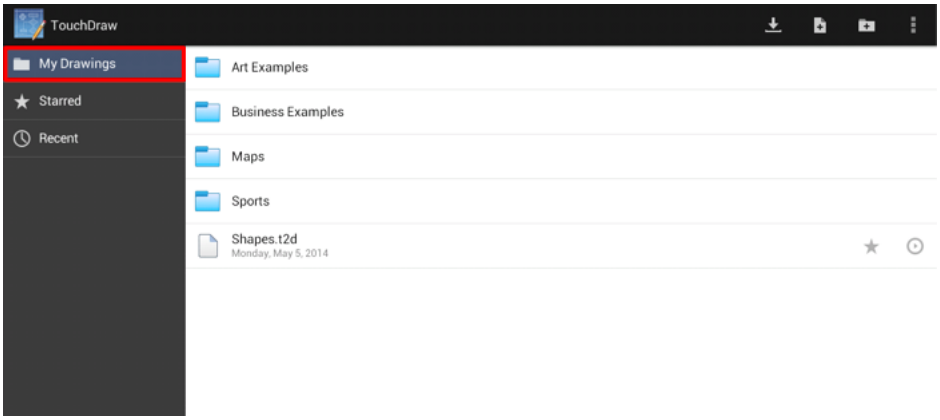
Tap on one of the choices under the View List to see its files and folders within the File List portion of the Drawing Chooser. In the example below, a **tap** is performed on **Recent**.



The current selection in the View List will be highlighted in blue.

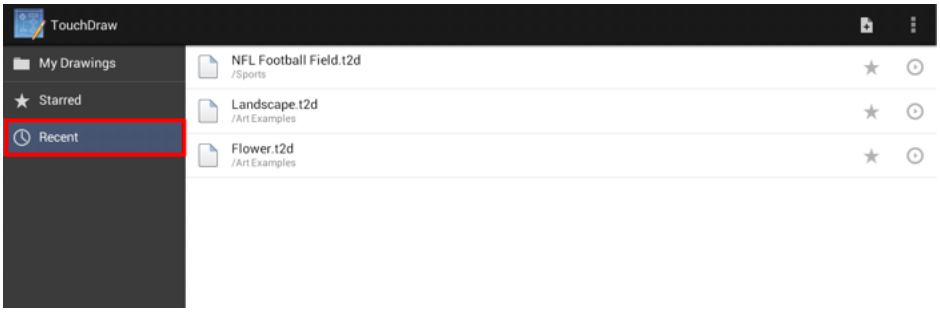
4.1.2.1. My Drawings

The **My Drawings** directory contains all drawing files and folders that have been created and saved within the TouchDraw application. Tap on **My Drawings** to view these items in the File List.



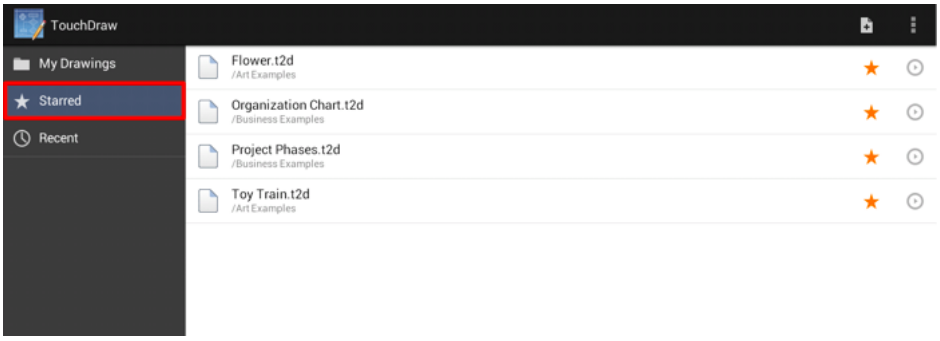
4.1.2.2. Recent

The **Recent** directory contains files that have recently been opened within the TouchDraw application. Tap on **Recent** to view these items in the File List.



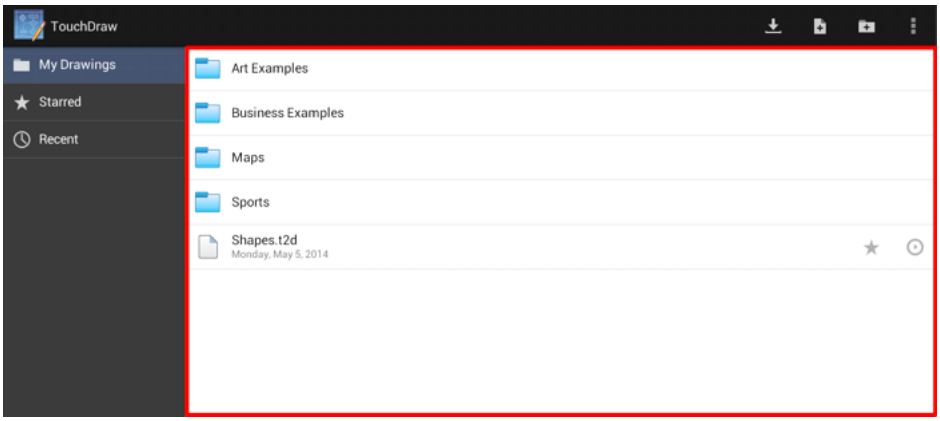
4.1.2.3. Starred

The **Starred** directory contains any drawing (file) that has been marked with the Star/Favorites Button in the Drawing Chooser. Tap on **Starred** to view these items in the File List.



4.1.3. File List

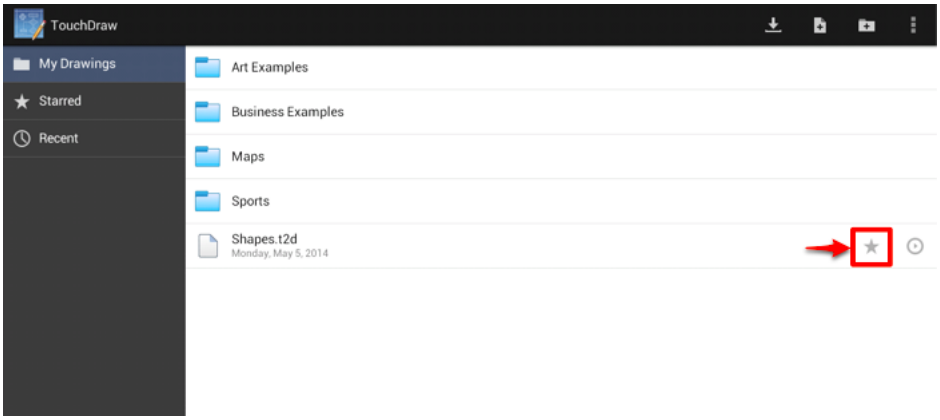
The **File List** shows all folders and files within a selected parent directory (My Drawings, Starred, or Recent). It is located on the right hand side of the Drawing Chooser underneath the Top Toolbar.



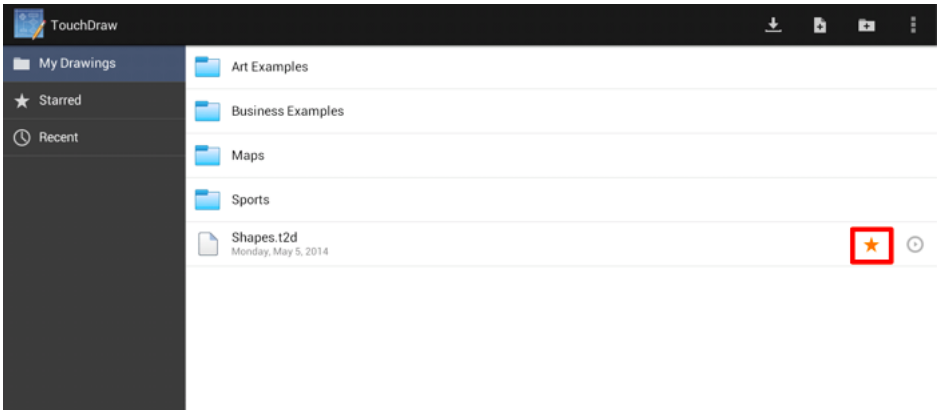
Tap on a folder name to see its contents or tap on a file name to open the file within the Drawing Editor and make changes. The Star/Favorites Button can be use to add a file to the Starred Directory in the View List and the **Disclosure Button** puts the file into Edit Mode.

4.1.3.1. Star/Favorites Button

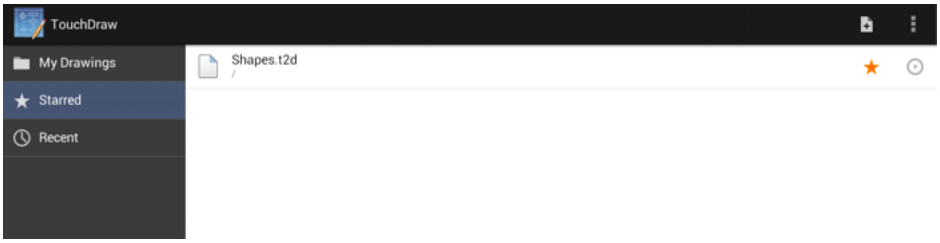
The **Star/Favorites Button** is used to add a drawing (file) to the **Starred Directory** in the View List. Multiple drawings can be starred to make them easier to find for making quick edits or faster viewing.



Press on the **Star/Favorites Button** to select the drawing and add it to the **Starred Directory**. The star appears orange when a drawing has been selected and gray when it is not currently part of the directory.



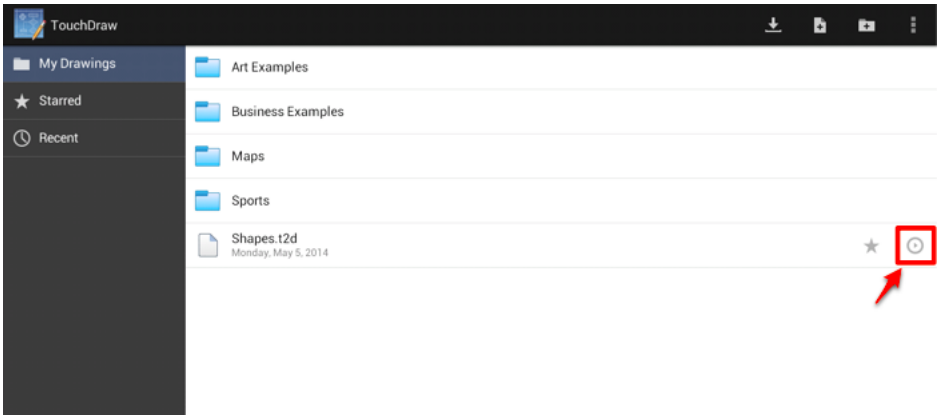
In the above example the **Star/Favorites Button** is press for the Rectangle.t2d drawing. Tap on the **Starred Directory** and the drawing will also appear in this **File List** for this directory.



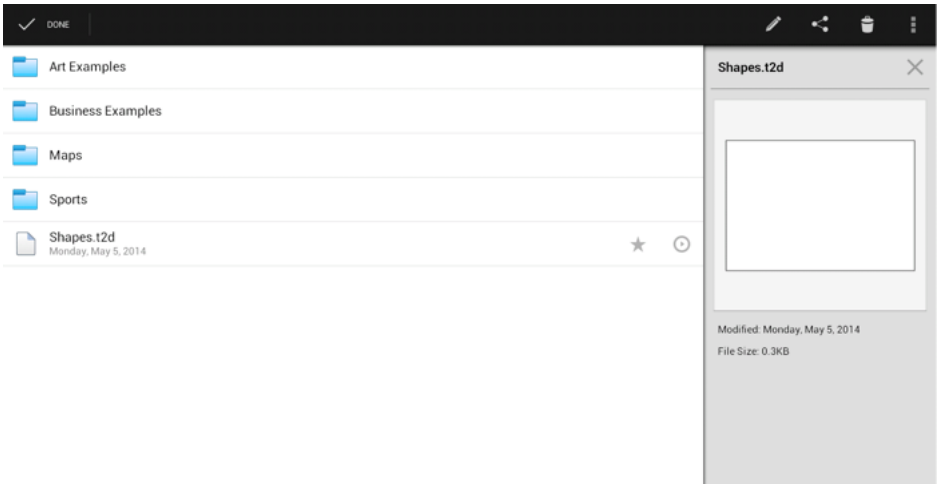
Press on the **Star/Favorites Button** once again to remove a drawing from the **Starred Directory**.

4.1.3.2. Disclosure Button

The **Disclosure Button** is located to the right of a drawing name in the File List and can be used to view general information about a selected file as well as for editing purposes.



The Drawing Chooser will change in two ways when the **Disclosure Button** is pressed. First, it will open a **sidebar panel** showing information about the particular drawing that was selected. Second, the drawing enters Edit Mode, which causes the Top Toolbar buttons to change.

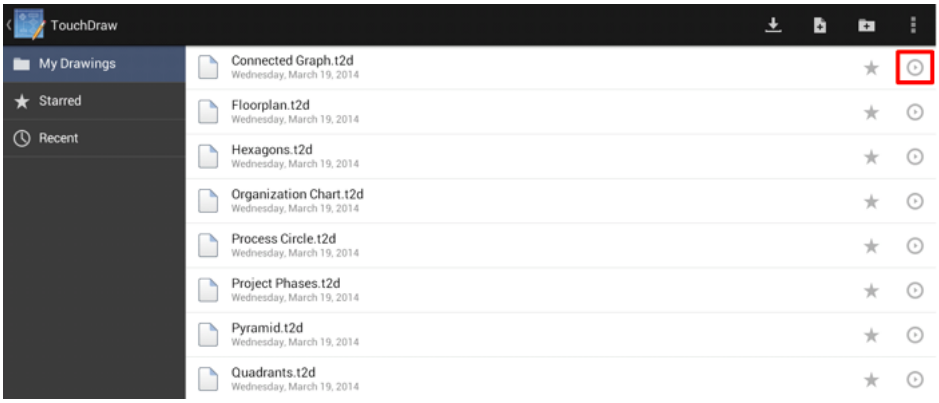


The **sidebar panel** shows a preview of the drawing and basic file information and can be closed by pressing the **Close (X) Button** in the upper right hand corner of the sidebar panel or the **Done Button** in the upper left hand corner of the Top Toolbar. Either of these options causes TouchDraw to exit Edit Mode and return to the normal Drawing Chooser view. Drawings (or folders) can be shared, deleted, and renamed or duplicated when

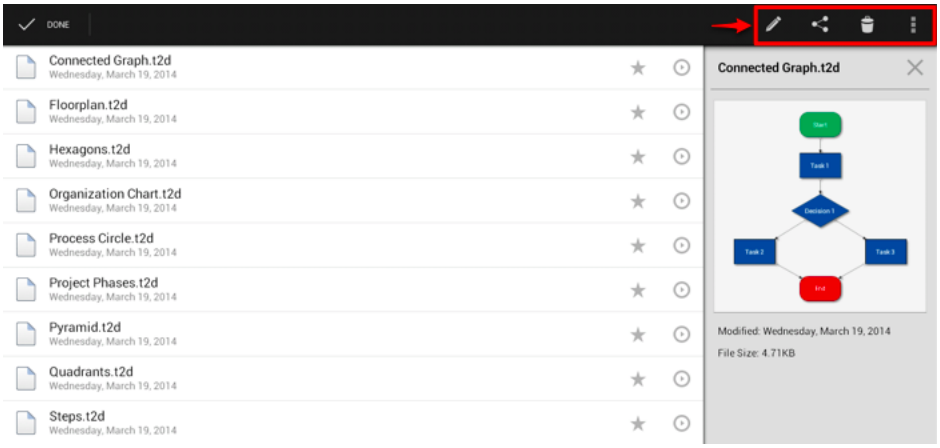
the chooser is in **Edit Mode** .

4.1.3.3. Edit Mode

A file (or folder) can be put into **Edit Mode** by performing an extended press on its name. The Disclosure Button to the right of a file name can also be used to put the file into **Edit Mode** and view additional information about the drawing. The Drawing Chooser will appear as below once the **Disclosure Button** has been pressed.



Once **Edit Mode** has been enabled, the Top Toolbar buttons will change to accommodate file or folder management needs. Press on one of the buttons located on the right of the toolbar to make alterations to a chosen file or folder and then press on the **Done Button** to exit **Edit Mode**.



Click or Tap on the Top Toolbar option name to learn more about its functionality.

Icon	Button Name	Description
	Edit Drawing	The **Edit Drawing Button** opens the selected drawing for editing within the Drawing Editor.
	Share	The **Share Button** is used to select a file format and sharing source for a selected drawing.
	Delete	The **Delete Button** is used to delete a file or folder (depending on what is selected).
	Overflow	The **Overflow Button** opens a menu that contains options for renaming a drawing (or folder), duplicating a drawing, sending a drawing to the device's photo gallery.

4.2. File Management

TouchDraw provides numerous **File Management** options to make working with new, saved, or imported drawings easier. The following pages explain how to perform basic file and folder operations.

4.2.1. Creating a New Folder

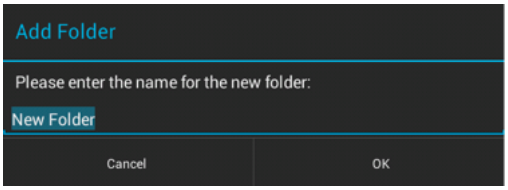
To create a new folder within the Drawing Chooser:

1

Press on the **Create Folder Button** in the Top Toolbar.

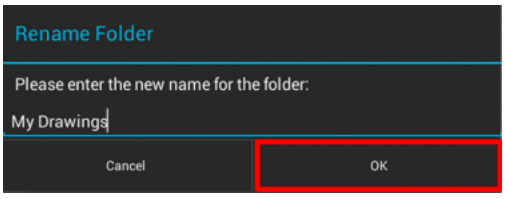
2

Enter a name for the folder.



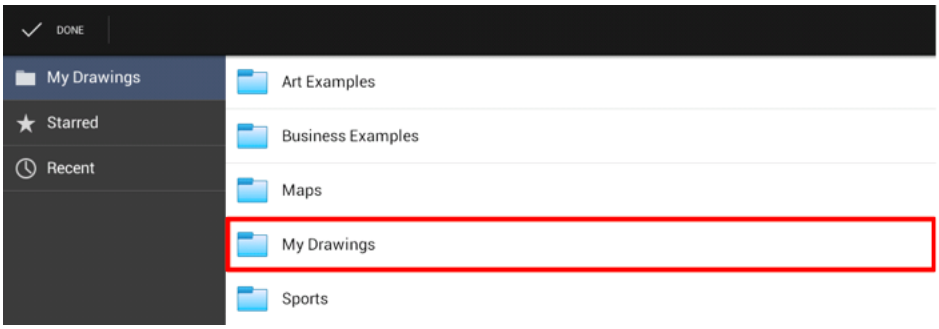
3

Press on the **OK Button**.



4

The new folder will appear in the **Drawing Chooser**.



4.2.2. Creating a New Drawing

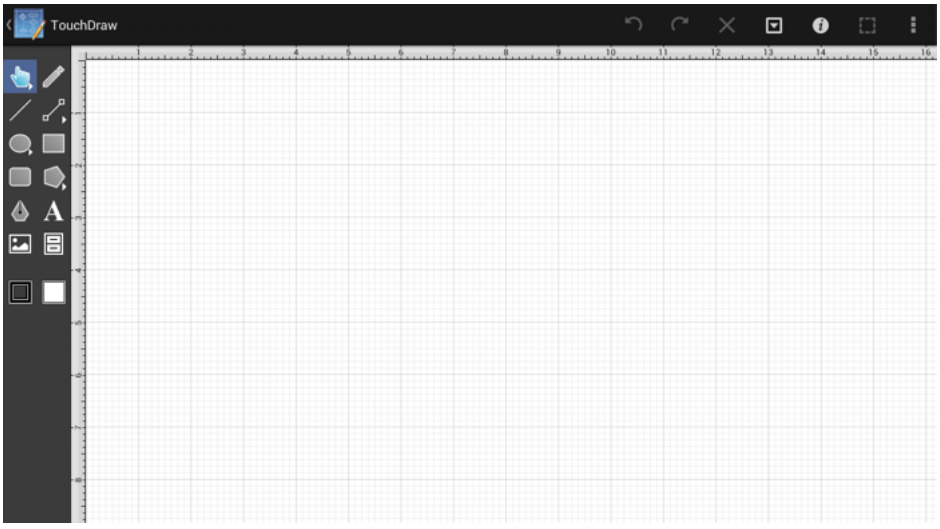
To create a new drawing or folder within the Drawing Chooser:

1

Press on the **Create Drawing Button** in the Top Toolbar.

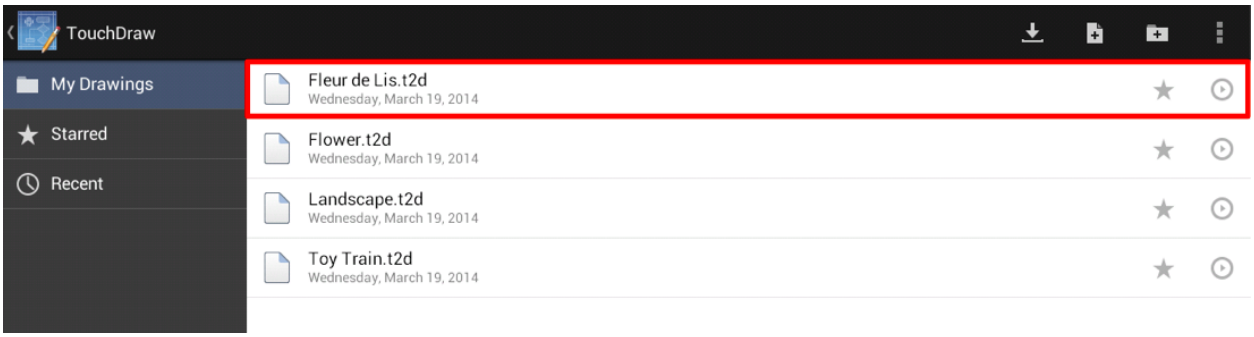
2

The Drawing Editor will open to a blank drawing canvas.

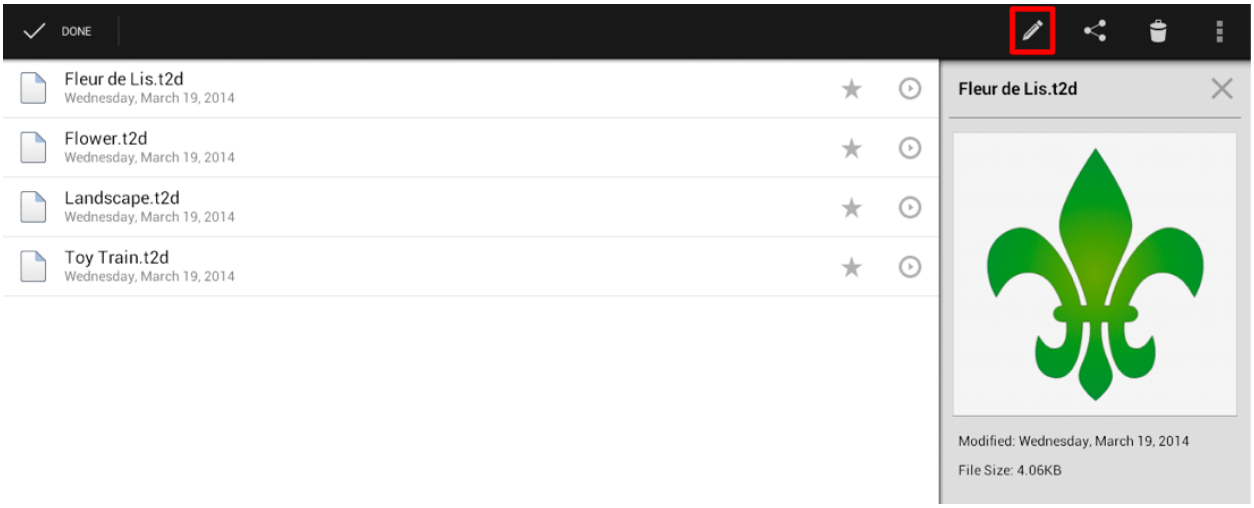


4.2.3. Opening a Drawing

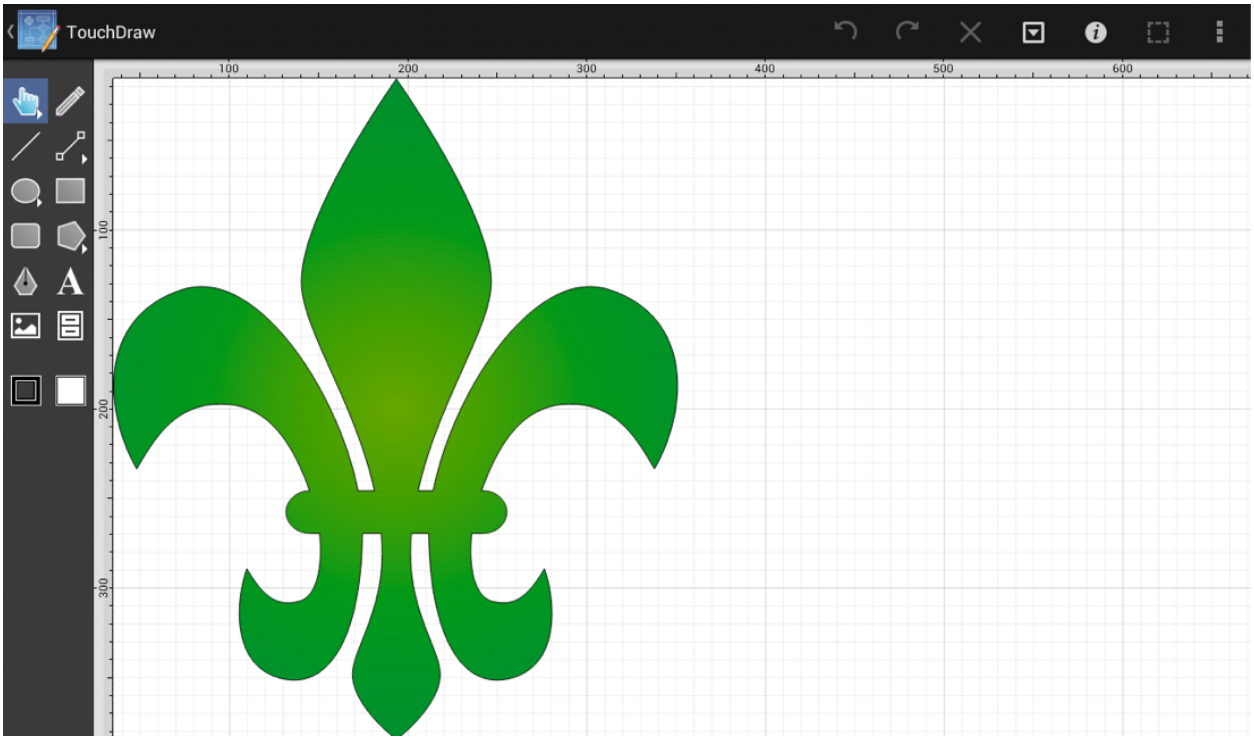
To open a drawing for editing or viewing, simply browse to the appropriate folder and **Tap** on the drawing name to open the file within the Drawing Editor.



A drawing may also be opened when the Drawing Chooser is in Edit Mode by clicking on the **Edit Drawing Button** (Pencil) in the toolbar.



The selected drawing will be opened in the Drawing Editor.

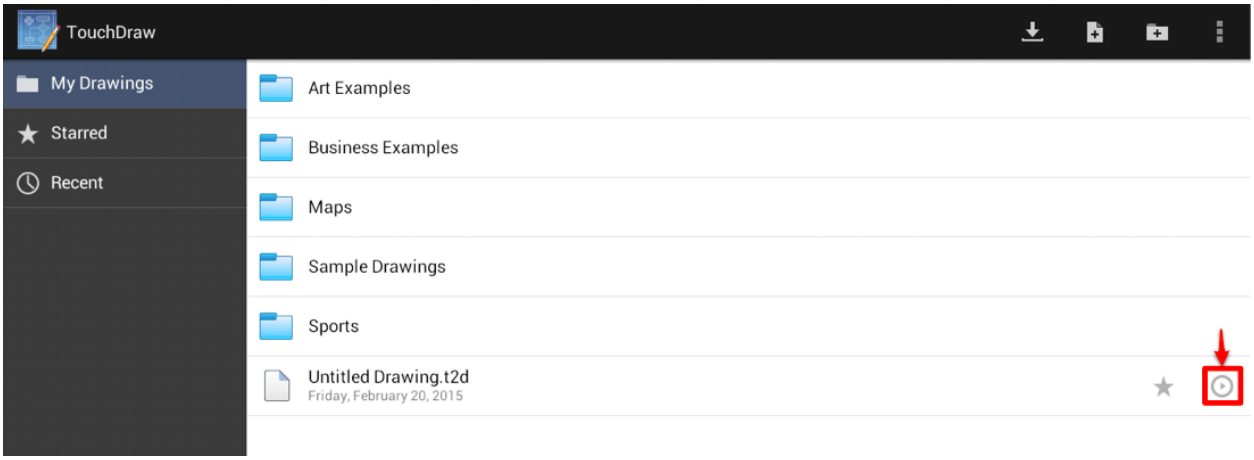


4.2.4. Renaming a Drawing (or Folder)

The **Rename** option is accessible by placing the file into **Edit Mode** and then pressing on the **Overflow Button** in the Drawing Chooser. To rename a drawing or folder:

1

Perform an **extended press** on the file (or Folder) name within the File List or **press** on the Disclosure Button located to the right of the file name to enter Edit Mode.

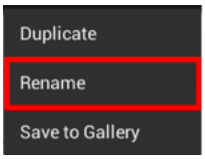


2

Press on the **Overflow Button** in the Top Toolbar to access the **Rename** option.

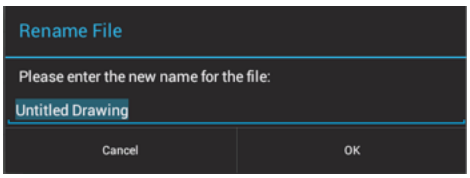
3

Press on the **Rename** option.



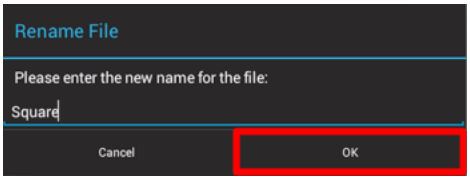
4

Use the keyboard to enter a new name for the selected drawing (or folder).



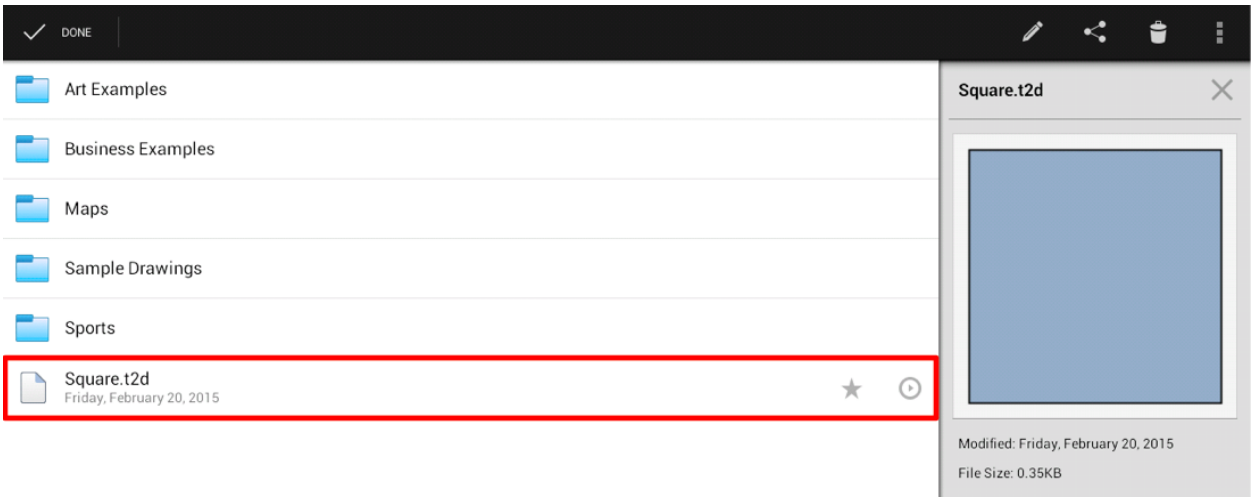
5

Press on the **OK Button** when finished to rename the drawing or press on the **Cancel Button** to exit the window without completing the rename.



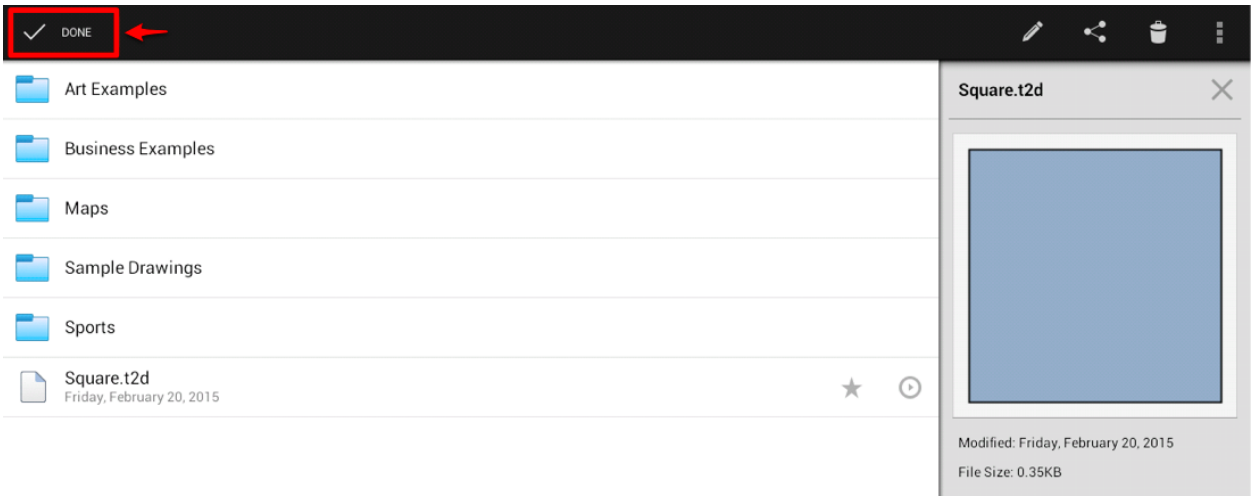
6

The drawing (or folder) will appear under the new name within the **File List**.



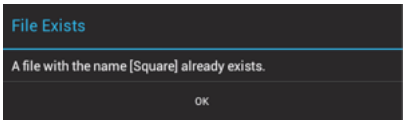
7

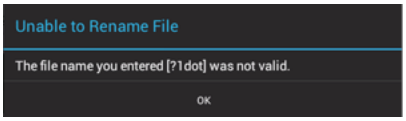
Tap on **Done** to exit out of Edit Mode.



If the entered name is already taken or invalid, TouchDraw will provide visual feedback by showing an error

message stating that the file (or folder) already exists or the name is not valid.





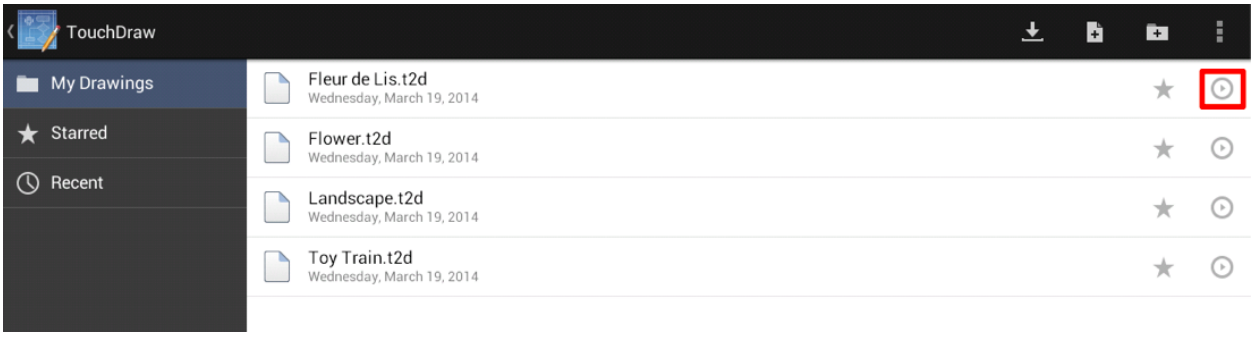
4.2.5. Duplicating a Drawing

A drawing can be duplicated at any time within the Drawing Chooser. This function essentially creates a copy of the file with all properties, etc. in tact that can be renamed and altered separately from the original file.

To **Duplicate a Drawing:**

1

Press on the Disclosure Button located to the right of the file name or perform an **extended press** on the file name itself to put the file into Edit Mode.



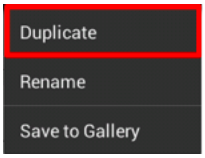
The **Top Toolbar** will appear as shown below once a file is in **Edit Mode**.

2

Press on the **Overflow Button** to open up the overflow menu.

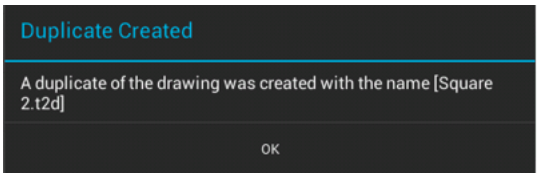
3

Press on the **Duplicate** option in the Drawing Chooser Overflow Menu.



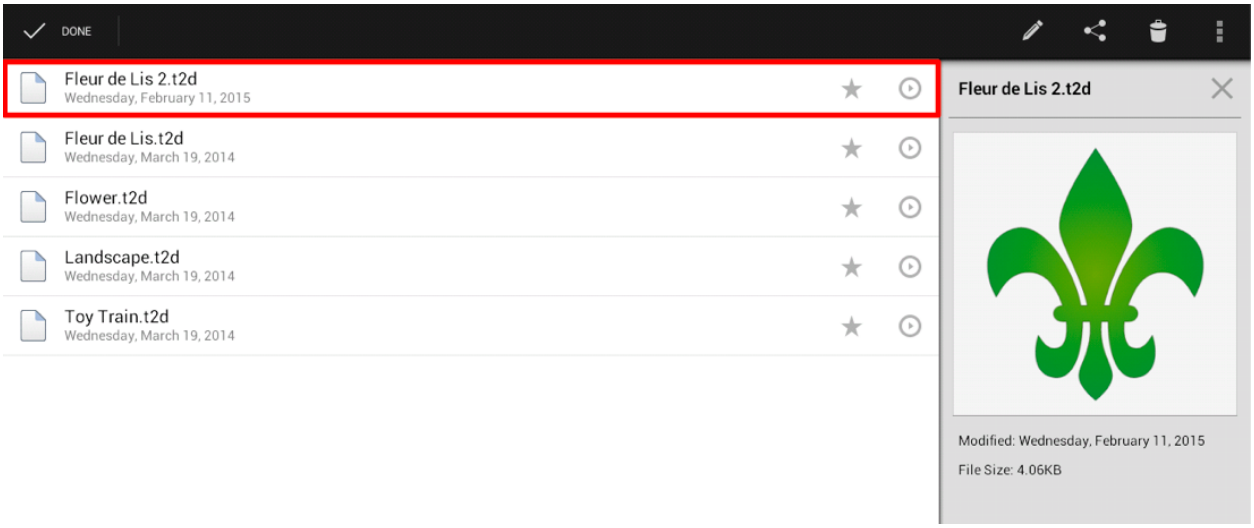
4

A dialog will appear to confirm the file was duplicated. Tap on **OK** to close this dialog.



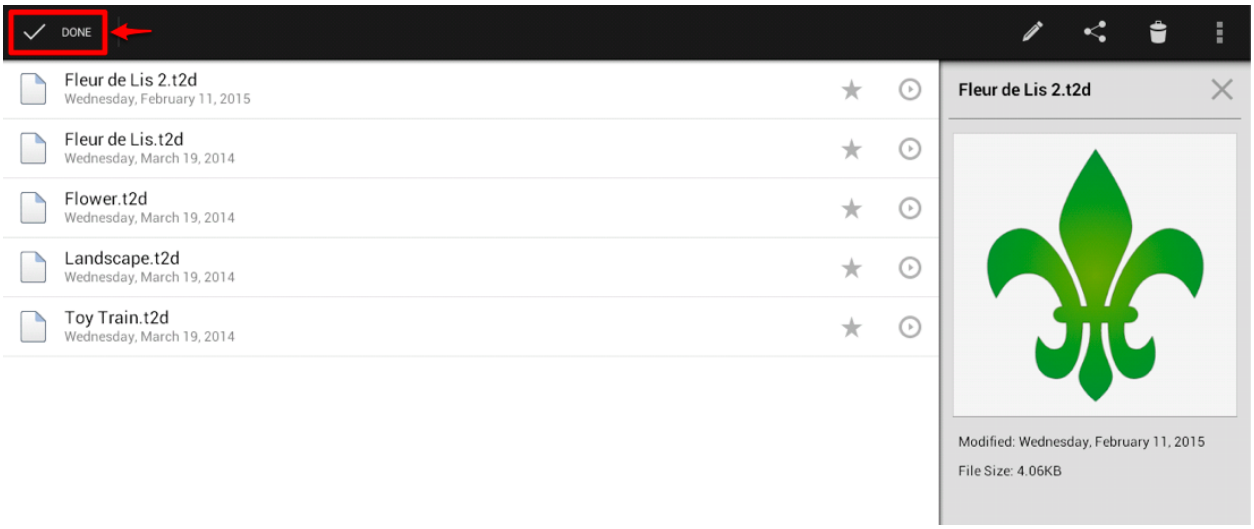
5

The duplicated file will appear within the same directory as the copied file and have a number attached to the end to prevent overwriting.



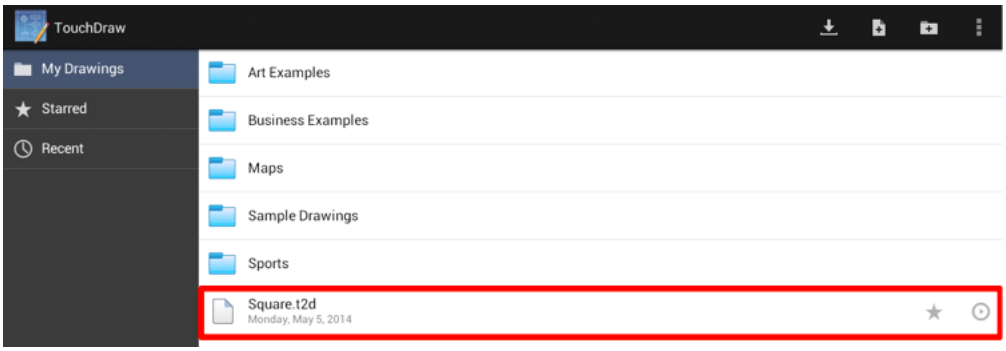
6

Press on the **Done Button** in the Top Toolbar to exit Edit Mode.

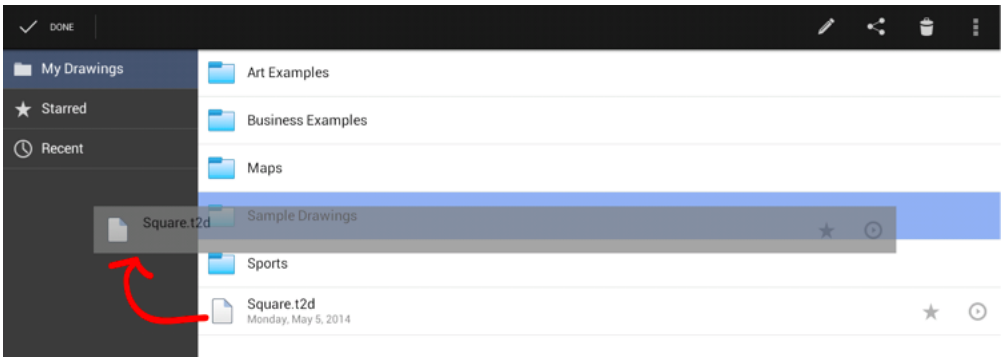


4.2.6. Moving a Drawing (or Folder) to a Parent Directory

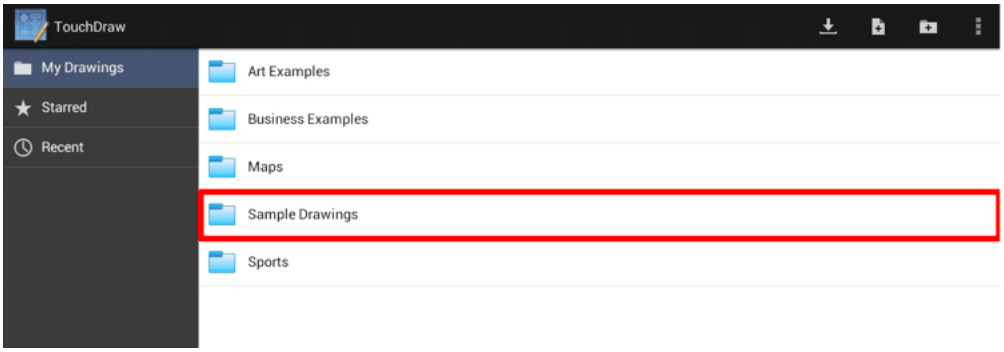
To move a drawing (or folder) to another directory, **Touch and Hold** on the file (or folder) in the File List and then **drag** it to a location within the View List or File List. In the example below, Square.t2d is moved to the *Sample Drawings* folder.



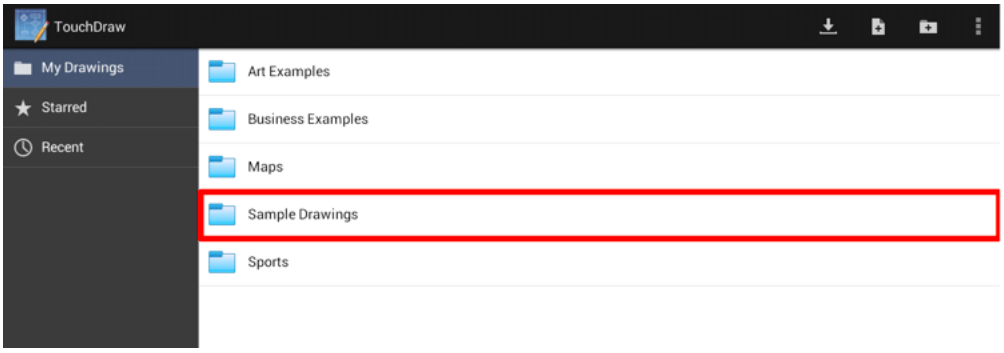
As the file is dragged to the *Sample Drawings* folder, the destination folder becomes highlighted in blue and a semi-transparent, gray highlight represents the file being moved, as shown below:



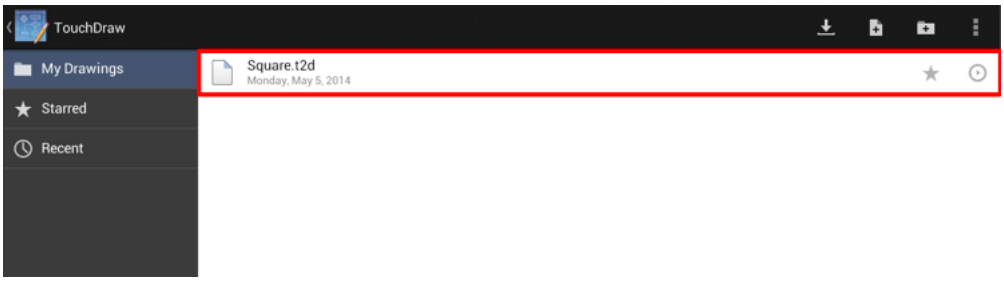
In the screenshot below, the Square.2td file has been successfully moved to the *Sample Drawings* folder.



In this example, Square.t2d is moved from the *Sample Drawings* folder to **My Drawings** in the View List. This is accomplished by first tapping on the *Sample Drawings* folder to access its contents.

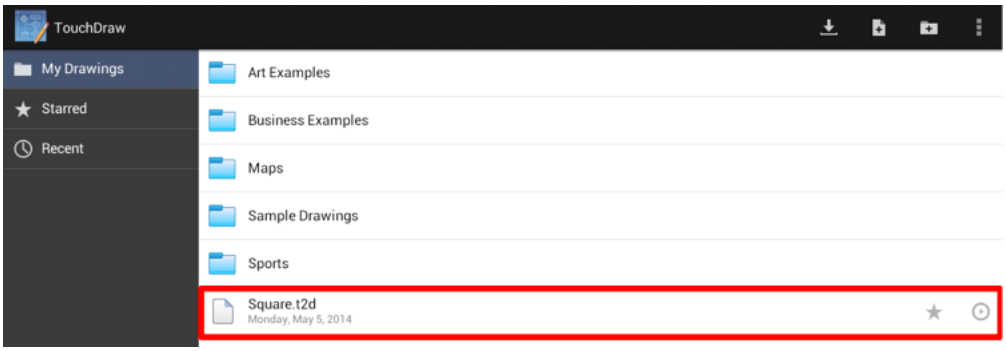


The Square.2td file can now be seen within the Drawing Chooser.



The drawing can be moved by **Touching and Holding** on the Square.t2d file and **dragging** it into **My Drawings** within the View List.

It will appear in **My Drawings**, as shown below:



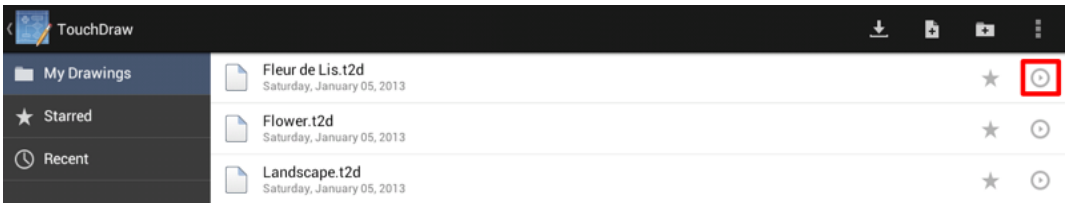
The file (or folder) will be highlighted in blue as a visual indicator of the selection. Once it turns blue, it can be dragged to the appropriate location.

4.2.7. Saving a Drawing to the Photo Gallery

Drawings saved within TouchDraw may be saved to the photo gallery of the utilized device. You will need to be in the Drawing Chooser to perform this action in TouchDraw. To save a drawing to the photo gallery:

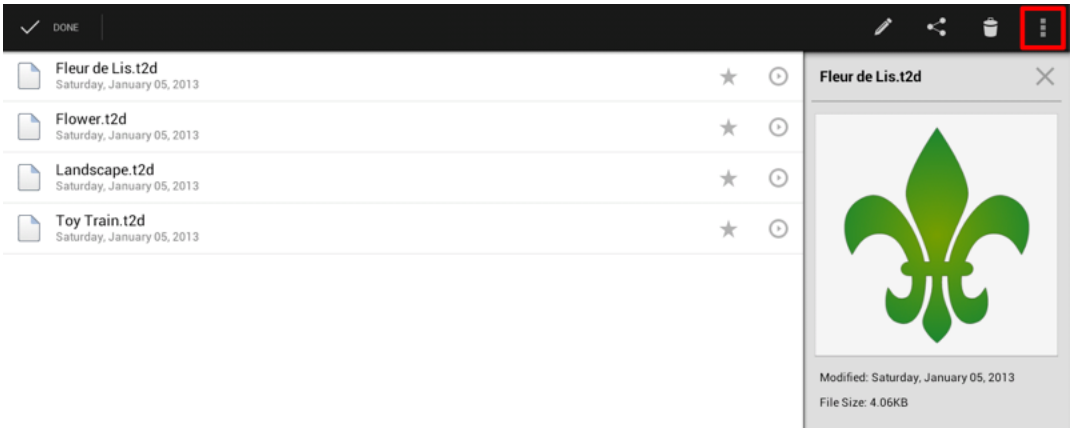
1

Place the drawing in Edit Mode by pressing on the **Disclosure Button** for the desired drawing.



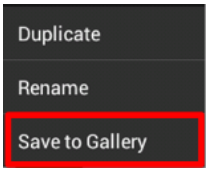
2

Press on the **Overflow Menu Button** to open the Overflow Menu.



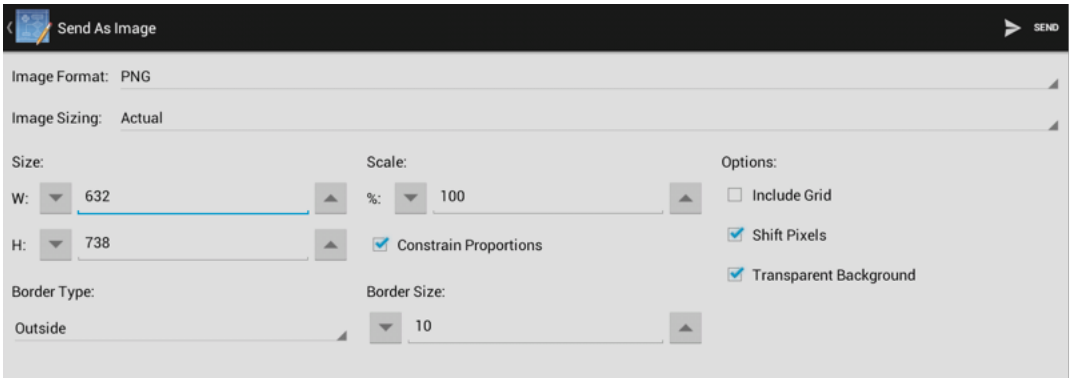
3

Tap on **Save to Gallery** in the Overflow Menu.



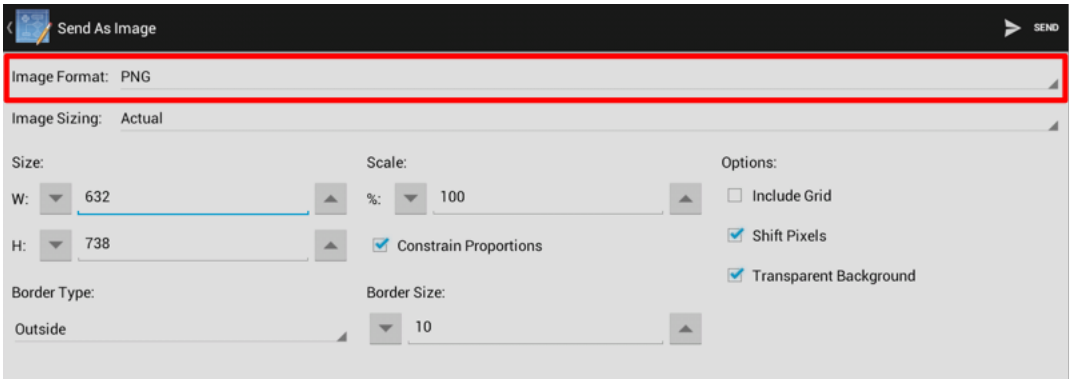
4

You will automatically be directed to the **Send as Image** screen in TouchDraw.



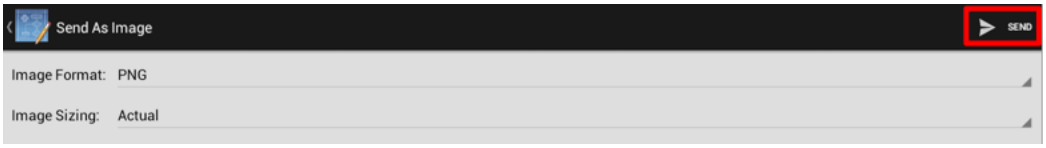
5

Drawings may be sent as either a **PNG** or **JPEG** format. The file type defaults to PNG; however, you can change the format to JPEG by tapping on **Image Format** and selecting **JPEG** from the provided drop-down menu. Additional attributes and options on this screen may also be altered to meet specific preferences.



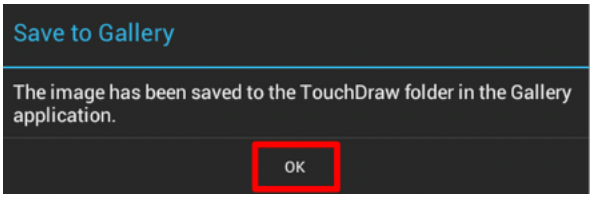
6

Press on **Send** in the upper right hand corner when finished.



7

Tap on **OK** in the provided confirmation message to complete the save to your device's photo gallery.

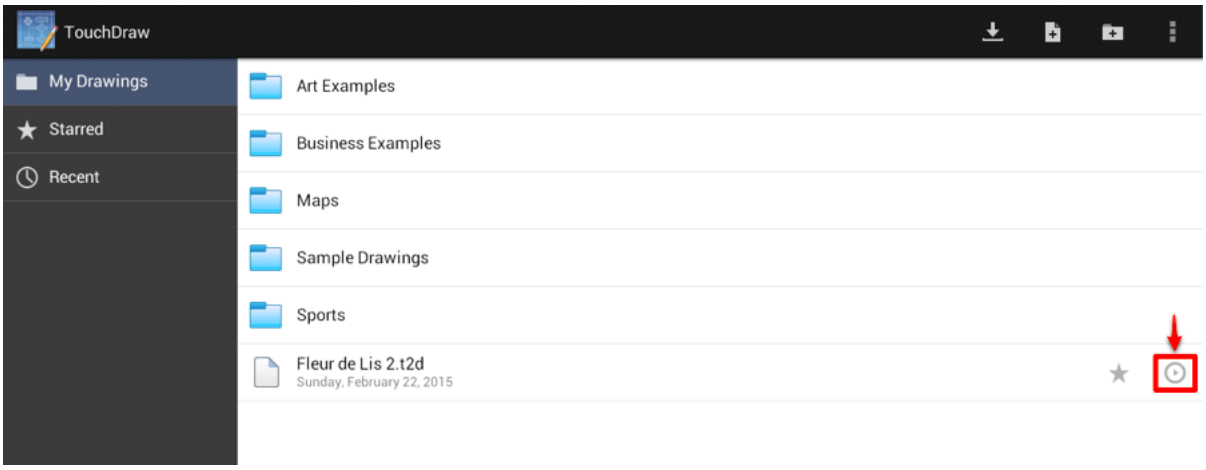


4.2.8. Deleting a Drawing (or Folder)

The **Delete** option is accessible by placing a file (or folder) into **Edit Mode** and then pressing on the **Overflow Button** in the Drawing Chooser. To delete a drawing or folder:

1

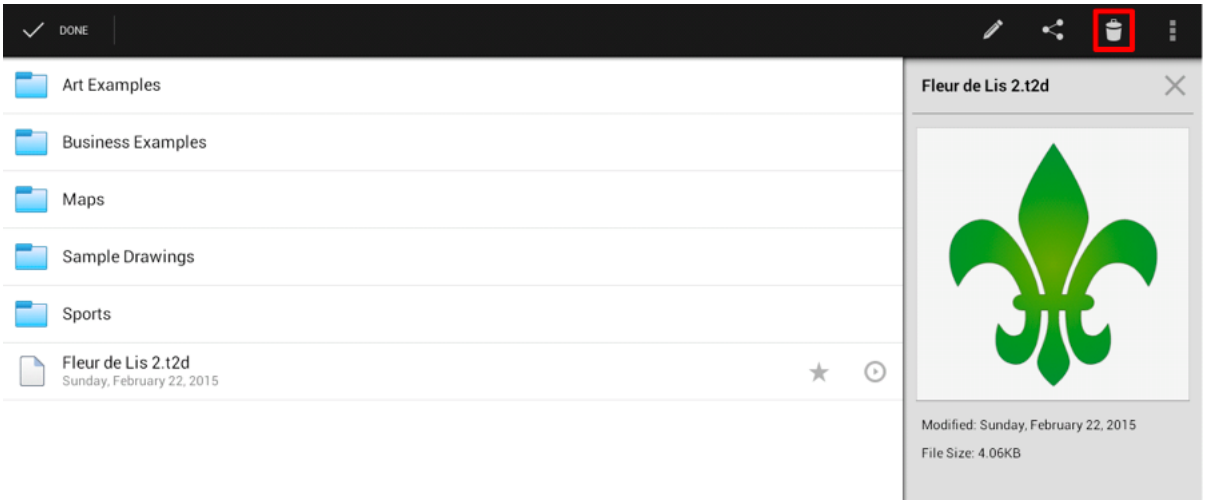
Perform an **extended press** on the file (or folder) name within the File List or **press** on the Disclosure Button located to the right of the file name to enter Edit Mode.



If you are removing a folder from the Drawing Chooser, you will need to perform an **extended press** to enter **Edit Mode**. A disclosure button is not provided for folders.

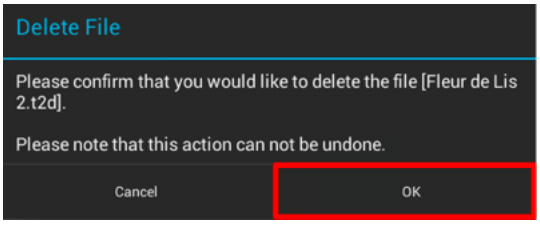
2

Press on the **Delete Button** in the Top Toolbar.



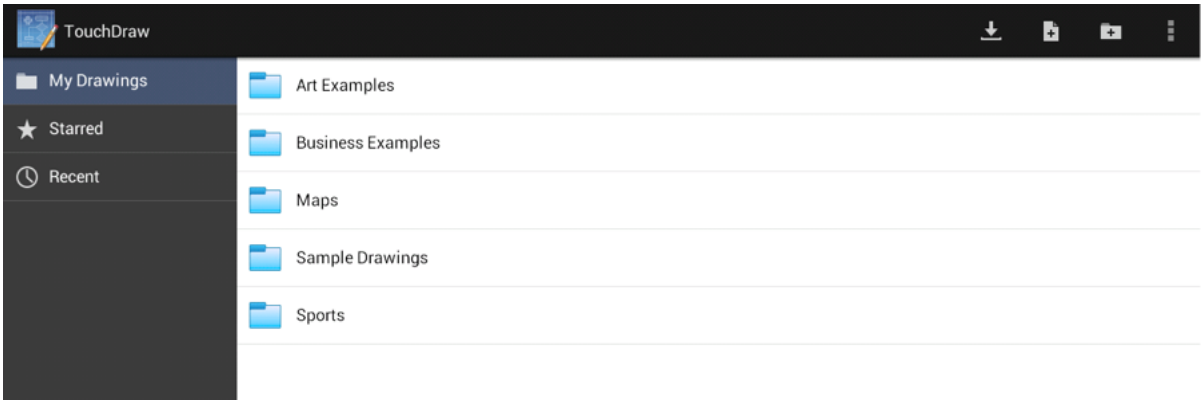
3

Press on the **OK Button** in the confirmation window to delete the drawing or press on the **Cancel Button** to exit without deleting the file (or folder).



4

The file (or folder) will no longer appear in the Drawing Chooser.



4.2.9. Sharing a Drawing

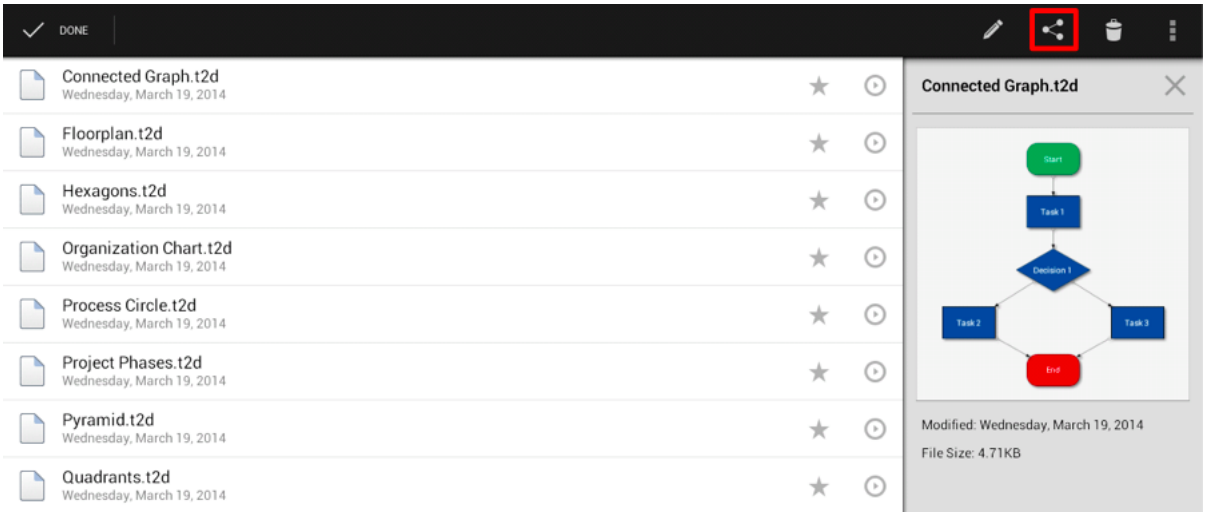
TouchDraw supports several different methods of sharing and/or exporting a drawing from within the Drawing Chooser and the Drawing Editor. Drawing Chooser options are accessible by placing the file into **Edit Mode** and pressing on the **Share Button**, as shown below.

1

Perform an **extended press** on the file name itself or **press** on the Disclosure Button next to the file name to enter Edit Mode. In this example, the Connected Graph drawing in Business Examples is chosen.

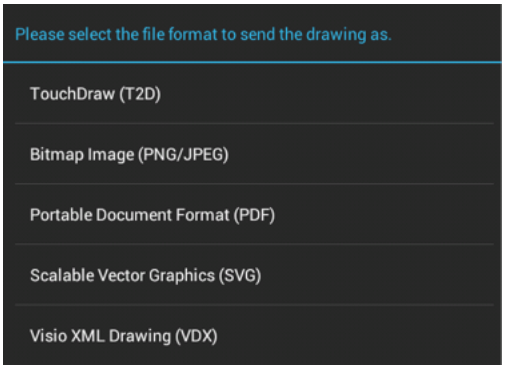
2

Press on the **Share Button** in the Top Toolbar.



3

Tap on the desired **File Format**. See the Sharing Formats section of the documentation to learn more about each available format choice.

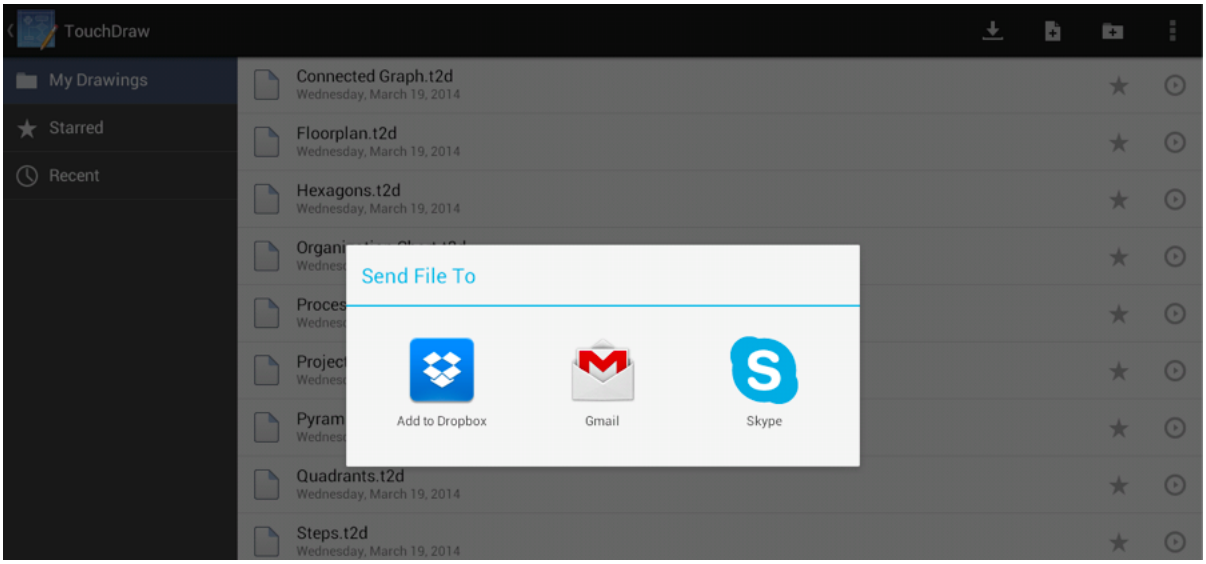


An additional settings panel opens when Bitmap Image is chosen from the File Format Prompt. Make any desired changes and then press on the **Send Button** to access the next selection window or press on the **App Button** to return to the Drawing Chooser without sending.

```
![](attachments/3248737/8495574.png)
```

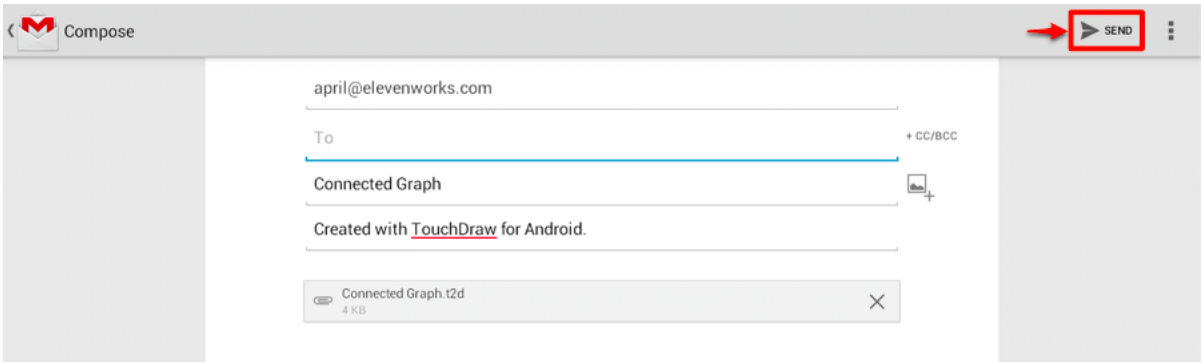
1

The **Send File To** prompt is dynamically based on the used device and installed applications. It varies every time a file format is selected. **Gmail** is chosen in the example below to show how an image can be sent via email.



2

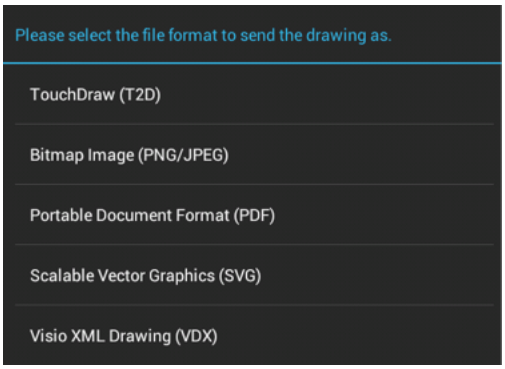
Enter all necessary email information and then press on the **Send Button**.



Note: For detailed information on all of the options, limitations and known issues for the supported file formats, please refer to the exporter section of the File Format Support pages.

4.2.9.1. Sharing Formats

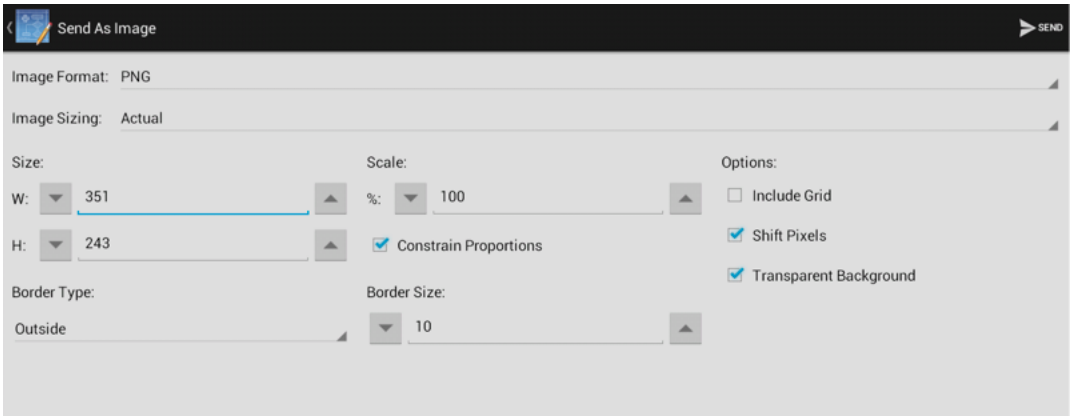
A created drawing in TouchDraw can be shared (or exported) in its original format or an alternative file format.



Option Name	Description
TouchDraw (T2D)	The **TouchDraw (T2D)** option is the standard file format for an application drawing.
Bitmap Image (PNG/JPEG)	The **Bitmap Image (PNG/JPEG)** option shares a drawing in either PNG or JPEG format.
Portable Document Format (PDF)	The **Portable Document Format (PDF)** option shares a drawing in PDF format.
Scalable Vector Graphics (SVG)	The **Scalable Vector Graphics (SVG)** option shares a drawing in SVG format.
Visio XML Drawing (VDX)	The **Visio XML Drawing (VDX)** option shares a drawing in VDX format to make importing into Visio easy.

4.2.9.2. Bitmap Image Panel

This panel opens when the **Bitmap Image (PNG/JPEG)** option is chosen from the format prompt for sharing a drawing.



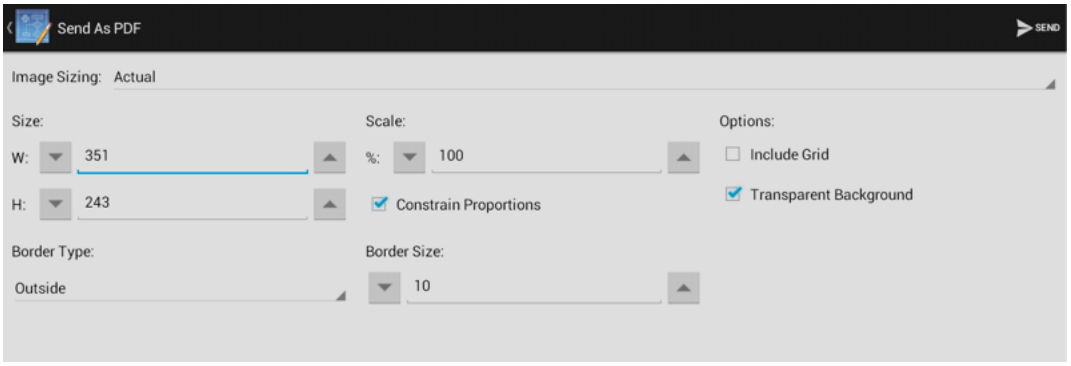
Click or Tap on the name of the Bitmap Image Option to learn more about what actions occur upon selection.

Option Name	**Description**
Image Format	The **Image Format** option is used to select the type of image file to be created by the export (PNG or JPEG).
Image Sizing	The **Image Sizing** option can be used to pick a preset or custom pixel size for sharing. If this option is set to **Actual**, the image remains at its original size.
Size	The **Size** option shows the current width and height of the image and can be altered prior to exporting.
Scale	The **Scale** option sets the dimension of the exported image to a specific percentage relative to the drawings actual size.
Constrain Proportions	The **Constrain Proportions** option links the width and height when selected.
Border Type	The **Border Type** option can be used to turn the border feature on or off for a share. Choosing **None** turns the border feature off while **Inside** and **Outside** are used to set the position of a border.
Border Size	The **Border Size** option sets the size of a border within or outside of the image.
Include Grid	The **Include Grid** option tells TouchDraw to include (or not include) the grid in the generated file.
Shift Pixels	The **Shift Pixels** option shifts pixels half a pixel to the right and down. This is useful when you are dealing with anti-aliasing issues when lines aren't perfectly pixel

Option Name	Description
	aligned.
Transparent Background	The **Transparent Background** option forces the exported image (when using PNG) to be created with a transparent background regardless of the currently selected background color.

4.2.9.3. Portable Document Format Panel

This panel opens when the **Portable Document Format (PDF)** option is chosen from the format prompt for sharing a drawing.



Click or Tap on the name of the Portable Document Format (PDF) Option to learn more about what actions occur upon selection.

Option Name	Description
Image Sizing	The **Image Sizing** option can be used to pick a preset or custom pixel size for sharing. If this option is set to **Actual**, the image remains at its original size.
Size	The **Size** option shows the current width and height of the image and can be altered prior to exporting.
Scale	The **Scale** option sets the dimension of the exported image to a specific percentage relative to the drawings actual size.

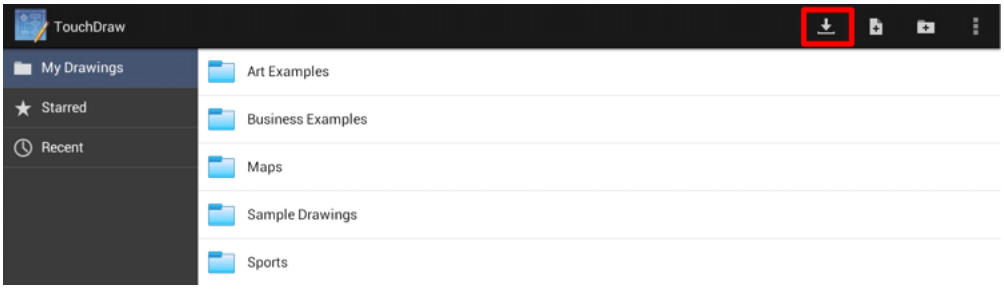
Option Name	Description
Constrain Proportions	The **Constrain Proportions** option links the width and height when selected.
Border Type	The **Border Type** option can be used to turn the border feature on or off for a share. Choosing **None** turns the border feature off while **Inside** and **Outside** are used to set the position of a border.
Border Size	The **Border Size** option sets the size of a border within or outside of the image.
Include Grid	The **Include Grid** option tells TouchDraw to include (or not include) the grid in the generated file.
Transparent Background	The **Transparent Background** option forces the exported image (when using PNG) to be created with a transparent background regardless of the currently selected background color.

4.2.10. Importing a Drawing

There are currently two ways to import drawings and images into TouchDraw for Android.

1

Use the Import Button available within TouchDraw to import from cloud storage services such as DropBox or from a directory on your device.



2

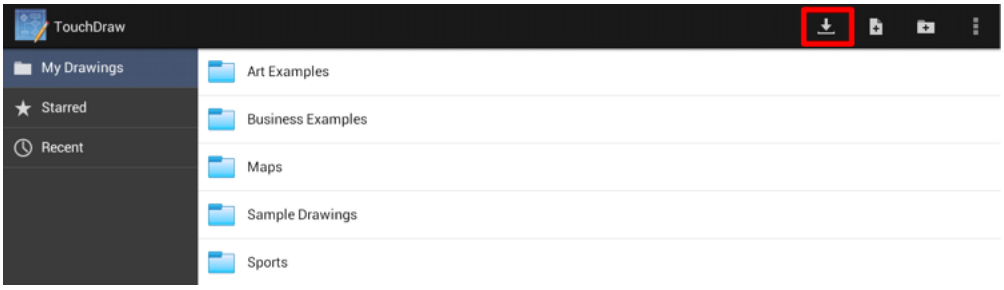
Use a third party application (such as, but not limited to Mail, DropBox or Box) to send (or "Open in...") a drawing to TouchDraw on your Android device.

4.2.10.1. Importing within TouchDraw

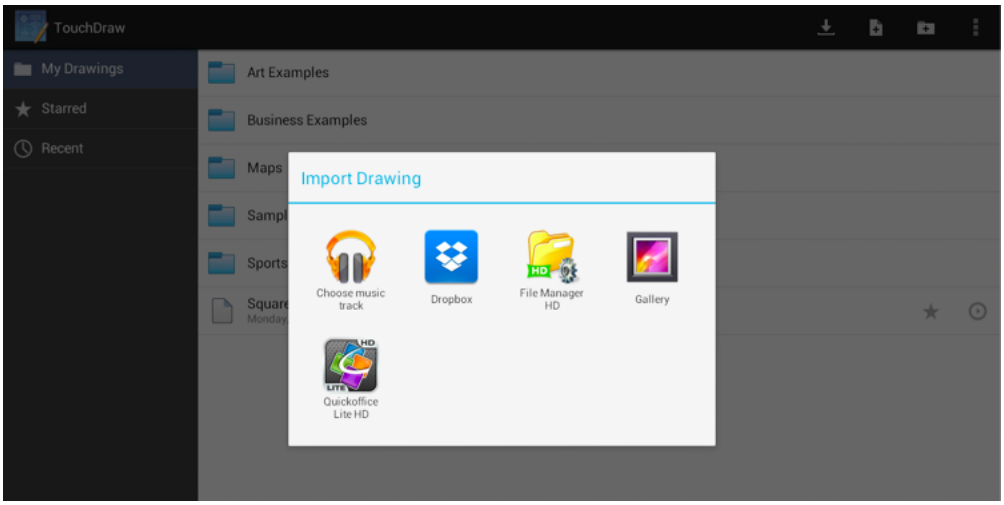
In addition to be being able to open native TouchDraw documents, TouchDraw also has support for opening other file types. The list of supported file types are:

- TouchDraw Native (.t2d)
- Scalable Vector Graphics (.svg)
- Visio XML Drawing (*.vdx)
- Portable Network Graphic (.png)
- JPEG (.jpg, .jpeg)
- BMP (.bmp)
- TIFF (.tif, .tiff)
- Enhanced Metafile (.emf)
- Windows Metafile (.wmf)

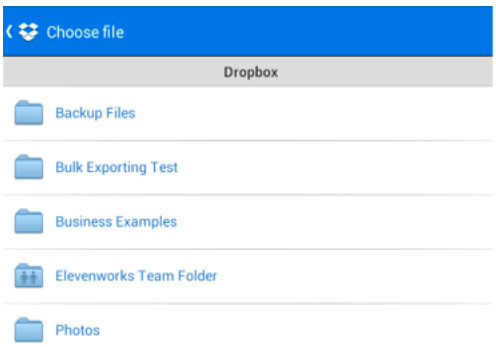
The **Import Button** can be used to import all non-native file formats and is located in the Top Toolbar of the Drawing Chooser, as shown below.

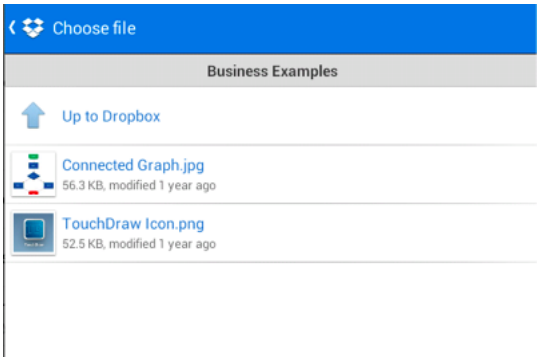


A menu similar to the one displayed below will appear when the **Import Button** is pressed. Press on one of the provided local device or cloud storage options to make a selection.



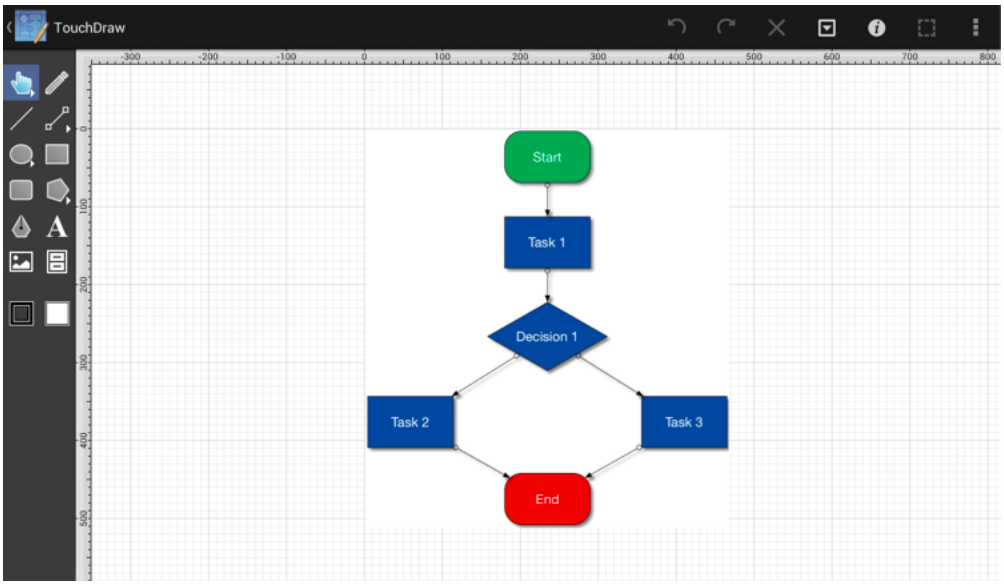
A folder or file list will then be presented based on what has been stored on the local device or within the selected cloud service. If a folder list is presented, navigate to the desired drawing by pressing on the folder name where it is located. In the example below, **Business Examples** is chosen from the supplied Dropbox folders and **Connected Graph.jpg** is imported.





To import a drawing/image, tap on the file name in the list to select it. A progress indicator will appear as a

visual indicator of the import and the converted/imported drawing automatically opens within the Drawing Editor when the process has completed.



The imported drawing must be saved to appear in the Drawing Chooser. If you do not save the file prior to exiting the Drawing Editor, you will have to perform the import again.

4.2.10.2. Importing Using Mail (or other local application)

4.3. Setting Application Preferences

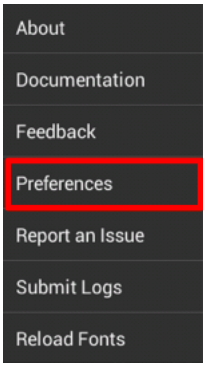
Application Preferences are accessed through the Top Toolbar and can be used to change preferences for reporting issues to the TouchDraw development team and Visio Support settings. To access the application preferences:

1

Press on **Overflow Button** to open the Drawing Chooser Overflow Menu.

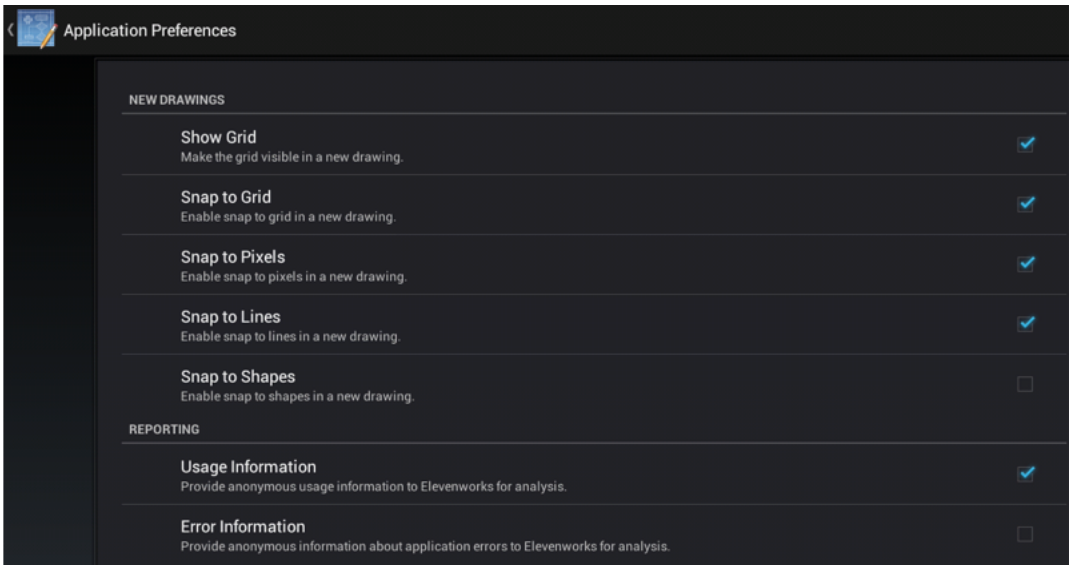
2

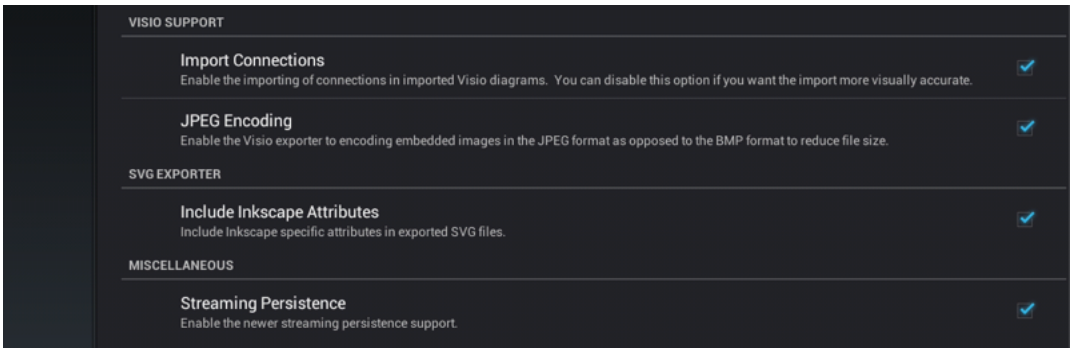
Press on the **Preferences** option to access the application preferences.



3

The **Preferences Window** will appear as shown below.





Enabled preferences will have a blue checkmark to the right of the preference name and description. Tap on this box to enable or disable a preference and then press on the **App Button** to return to the Drawing Chooser.

Click or Tap on a Preference Name to learn more about its functionality.

Preference Name	**Description**
Show Grid	The **Show Grid** preference toggles the visibility of the grid. The **Grid Visibility** preference is an application level preference. TouchDraw will remember what you have selected through the application restart and will apply to all drawings that you edit/view.

Preference Name	Description
Snap to Grid	The **Snap To Grid** preference toggles the snap to grid functionality . The **Snap to Grid** preference is an application level preference and is enabled by default. TouchDraw will remember what you have selected through the application restart and will apply to all drawings that you edit/view.
Snap to Pixels	The **Snap to Pixels** preference aligns objects to whole pixel numbers for simplified modification and increased accuracy. The **Snap to Pixels** preference is an application level preference and is enabled by default. TouchDraw will remember what you have selected through the application restart and will apply to all drawings that you edit/view.
Snap to Lines	The **Snap to Lines** preference allows dragged handles to be snapped to the endpoints or the midpoints of lines in the drawing canvas. The **Snap to Lines** preferenceis an application level preference and is enabled by default. TouchDraw will remember what you have selected through the application restart and will apply to all drawings that you edit/view.
Snap to Shapes	The **Snap to Shapes** preference snaps a figure to a selected shape vertex or center point. The **Snap to Shapes** preferenceis an application level preference and is disabled by default. TouchDraw will remember what you have selected through the application restart and will apply to all drawings that you edit/view.
Usage Information	The **Usage Information** preference provides anonymous information to the development team for further analysis.
Error Information	The **Error Information** preference provides anonymous information to the development team regarding application errors.
Import Connections	The **Import Connections** preference allows connections to be imported when Visio diagrams are imported into TouchDraw.
JPEG Encoding	The **JPEG Encoding** preference informs the Visio exporter to encode embedded images as a JPEG format to reduce the total size of the exported file. This preference is automatically enabled (checked) by default.
Include Inkscape Attributes	The **Include Inkscape Attributes** preference informs TouchDraw to include Inkscape specific attributes when exporting a drawing as an SVG File.
Streaming Persistence	The **Streaming Persistence** preference turns off the new (faster) "persistence engine" capable of opening a drawing anywhere from 2 to 5 times faster. This preference is

Preference Name	Description
	automatically enabled (checked) by default.

4.4. Sending Feedback

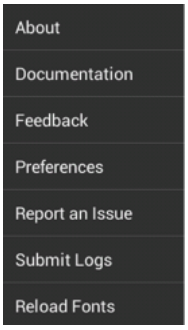
Options for **Sending Feedback** to the TouchDraw Development Teamare accessible through the Top Toolbar and can be used to provide general feedback about the application or to report an issue. To access these options:

1

Press on the **Overflow Button** to open the Drawing Chooser Overflow Menu.

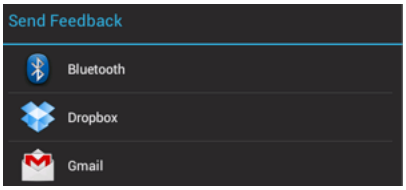
2

Press on the **Feedback or Report an Issue** option to send data to the development team.



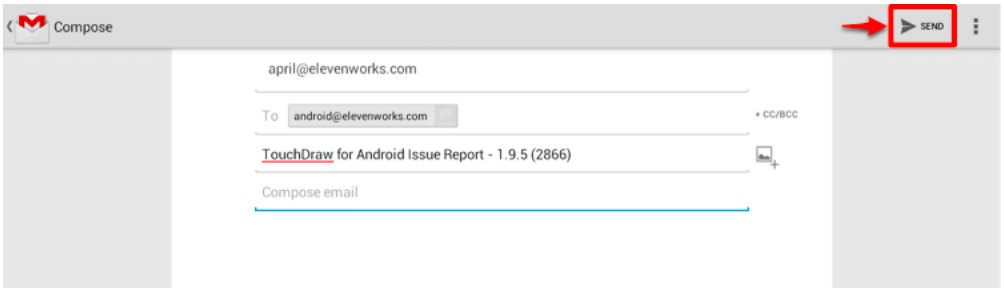
3

The **Feedback and Report an Issue** prompts are dynamically based on the used device and installed applications. In this example, **Gmail** is chosen to send the information via email.



4

Enter all necessary sending information and then press on the **Send Button**.



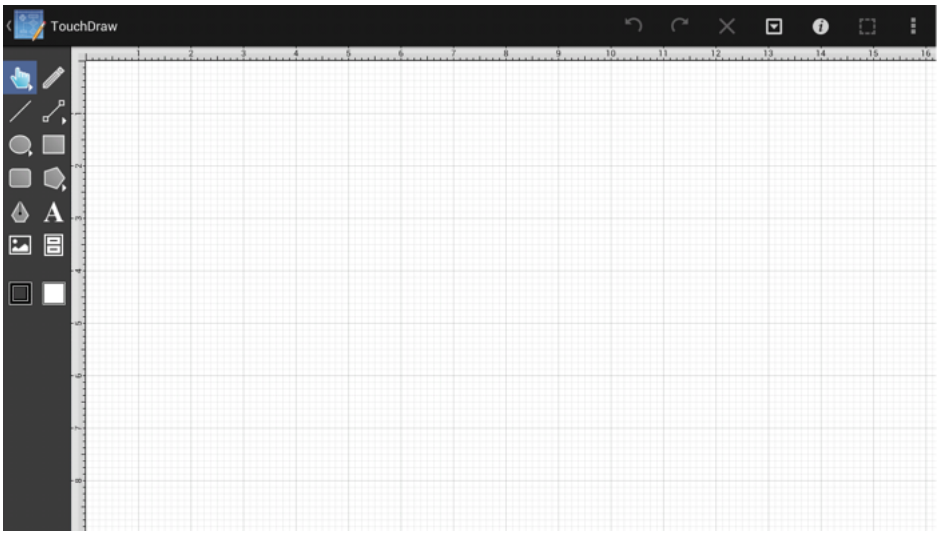
To exit the email window without sending feedback or a report, press on the **Overflow Button** and tap on **Discard**. Press on the **OK Button** when the confirmation prompt appears.

5. Drawing Editor

The options for **Editing Drawings** in TouchDraw are designed to make working with figures, lines, paths, and handles easier. The following pages explain how to create, manage, and edit figures within a drawing through the **Drawing Editor**.

5.1. User Interface

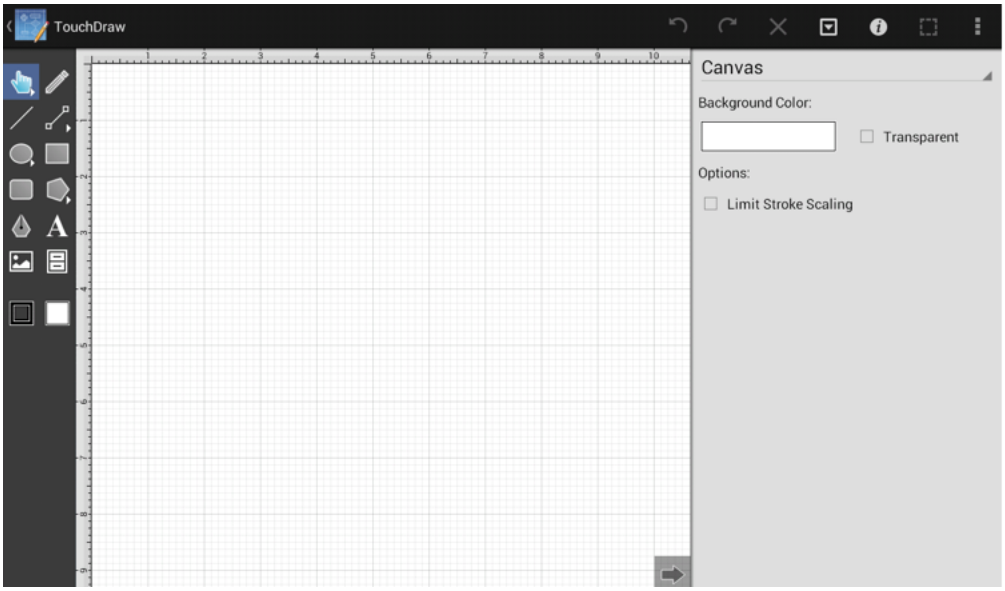
The following screen will open once an existing or new drawing has been selected in the Drawing Chooser.



This screen functions as the user interface for creating and managing drawings in TouchDraw for the Android.

As shown above, the screen is split into two views. The Drawing Canvas and Drawing Tools are located on the lower portion of the application window. A toolbar is positioned above these two portions of the user interface and can be used to make additional modifications to figures within a drawing.

A sidebar can be opened by pressing on the Info Menu Button and making a selection. The Drawing Editor appears as below when the sidebar is opened.



5.1.1. Toolbar

The *Toolbar* has eight buttons available for performing actions within the TouchDraw application. The buttons on the right hand side of the title bar supply access to most of the functions for modifying drawing figure attributes and changing application settings.

Click or Tap on the Toolbar Button name to learn more about its functionality.

Button Name	Description
App Button	The **App Button** provides options for saving a drawing that is currently being edited or viewed and exiting to the Drawing Chooser.
Undo Button	The **Undo Button** reverts the last change that was made to a drawing. This button is disabled (dimmed) when no changes have been made and enabled as soon as something is altered in the Drawing Editor.
Redo Button	The **Redo Button** cancels the last undone change made to the drawing canvas. This button is disabled (dimmed) when nothing has been undone and is enabled as soon as the **Undo** command has been used or something is altered.

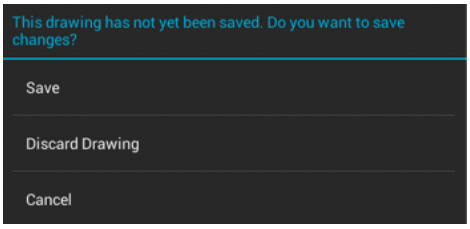
Button Name	Description
Delete Button	The **Delete Button** removes currently selected figure(s) from the Drawing Canvas.
Contextual Menu Button	The **Contextual Menu Button** provides access to basic editing functions within TouchDraw along with path, layer, and line options.
Info Menu Button	The **Info Menu Button** provides access to options for changing the attributes of a figure that is about to be drawn or any currently selected figure.
Selection Menu Button	The **Selection Menu Button** provides access to actions for arranging, aligning, distributing, flipping, ordering, rotating, and moving selected figures within the drawing canvas. It can also be used to obtain finer control over a selected figure or to make path related changes and is only enabled (selectable) when figures have been selected within the drawing canvas.
Overflow Menu Button	The **Overflow Menu Button** provides access to general purpose actions and preferences within TouchDraw.

Note: Not all buttons appear in the toolbar when the Android device is in portrait mode. In this instance, some buttons and options are moved to the Overflow Menu.

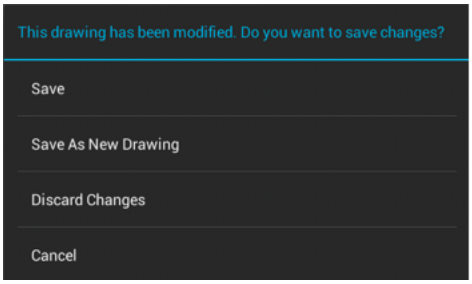
5.1.1.1. App Button

The **App Button** provides options for saving a current drawing and can be used to exit back to the Drawing Chooser. A menu opens when a **Tap** is performed on the button and options vary depending on the recent actions performed on the open drawing.

The menu will appear as shown below when a drawing has never been saved:



The menu appears with different options when the drawing has previously been saved and changes have been made since the save.



If a drawing has previously been saved and no changes have been made, TouchDraw will simply exit back to the **Drawing Chooser**.

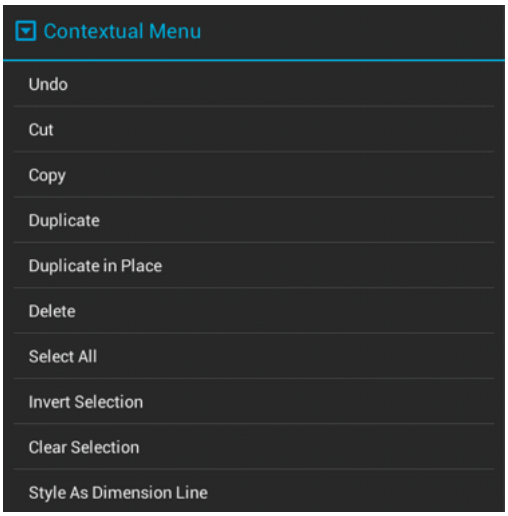
Click or Tap on the corresponding App Menu item name to learn more about what the option does.

Option Name	**Description**
Save	The **Save** option saves the current drawing.
Discard Drawing	The **Discard Drawing** option exits back to the Drawing Chooser without saving a new drawing.
Save As New Drawing	The **Save As New Drawing** option saves the current drawing under a different name and then returns to the Drawing Chooser.
Discard Changes	The **Discard Changes** option exits back to the Drawing Chooser without saving the most recently made changes.
Cancel	The **Cancel** option exits back to the Drawing Editor without completing a save or discard action.

5.1.1.2. Contextual Menu

The **Contextual Menu**can be used to access basic editing functions within TouchDraw along with path, layer, and line options. The menu is accessible by either touching and pressing on the drawing canvas for ~1 second or pressing on the **Contextual Menu Button** in the Top Toolbar, as shown below.

The options shown on this menu change depending on the type of figure(s) and number of figures currently selected within the drawing canvas. Options will also vary based on previous changes made to figure(s). For example, the **Convert to Cubic Curve**option does not appear unless line or quadratic curve segment has been selected within a path figure and the undo option will only appear when a change has been made to a drawing.



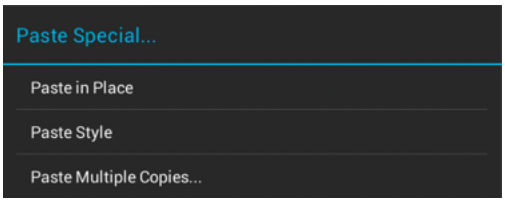
Click or Tap on the corresponding Contextual Menu item name to learn more about what the option does.

Option Name	Description
Undo	The **Undo** option removes drawing changes in the order they were applied starting with the most recent.
Redo	The **Redo** option reapplies drawing changes in the order they were removed starting with the most recent.

Option Name	Description
Cut	The **Cut** option removes the currently selected item from the active drawing and places it in the clipboard.
Copy	The **Copy** option places a copy of the currently selected item into the clipboard.
Paste	The **Paste** option adds the most current item residing in the clipboard to the active drawing.
Paste Special... Submenu	The **Paste Special... Submenu** contains options for pasting the most current clipboard item into the active drawing.
Duplicate	The **Duplicate**option creates a copy of a selected item in the active drawing.
Duplicate in Place	The **Duplicate in Place** option creates a copy of a selected item and places it in the same location as the original.
Delete	The **Delete** option permanently removes an item from the active drawing.
Select All	The **Select All** option selects all items residing in the currently active drawing.
Invert Selection	The **Invert Selection** option deselects currently selected figures within the active drawing and selects all figures that were previously not chosen.
Clear Selection	The **Clear Selection** option deselects all currently selected figures within the active drawing.
Insert Handle	The **Insert Handle** option inserts a handle into the currently selected path segment.
Delete Handle	The **Delete Handle** option deletes the currently selected handle from a path segment.
Delete Segment	The **Delete Segment** option deletes the currently selected segment from a path.
Segment To Line	The **Segment To Line** option can be used to convert a quadratic or cubic path segment into a line segment.
Segment To Quad	The **Segment To Quad** option can be used to convert a line or cubic path segment into a quadratic segment.
Segment To Cubic	The **Segment To Cubic** option can be used to convert a line or quadratic path segment into a cubic segment.
Style as Dimension Line	The **Style as Dimension Line** option adds arrowheads and a variable to a selected line(s). At least one line must be selected in the drawing canvas for this option to appear.

5.1.1.2.1. Paste Special Submenu

The **Paste Special... Submenu** contains options for pasting the most current clipboard item into the active drawing. It is accessed by either touching and pressing on the drawing canvas for ~1 second or by pressing on the **Contextual Menu Button** in the Top Toolbar. This menu choice only appears if a figure has been cut or copied and currently resides in the clipboard.



Click or Tap on the corresponding Paste Submenu item name to learn more about what the option does.

Option Name	Description
Paste in Place	The **Paste in Place** menu item copies the current clipboard item into the exact location of the original.
Paste Style	The **Paste Style** menu item applies the formatting properties of one object to the currently selected object.
Paste Multiple Copies...	The **Paste Multiple Copies...** menu item can be used to paste multiple copies of a clipboard item at specific offsets.

5.1.1.2.2. Paste Multiple Copies

The **Paste Multiple Copies...** option can be used to paste multiple copies of a clipboard item at specific offsets. It is accessed by either touching and pressing on the drawing canvas for ~1 second or pressing on the **Contextual Menu Button** in the Top Toolbar and then pressing on the **Paste Special... Submenu.** Press on the **Paste Multiple Copies...** option to open the window shown below. This menu choice only appears if a figure(s) have been cut or copied and currently reside in the clipboard.

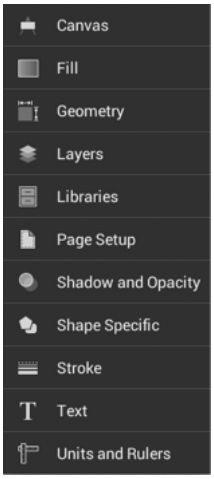
Click or Tap on the corresponding Paste Multiple Copies...item name to learn more about what the option does.

Option Name	Description
X Offset	The **X Offset** option sets the X position value of the first pasted figure in the drawing canvas.
Y Offset	The **Y Offset** option sets the Y position value of the first pasted figure in the drawing canvas.
# of Copies	The **# of Copies** option sets the number of times an item currently residing in the clipboard will be pasted into the active drawing.

5.1.1.3. Info Menu

The **Info Menu** can be used to change attributes for a figure that is about to be drawn or any currently selected figure. Press on the **Info Button** in the Top Toolbar to open this menu.

A menu with multiple selection choices will appear when the **Info Button** is pressed. This menu provides access to the sidebar options for changing the attributes of multiple types of created figures and will appear as shown below.



Click or Tap on the corresponding Info Menu item name to learn more about what the option does.

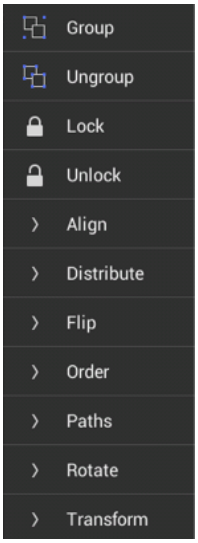
Option Name	Description
Canvas	The **Canvas** option opens a sidebar panel for altering background color, transparency, and additional drawing canvas related settings.
Fill	The **Fill** option opens a sidebar panel for setting the fill attributes of all objects with the exception of the Line and Connection tools.
Geometry	The **Geometry** option opens a sidebar panel for gaining enhanced control of a selected figure.
Layers	The **Layers** option opens a sidebar panel for incorporating more than one level of objects into a drawing. It is used to create and manage all layers within a drawing.
Libraries	The **Libraries** option opens a sidebar panel for adding and managing stencils stored within the application and for adding these objects to a drawing.
Page Setup	The **Page Setup**option opens a sidebar panel for altering the page size, printing units, and print margins of a drawing.
Shadow and OpacityShadow and Opacity	The **Shadow and Opacity** option opens a sidebar panel for altering the shadowing, opacity, and blending attributes of a figure.
Shape Specific	The **Shape Specific** option opens a sidebar panel for altering attributes for specific types of selected figures.

Option Name	Description
Stroke	The **Stroke** option opens a sidebar panel for altering the attributes of a stroke (line) for existing or new figures(s) within the drawing canvas.
Text	The **Text** option opens a sidebar for altering the text attributes of any figure capable of displaying text.
Units and Rulers	The **Units and Rulers** option opens a sidebar panel for setting the units of measure for the current drawing. In addition to controlling the layout and divisions of the ruler, the units are also used when exporting the drawings to other formats such as PNG Images and PDF files.

5.1.1.4. Selection Menu

The **Selection Menu** can be used to access options for transforming and moving figures within the drawing canvas. It is enabled (selectable) when at least one figure has been selected within the drawing canvas. Tap on the **Selection Button** located in the Top Toolbar to open this menu and make a selection.

The **Selection Menu** will appear as shown below:

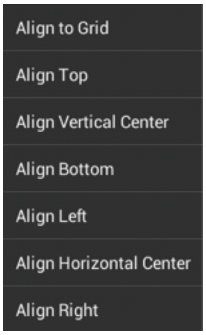


Click or Tap on the corresponding Selection Menu item name to learn more about what the option does.

Option Name	Description
Group	The **Group** option allows currently selected shapes on the drawing canvas to be manipulated and treated as a single figure. This menu item is enabled when two or more groupable figures are selected in the drawing canvas. Shapes residing on the drawing canvas can be manipulated.
Ungroup	The **Ungroup** option removes the grouping attribute for selected shapes to allow for individual manipulation. This menu item is enabled when one or more grouped figures are selected in the drawing canvas.
Lock	The **Lock** option prevents a selected figure(s) or group of figures from being moved or resized. This menu item is enabled when one or more unlocked (and lockable) figures are selected in the drawing canvas.
Unlock	The **Unlock** option removes a previously instated lock on a selected figure(s) or group of figures to allow for moving and resizing.This menu item is enabled when one or more locked figures are selected in the drawing canvas.
Align Submenu	The **Align Submenu** contains options for aligning selected figures within a drawing.
Distribute Submenu	The **Distribute Submenu** contains options for distributing selected figures within a drawing.
Flip Submenu	The **Flip Submenu** contains options for flipping selected figures within a drawing.
Order Submenu	The **Order Submenu** contains options for changing the order of figures within a selected layer of the drawing.
Paths Submenu	The **Paths Submenu** contains options for altering the attributes of a selected path figure within a drawing.
Rotate Submenu	The **Rotate Submenu** contains options for rotating selected figures within a drawing.
Transform Submenu	The **Transform Submenu** contains options for tranforming (moving, scaling, etc...) selected figures within a drawing.

5.1.1.4.1. Align Submenu

The **Align Submenu** contains options for aligning selected figures within a drawing. When this submenu is selected within the Selection Menu, the options shown below will appear.



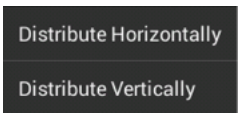
Click or Tap on the corresponding Alignment Submenu item name to learn more about what the option does.

Option Name	Description
Align To Grid	The **Align To Grid** option aligns figures with the grid. This menu item is enabled when two or more unlocked figures are selected in the drawing canvas.
Align Top	The **Align Top** option moves all currently selected figures to match the top (Y position) of the **first** selected figure. This menu item is enabled when two or more unlocked figures are selected in the drawing canvas.
Align Vertical Center	The **Align Vertical Center** option moves all currently selected figures to match the vertical center (Y position + 1/2 of the height of all figures) of the **first** selected figure. This menu item is enabled when two or more unlocked figures are selected in the drawing canvas.
Align Bottom	The **Align Bottom** option moves all currently selected figures to match the the bottom (Y position + Height) of the **first** selected figure. This menu item is enabled when two or more unlocked figures are selected in the drawing canvas.
Align Left	The **Align Left** option moves all currently selected figures to match the left (X position) of the **first** selected figure. This menu item is enabled when two or more unlocked figures are selected in the drawing canvas.
Align Horizontal Center	The **Align Horizontal Center** option moves all currently selected figures to match the horizontal center (X position + 1/2 of the width) of the **first** selected figure. This menu item is enabled when two or more unlocked figures are selected in the drawing

Option Name	Description
	canvas.
Align Right	The **Align Right** option moves all currently selected figures to match the right (X position + Width) of the **first** selected figure. This menu item is enabled when two or more unlocked figures are selected in the drawing canvas.

5.1.1.4.2. Distribute Submenu

The **Distribute Submenu** contains options for distributing selected figures within a drawing. When this submenu is selected within the Selection Menu, the options shown below will appear.

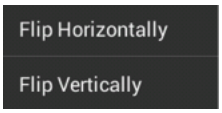


Click or Tap on the Distribute Submenu item name to find out more about what the option does.

Option Name	Description
Distribute Horizontally	The **Distribute Horizontally** option adjusts the positioning of selected figures to create an even amount of horizontal space between each figure. This menu item is enabled when three or more unlocked figures are selected in the drawing canvas.
Distribute Vertically	The **Distribute Vertically** option adjusts the positioning of selected figures to create an even amount of vertical space between each figure. This menu item is enabled when three or more unlocked figures are selected in the drawing canvas.

5.1.1.4.3. Flip Submenu

The **Flip Submenu** contains options for flipping selected figures within a drawing. When this submenu is selected within the Selection Menu, the options shown below will appear.

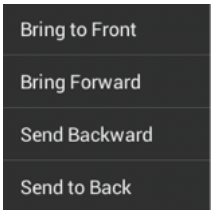


Click or Tap on the Flip Submenu item name to learn more about what the option does.

Option Name	Description
Flip Horizontally	The **Flip Horizontally** option interchanges the position of a figure horizontally.
Flip Vertically	The **Flip Vertically** option interchanges the position of a figure vertically.

5.1.1.4.4. Order Submenu

The **Order Submenu** contains options for changing the order of figures within a selected layer of a drawing. When this submenu is selected within the Selection Menu, the options shown below will appear.



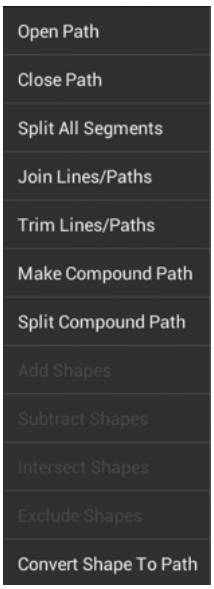
Click or Tap on the corresponding Order Submenu item name to learn more about what the option does.

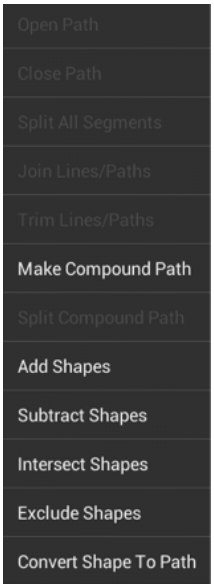
Option Name	Description
Bring to Front	The **Bring To Front** option moves a currently selected figure(s) to the front of all figures residing in the same layer. This menu item is enabled when one or more figures are selected in the drawing canvas.
Bring Forward	The **Bring Forward** option moves a currently selected figure(s) one step closer to the top of the stack within the layer they reside in. This menu item is enabled when one or more figures are selected in the drawing canvas.
Send Backward	The **Send Backward** option moves a currently selected figure(s) one step closer to the bottom of a stack within their residing layer. This menu item is enabled when one or

Option Name	Description
	more figures are selected in the drawing canvas.
Send to Back	The **Send To Back** option moves a currently selected figure(s) behind all other figures residing within the same layer. This menu item is enabled when one or more figures are selected in the drawing canvas.

5.1.1.4.5. Paths Submenu

The **Paths Submenu** contains options for altering the attributes of a selected path figure within a drawing. When this submenu is selected within the Selection Menu, the options shown below will appear.





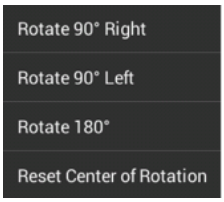
Click or Tap on the Paths Submenu item name to learn more about what the option does.

Option Name	Description
Open Path	The **Open Path** menu item is enabled when one or more closed paths are selected. This option removes a line segment or simply separates the last end/start points into two separate handles to transform a closed path into an open path.
Close Path	The **Close Path** option is enabled when a path figure is selected and closes a curved path to create a shape.
Split All Segments	The **Split All Segments** option is enabled when a closed or open path is selected and separates each segment of the selected figure into its own path segment.
Join Lines/Paths	The **Join Paths** option is enabled when two or more lines and/or open paths are selected. This option joins the end point handles of segments to create a single path figure.
Trim Lines/ Paths	The **Trim Lines/Paths** option is enabled when two or more shapes are selected and at least one of those shapes is a line or open path. This option trims the ends of intersecting lines, paths, or connections when the intersection is near the end of the line/path.
Make Compound Path	The **Make Compound Path** menu item is enabled when two or more paths are selected. This option combines two or more selected paths into one compound path to

Option Name	Description
	provide attribute sharing capabilities.
Split Compound Path	The **Separate Compound Path** menu item is enabled when one ore more compound paths are selected. This option separates a compound path into individual paths.
Add Shapes	The **Add Shapes** option is enabled when two shapes and/or closed paths are selected. This option combines two selected shapes into one figure.
Subtract Shapes	The **Subtract Shapes**option is enabled when two shapes and/or closed paths are selected. This option removes the intersecting portions of the second selected shape from the first figure selected in the drawing canvas.
Intersect Shapes	The **Intersect Shapes** option is enabled when two shapes and/or closed paths are selected. This option removes all non-intersecting portions of selected figures from the drawing canvas.
Exclude Shapes	The **Exclude Shapes** option is enabled when two shapes and/or closed paths are selected. This option removes the intersecting portions of selected figures from the drawing canvas.
Convert Shape To Path	The **Convert Shape to Path** option is enabled when one or more shapes or lines are selected. This option converts the bordering lines of a selected shape into a closed path by adding the necessary handles.

5.1.1.4.6. Rotate Submenu

The **Rotate Submenu** contains options for rotating selected figures within a drawing. When this submenu is selected within the Selection Menu, the options shown below will appear.



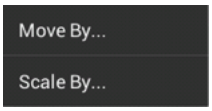
Click or Tap on the Rotate Submenu item name to learn more about what the option does.

Rotate 90° Right	The **Rotate 90° Right** option rotates a selected figure to the right by 90°.

Option Name	Description
Rotate 90° Left	The **Rotate 90° Left** option rotates a selected figure to the left by 90°.
Rotate 180°	The **Rotate 180°** option rotates a selected figure by 180°. The figure is flipped upside down or back to its original position depending on the number of times this selection is made.
Reset Center Rotation	The **Reset Center Rotation** option is enabled when the "Center of Rotation" setting is enabled through the Handles Submenu and the center of rotation has been altered on a shape. This option changes the "Center of Rotation" for a shape back to its original centered location.

5.1.1.4.7. Transform Submenu

The **Transform Submenu** contains options for tranforming (moving, scaling, etc...) selected figures within a drawing. When this submenu is selected within the Selection Menu, the options shown below will appear.



Click or Tap on the Transform Submenu item name to learn more about what the option does.

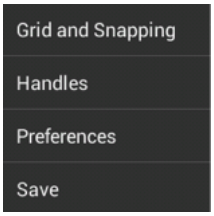
Option Name	Description
Move By...	The **Move By...** option changes the location of a figure based on input coordinates.
Scale By...	The **Scale By...** option alters figure size based on input coordinates to create a smaller or larger figure spanning over a specific area.

5.1.1.5. Overflow Menu

The **Overflow Menu** can be used to access general purpose actions and preferences within TouchDraw. Tap on the **Overflow Button** located in the Top Toolbar to open this menu and make a selection.

If your Android device has a hardware menu button, the **Overflow Button** will not be visible in the Top Toolbar. To access the options described below, press the hardware menu button to bring up the menu.

The **Overflow Menu** will appear as shown below:



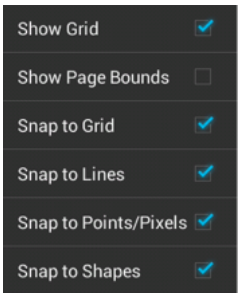
Click or Tap on the corresponding Overflow Menu item name to learn more about what the option does.

Option Name	Description
Grid and Snapping Submenu	The **Grid and Snapping Submenu** contains options for altering grid appearance and snapping objects to the grid, lines or points on the drawing canvas.
Handles Submenu	The **Handles Submenu** contains options for configuring which handles are visible for figures residing on the drawing canvas.
Preferences Submenu	The **Preferences Submenu** contains options for impacting Drawing Editor performance and usability. Specifically, these options will help speed up zooming and panning when zoomed in by a large factor on drawings using many shadow or gradient effects.
Save	The **Save** option may be used at any time to save the currently open drawing.

5.1.1.5.1. Grid and Snapping Submenu

The **Grid and Snapping Submenu** contains options for altering grid appearance and snapping objects to the grid, lines or points on the drawing canvas. These options are accessible through the Overflow Menu in the Top

Toolbar . The **Grid and Snapping Submenu** appears as shown below.

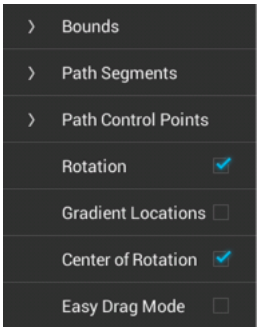


Click or Tap on the corresponding Grid and Snapping Menu item name to learn more about what the option does.

Option Name	Description
Show Grid	The **Show Grid** option toggles the visibility of the grid. The grid visibility is an application level preference. It will remember what you have selected through the application restart and will apply to all drawings that you edit/view.
Show Page Bounds	The **Show Page Bounds** option toggles the visibility of bounds of a page within the drawing canvas. Any figure surpassing this line will appear on another page when printing.
Snap to Grid	The **Snap To Grid** option toggles the snap to grid functionality. The snap to grid is an application level preference. It will remember what you have selected through the application restart and will apply to all drawings that you edit/view.
Snap to Lines	The **Snap to Lines** option aligns figures with the nearest lines.
Snap to Points/Pixels	The **Snap to Points/Pixels** option aligns figures to whole pixel numbers or points on the grid for simplified object modification and increased accuracy.
Snap to Shapes	The **Snap to Shapes** option snaps a figure to a selected shape vertex or center point. To see this option in action, disable the Snap to Grid option, make certain **Snap to Shapes** is enabled, and then draw a star or rectangle. Once the shape is completed, select the Line Tool and try to draw a line from one of the vertexes of the shape or its center point. The drawn line will snap to one of these locations.

5.1.1.5.2. Handles Submenu

The **Handles Submenu** contains options for configuring which handles are visible for figures residing on the drawing canvas. These options are accessible through the Overflow Menu in the Top Toolbar. The **Handles Submenu** appears as shown below.



Enabled options will have a blue checkmark as a visual indicator of the item being selected.

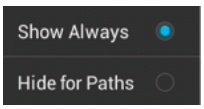
Click or Tap on the corresponding Handles Option name to learn more about what the option does.

Option Name	Description
Bounds Submenu	The **Bounds Submenu** can be used to toggle the visibility of the boundaries of path handles. Boundaries can be shown on handles for all figures, strokes, and paths or for everything but paths.
Path Segments Submenu	The **Path Segments Submenu** can be used to toggle the visibility of segment handles for paths.
Path Control Points Submenu	The **Path Control Points****Submenu** can be used to toggle the visibility of path control points between always showing, only showing active points, or showing none at all.
Rotation	The **Rotation** preference toggles the visibility of the rotation handle on the drawing canvas.
Gradient Locations	The **Gradient Locations** option toggles the visibility of the gradient location handle within a figure(s) on the drawing canvas.

Option Name	Description
Center of Rotation	Enabling the the **Center of Rotation** option allows the point at which a figure or shape is rotated around to be edited.
Easy Drag Mode	Enabling the the **Center of Rotation** preference allows the point at which a figure or shape is rotated around to be edited.

5.1.1.5.2.1. Bounds Submenu

The **Bounds**Submenu can be used to toggle the visibility of the boundaries of path handles. Boundaries can be shown on handles for all figures, strokes, and paths or for everything but paths. These options are accessible by tapping on the Handles Submenu in theOverflow Menu. Tap on the** Bounds Submenu** and the options shown below will appear.



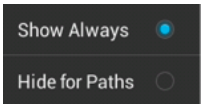
Click or Tap on the corresponding Bounds Submenu item name to learn more about what the option does.

Option Name	Description
Show Always	The **Show Always** option toggles the visibility of bounds handles for figures within the drawing canvas.
Hide for Paths	The **Hide for Paths** option toggles the visibility of bounds handles for paths within the drawing canvas.

5.1.1.5.2.2. Path Segments Submenu

The **Path Segments Submenu** can be used to toggle the visibility of segment handles for path figures. These options are accessible by tapping on the **Handles Submenu** in the Overflow Menu. Tap on the **Path Segments**

Submenu and the options shown below will appear.

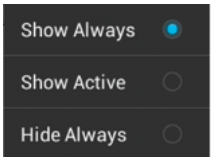


Click or Tap on the corresponding Path Segments Submenu item name to learn more about what the option does.

Option Name	Description
Show Always	The **Show Always** option toggles the visibility of path segment for figures within the drawing canvas. All path segment handles appear within the drawing canvas when this option is selected.
Hide Always	The **Hide Always** option toggles the visibility of path segment handles for paths within the drawing canvas. All path segment handles are hidden when this option is selected.

5.1.1.5.2.3. Path Control Points Submenu

The **Path Control Points**Submenu options toggle the visibility of path control points between always showing, only showing active points, or showing none at all. These options are accessible by tapping on the Handles Submenu in the**Overflow Menu. Tap on the** Path Control Points Submenu Button** and the options shown below will appear.



Click or Tap on the corresponding Path Control Points Submenu item name to learn more about what the option does.

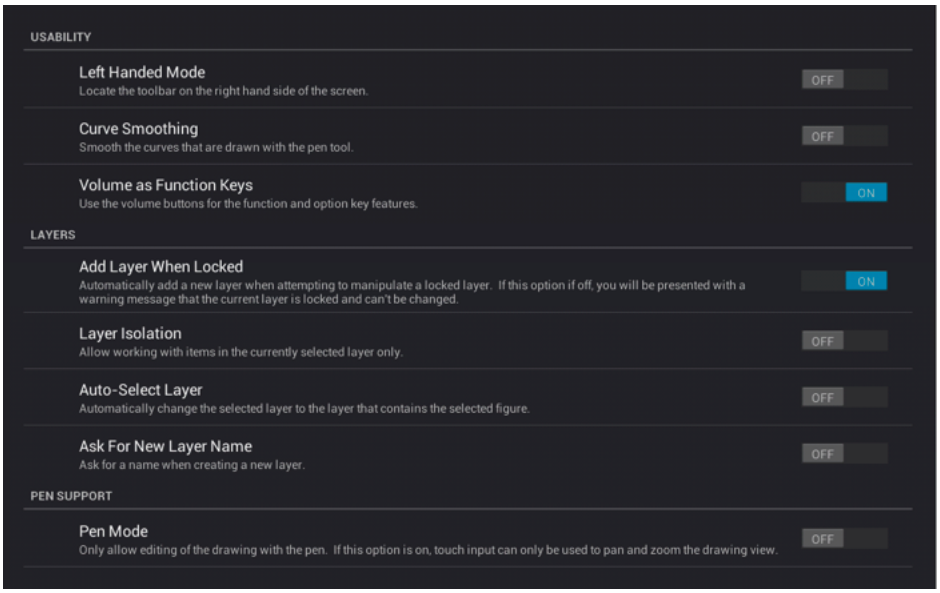
Show Always	The **Show Always** option shows all control points for path figures within the drawing

Option Name	Description
	canvas.
Show Active	The **Show Active** option shows only the active control points for path figures within the drawing canvas.
Hide Always	The **Hide Always** option hides all control points for path figures within the drawing canvas.

5.1.1.5.3. Preferences Submenu

The **Preferences Submenu** contains options for impacting Drawing Editor performance and usability. Specifically, these options will help speed up zooming and panning when zoomed in by a large factor on drawings using many shadow or gradient effects.

It is accessed by pressing on the **Overflow Button** located in the Top Toolbar and then pressing on the **Preferences Submenu** in the Overflow Menu. The **Preferences Submenu** will appear as shown below.

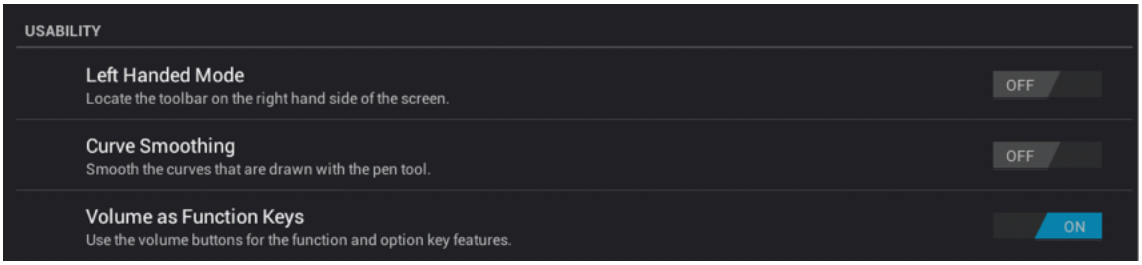


Click or Tap on the corresponding Preferences Submenu item name to learn more about what the option does.

Preference Section	Description
Usability	The **Usability Preference** section contains options for application setup and operational characteristics.
Layers	The **Layers Preference** section contains options for application setup and operational characteristics of TouchDraw for layers.
Pen Support Preferences	The **Pen Support Preference** section contains options for application setup and operational characteristics when using a pen for drawing creation.
Performance	The **Performance Preference** section contains options for turning off certain features as images are rendered on the drawing canvas.
Imported Image Sizing Preferences	The **Imported Image Sizing Preference** section contains options for reducing memory usage when images are imported into the TouchDraw Application.

5.1.1.5.3.1. Usability Preferences

The **Usability Preference** section contains options for application setup and operational characteristics. It is accessed by pressing on the **Overflow Button** located in the Top Toolbar and then pressing on the **Preferences Submenu** in the Overflow Menu.



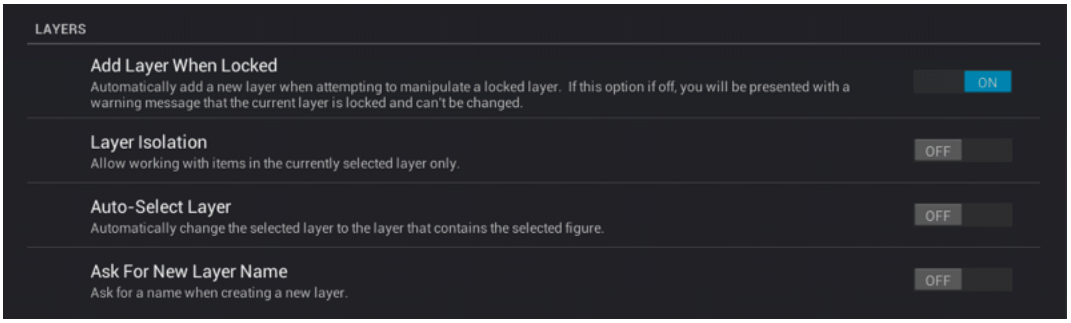
Enabled preferences show the word **ON** with a blue background in the toggle button located to the right of the option.

Preference Name	Description
Left Handed Mode	The **Left Handed Mode** preference places the vertical toolbar on the right side of the Drawing Editor. This is the natural choice for left handed users.

Preference Name	Description
Curve Smoothing	The **Curve Smoothing** preference enables/disables the creation of a smooth curve when the Pen Tool is used to create a figure.
Volume as Function Keys	The **Volume as Function Keys** preference enables/disables the ability to use device volume up/down buttons for activating the function and option key features within TouchDraw.

5.1.1.5.3.2. Layers Preferences

The **Layers Preference** section contains options for application setup and operational characteristics of TouchDraw for layers. It is accessed by pressing on the **Overflow Button** located in the Top Toolbar and then pressing on the **Preferences Submenu** in the Overflow Menu.



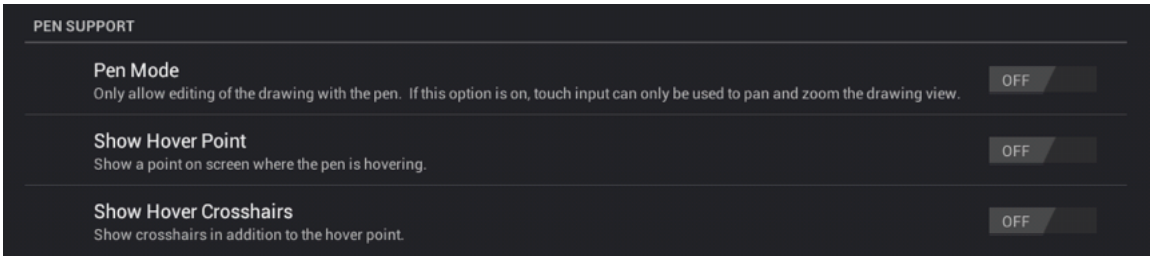
Enabled preferences show the word **ON** with a blue background in the toggle button located to the right of the option.

Preference Name	Description
Add Layer When Locked	The **Add Layer When Locked** preference automatically creates another layer if a figure is added to the drawing canvas when the current layer is locked.
Layer Isolation	The **Layer Isolation** preference isolates modifications to the currently selected layer and prevents other existing layers from being selected for editing.
Auto-Select Layer	The **Auto-Select Layer** preference alters the currently active layer to the residing layer of a selected figure unless the layer has been locked.

Preference Name	Description
Ask For New Layer Name	The **Ask For New Layer Name** preference opens a prompt window for naming a layer any time a new layer is created.

5.1.1.5.3.3. Pen Support Preferences

The **Pen Support Preference** section contains options for application setup and operational characteristics when using a pen for drawing creation. It is accessed by pressing on the **Overflow Button** located in the Top Toolbar and then pressing on the **Preferences Submenu** in the Overflow Menu.



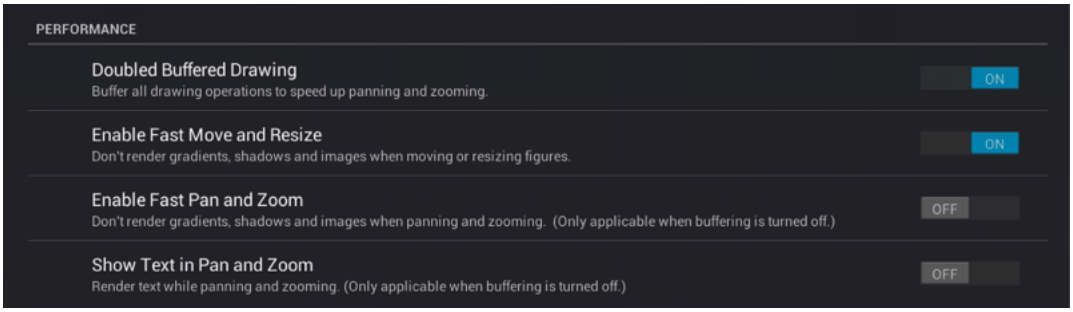
Enabled preferences show the word **ON** with a blue background in the toggle button located to the right of the option.

Preference Name	Description
Pen Mode	The **Pen Mode** preference informs TouchDraw to ignore all "touch" input with the exception of pan and zoom gestures. When this preference is enabled, drawing through the use of the digitizer pen is the only allowed input. It is disabled by default, but can be enabled to prevent touch input from altering the drawing while using a digitizer pen.
Show Hover Point	The **Show Hover Point** preference places a point in the drawing canvas where the pen is currently hovering.
Show Hover Crosshairs	The **Show Hover Crosshairs** preference tells TouchDraw to draw crosshairs in the drawing editor for every touch performed with a pen and to show the hover point as the pen hovers over the drawing canvas. This means that multiple crosshairs will

Preference Name	Description
	appear on the screen for multi-touch gestures.

5.1.1.5.3.4. Performance Preferences

The **Performance Preference** section contains options for turning off certain features as images are rendered on the drawing canvas. It is accessed by pressing on the **Overflow Button** located in the Top Toolbar and then pressing on the **Preferences Submenu** in the Overflow Menu.



Enabled preferences show the word **ON** with a blue background in the toggle button located to the right of the option.

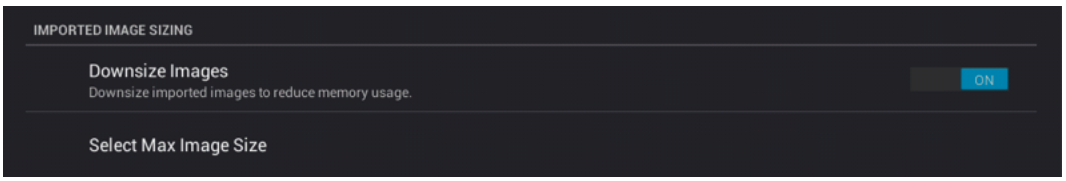
Preference Name	Description
Doubled Buffered Drawing	The **Doubled Buffered Drawing** preference (when enabled) buffers all drawing operations for faster panning and zooming within drawings.
Enable Fast Pan and Zoom	The **Enable Fast Pan and Zoom** preference toggles the rendering of gradients, shadows, and images when panning or zooming to increase rendering speed within the drawing editor. These items are not actually removed from the drawing.
Enable Fast Move and Resize	The **Enable Fast Move and Resize** preference toggles the rendering of gradients, shadows, and images when moving or resizing to increase rendering speed within the drawing editor. These items are not actually removed from the drawing.
Show Text in Pan and Zoom	The **Show Text in Pan and Zoom** preference toggles the visibility of text while panning and zooming actions are being performed in the drawing editor. This does not

Preference Name	Description
	mean that text is removed from the drawing. Instead, text is not drawn in the editor to provide increased rendering speed.

5.1.1.5.3.5. Imported Image Sizing Preferences

The **Imported Image Sizing Preference** section contains options for reducing memory usage when images are imported into the TouchDraw Application. These preferences specifically allow for image downsizing and max image size selection to limit the amount of memory used when an image is imported into a drawing with the Image Tool.

This section is accessed by pressing on the **Overflow Button** located in the Top Toolbar and then pressing on the **Preferences Submenu** in the Overflow Menu.



Enabled preferences show the word **ON** with a blue background in the toggle button located to the right of the option.

Preference Name	Description
Downsize Images	The **Downsize Images** preference tells TouchDraw wether or not it should downsize images when they are imported. If it is enabled, then it will use the value of the **Max Image Size** value to limit the width or the height of the imported image. This option is on by default in order to limit memory usage.
Select Max Image Size	The **Select Max Image Size** preference sets the maximum pixel size (either width or height) of imported images when the **Downsize Images** preference is on. This preference has a default value selection of 768 pixels; however, this value can be changed to 512,1024, or 2048 pixels when necessary.

5.1.2. Drawing Toolbar

The **Drawing Toolbar**, located on the left side of the screen, contains all available drawing tools for adding to or manipulating the current drawing. The tools and their exact functionality are detailed in the following sections; however there are some general concepts of the toolbar that need to be discussed first. All tools with the exception of the Move, Zoom, and Selection Tool can operate in two modes: "Normal" or "Sticky".

Normal Mode

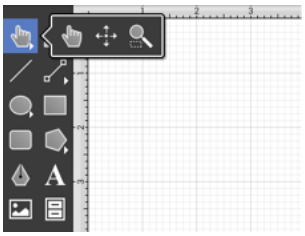
In **Normal Mode**, which is activated by selecting the tool through a single tap, the tool is used to insert one figure into the drawing. Upon completion of creating a figure, the **Move, Zoom, and Select Tool** will be reactivated and the created figure is selected. A tool is in **Normal Mode** when it's background is highlighted with a blue gradient as shown in the first figure below.

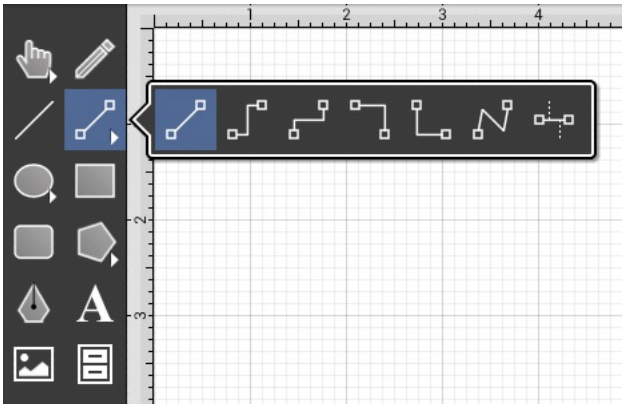
Sticky Mode

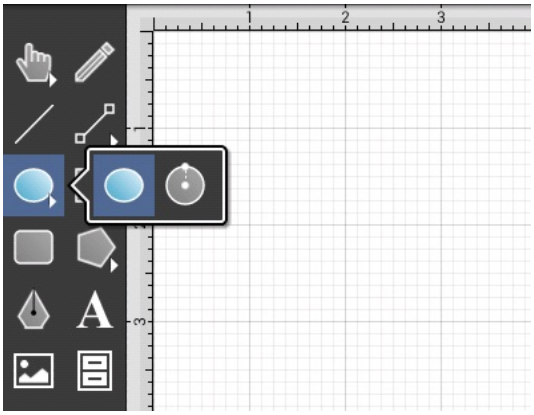
Sticky Mode, which is activated by selecting a tool by a double tap, makes it possible to add many figures into the drawing without having to reselect the tool. Upon completion of creating a figure, the tool will remain selected, and additional figures of the same type can be created/inserted immediately. To cancel/end creating the selected figure type, simply select another tool. A tool is in **Sticky Mode** when it's background is highlighted with a blue gradient and contains a lock symbol in the lower right hand corner as shown in the figure below.

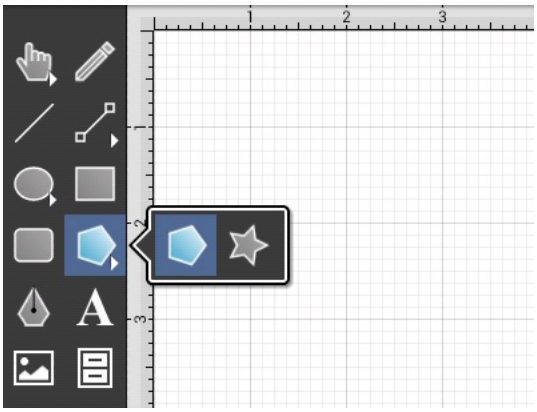
Additional Drawing Tool Options

The **Move, Zoom, and Selection Tool**, **Connection Tool**, **Oval Tool**, and **Polygon Tools** have additional options as indicated by the arrow at the bottom right of each button. Perform an extended **Press** to access these features and then tap on the provided choices to make a selection. Available choices will appear as shown below:





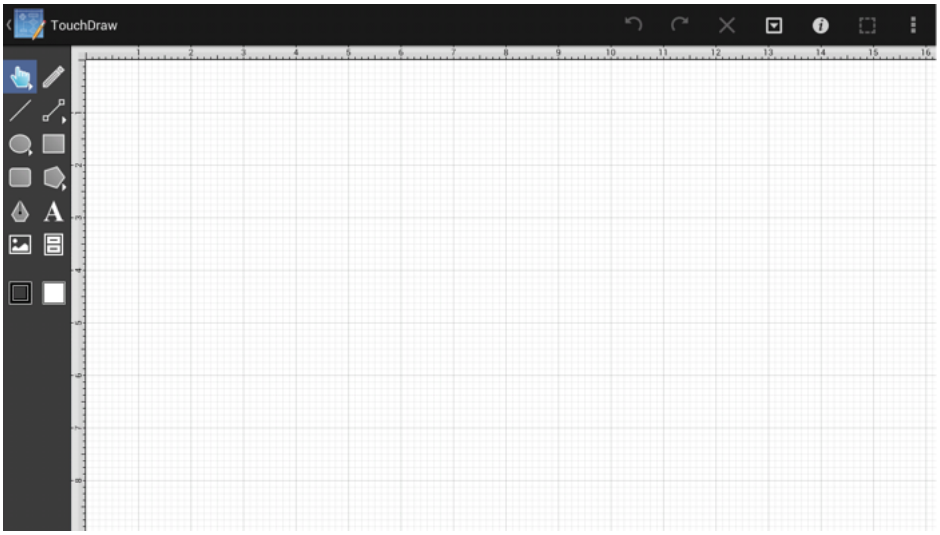




These **Drawing Toolbar** options are explained in further detail under the Selection Tool, Connection Tool, Oval Tool, and Polygon Tool sections of the documentation.

5.1.2.1. Drawing Toolbar Options

The **Drawing Toolbar,** located on the left side of the screen, contains all available drawing tools for adding to or manipulating the current drawing.



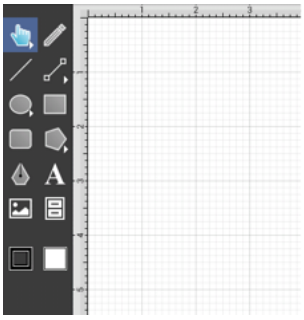
Click or Tap on the corresponding Drawing Toolbar item name to learn more about what the option does.

Icon	Option Name	Description
	Move, Zoom, and Selection Tool	The **Move, Zoom, and Selection Tool** is the chosen tool default within the application each time a drawing is created or opened. It can be used to pan the drawing canvas, zoom in or out, and for figure selection.
	Pen Tool	The **Pen Tool** uses a technique called curve fitting to create a smooth curve from a drawn freehand path.
	Line Tool	The **Line Tool** can be used to draw straight lines.
	Connection Tool	The **Connection Tool** can be used to draw lines for connecting one figure to another and makes it easy to create connected graphs such as flow charts.
	Oval Tool	The **Oval Tool** can be used to create ovals or circles within a drawing.
	Rectangle Tool	The **Rectangle Tool** can be used to create rectangles or squares within a drawing.
	Rounded Rectangle Tool	The **Rounded Rectangle Tool** can be used to create rounded rectangles or rounded squares within a drawing.

Icon	Option Name	Description
	Polygon Tool	The **Polygon Tool** can be used to create regular polygons within a drawing.
	Path Tool	The **Path Tool** is the most powerful and complex tool available within TouchDraw. It can be used to create complex curves and shapes with detailed control on every aspect of the shapes appearance.
	Text Tool	The **Text Tool** can be used to create a text area within a drawing.
	Image Tool	The **Image Tool** can be used to insert an image from a photo library into the drawing.
	Library Tool	The**Library Tool** can be used to add and manage stencils stored within the application and for adding these objects to a drawing.
	Stroke Button	The **Stroke Button** contains options for altering stroke (or line) attributes of a currently selected figure(s) or new additions to the drawing canvas.
	Fill Button	The **Fill Button** contains options for enabling and managing fill attributes of a currently selected figure(s) or new additions to the drawing canvas.

5.1.2.2. Move, Zoom, and Selection Tool

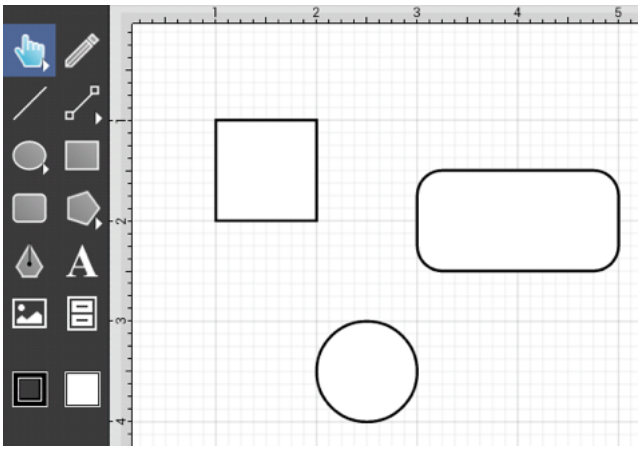
The **Move, Zoom, and Selection Tool** is the chosen tool default within the application each time a drawing is created or opened. The following described functions can be performed when this tool is selected.

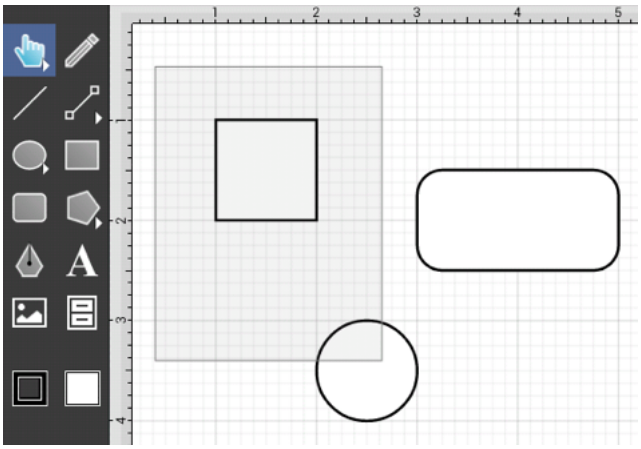


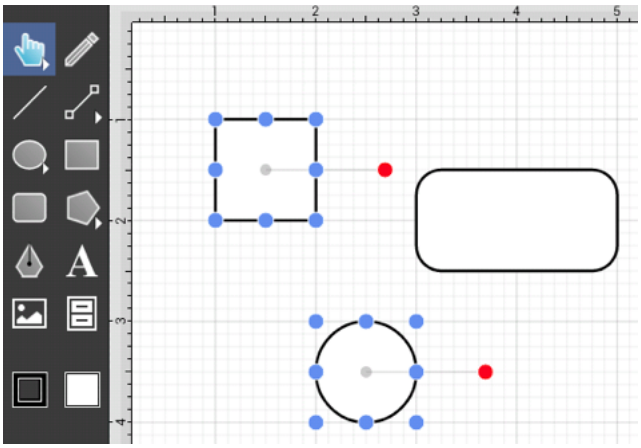
Selecting Figures

The simplest and most common method for selecting objects is to perform a tap within bounds of a figure (for ovals, rectangles, rounded rectangles, polygons, filled paths, text and images) or on a line (for lines and paths). Handles are displayed as a visual indicator of successful figure selection.

Figures can also be selected by outlining an area within the grid. Touch and drag in an area where there are no figures to draw a selection rectangle over all objects within a desired area in the drawing canvas. All figures residing in or intersecting the defined area are automatically selected when the drag action is completed.







Single Selection

Using the methods above, without the Function Key Feature enabled, results in what TouchDraw considers to be single selection. By single selection, we mean that only the figure or figures selected within the enactment of one gesture will be selected.

Multiple Selection

To select multiple figures in an individual manner by tapping (or dragging) multiple times, use the Function Key Feature to tell TouchDraw to enable multiple selection mode. Each tap (or drag) will add the figure as part of the overall selection when not already selected or deselect the figure if it is already selected. This application option allows you to have fine grained control over the selected figures.

Zooming

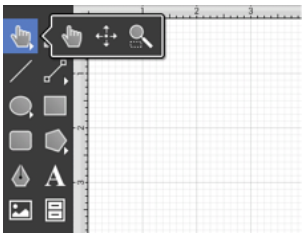
To zoom in on a drawing, put two fingers within the drawing panel and either pinch them to zoom out, or spread your fingers to zoom in. Feedback regarding the exact zoom level is given at the top of the drawing canvas as these gestures are performed.

Moving (Panning)

To move around in a drawing, put two fingers within the drawing panel and drag them around (without pinching or expanding them). The current position of the drawing will track with the position of your fingers. The ruler will also track these movements to provide feedback regarding the current location within the drawing.

The Move and Zoom Tool and Zoom Rectangle Tool

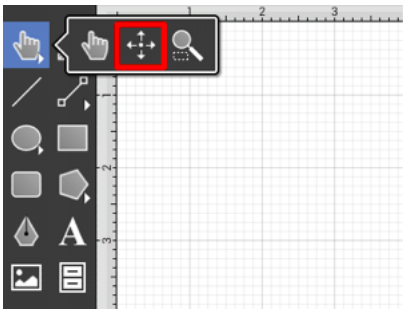
Two additional **Move, Zoom, and Selection Tool** options are made available when an extended **Press** is performed over the tool button.

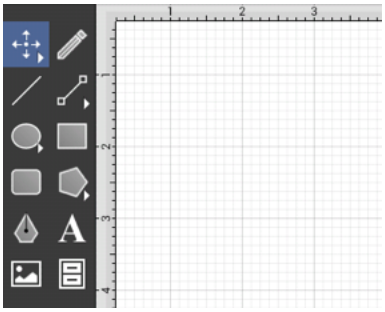


The Move and Zoom Tool allows the grid to be moved with a **Touch/Drag** gesture combination for panning, zooming in, or zooming out on an entire drawing rather than moving the objects residing on the drawing canvas. The Zoom Rectangle Tool can be used to draw a rectangle over a portion of the drawing canvas to specify a precise zooming location.

5.1.2.3. Move and Zoom Tool

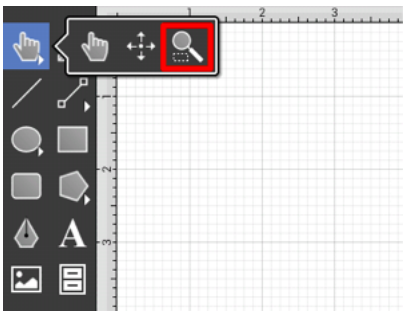
The **Move and Zoom Tool** selection allows the visible portion of the drawing to be moved with a **Touch/Drag** gesture combination for performing panning or zooming actions on an entire drawing rather than moving the objects residing on the drawing canvas. This option is accessible when an extended **Press** is performed over the Move, Zoom, and Selection Tool button and will appear as shown below.

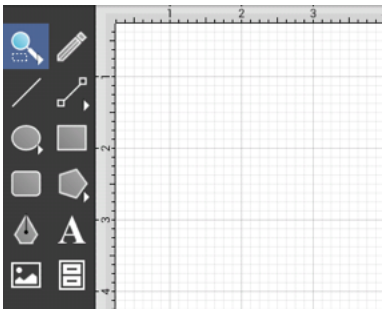




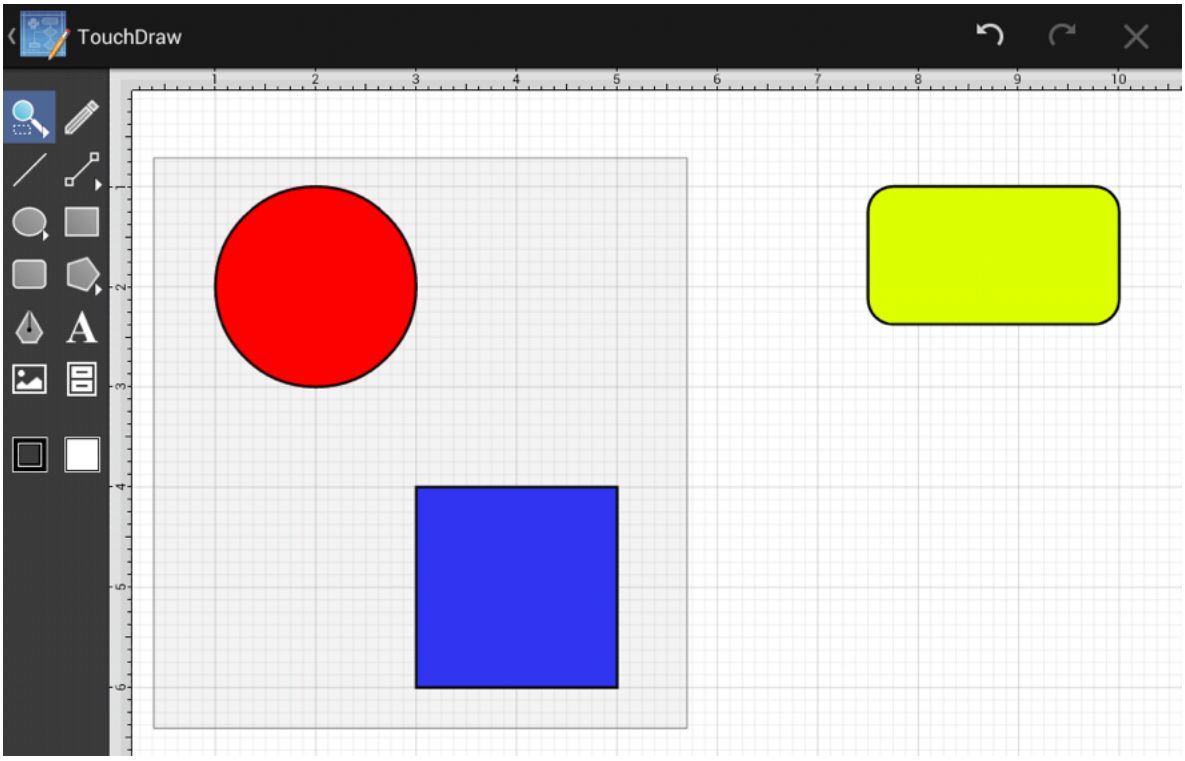
5.1.2.4. Zoom Rectangle Tool

The **Zoom Rectangl Tool** selection can be used to draw a rectangle over a portion of the drawing canvas to specify a precise zooming location. It provides finer control than the Pinch and Zoom gesture when zooming in on specific figures within the drawing canvas. This option is accessible when an extended **Press** is performed over the Move, Zoom, and Selection Tool button. Press on the Zoom Rectangle Tool and it will appear in place of the standard Selection Tool in the Drawing Toolbar.

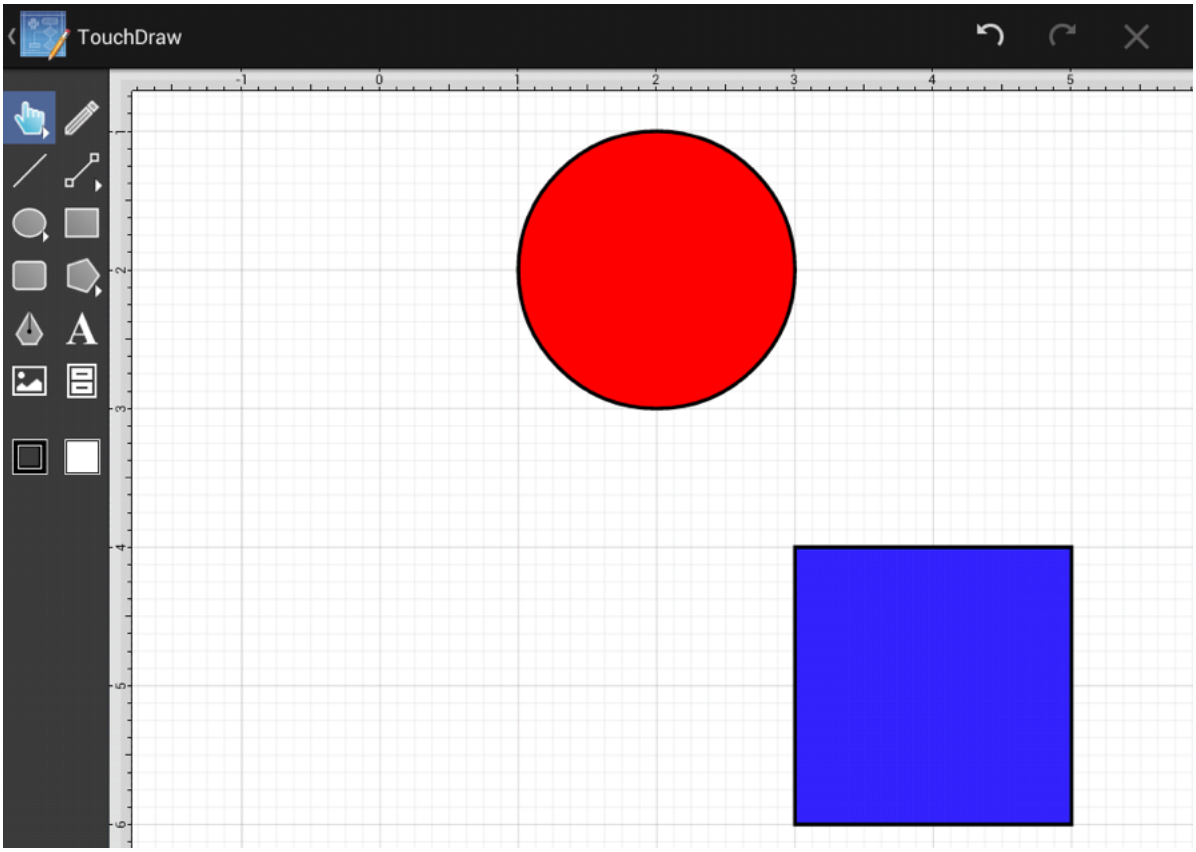




Touch, Hold, and Drag the rectangle over a desired area and then release this action to complete the selection. In this example, the red circle and blue rectangle are selected with the **Zoom Rectangle Tool**.

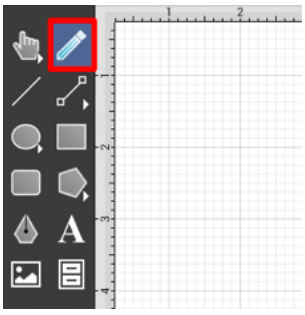


The Drawing Editor will automatically zoom in on the figures within the selected area.



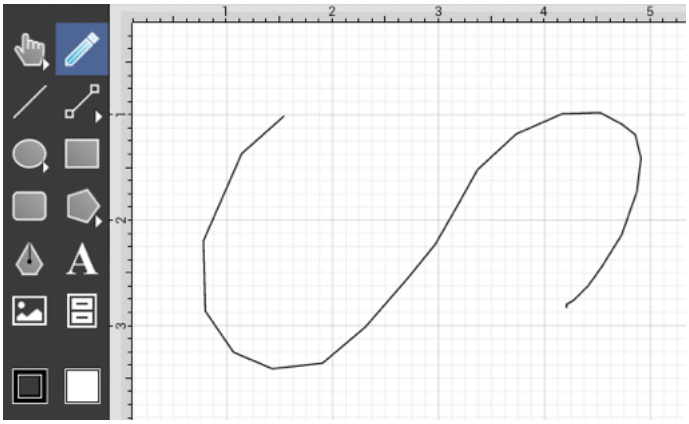
5.1.2.5. Pen Tool

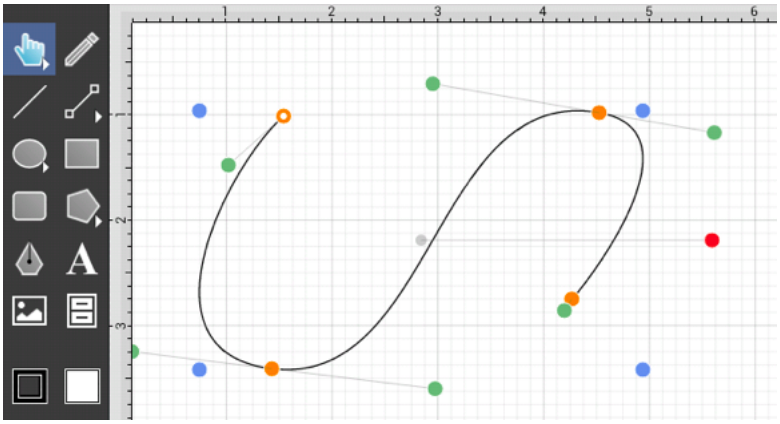
The **Pen Tool** uses a technique called curve fitting to create a smooth curve from a freehand path that is drawn by using a **Touch/Drag** gesture combination to drag the tool to desired points on the drawing canvas.



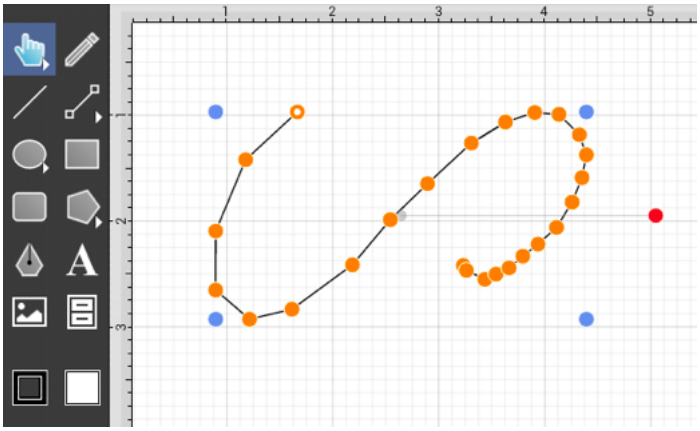
To use the tool, simply select it, and then draw a freehand path by using a **Touch/Drag** gesture combination to maneuver the pen. The **Pen Tool** converts the drawn path into a smooth curve once the drag gesture is released. The following figure illustrates what a curve looks like when drawn by hand, and then what it looks like after

the **Pen Tool** has created the curve.





Please note that if the **Curve Smoothing** option is disabled in the Application Preferences, then the figure created with the **Pen Tool** will appear similar to what is shown below:

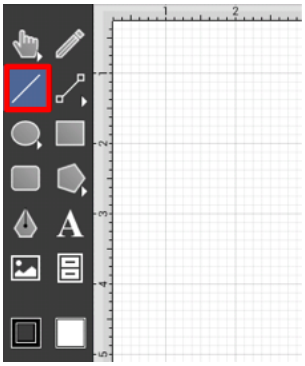


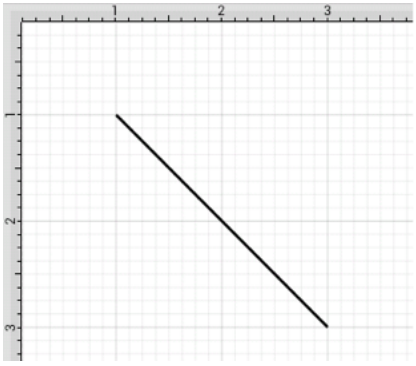
The **Pen Tool** can create shapes instead of paths by using the function key feature in conjunction with the pen

tool. If the **function key** is enabled when finishing the drawing of a shape (path) by releasing your finger, a closed shape will be created as opposed to an open path.

5.1.2.6. Line Tool

The **Line Tool** can be selected to draw straight lines. Use a **Touch/Drag** gesture combination to draw the line from a set starting point to a desired end point and then release the used finger to complete the drawing action.



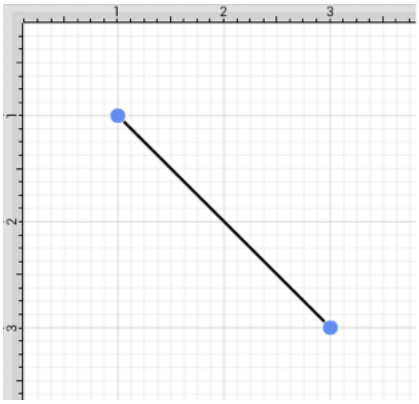


If the Function Key Feature is enabled during line creation, the line is constrained to increments of 90°.

The length and angle of a line can be altered any time after a line has been created. To alter the length or angle of a line:

1

Select the line to be altered.

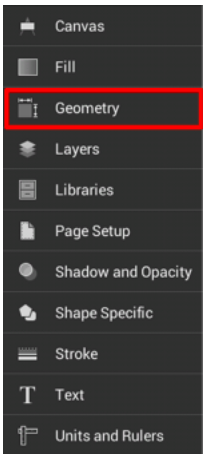


2

Press on the **Info Button** located in the Top Toolbar to open the Info Menu.

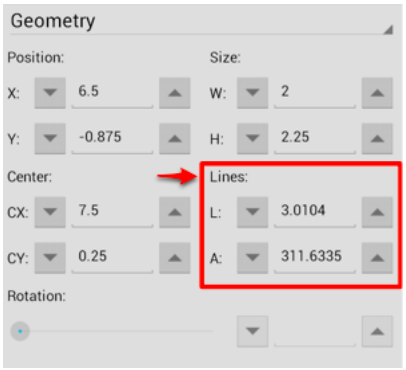
3

Press on the **Geometry** option.



4

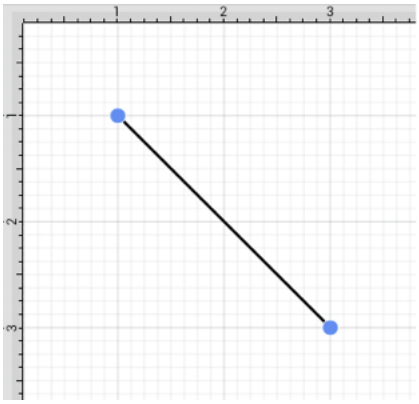
Use the **L and A** options under the **Lines** portion of the Geometry Panel to change the length or angle of a selected line. Tap on the "up" or "down" buttons to change the value or press on the text entry field to bring up a keypad for entering the value by hand.



The **Style As Dimension Line** option within the Contextual Menu may be used to add dimensional aspects to an existing line figure. When this option is used, TouchDraw automatically adds arrowheads and a variable to the selected line(s). At least one line must be selected in the Drawing Canvas for this option to appear within the Contextual Menu. Follow the steps shown below to use this option:

1

Select the line figure you would like to alter.



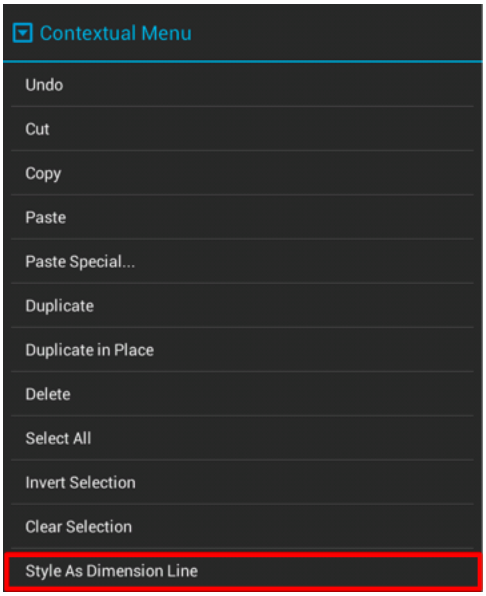
2

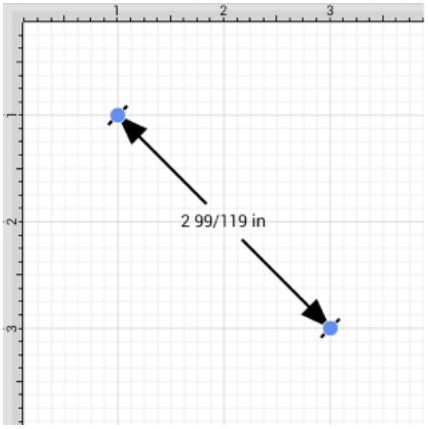
Then press and hold on the Drawing Canvas for ~1 second or use the **Contextual Menu Button** in the Top Toolbar.

3

Tap on **Style As Dimension Line** and the selected line figure(s) will appear similar to the example shown

below:



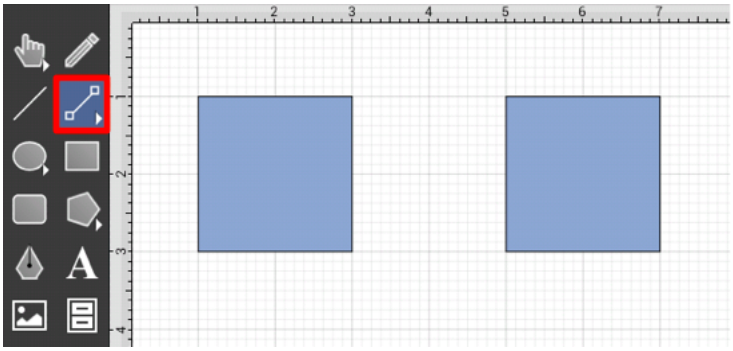


5.1.2.7. Connection Tool

The **Connection Tool** can be used to draw lines for connecting one figure to another and makes it easy to create connected graphs such as flow charts.

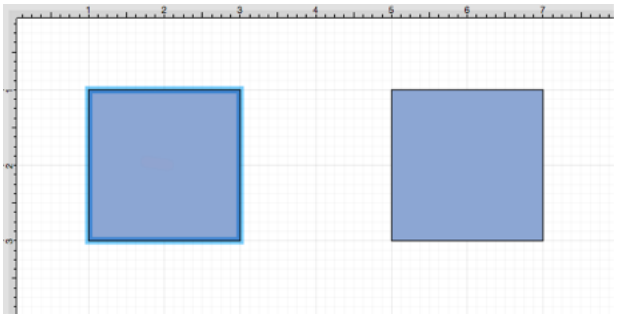
1

Begin by creating two figures and then select the **Connection Tool**. All figures including path shapes, text blocks, and images can be connected with the exception of lines and open paths.



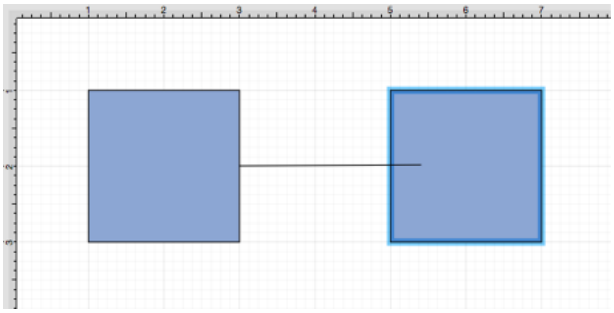
2

Touch (but do not lift your finger) within the first figure to be connected. The figure will be "highlighted" with a light blue border when the selection has been performed correctly. The light blue border indicates the ability to connect the figure.



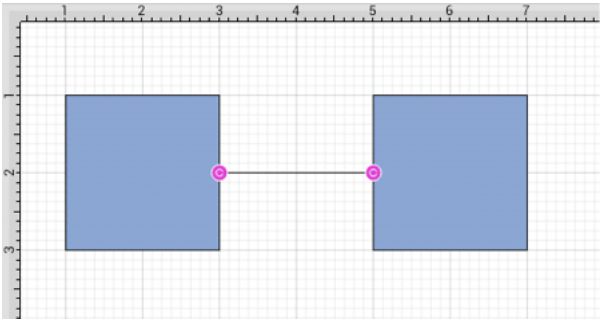
3

Drag your finger from the start figure to the end figure where the connection will terminate. When the your finger is within the "target" figure, it will be "highlighted" with a light blue border. The light blue border indicates the ability to connect the second figure to the source figure.



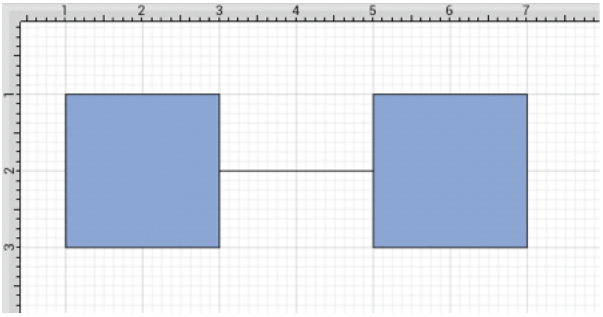
4

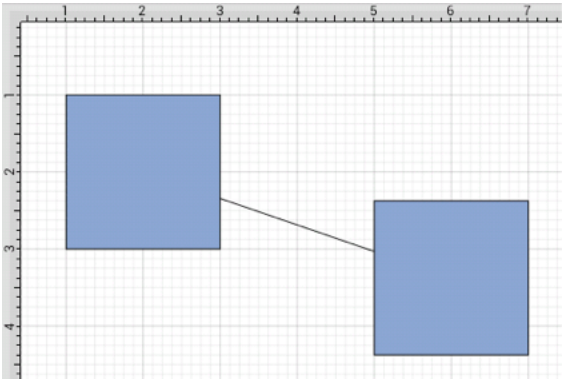
The connection line is created between the two figures when the **Touch/Drag**gesture combination is released.



5

Performing a **Touch**/Drag**gesture combination on the second figure after the connection is established results in the connection line position being adapted to keep the two figures connected.





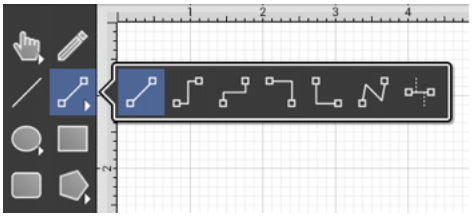
To learn more about using different connector types and the connection tool, please see the following pages:

6Connection Tool Options
7Line Connection Tool
8East-West Connection Tool

9North-South Connection Tool
10Horizontal-Vertical Connection Tool
11Vertical-Horizontal Connection Tool
12Path Connection Tool
13Hub Connection Tool

5.1.2.7.1. Connection Tool Options

Theoptions shown below are made available when an extended **Press** is performed on the **Connection Tool** in the Drawing Toolbar.



Click or Tap on the name of an available **Connection Tool** choice to learn more about what action occurs when it is selected.

Icon	Name	Description
	Line Connection Tool	The **Line Connection Tool** draws a line connection that connects two shapes in the shortest path.
	East-West Connection Tool	The **East-West Connection Tool** draws a connection line that originates from the side (either west/left or east/right) of the source figure and connects to the side (either west/left or east/right) of the target figure.
	North-South Connection Tool	The **North-South Connection Tool** draws a connection line that originates from the side (either north/top or south/bottom) of the source figure and connects to the side (either north/top or south/bottom) of the target figure.
	Horizontal-Vertical Connection Tool	The **Horizontal-Vertical****Connection Tool** draws a connection line that originates horizontally from the right or left

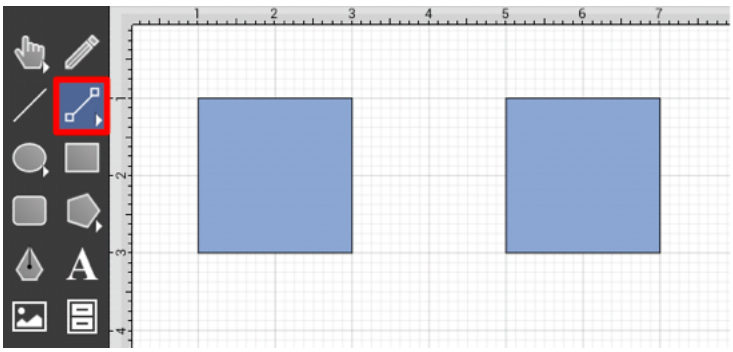
Icon	Name	Description
		side of the source figure and connects vertically to the side (top) of the target figure.
	Vertical-Horizontal Connection Tool	The **Vertical-Horizontal Connection Tool** draws a connection line that originates vertically from the side (either top or bottom) of the source figure and connects to the side (either left or right) of the target figure.
	Path Connection Tool	The **Path Connection Tool** creates a path connection that connects two shapes. As with paths created with the Path Tool, path connections can be manipulated to add additional line or curve segments.
	Hub Connection Tool	The **Hub Connection Tool** creates a connection line that is able to receive connections. This is typically used for creating network diagrams.

5.1.2.8. Line Connection Tool

The **Line Connection Tool** draws a line connection from a source figure and connects in the shortest way to a target figure. The start, line, and end points of a connection line can be altered by pressing on the **Stroke** option in the Info Menu. To create a connection with this tool:

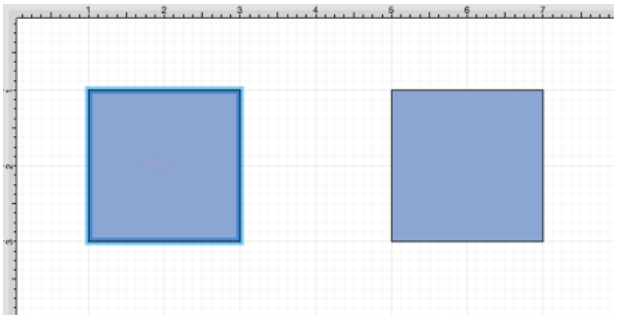
1

Select the **Line Connection Tool**in the drawing toolbar.



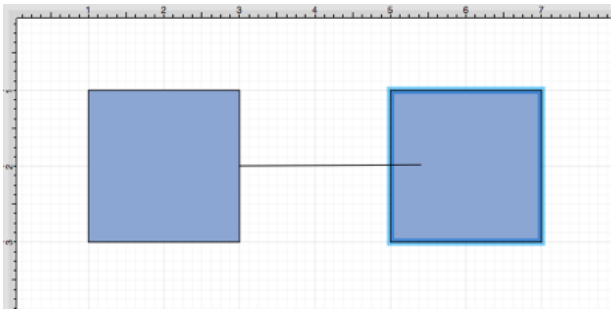
2

Perform a **Touch/Drag** gesture combination at the desired starting point on the source figure and move the handle to a desired end point on the target figure.



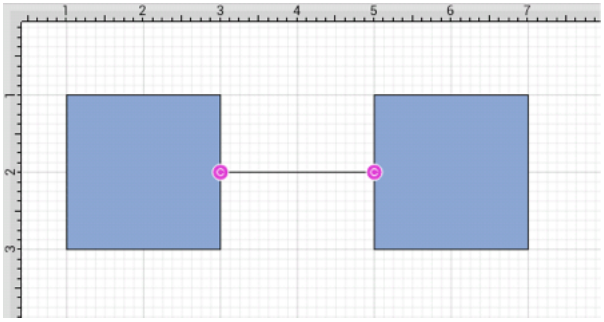
3

Release the **Touch** action to complete the connection line. Each selected figure will be highlighted in blue when a valid connection has been made.

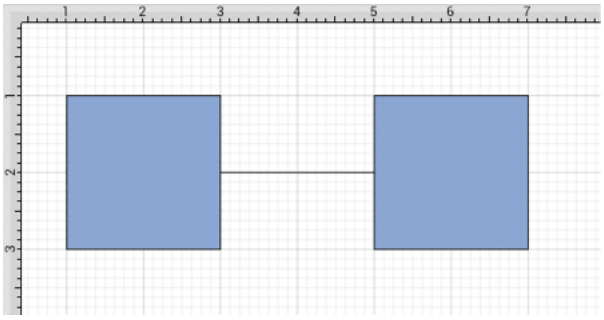


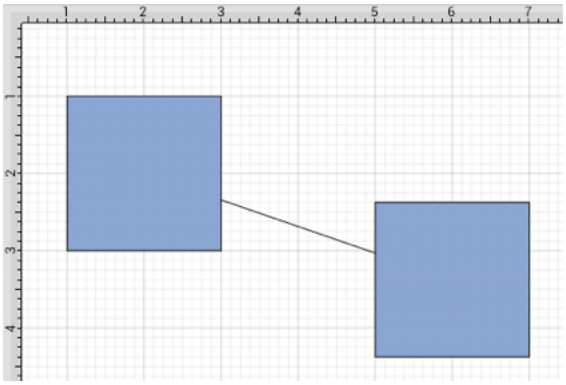
4

The completed connection line will appear as shown below:



Performing a **Touch/Drag** gesture combination on the second figure after the connection is established results in the connection line position being adapted to keep the two figures connected.

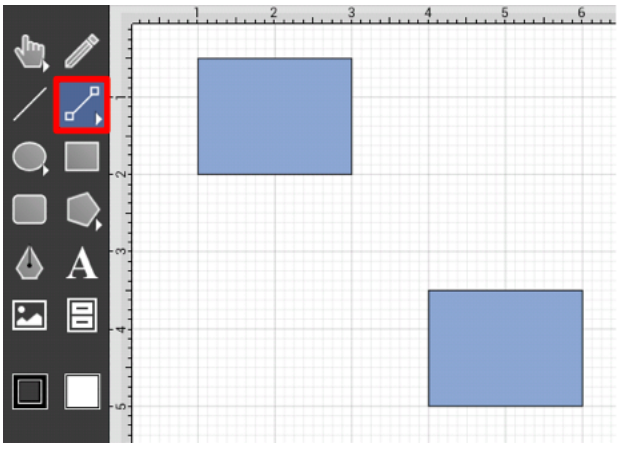




5.1.2.9. East-West Connection Tool

The **East-West Connection Tool** draws a connection line that originates from the side (either west/left or east/right) of the source figure and connects to the side (either west/left or east/right) of the target figure.

To select the East-West Connection Tool, perform an extended **Press** on the **Connection Tool** in the Drawing Toolbar.

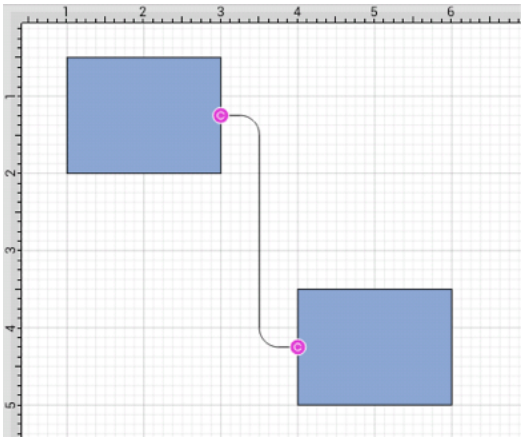


Then tap on the **East-West Connector Type** in the provided selection menu.

This connection between the figures is created in the same manner as with the Line Connection Tool, but the connection path remains orthogonal with the source and target lines remaining horizontal.

Perform a **Touch/Drag** gesture combination from the desired starting point on a figure to the desired end point on another figure and then release the **Touch** action to complete the connection. The selected figures will be highlighted in blue when a valid connection has been made.

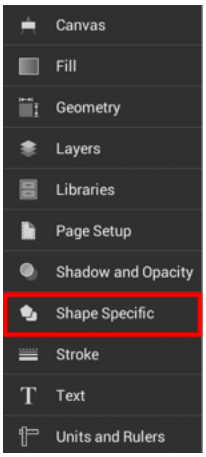
The completed connection line will appear as shown below.

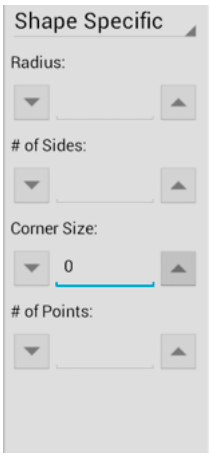


Performing a **Touch/Drag** gesture combination on the second figure after the connection is established results in the connection line position being adapted to keep the two figures connected. The appearance of a created orthogonal or elbow connection line varies based on the location of each figure and the amount of space between the two connected figures.

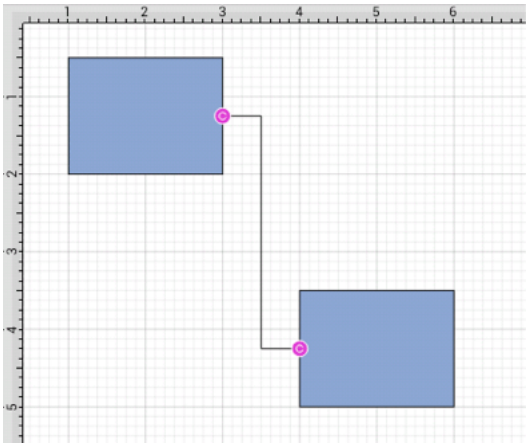
The connection line will automatically contain a rounded corner. To change the **Corner Size** of the created connection line, make certain it is selected and press on the **Info Button** in the Top Toolbar to open the Info Menu.

Tap on Shape Specific to open the Sidebar and then alter the **Corner Size** value by pressing on the **Up** and **Down** buttons.





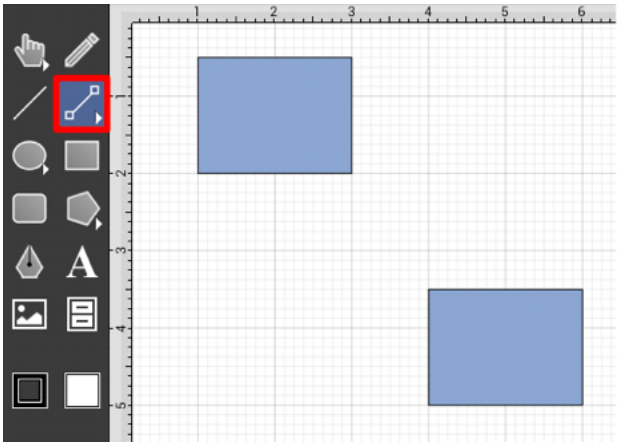
Changing the **Corner Size** to zero for a selected connection line causes the corners to become ninety degree angles as shown below.



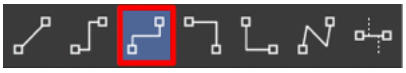
5.1.2.10. North-South Connection Tool

The **North-South Connection Tool** draws a connection line that originates from the side (either north/top or south/bottom) of the source figure and connects to the side (either north/top or south/bottom) of the target figure.

To select the North-South Connection Tool, perform an extended **Press** on the **Connection Tool** in the Drawing Toolbar.

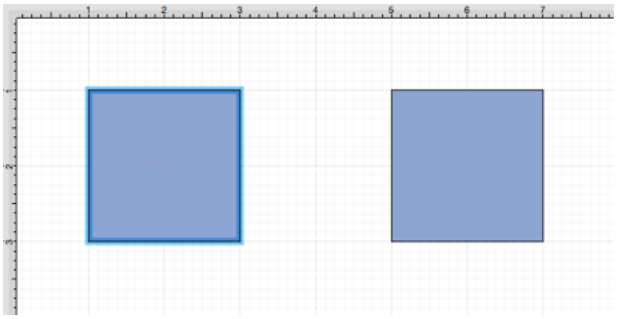


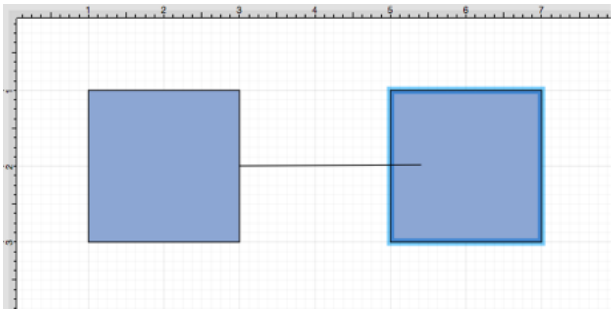
Then tap on the **North-South Connector Type**in the provided selection menu.



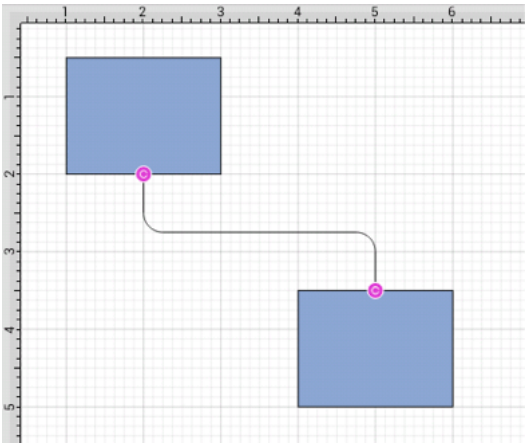
This connection between the figures is created in the same manner as with the Line Connection Tool, but the connection path remains orthogonal with the source and target lines remaining vertical.

Perform a **Touch**/**Drag** gesture combination from the desired starting point on the source figure to the desired end point on the target figure and then release the **Touch** action to complete the connection. The selected figures will be highlighted in blue when a valid connection has been made.





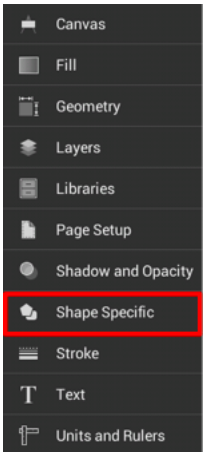
The completed connection line will appear as shown below.

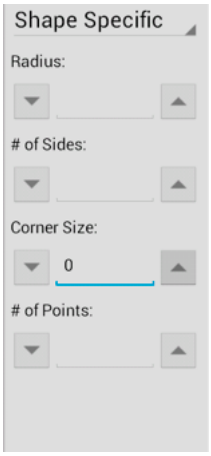


Performing a **Touch/Drag** gesture combination on the second figure after the connection is established results in the connection line position being adapted to keep the two figures connected. The appearance of a created orthogonal or elbow connection line varies based on the location of each figure and the amount of space between the two connected figures.

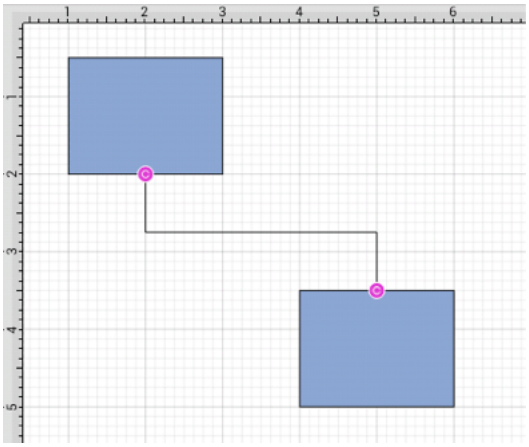
The connection line will automatically contain a rounded corner. To change the **Corner Size** of the created connection line, make certain it is selected and press on the **Info Button** in the Top Toolbar to open the Info Menu.

Tap on Shape Specific to open the Sidebar and then alter the **Corner Size** value by pressing on the **Up** and **Down** buttons.





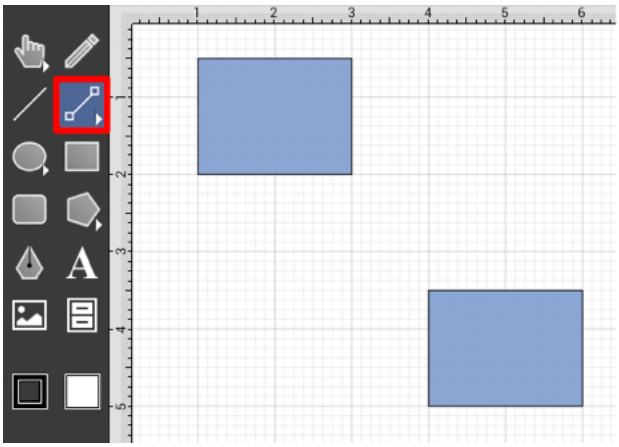
Changing the **Corner Size** to zero for a selected connection line causes the corners to become ninety degree angles as shown below.



5.1.2.11. Horizontal-Vertical Connection Tool

The **Horizontal-Vertical Connection Tool** draws a connection line that originates horizontally from the right or left side of the source figure and connects vertically to the side (top) of the target figure.

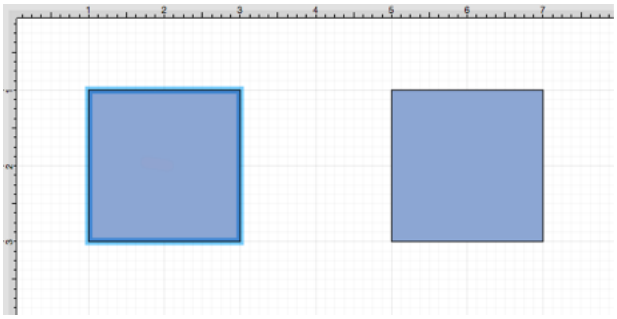
To select the Horizontal-Vertical Connection Tool, perform an extended **Press** on the **Connection Tool** in the Drawing Toolbar.

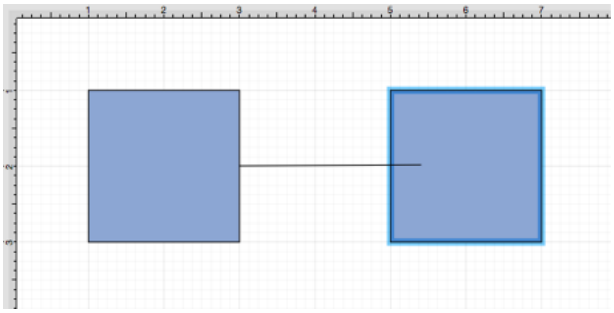


Then tap on the **Horizontal-Vertical Connector Type** in the provided selection menu.

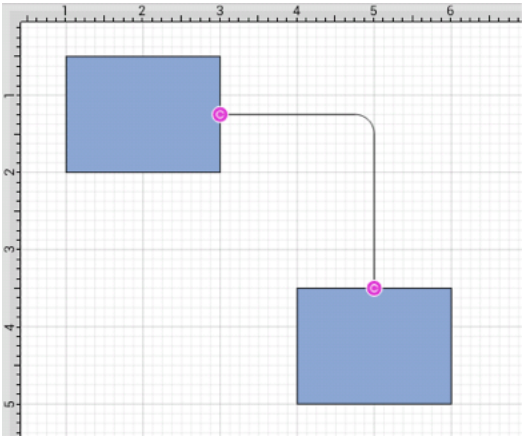
This connection between the figures is created in the same manner as with the Line Connection Tool, but the connection path remains orthogonal with the source lines remaining horizontal and target lines remaining vertical.

Perform a **Touch/Drag** gesture combination from the desired starting point on the source figure to a desired end point on the target figure and then release the **Touch** action to complete the connection. The selected figures will be highlighted in blue when a valid connection has been made.





The completed connection line will appear as below.

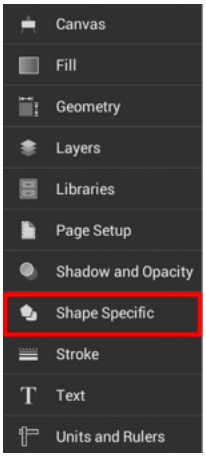


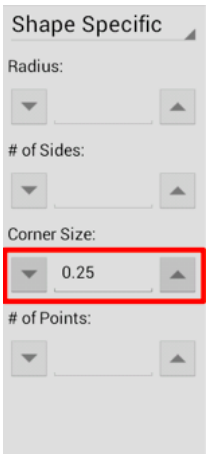
Performing a **Touch/Drag** gesture combination on the second figure after the connection is established results in the connection line position being adapted to keep the two figures connected. The appearance of a created orthogonal or elbow connection line varies based on the location of each figure and the amount of space between the two connected figures.

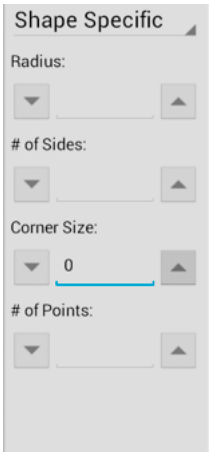
The connection line will automatically contain a rounded corner. To change the **Corner Size** of the created connection line, make certain it is selected and press on the **Info Button** in the Top Toolbar to open the Info

Menu .

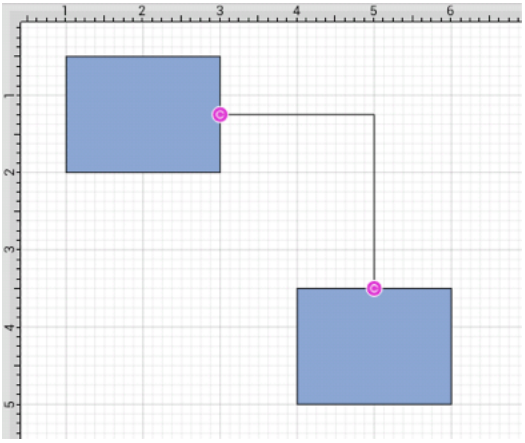
Tap on Shape Specific to open the Sidebar and then alter the **Corner Size** value by pressing on the **Up** and **Down** buttons.







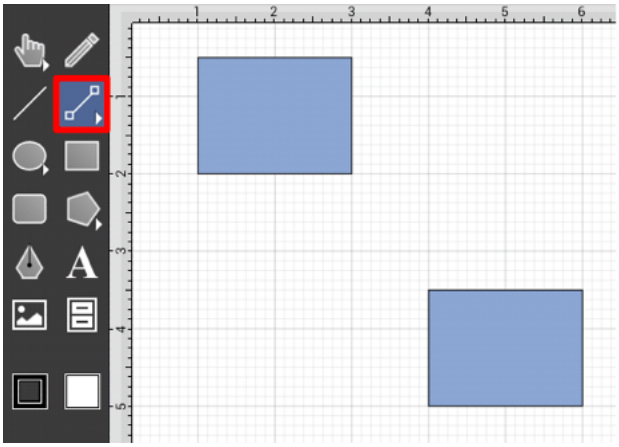
Changing the **Corner Size** to zero for a selected connection line causes the corners to become ninety degree angles as shown below.



5.1.2.12. Vertical-Horizontal Connection Tool

The **Vertical-Horizontal****Connection Tool** draws a connection line that originates vertically from the side (either top or bottom) of the source figure and connects to the side (either left or right) of the target figure.

To select the Vertical-Horizontal Connection Tool, perform an extended **Press** on the **Connection Tool** in the Drawing Toolbar.

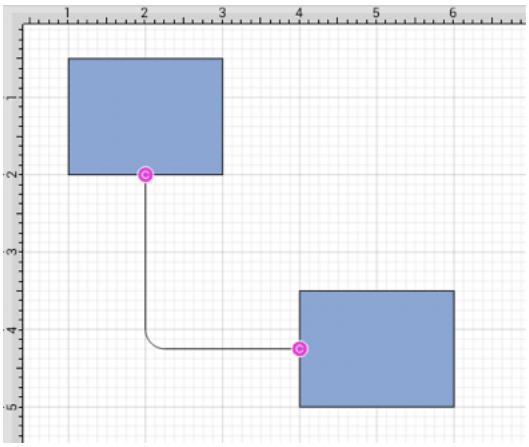


Then tap on the **Vertical-Horizontal Connector Type** in the provided selection menu.

This connection between the figures is created in the same manner as with the Line Connection Tool, but the connection path remains orthogonal with the source lines remaining vertical and target lines remaining horizontal.

Perform a **Touch/Drag** gesture combination from the desired starting point on the source figure to a desired end point on the target figure and then release the **Touch** action to complete the connection. The selected figures will be highlighted in blue when a valid connection has been made.

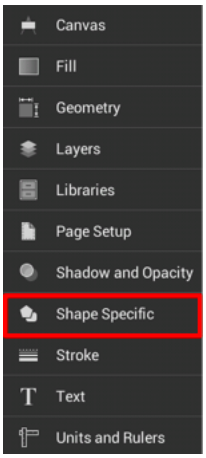
The completed connection will appear as shown below.

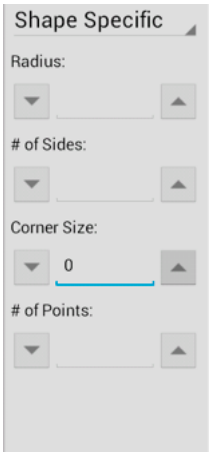


Performing a **Touch/Drag** gesture combination on the second figure after the connection is established results in the connection line position being adapted to keep the two figures connected. The appearance of a created orthogonal or elbow connection line varies based on the location of each figure and the amount of space between the two connected figures.

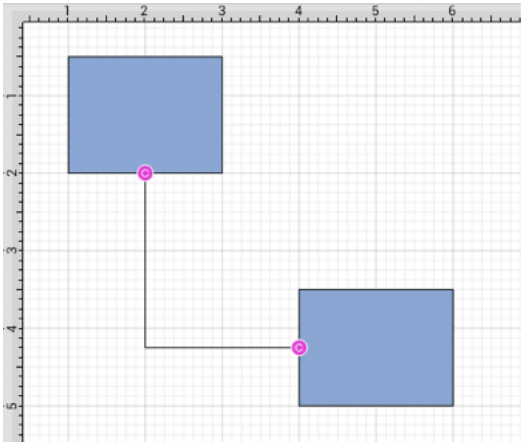
The connection line will automatically contain a rounded corner. To change the **Corner Size** of the created connection line, make certain it is selected and press on the **Info Button** in the Top Toolbar to open the Info Menu.

Tap on Shape Specific to open the Sidebar and then alter the **Corner Size** value by pressing on the **Up** and **Down** buttons.





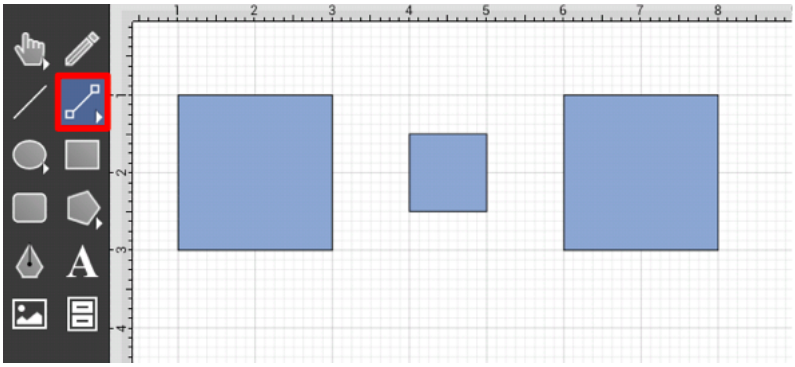
Changing the **Corner Size** to zero for a selected connection line causes the corners to become ninety degree angles as shown below.



5.1.2.13. Path Connection Tool

The **Path Connection Tool** can be used to create a connection between two shapes that can be routed however the user wants using the same tools and flexibility used to modify paths created with the Path Tool.

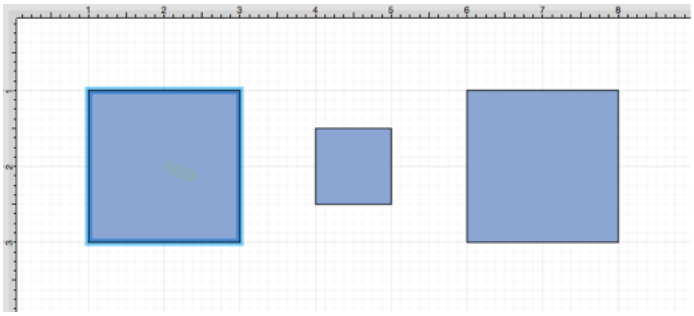
To select the Path Connection Tool, perform an extended **Press** on the **Connection Tool** in the Drawing Toolbar.

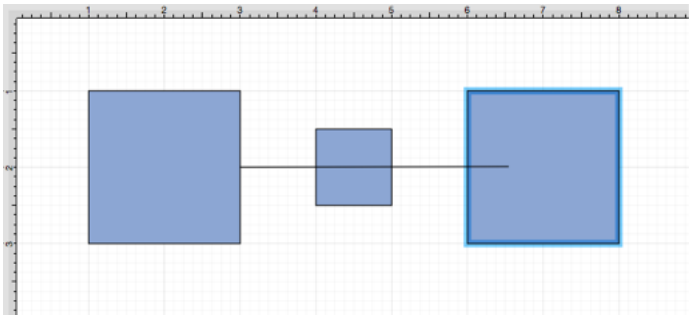


Then tap on the **Path Connector Type** in the provided selection menu.

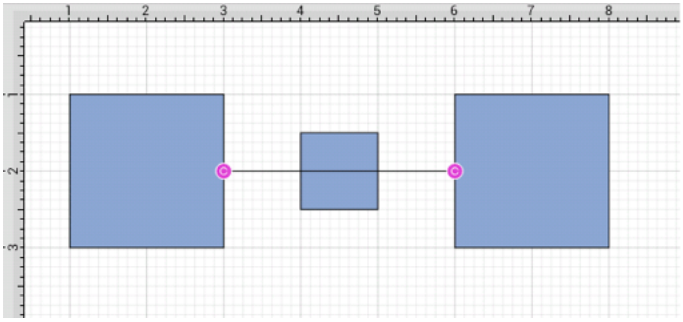
This connection between the figures will initially look like a connection created with the Line Connection Tool; however the resulting connection can be modified just as items generated with the Path Tool. See the handling paths section of this documentation to learn more.

Perform a **Touch/Drag** gesture combination from the desired starting point on the source figure to a desired end point on target figure and then release the **Touch** action to complete the connection. The selected figures will be highlighted in blue when a valid connection has been made.





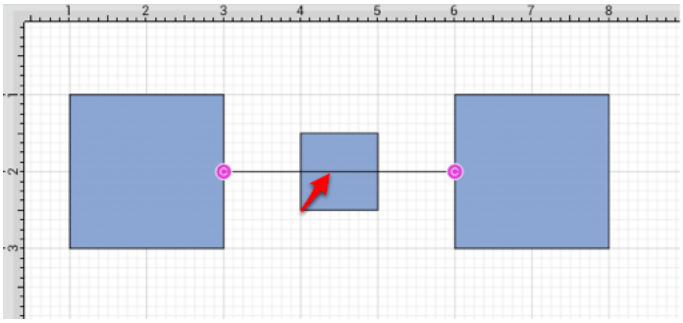
The completed connection will appear as shown below.



Performing a **Touch/Drag** gesture combination on the second figure after the connection is established results in the connection line position being adapted to keep the two figures connected.

Altering the Route of Path Connection Lines

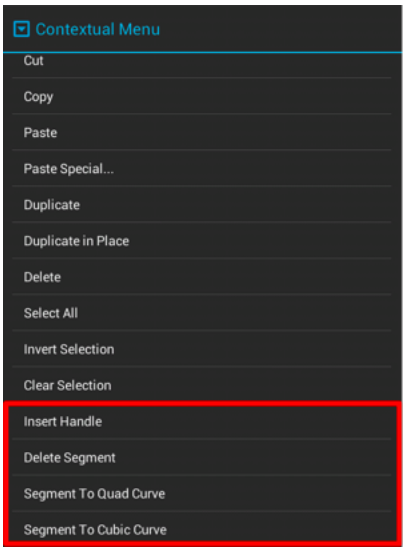
Once the **Path Connection Line** has been added to the desired target figure from the selected source figure, it can be manuplated in the same manner as a Path Figure. In this example, the connection line currently goes through the middle rectangle.



To route the **Path Connection Line** around another figure, handles must be added to the connection line or it

must be converted to a quadratic or cubic segment. These options can be accessed by performing an **extended Press** on the connection line to open the Contextual Menu or by selecting the connection line and tapping on the **Contextual Menu Button** in the Top Toolbar .

Several options will appear within the Contextual Menu for modifying the connection line and routing it around a specific figure. Handles and/or curved segments can be added to alter the route of the connection line.



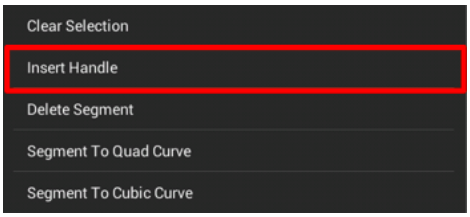
Please note that if you select Delete Segment without adding any additional handles or segments, then the connection line will be completely removed from the drawing.

Example 1: Inserting Handles

Inserting handles and then dragging them to desired points in the Drawing Canvas is one method for altering the route of a **Path Connection Line**. Follow the steps below to learn how to do so.

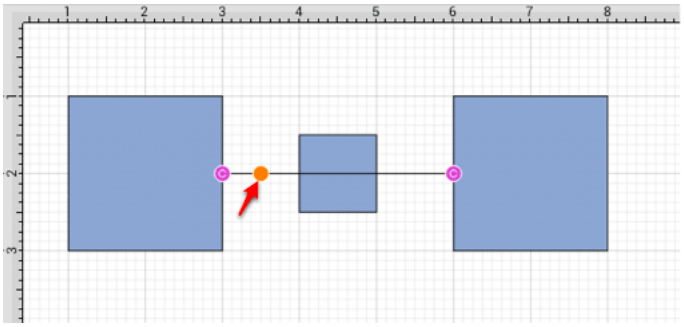
1

Perform an **extended Press** on the connection line in a location to the left of the crossed figure and then select **Insert Handle** from the menu.



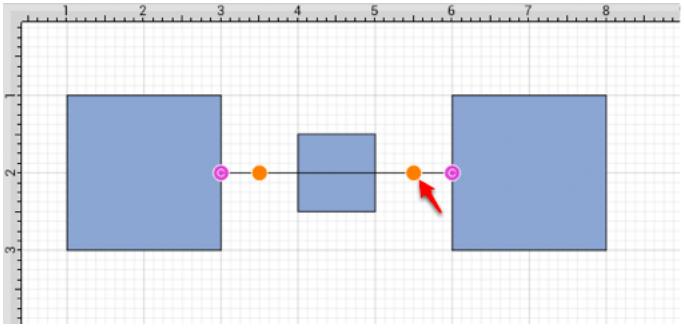
2

A new **Path Handle** (Orange) will appear within the **Path Connection Line** as shown below:



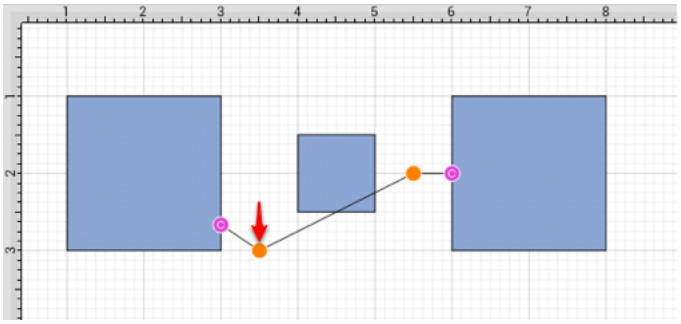
3

Perform an **extended Press** on the connection line in a location to the right of the crossed figure and then select **Insert Handle** from the menu again to add another Path Handle (Orange).



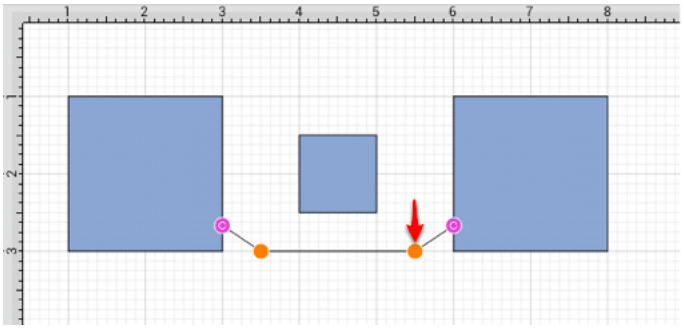
4

Then press and drag down or up on the left handle to change the direction/path of the connection line.



5

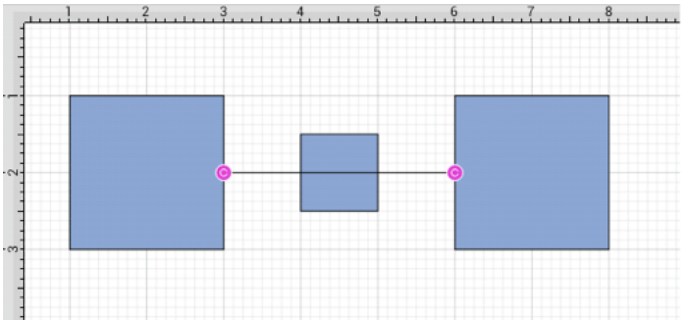
Notice that the line still intersects the figure. Press and drag on the right handle to continue altering the direction/path of the connection line. This will result in the straight segment residing below the figure and a successfully routed Path Connection Line.



Note: Please note that the handles may be moved in any direction; however, for this example both are moved down to route the connection line around the figure.

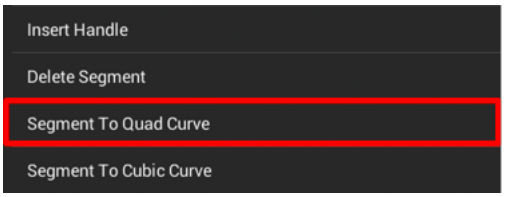
Example 2: Segment to Quad

A **Path Connection Line** can also be routed differently by converting the line to a quadratic segment. This example will use the same original figures as shown previously and will display how to convert the current connection line to a quadratic segment for path routing.



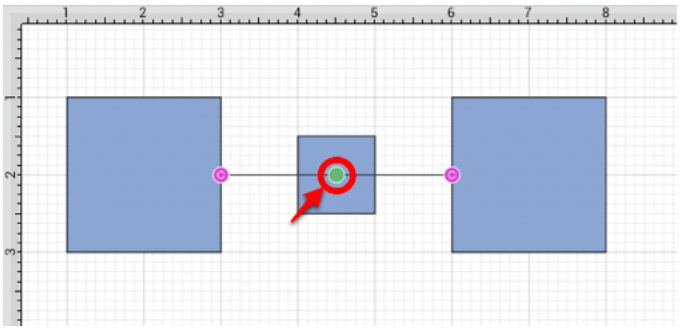
1

Perform an **extended Press** on the connection line and then select **Segment to Quad** from the menu.



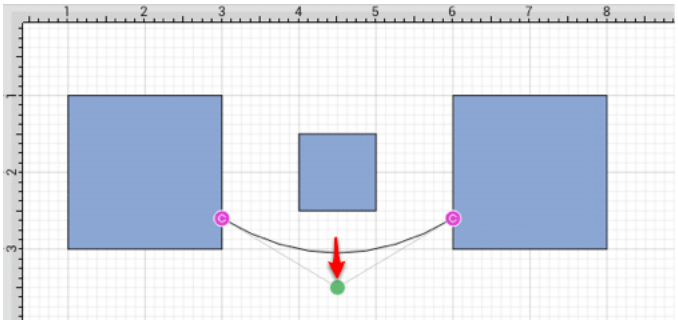
2

A **Control Point Handle (Green)** will appear in the middle of the connection line.



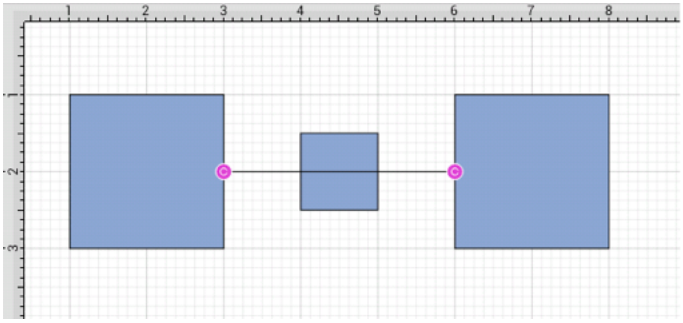
3

Press and drag the handle downward (or upward) to create a curved segment. The **Control Point Handle** may be moved in any direction; however, for this example, it is moved downward below the figure.



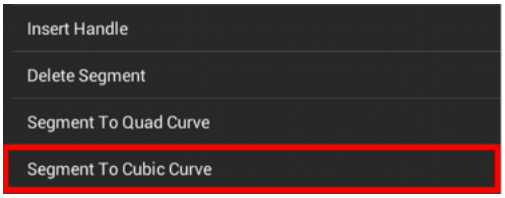
Example 3: Segment to Cubic

A **Path Connection Line** can also be routed differently by converting the line to a cubic segment. This example will use the same original figures as shown previously and will display how to convert the current connection line to a quadratic segment for path routing.



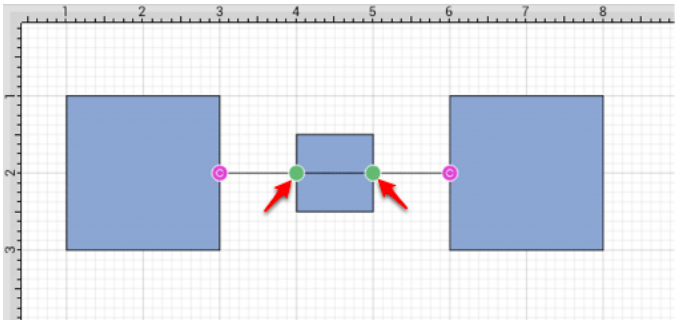
1

Perform an **extended Press** on the connection line and then select **Segment to Cubic** from the menu.



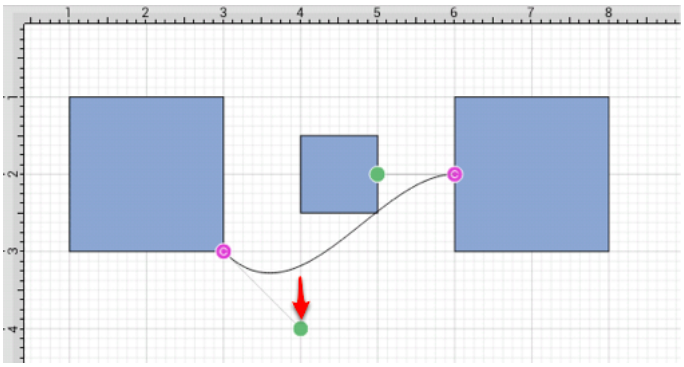
2

Two **Control Point Handles (Green)** will appear within the connection line.



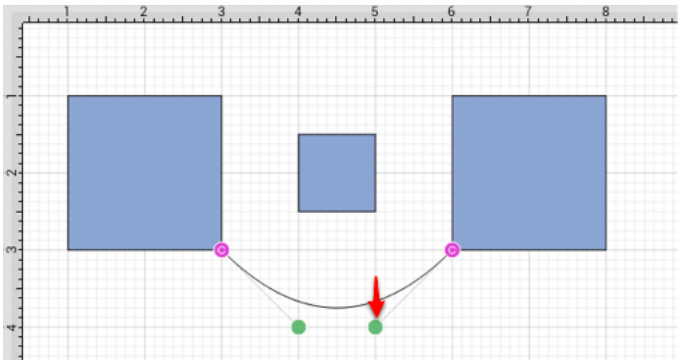
3

Press and drag in any direction on the **left handle** to change the position of the **Path Connection Line**. In this example, both handles are dragged downward.



4

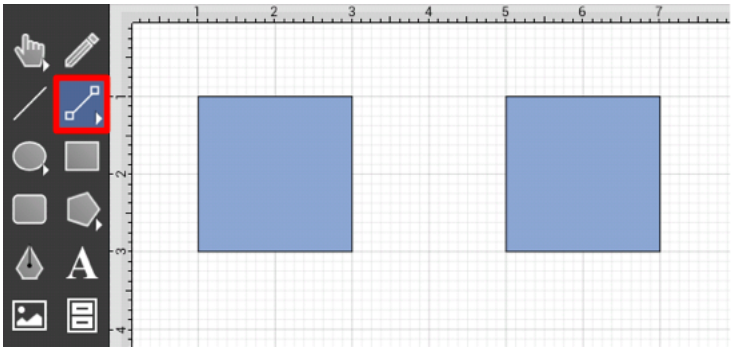
Then do the same for the **right handle** to finish routing the connection line around a figure within a drawing.



5.1.2.14. Hub Connection Tool

The **Hub Connection Tool** creates a connection line that is able to receive connections and is typically used for creating network diagrams.The connection line can originate from any side of the source figure and connects to any side of the target figure or to another hub connection line.

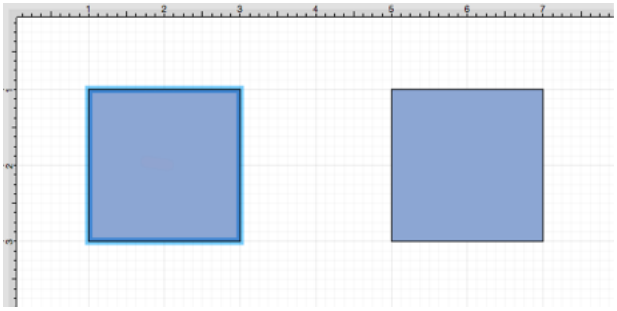
To select the Hub Connection Tool, perform an extended **Press** on the **Connection Tool** in the Drawing Toolbar.

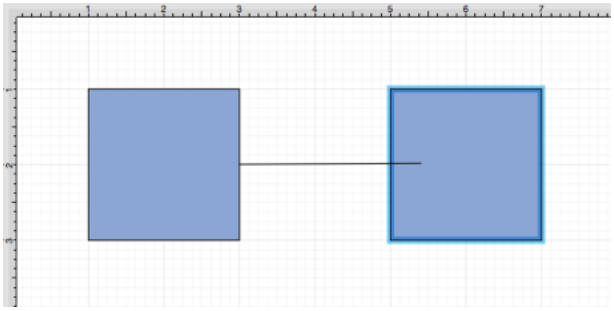


Then tap on the **Hub Connector Type**in the provided selection menu.

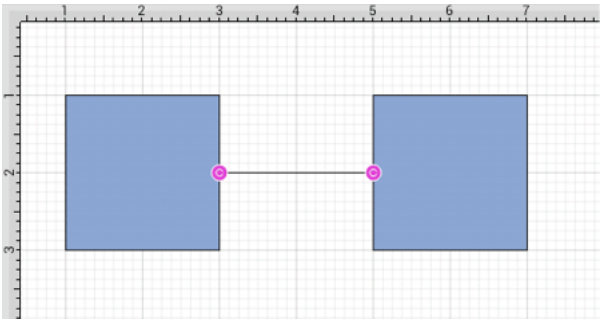
This connection between the figures is created in the same manner as with the Line Connection Tool; however, the connection path can be placed between two hub connection lines to create a networking or alternative type of diagram.

Perform a **Touch/Drag** gesture combination from the desired starting point on the source figure to the desired end point on the target figure or hub connection line and then release the **Touch** action to complete the connection. The selected figures or hub connection lines will be highlighted in blue when a valid connection has been made. Refer to the images below to see a hub connection between figures:

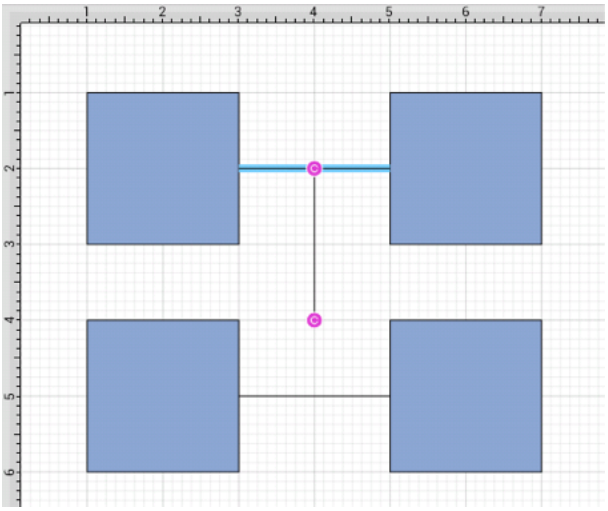


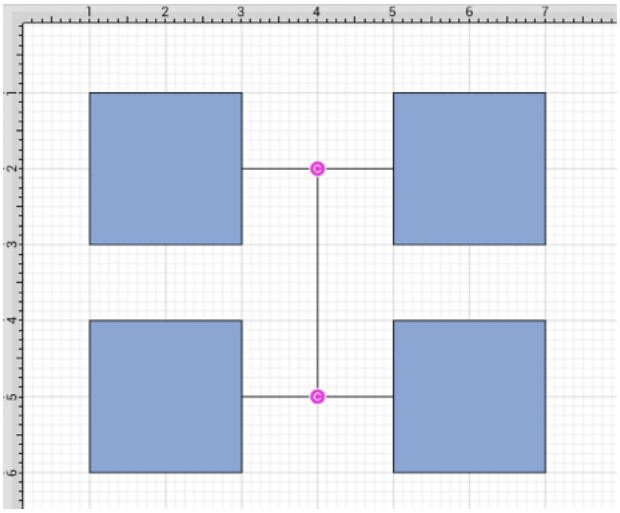


The completed connection line will appear as below.



The following example shows a hub connection line joining two previously drawn hub connection lines.

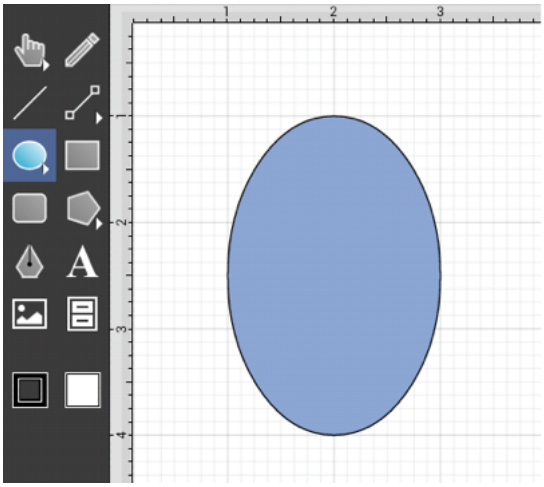




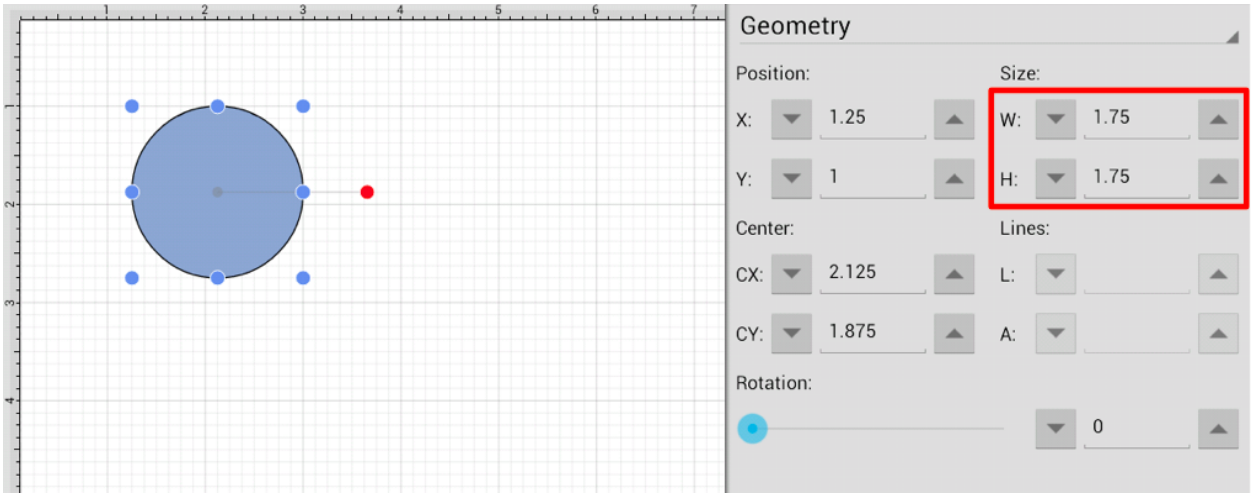
Performing a **Touch/Drag** gesture combination on the second figure after the connection is established results in the connection line position being adapted to keep the two figures connected.

5.1.2.15. Oval Tool

The **Oval Tool** is used to create ovals or circles within a drawing. To use the tool, simply select it and then perform a **Touch/Drag** gesture combination at the point in the drawing canvas where one of the bounding corners of the oval or circle should be. Drag in any direction and release the **Touch** action where the other bounding corner should be.



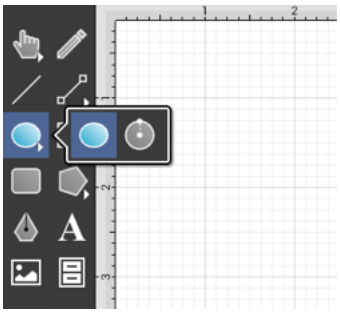
Using the **Oval Tool** in conjunction with the Function Key Feature allows for the creation of perfect circles by constraining the width and the height of the created object to equal values.



An oval can also contain text. See the Handling Text section for additional details.

Circle Tool

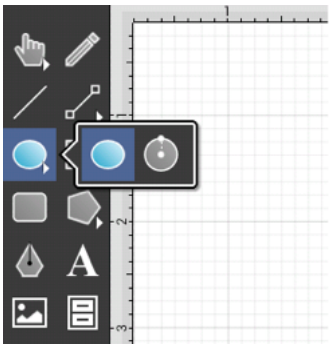
Additional **Oval Tool** options are made available when an extended **Press** is performed over the tool button.

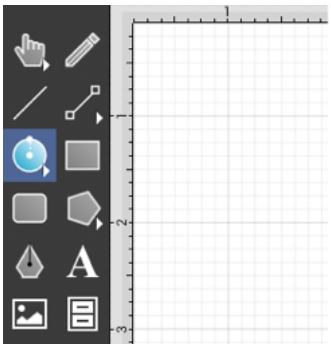


The Circle Tool creates a perfect circle where the radius increases in increments as the size of the shape increases.

5.1.2.16. Circle Tool

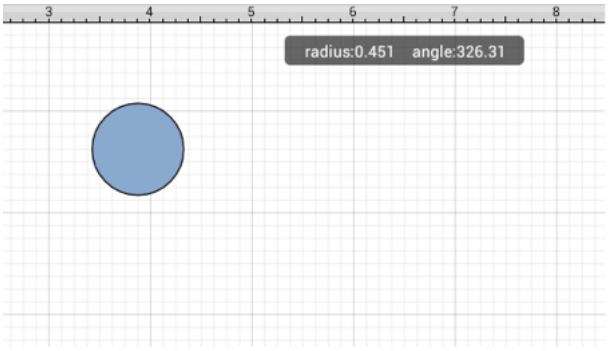
This **Circle Tool** creates a perfect circle where the radius increases in increments as the size of the shape increases. To select the Circle Tool, perform an extended **Press** on the Oval Tool in the Drawing Toolbar.

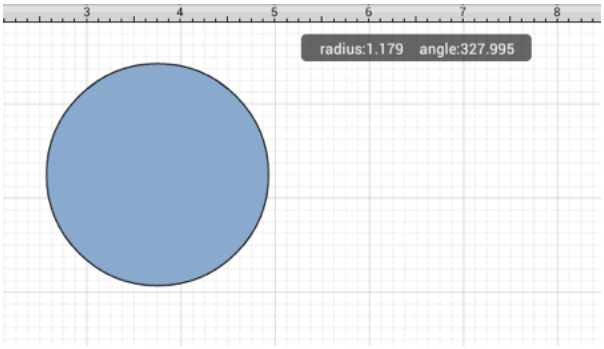




Touchon the point in the drawing canvas where the center of the circle should be and **Drag** outward without lifting the used finger until the circle consists of a desired radius or size. Release the **Touch** action to complete

the circle. The radius and angle values will increase as the size of the circle increases, as shown in the images below.

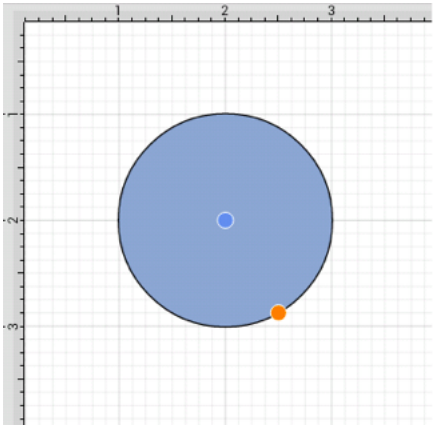




The radius of a circle can be specified prior to drawing the shape or altered any time after it has been created. To set the radius:

1

Select the circle to be altered.

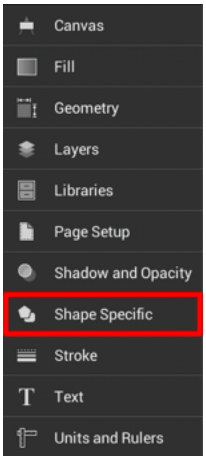


2

Press on the **Info Button** in the Top Toolbar to open the Info Menu.

3

Press on the **Shape Specific**option.



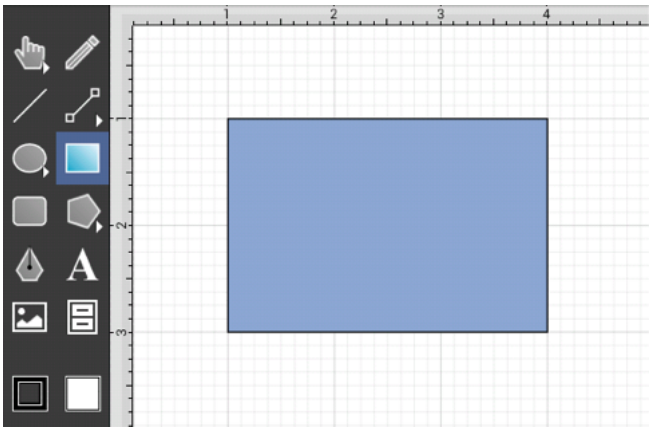
4

Use the **Radius**option to set the radius of a selected circle. Tap on the "up" or "down" buttons to change the value or press on the text entry field to bring up a keypad for entering the value by hand.

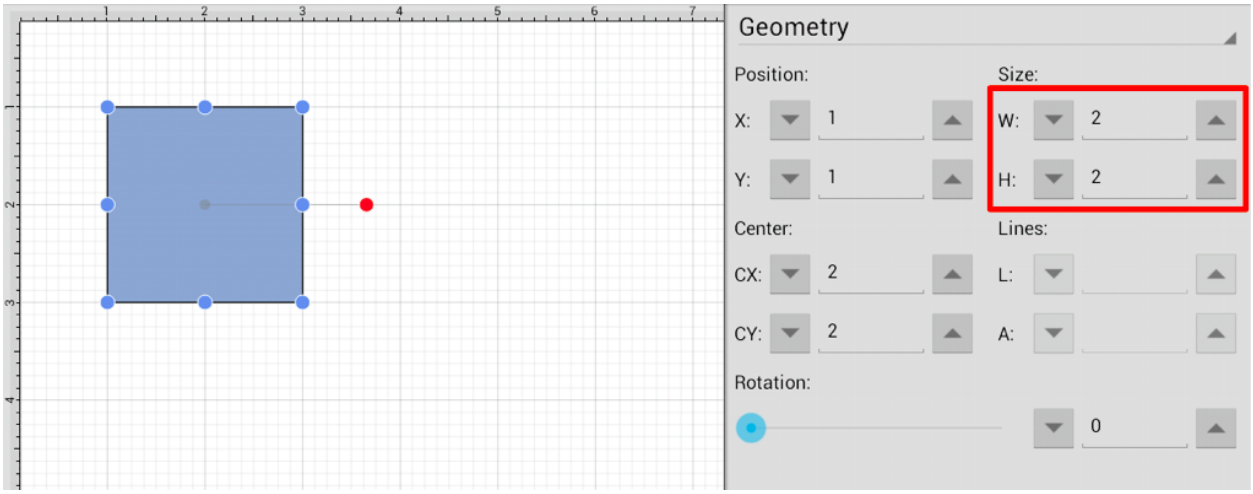
Note: A circle can also contain text. See Handling Text for further details.

5.1.2.17. Rectangle Tool

The **Rectangle Tool** can be used to create rectangles or squares within a drawing. To use the tool, simply select it and then use a **Touch/Drag** gesture combination at the point in the drawing canvas where one of the bounding corners of the rectangle or square should be. Then drag in any direction and release the **Touch** action where the other bounding corner should reside on the drawing canvas.



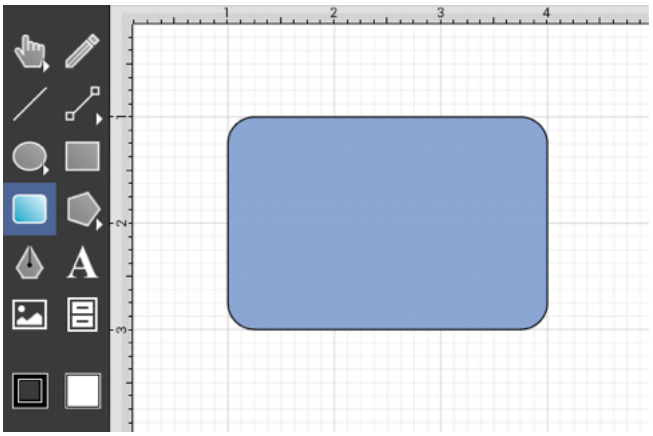
Using the **Rectangle Tool** in conjunction with the Function Key Feature allows for the creation of perfect squares by constraining the width and the height of the created object to equal values. In the example below, a square that is 2 inches in height and width has been created:



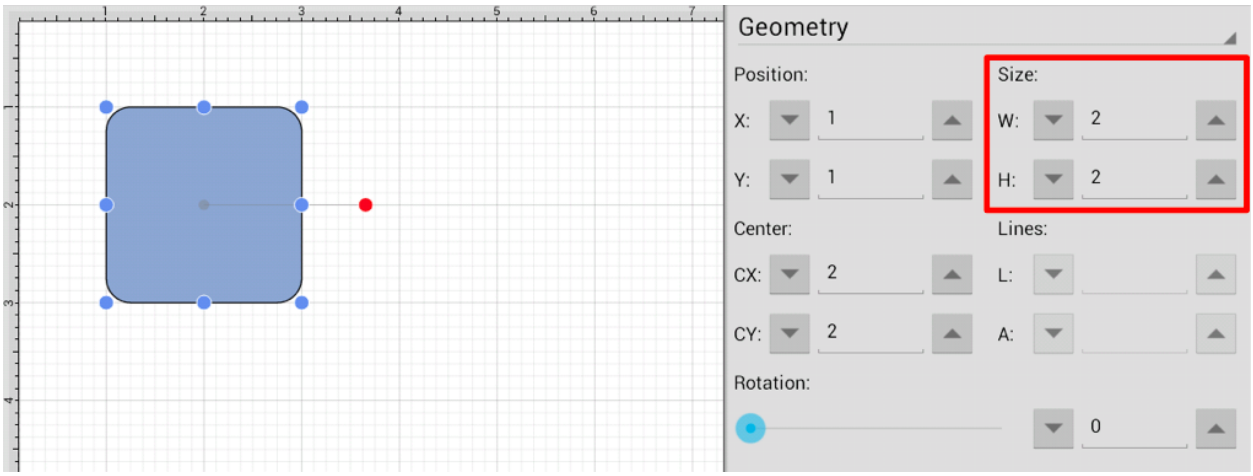
Note: A rectangle can also contain text. See the Handling Text section for additional details.

5.1.2.18. Rounded Rectangle Tool

The **Rounded Rectangle Tool** can be used to create rounded rectangles or rounded squares within a drawing. To use the tool, simply select it and use a **Touch/Drag** gesture combination at the point in the drawing canvas where one of the bounding corners of the rounded rectangle or square should be. Then drag in any direction and release the **Touch** action where the other bounding corner should reside on the drawing canvas.



Use the **Rounded Rectangle Tool** in conjunction with the Function Key Feature to create perfectly rounded squares. Having the **Function Key Feature** activated while creating a rounded rectangle constrains the width and the height to equal values. In the example below, a rounded square that is 2 inches in height and width has been created:

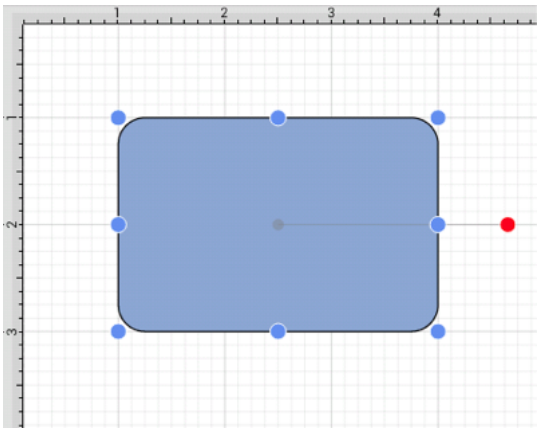


A rounded rectangle can also contain text. See Handling Text for further details.

The size of rounded corners can be specified prior to drawing the shape or altered any time after it has been created. To set the corner size:

1

Select a rounded rectangle.

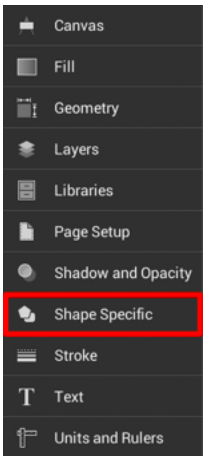


2

Press on the **Info Button** in the Top Toolbar to open the Info Menu.

3

Press on the **Shape Specific** option.

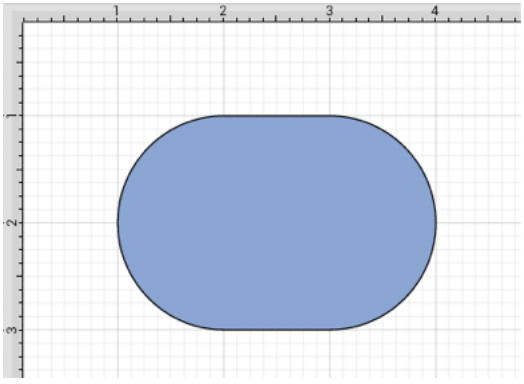


4

Use the **Corner Size** option to set the corner size of a rounded rectangle. Tap on the "up" or "down" buttons to change the value or press on the text entry field to bring up a keypad for entering the value by hand.

5

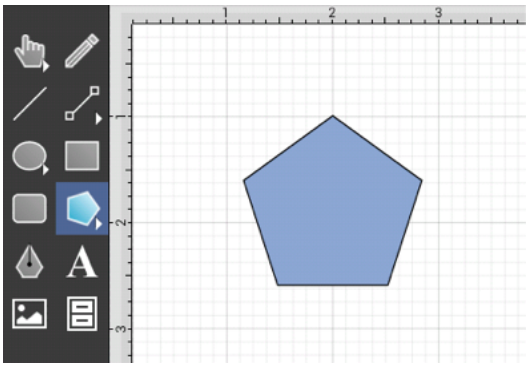
In the example below, the corner size has been change to 1 inch:



Note: The unit of measure for the corner size is the unit of measure for the drawing, thus if your unit of measure is inches, and the corner size is set to .25, that means the corner size is 1/4 of an inch.

5.1.2.19. Polygon Tool

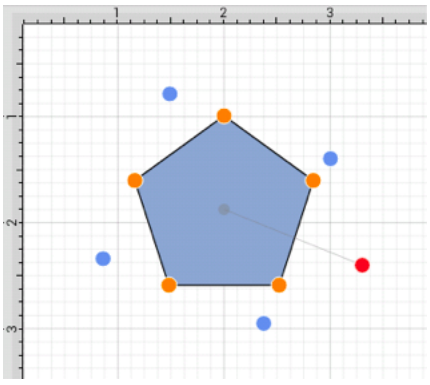
The **Polygon Tool** can be used to create regular polygons or stars within a drawing. To create a polygon, simply select the tool and then use a **Touch/Drag** gesture combination at the point in the drawing canvas where the *center* of the polygon will be. Then drag in any direction and release the **Touch** action where one of the outer points of the polygon should reside on the drawing canvas.



The number of polygon sides can be specified prior to drawing the shape or altered any time after it has been created. To set the number of sides:

1

Select the polygon to be altered.

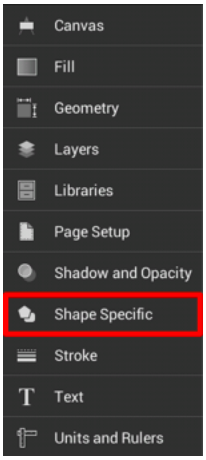


2

Press on the **Info Button** located in the Top Toolbar to open the Info Menu..

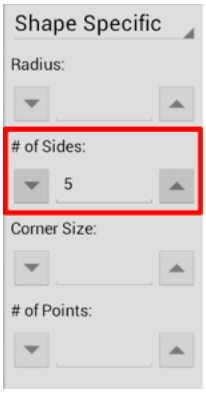
3

Press on the **Shape Specific** option.



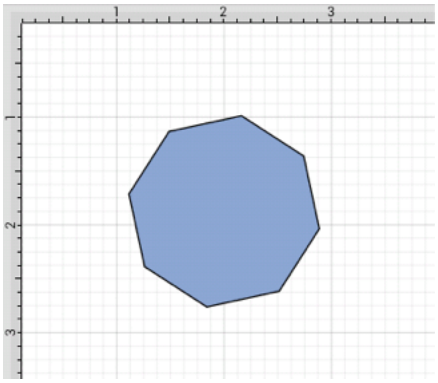
4

Use the **# of Sides** option to set the number of sides for a polygon. Tap on the "up" or "down" buttons to change the value or press on the text entry field to bring up a keypad for entering the value by hand.



5

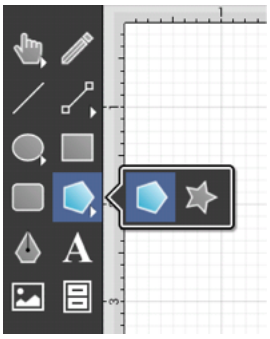
In the example below, the value has been changed to 8.

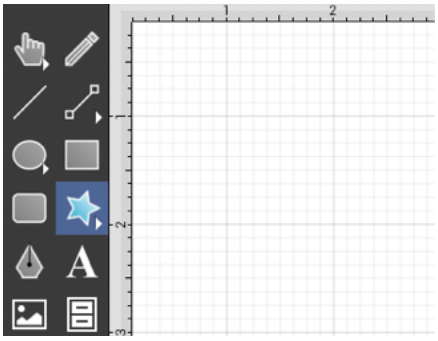


Note: A polygon can also contain text. See Handling Text for further details.

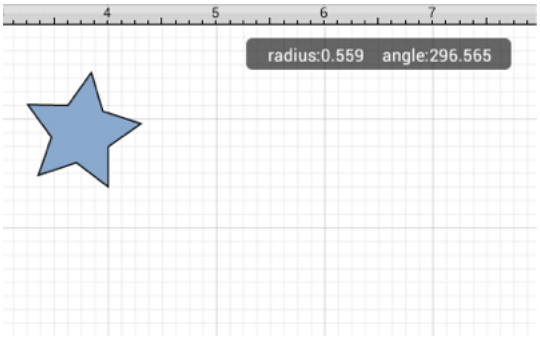
5.1.2.20. Star Tool

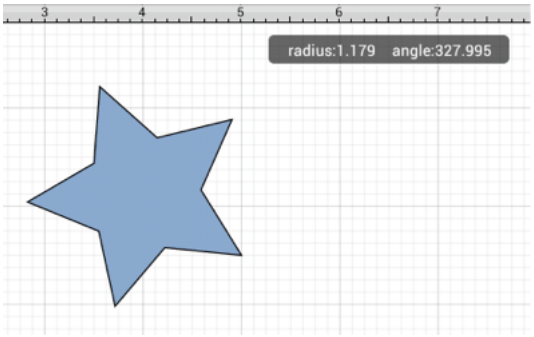
The **Star Tool** can be used to create stars within a drawing. To select the Star Tool, perform an extended **Press** on the Polygon Tool in the Drawing Toolbar to bring up the menu and then tap on the **Star Tool** in the provided selection menu.





Touchon the point in the drawing canvas where the center of the star should be and **Drag** outward without lifting the used finger until the star consists of a desired radius, angle, and size. Release the **Touch** action to complete the star. The radius and angle values will increase as the size of the star increases, as shown in the images below.

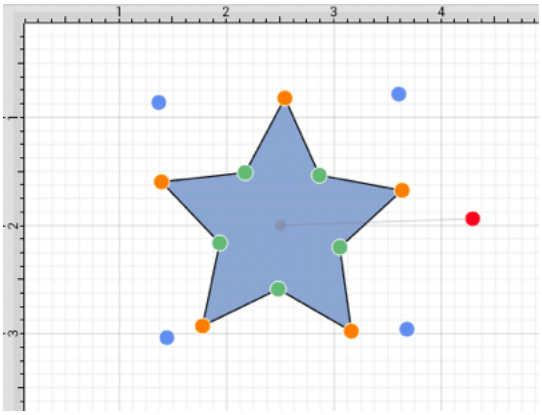




The number of star points can be specified prior to drawing the shape or altered any time after it has been created. To set the number of points:

1

Select the star to be altered.

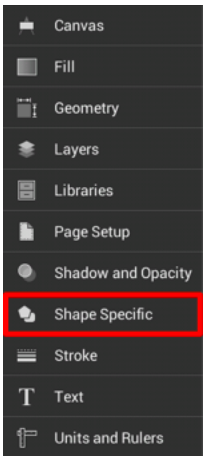


2

Press on the **Info Button** located in the Top Toolbar to open the Info Menu.

3

Press on the **Shape Specific** option.

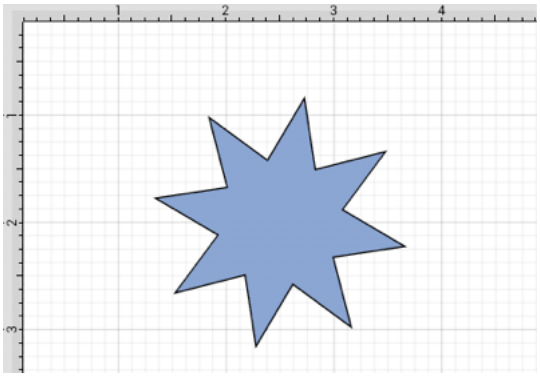


4

Use the **# of Points** option to set the number of point for a star. Tap on the "up" or "down" buttons to change the value or press on the text entry field to bring up a keypad for entering the value by hand.

5

In the example below, the value has been changed to 8.



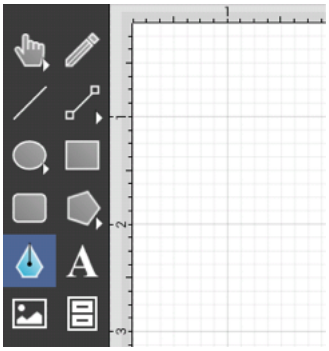
Note: A star can also contain text. See Handling Text for further details.

5.1.2.21. Path Tool

The **Path Tool** is the most powerful and complex tool available within TouchDraw. It can be used to create complex curves and shapes with detailed control on every aspect of the shapes appearance. Paths created with this tool are made up of many segments and three different types of line segments are possible:

- Straight Lines
- Quadratic Curves (lines with 1 control point)
- Cubic Curves (lines with 2 control points)

It's also important to understand that, like the Pen Tool, the **Path Tool** can be used to create both paths and shapes. The Path selection is different from the pen selection in that a continuous line is not drawn. The used finger will need to be lifted to create each path segment of a line or shape and this is accomplished by using one of two available gestures depending on whether or not the end result should be a path or shape.



Use a **Single Tap** to add each line end point or a **Touch/Drag** gesture combination to add a line end point and a corresponding control point in one action.

To **Create a Path**, **double tap** on the drawing canvas or choose another drawing tool when the path is complete.

To **Create a Shape**, tap on the first (start) handle (the orange handle with a white dot) to manually complete a shape or perform a **Triple Tap** on the drawing canvas for the **Path Tool** to automatically draw a line from the current position to the start position to close the path. The **Triple Tap** method eliminates the need to draw a point to intersect with the starting point.

Path Tool Actions

A control point is displayed in gray when it has not been used and is referred to as a "phantom" control point. This characteristic provides a hint to the TouchDraw application that it should function as a control point in

scenarios where the next drawn segment is a curve. A few basic actions can be used to alter the type of created segment, curve positioning, and "phantom" control point position as a path is being created. Refer to the table below to learn more about each available action.

Action	Description
Touch/Drag	A **Touch/Drag** combination can be use to create a curve segment and allows the "phantom" control point to be dragged to a any drawing canvas position to generate a desired curve segment.
Single Tap	A **Single Tap** adds a line or curve segment depending on the actions taken during initial path creation. For example, tapping on two points within the drawing canvas after selecting the path tool causes a straight line segment; however, an initial **Touch/Drag** combination creates a curve segment. An additional curve segment (based on the "phantom" control point position) is created when a **Single Tap** action is performed in this scenario.
Double Tap	A **Double Tap** action anywhere on the drawing canvas completes the path and causes the Move, Zoom, and Selection Tool to be automatically chosen as the active drawing tool.
Triple Tap	**Triple Tapping** on the start handle (the orange handle with a white dot) or anywhere within the drawing canvas directs TouchDraw to automatically draw a line from the current position to the start position and closes the path. The **Triple Tap** method eliminates the need to draw a point to intersect with the starting point.
Function Key Feature/Tap	Enabling the Function Key Feature and using it in combination with a **Tap** when adding the next path segment alerts TouchDraw to ignore the "phantom" control point and creates a straight line segment.
Option Key Feature/Tap	Enabling the Option Key Feature and using it in combination with a **Tap** allows the "phantom" control point position to be set to a desired location on the drawing canvas after a **Touch/Drag** combination has been performed to create a curve segment.
Option Key Feature/Touch/Drag	Enabling the Option Key Feature and using it with a **Touch/Drag** gesture combination allows the "phantom" control point to be dragged to any point on the drawing canvas and changes a corner point back to a smooth curve after the initial **Touch/Drag** action has ben completed for creating the curve segment.

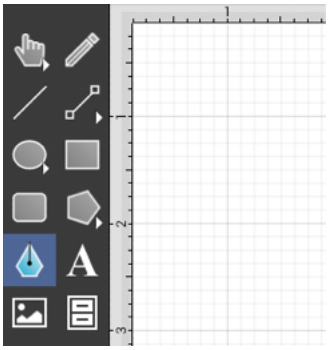
5.1.2.21.1. Adding Straight Line Segments

To create a **Straight Line Segment**, perform a **single tap** (do not drag) at the starting point and then again at the corresponding line end point. For example, the objective of drawing a parallelogram could be accomplished with the Path Tool.

The following screenshots and description outlines the steps required for creating a parallelogram with this tool.

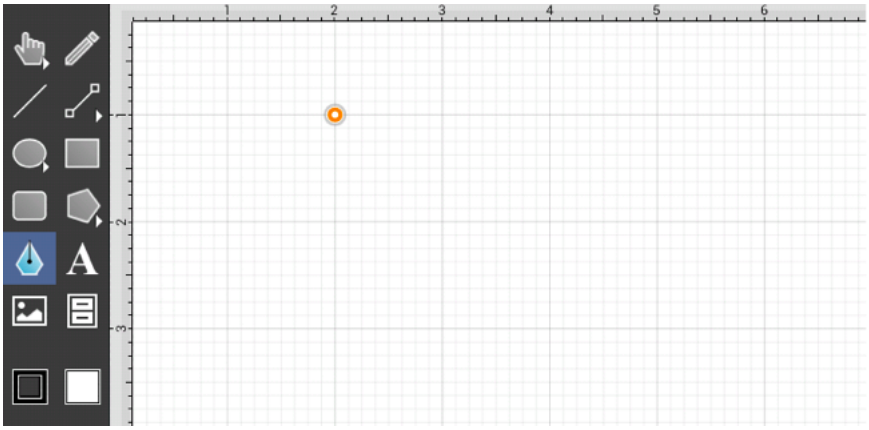
1

Select the **Path Tool** in the Drawing Toolbar.



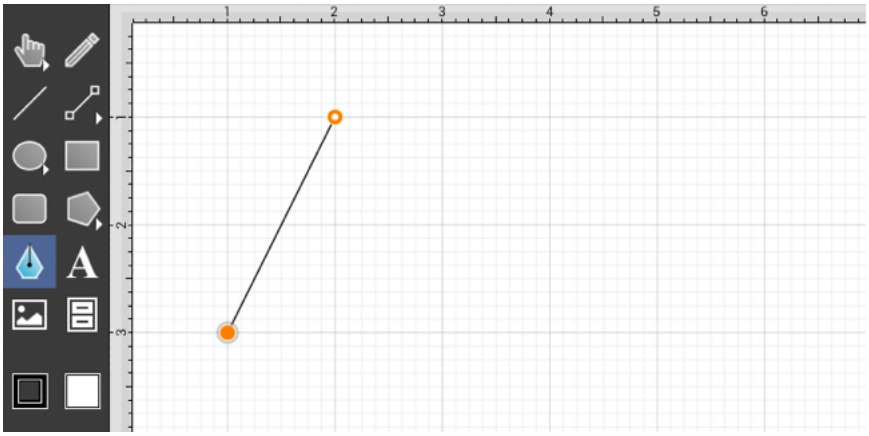
2

Tap on the drawing canvas at the location where the starting point should be established for the path. An orange handle with a white dot will appear in this specific location to signify the starting point of the path.



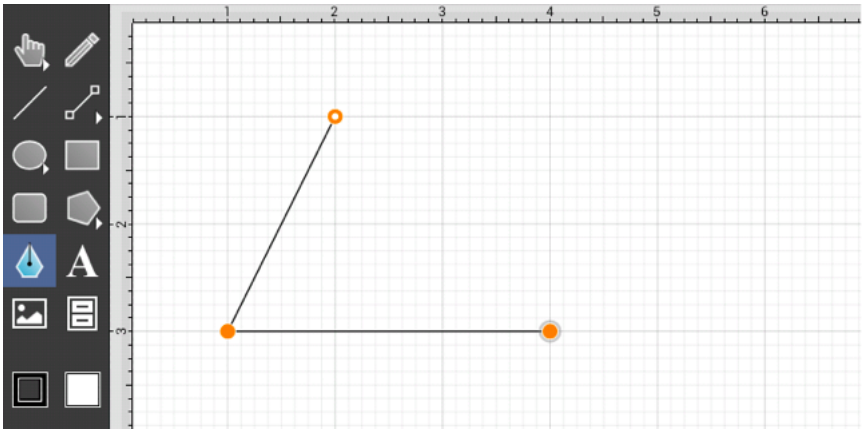
3

Tap on the drawing canvas at the location where the second corner of the parallelogram will be. This action draws a line between these two set points. It also creates a second handle (orange with no dot) at the point where the first segment ends and the second one begins.



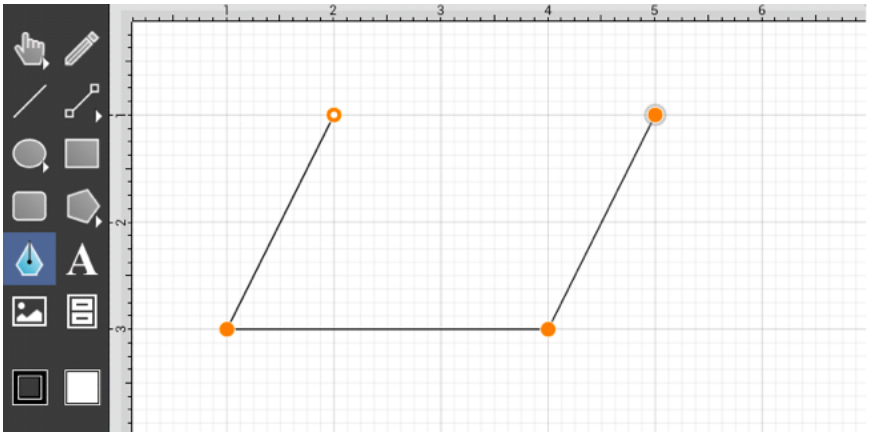
4

Tap on the drawing canvas at the location where the third corner of the parallelogram should be. As before, the action will cause a line to be drawn from the last point to the newest point and add an orange handle to the drawing.



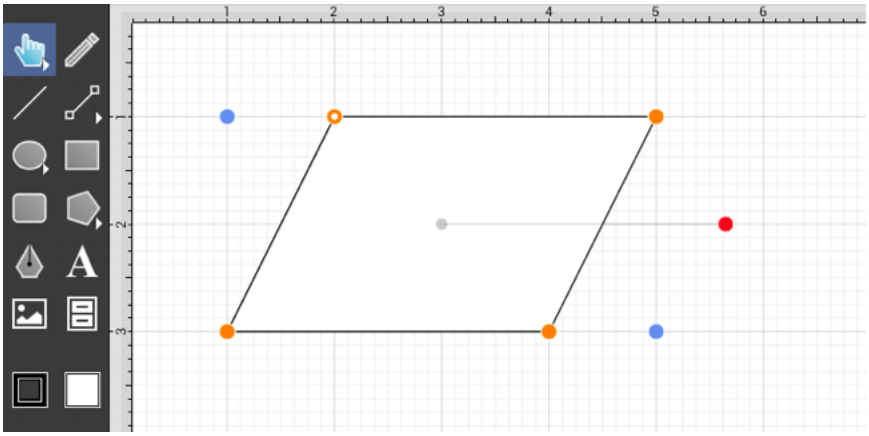
5

Tap on the drawing canvas at the location where the fourth corner should be. The same end results are provided as previously discussed for this additional line segment.

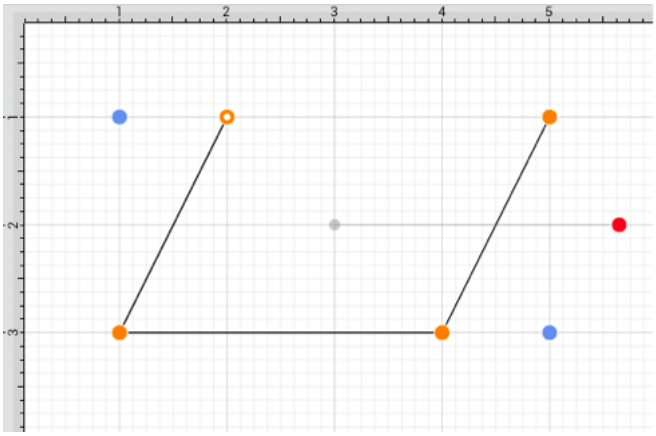


6

Two different options are available for automatically drawing the last line to connect the first point to the last (i.e. closing a path) The first option involves performing a **Tap** on the start point (orange handle with white dot). The second option involves performing a **Triple Tap** anywhere within the drawing canvas. The second choice closes the shape and exits the path tool when Sticky Mode is not enabled. Once a path has been created and selected, a few handles will be seen in addition to the path point handles created in the steps above. The blue handles are "bounds handles" that allow for shape resizing with a dragging action. The red handle is a "rotation" handle, which allows for shape rotation around it's center point.

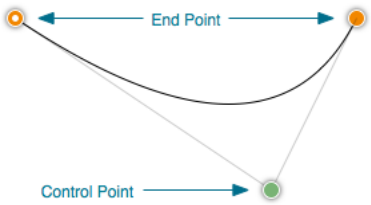


A **Double Tap** in the drawing canvas results in a path as illustrated in the screenshot below.



5.1.2.21.2. Adding Quadratic Curve Segments

A **Quadratic Curve** is a line segment with two end points and a control point that determines the exact curve to be drawn. The figure below illustrates an example of a quadratic curve.



Two core gestures are used when creating path segments. A **Single Tap** adds an end point and a **Touch/Drag** gesture combination adds an end point with a corresponding control point. Since a **Quadratic Curve** contains two end points and one control point, the above mentioned core gestures provide two ways to create this type of path:

- Performing a Single Tap and then a Touch/Drag combination.
- Performing a Touch/Drag combination and then a Single Tap.

For example, the Path Tool can be used to draw a shape resembling the fireplace below by combining 3 line segments and one quadratic curve segment.

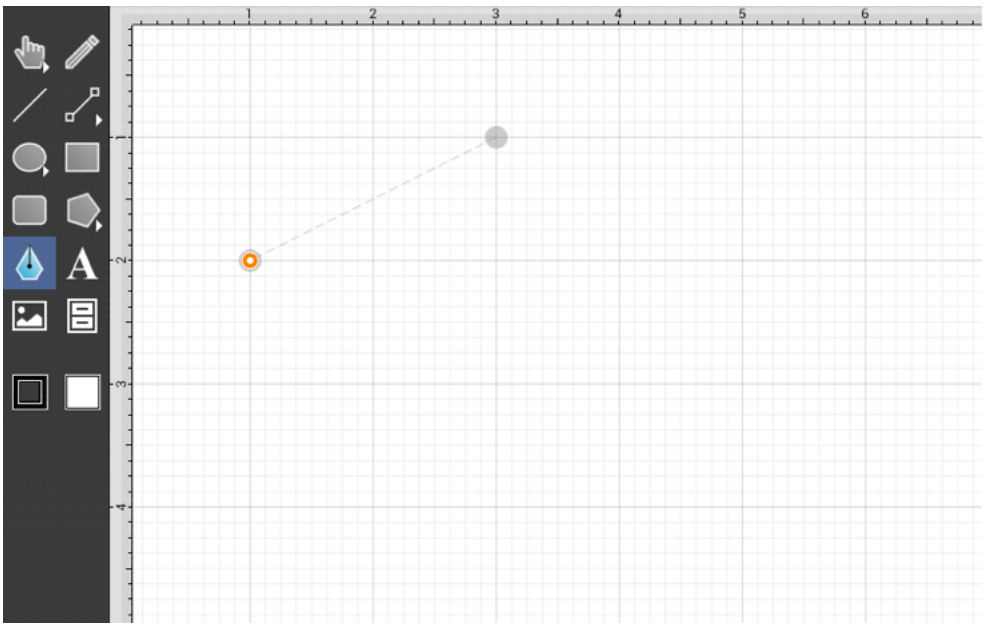
The following instructions outline the process we would take to do this.

1

Select the **Path Tool** in the Drawing Toolbar.

2

Touch (but do not release) on the drawing canvas at the location where the starting point for the path should be established. Any of the corner points could be a starting point for creating this shape; however, the upper left corner point is the starting location for this tutorial. Next, **drag** the segment to the established control point location without releasing the **Touch** action. TouchDraw will draw a lashed line from the start point to the control point while the dragging action is performed and then show a slightly transparent circle in the control point location upon completion.

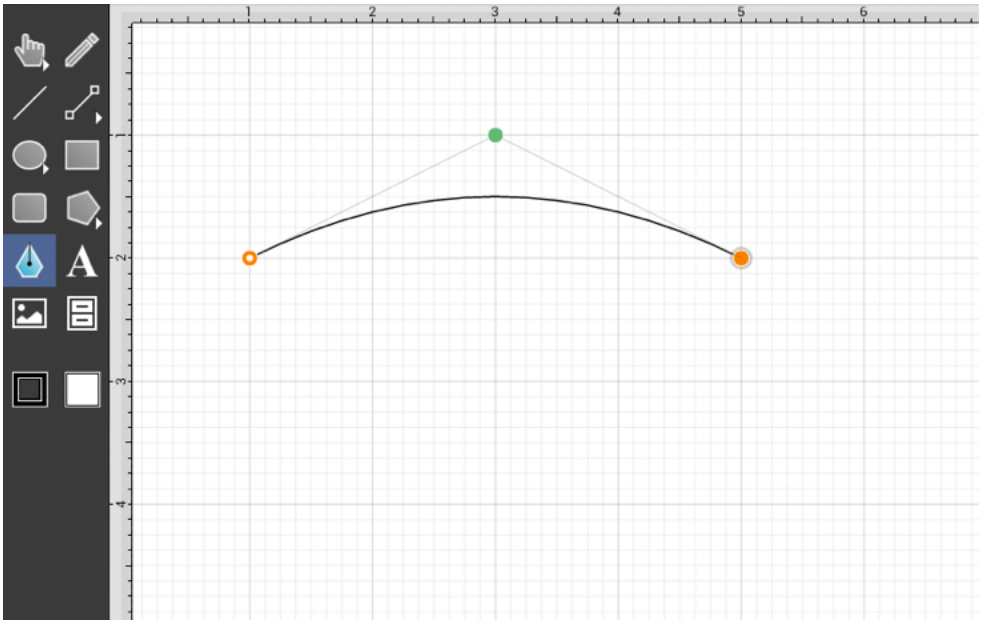


A control point is displayed in gray when it has not been used and is referred to as a "phantom" control point. This characteristic provides a hint to the TouchDraw application that it should function as a control point in

scenarios where the next drawn segment is a curve. The control point is ignored when a straight line segment is added.

3

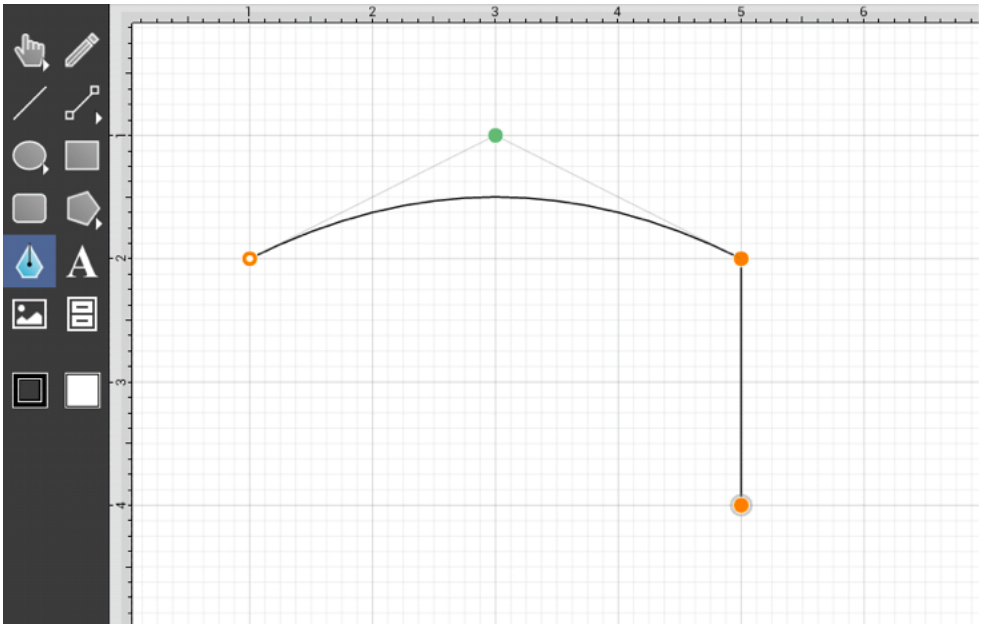
Next, tap on the drawing canvas location where the second corner of the path should be (the upper right hand corner). This action creates a quadratic curve between the two end points, with the added control point functioning as an indicator to TouchDraw as to how to draw the curve.



The handles for curve control points are green. The color and look of the control points are an indicator of how they relate to the selected shape. Refer to the handles reference page to learn about the types of handles.

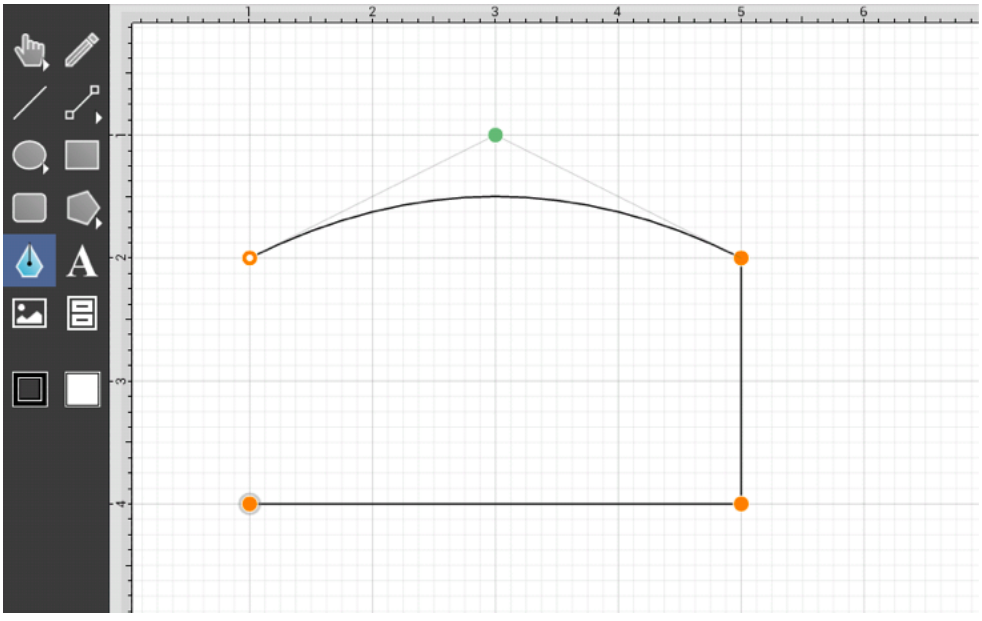
4

Next, tap on the drawing in the location where the third corner of the path should be. As in the previous examples, it will have drawn a line from the last created point to the new point.



5

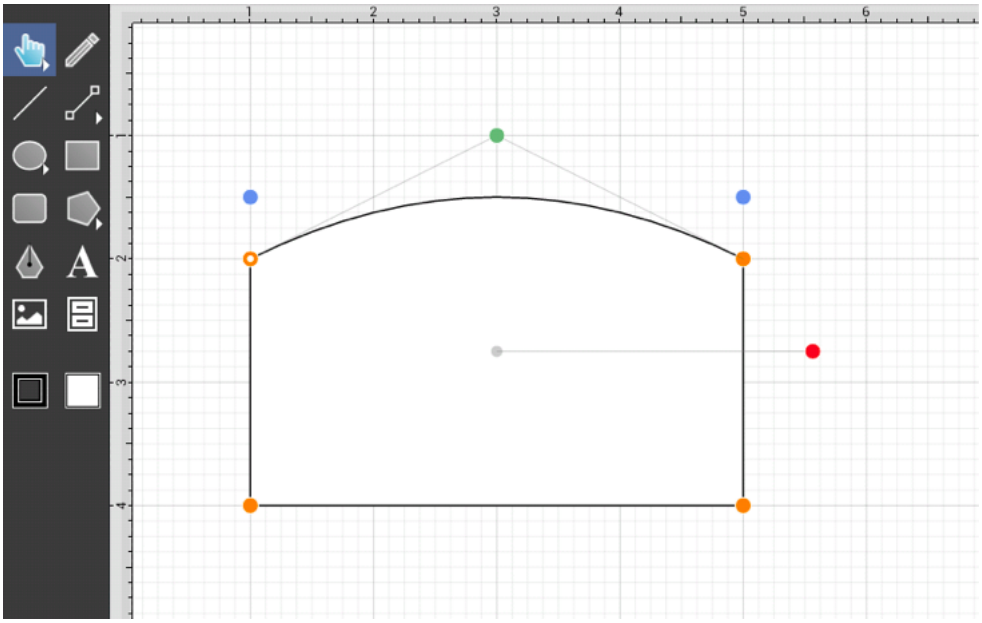
Next, tap on the drawing in a the location where the fourth corner should be. Again, the same results are provided as before.



6

To close the shape, either **Tap** on the start point (the orange handle with a white dot in it) or **Triple Tap** anywhere within the drawing canvas. This action closes the shape and exits the path tool (assuming sticky mode

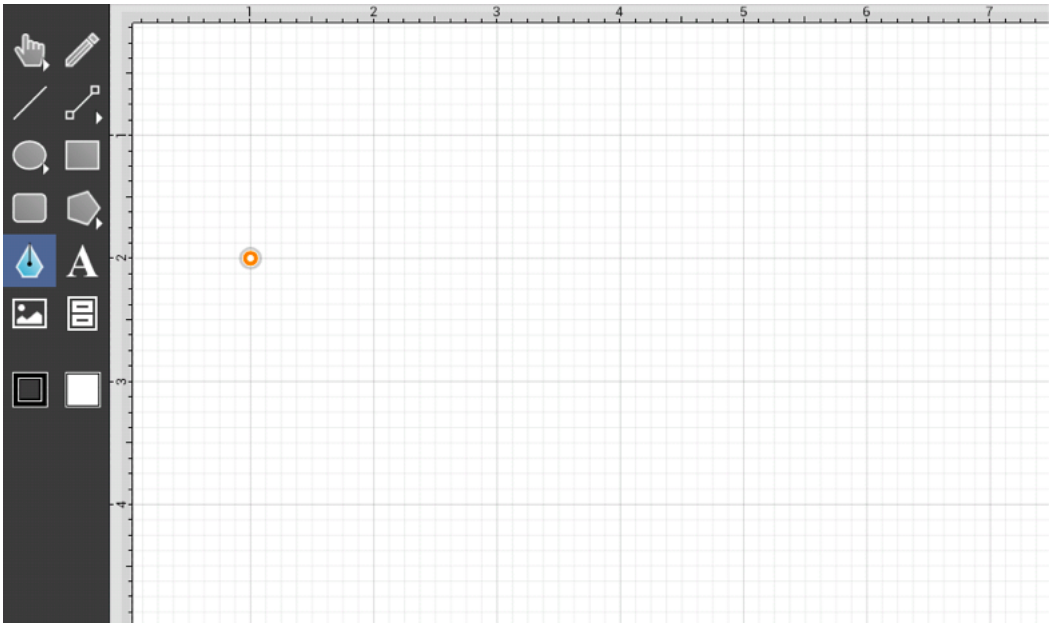
has not been enabled).



In addition to the approach above, the same figure can be drawn performing these actions in a slightly different order, as shown below:

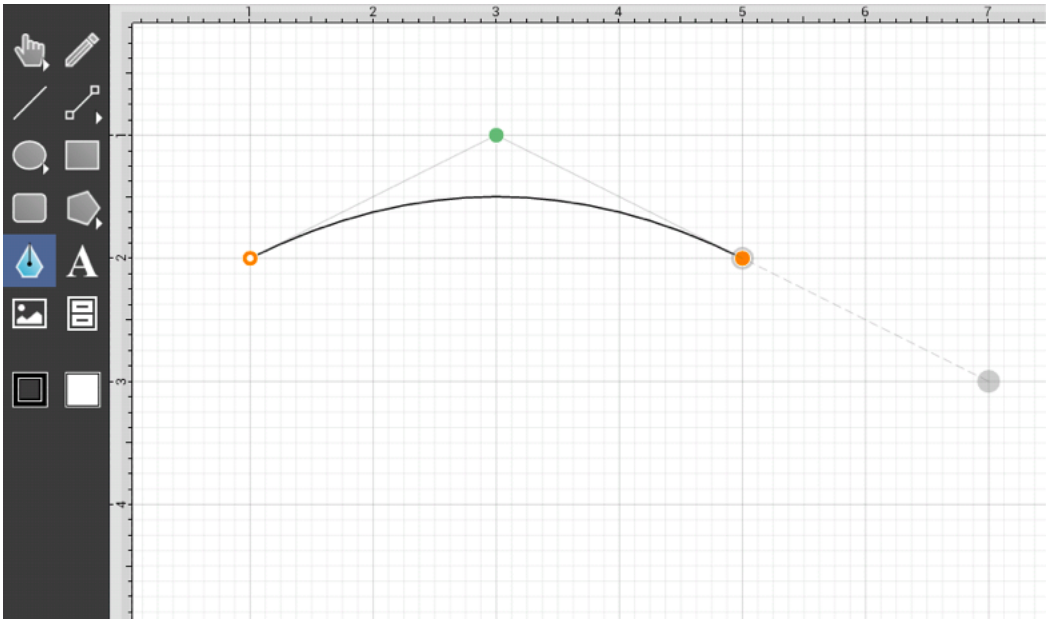
1

Tap in the upper left hand corner to create the first point of the curved portion of the fireplace.



2

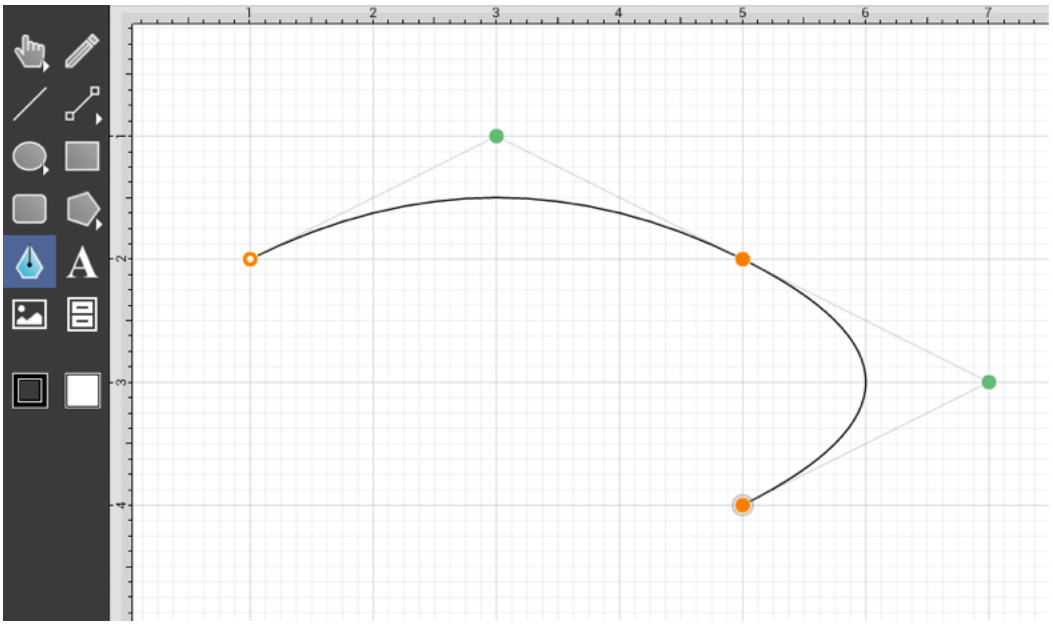
Perform a **Touch/Drag** gesture combination at the location where the ending point of the curve segment should be. **Drag** the "phantom" control point outward to the right and bottom until the desired curve has been created.



Performing an **Option/Tap** gesture combination on any location in the drawing canvas alters the position of the "phantom" control point to the selected location. Refer to the Path Tool section to learn more about this action.

3

Add a line to the next corner in the shape by tapping where the next end point should be located.

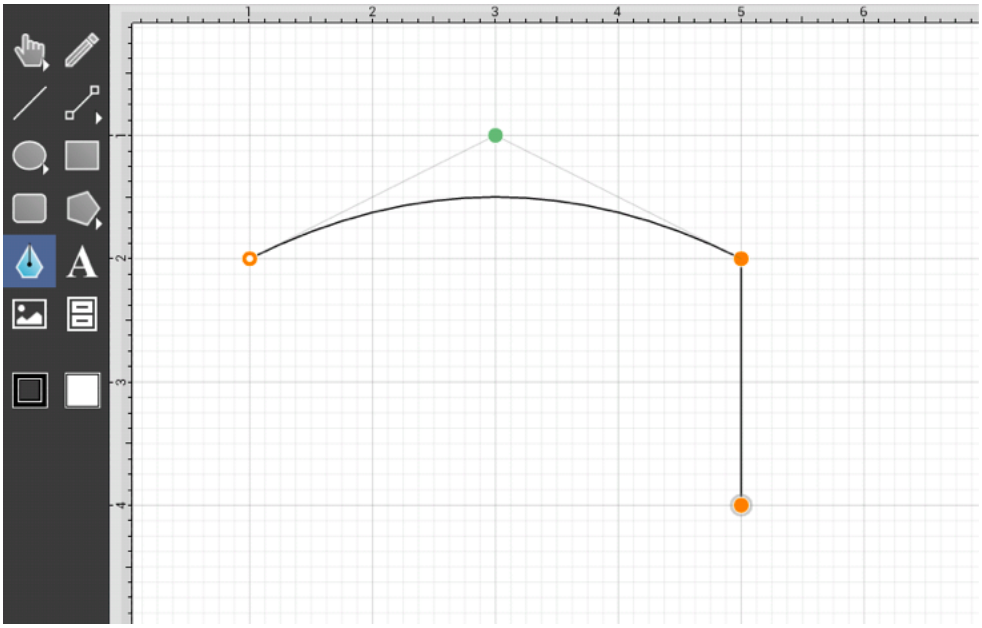


4

Obviously, this is not the desired result. If a "phantom" control point exists and a **Tap** is performed on the drawing, TouchDraw will use this control point to create a quadratic curve segment. In this case, the "phantom" control point should be ignored and discarded to draw a straight line segment from the last end point to the new end point. Tap on the **Undo Button** located in the Top Toolbar to remove this segment addition.

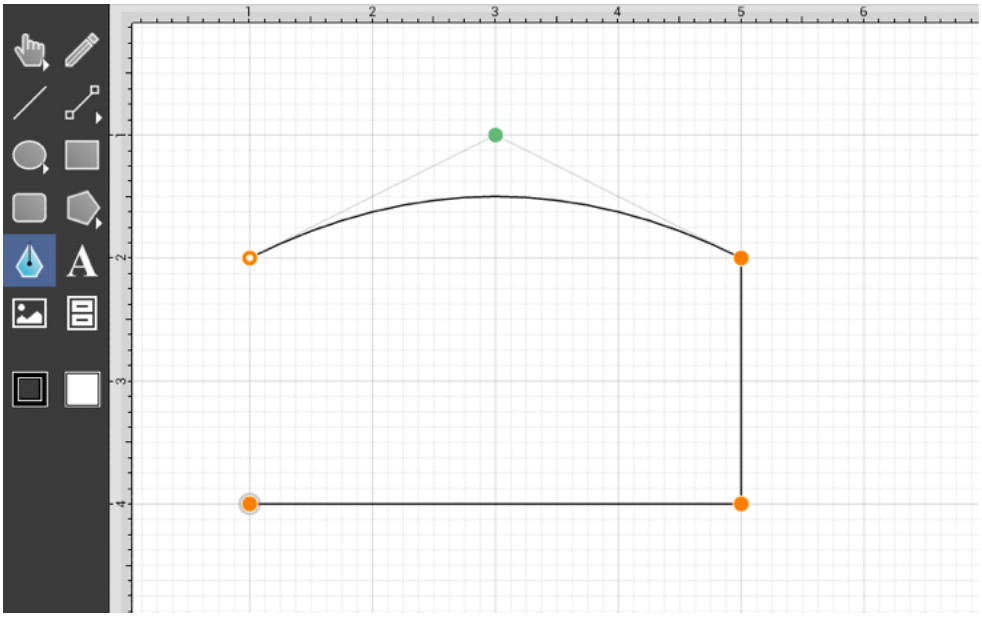
5

To draw a straight line from the last end point to the new end point, enable the Function Key Feature and tap on the next end point location in the drawing canvas. This action instructs TouchDraw to ignore the "phantom" control point and to draw a straight line.



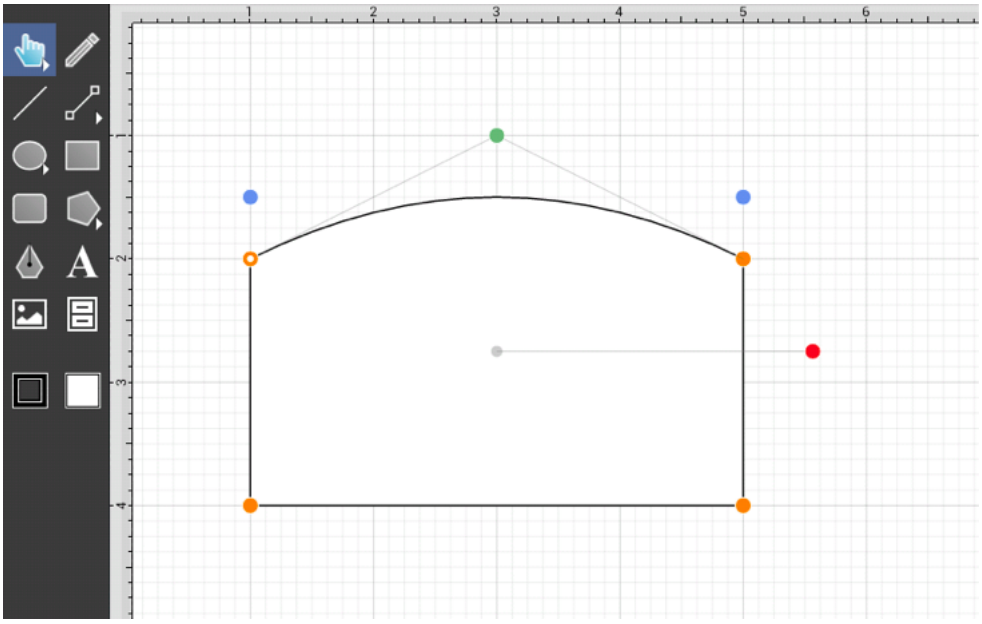
6

Tap on the next corner end point to create the bottom of the fireplace.



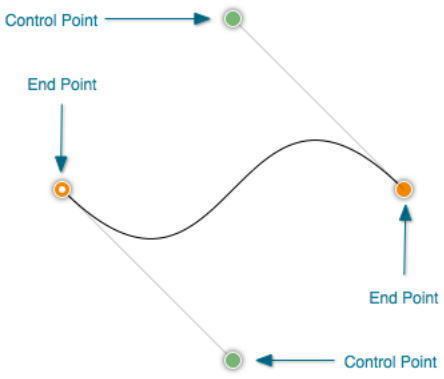
7

To close the shape, either **Tap** on the start point (the orange handle with a white dot in it) or **Triple Tap** anywhere within the drawing canvas. This action closes the shape and exits the path tool (assuming sticky mode has not been enabled).



5.1.2.21.3. Adding Cubic Curve Segments

A **Cubic Curve** is a line segment with two end points and two control points that determine the exact curve to be drawn. The image below illustrates an example of a cubic curve.



Two core gestures are available when creating path segments. A **Single Tap** will add just an end point and **Touch/Drag** gesture combination will add an end point with a corresponding control point. Since a cubic curve contains two end points and two control points, it can only be added by performing a **Touch/Drag** gesture

combination at one point and then by performing a **Touch/Drag** gesture combination at another point.

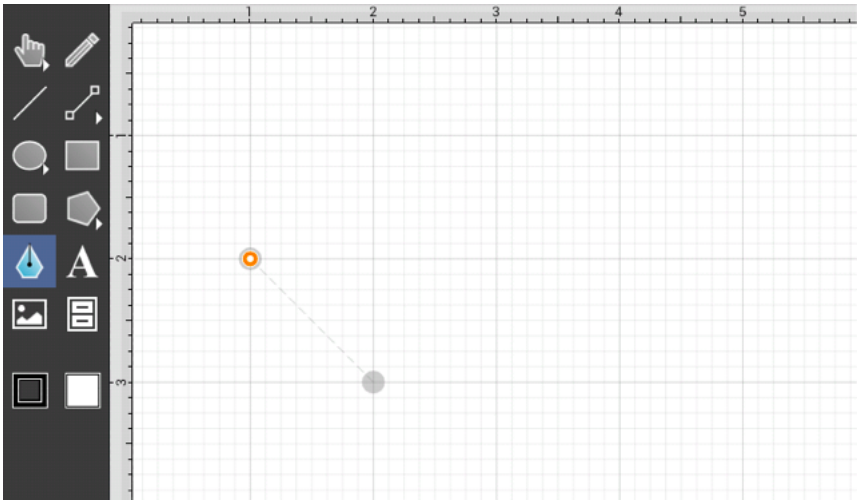
For example, complete the following steps to draw a path like the one displayed in the example above:

1

Select the **Path Tool** in the Drawing Toolbar.

2

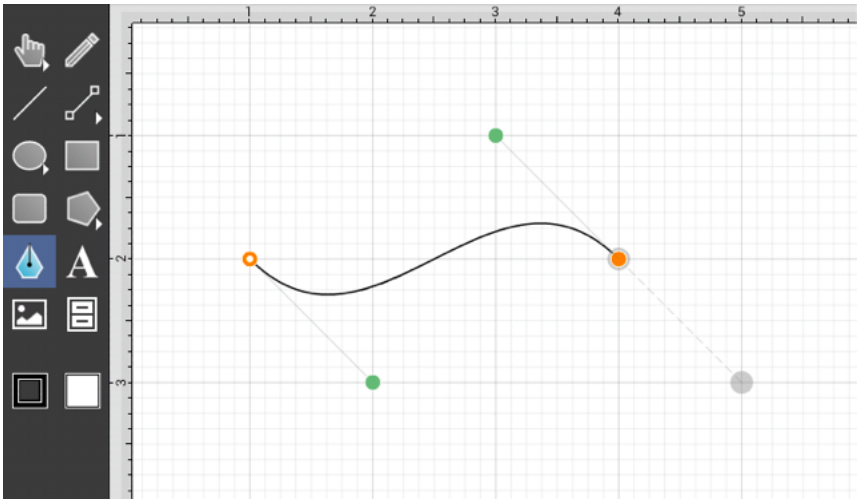
Touch on a desired starting point on the drawing canvas and drag to another location to establish the first control point. The orange handle with the white dot signifies the starting point of the path. The gray circle or "phantom" control point will turn into a control point when a curve segment is drawn.



Note: A control point is displayed in gray when it has not been used and is referred to as a "phantom" control point. This characteristic provides a hint to the TouchDraw </br> application that it should function as a control point in scenarios where the next drawn segment is a curve. The control point is ignored when a straight line segment is added.

1

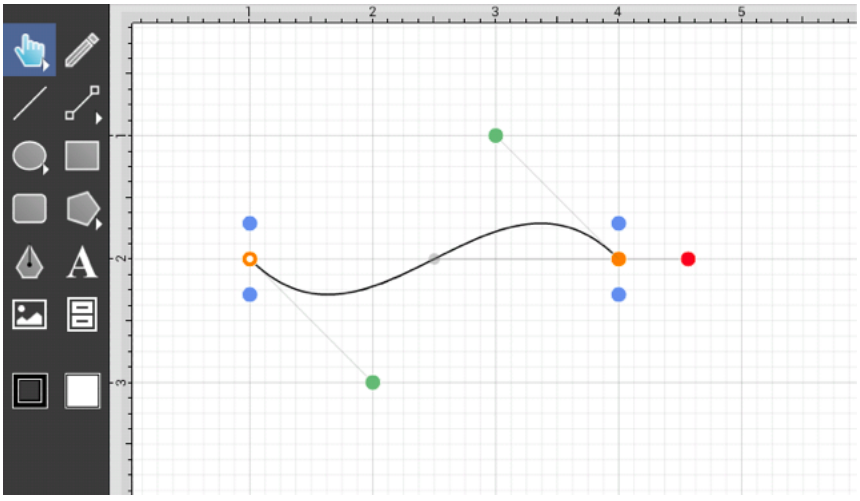
Next, touch on the point within the drawing canvas where the segment end point will be and then drag the "phantom" control point outward toward the right and bottom of the drawing canvas to create the desired curve. A real control point will be placed exactly opposite (relative to the endpoint) from the current location of the "phantom" control point.



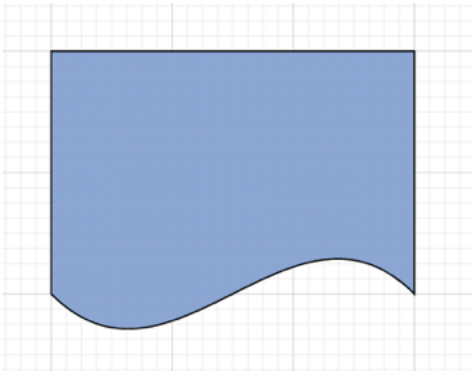
Note: Performing an **Option/Tap** combination on any location in the drawing canvas alters the position of the "phantom" control point to the selected location. Refer to the Path Tool section to learn more about this action.

1

Since a path is being created rather than a shape, a **Double Tap** must be performed on the drawing canvas to inform TouchDraw of the completed path.



The next step is to create a shape like the one shown below.

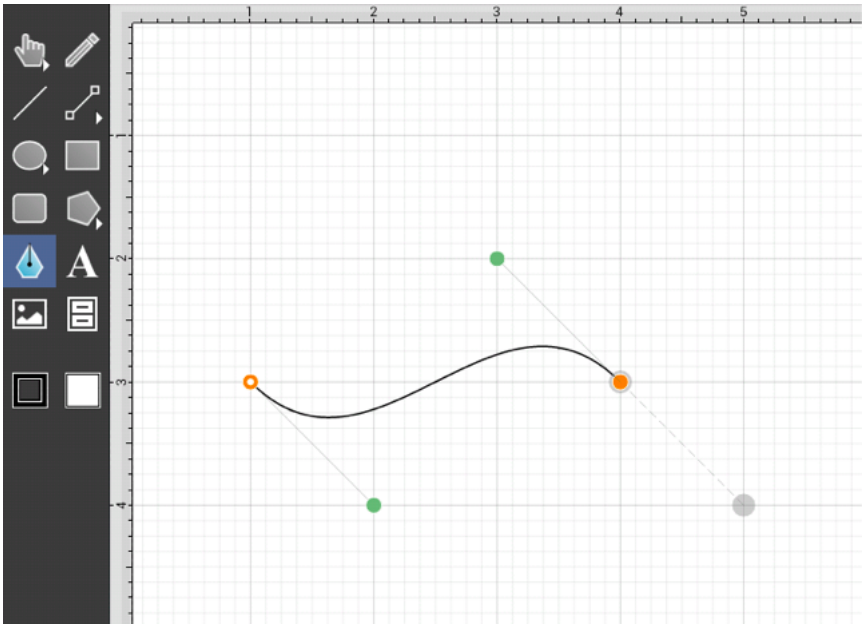


1

Select the **Path Tool** in the Drawing Toolbar.

2

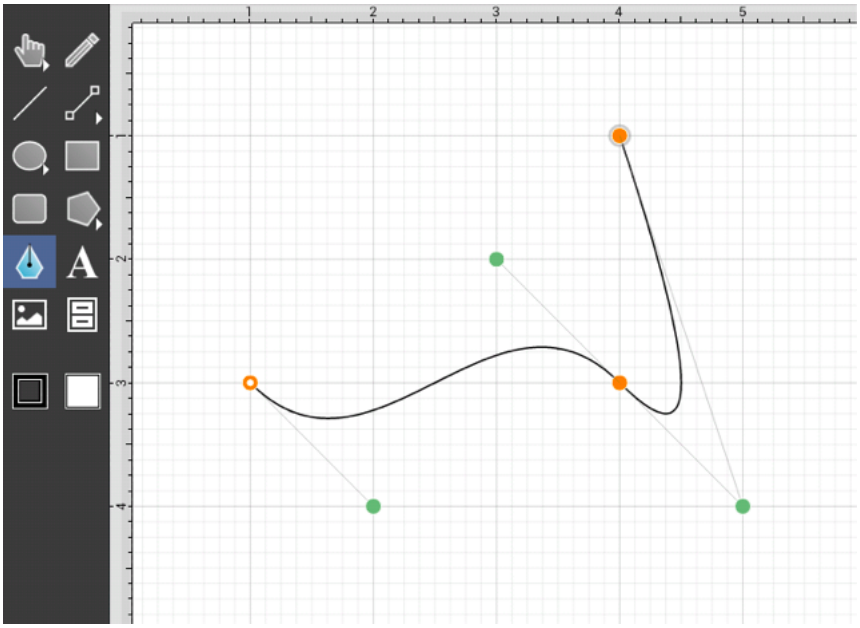
Repeat the steps above to create curve on the bottom of the shape as shown below.



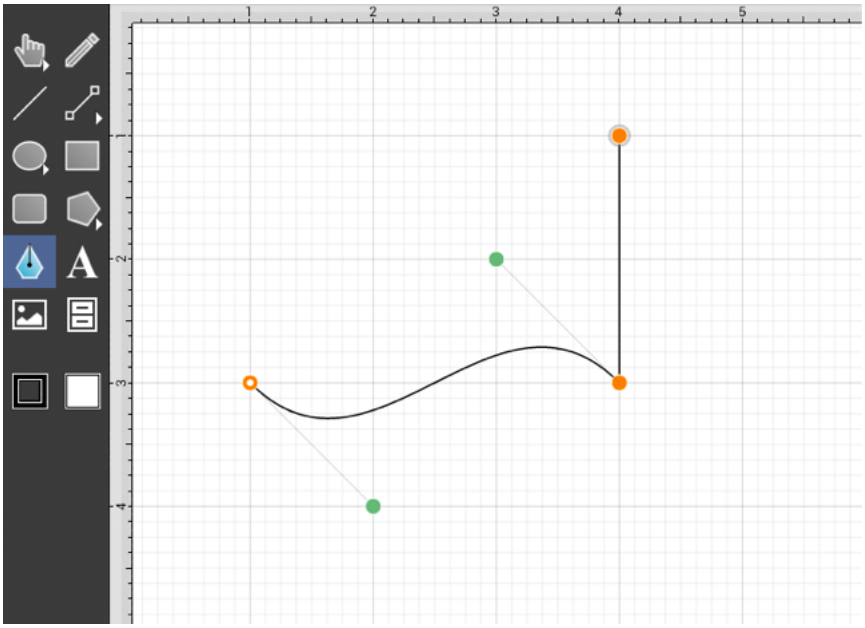
3

Next, draw the edge on the right hand side of the shape. If a control point exists and a **Tap** is completed to add a single endpoint, TouchDraw will use the "phantom" control point to create a curve. Enable the Function Key Feature by touching and holding in the empty section of the Drawing Toolbar for ~1 second until it turns red while performing the **Tap** gesture on the end point location to inform TouchDraw that a straight line should be added. This feature can also be enabled by turning on the Volume as Function Keys preference and using the

Volume Down Button on the device. The following screenshot illustrates what happens when the **Function Key Feature** is not used:

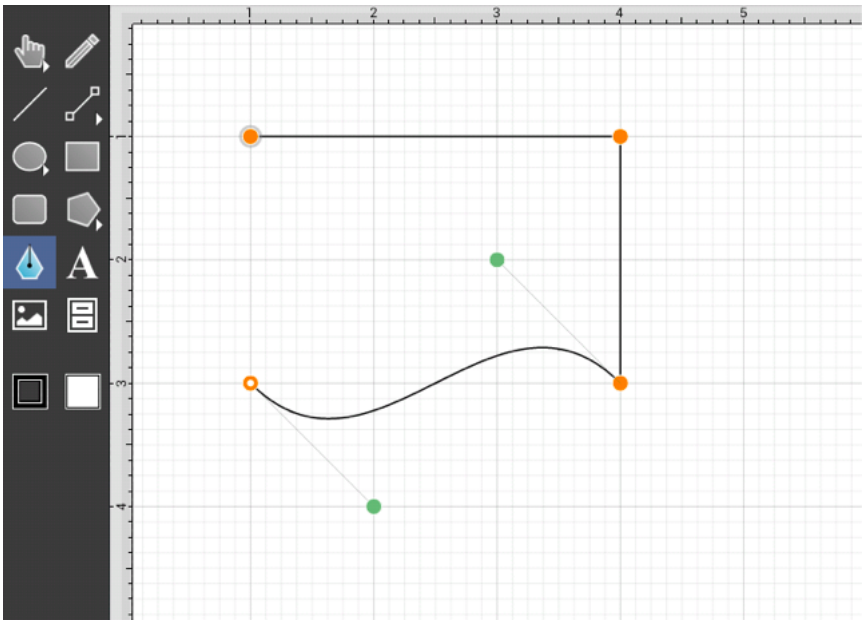


The following screenshot illustrates what happens when the **Function Key Feature**is enabled as the **Tap** is completed.



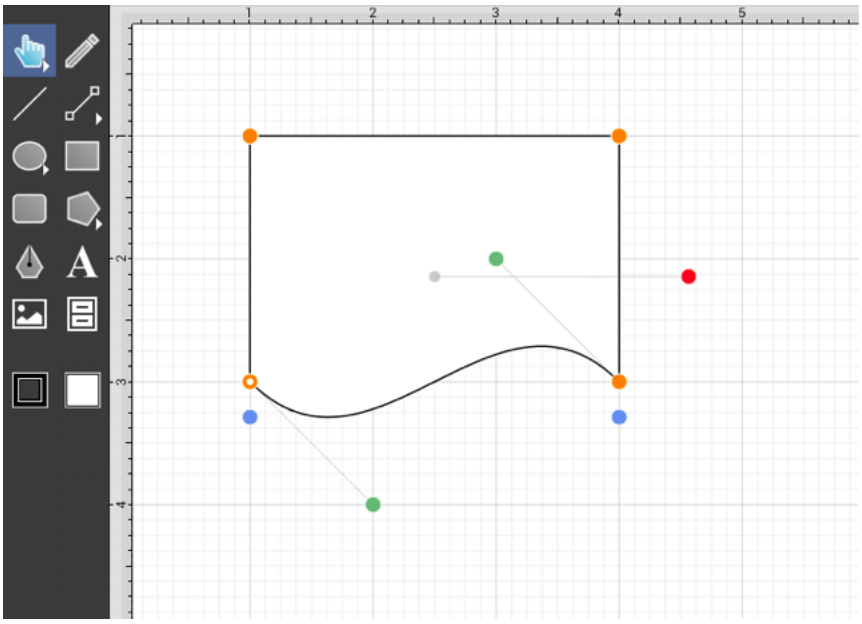
4

Next, tap in the upper left hand corner where the next end point should be.



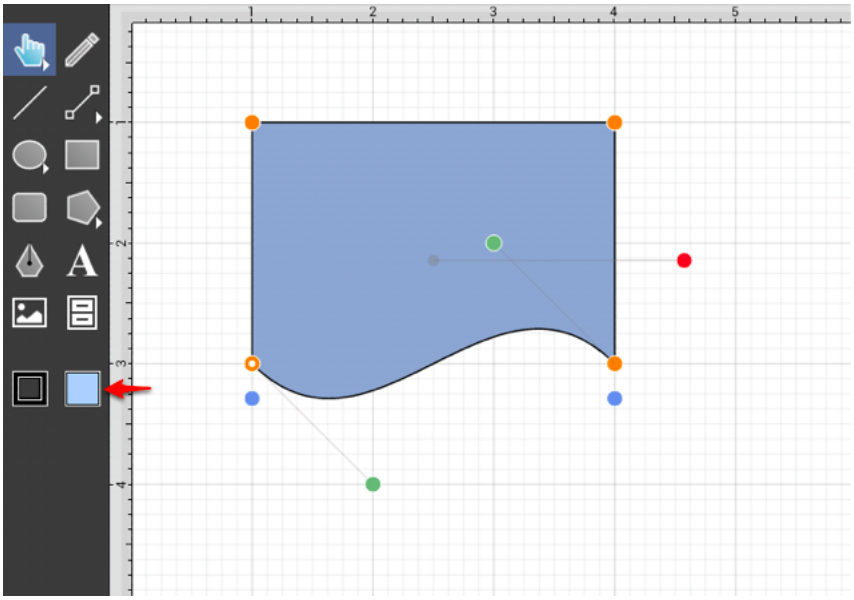
5

Finally, to close the path and to create a shape, either **Tap** on the start point (the orange handle with a white dot) or **Triple Tap** in the drawing canvas.



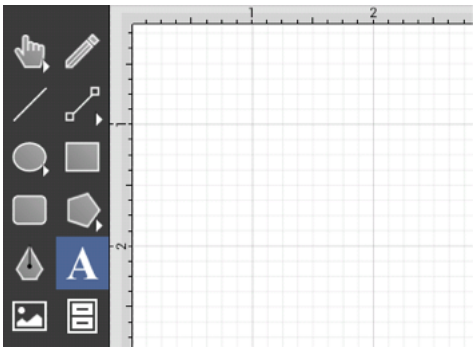
6

To set the color, Press on the **Fill Button** located in the Drawing Toolbar and choose light blue. Refer to the Handling Colors portion of the documentation to learn more about using colors.



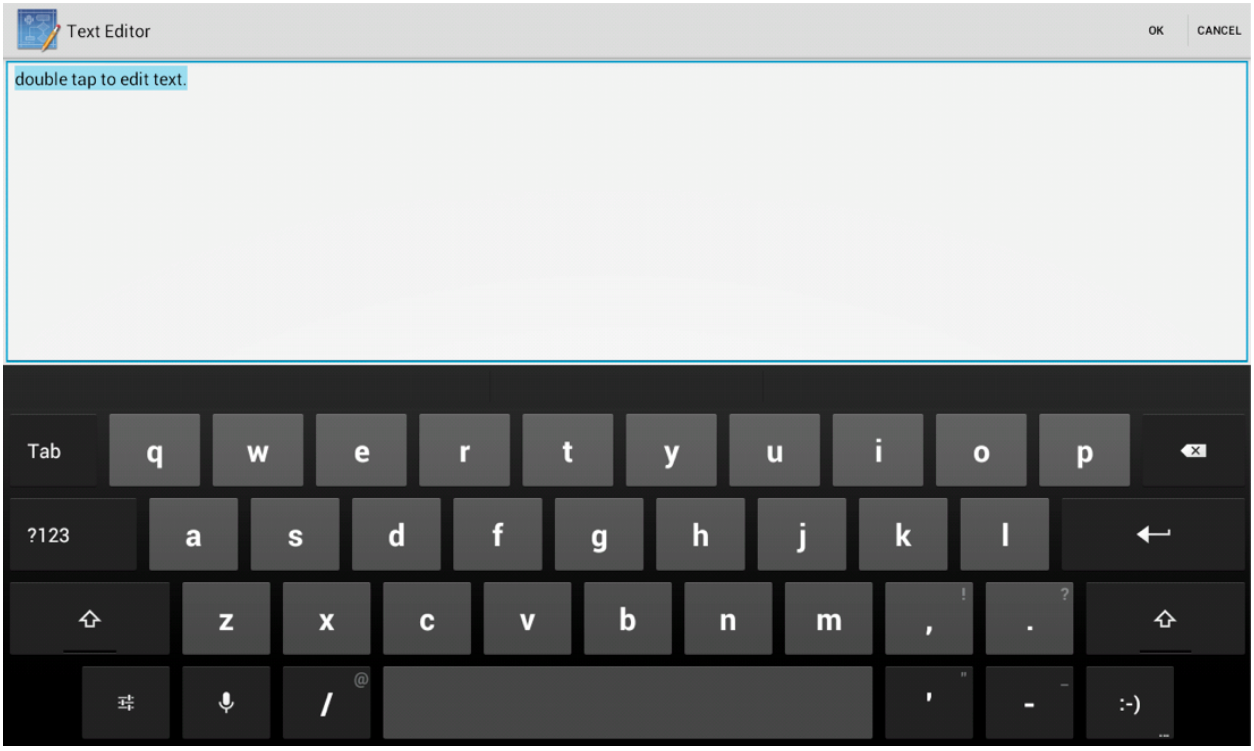
5.1.2.22. Text Tool

The **Text Tool** can be used to create a text area within a drawing. To use this tool, simply select it and perform a **Touch/Drag** gesture combination at the point in the drawing canvas where one of the bounding corners of the text area should be. Then drag in any direction and release the **Touch** action where the other bounding corner to should be located.

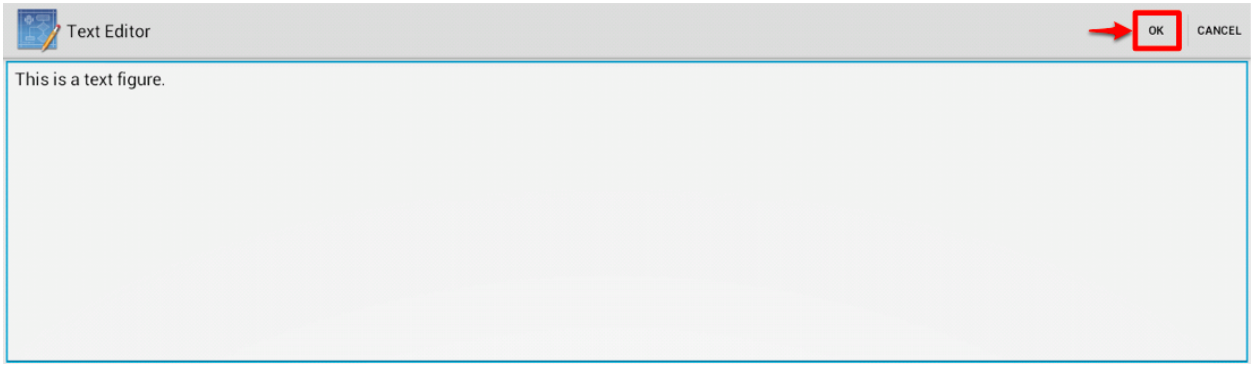


Modifying Text

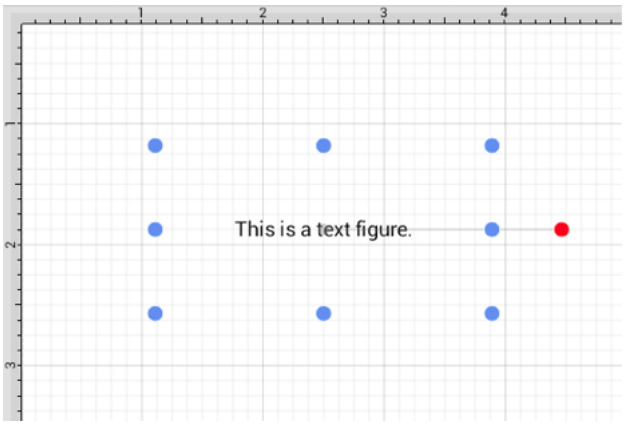
The **Text Editor** will automatically open after the *Text Figure* has been added to the Drawing Canvas.



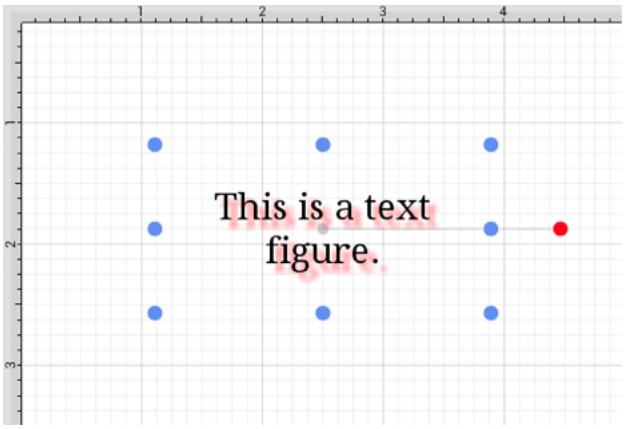
Use the keyboard to enter desired text and then tap on **OK** to exit the *Text Editor*.



Once text has been entered, it will appear similar to what is shown below:



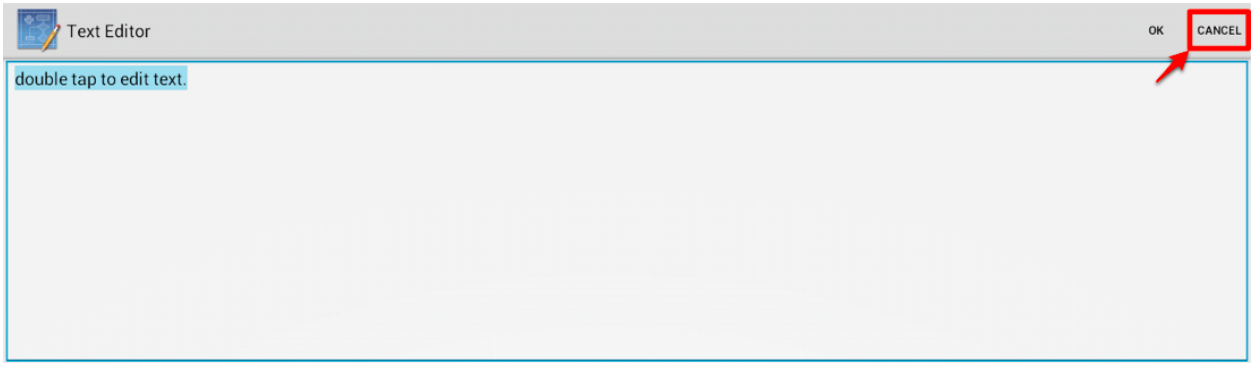
The text figure is different from all other types of figures because it only shows text. It cannot have a border (stroke) or be filled; however, displayed text can include a shadow.



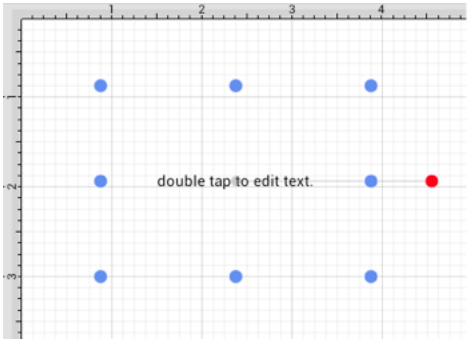
Text can be altered any time after a *Text Figure* has been added by **Double Tapping** on the figure.

Cancelling Out of the Editor

Tap on **Cancel** to exit the *Text Editor* without making changes and view the **Text Figure** within the Drawing Canvas.



The image shown below containing the default text **"double tap to edit text"** will appear if the *Text Editor* is closed without making any changes.

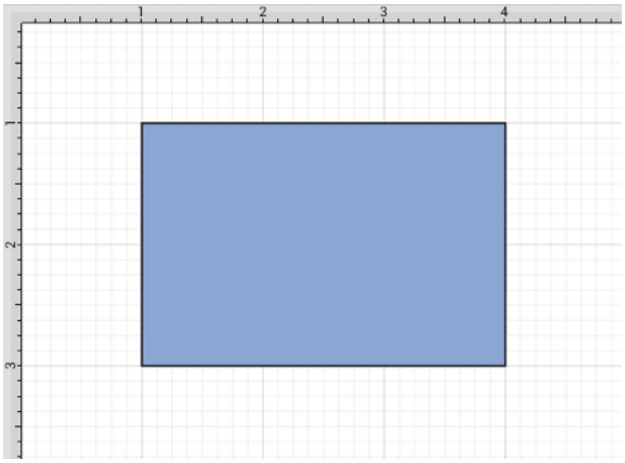


Adding Text to Figures

To add text to the inside of a of rectangle with a border, a circle, or a rounded rectangle:

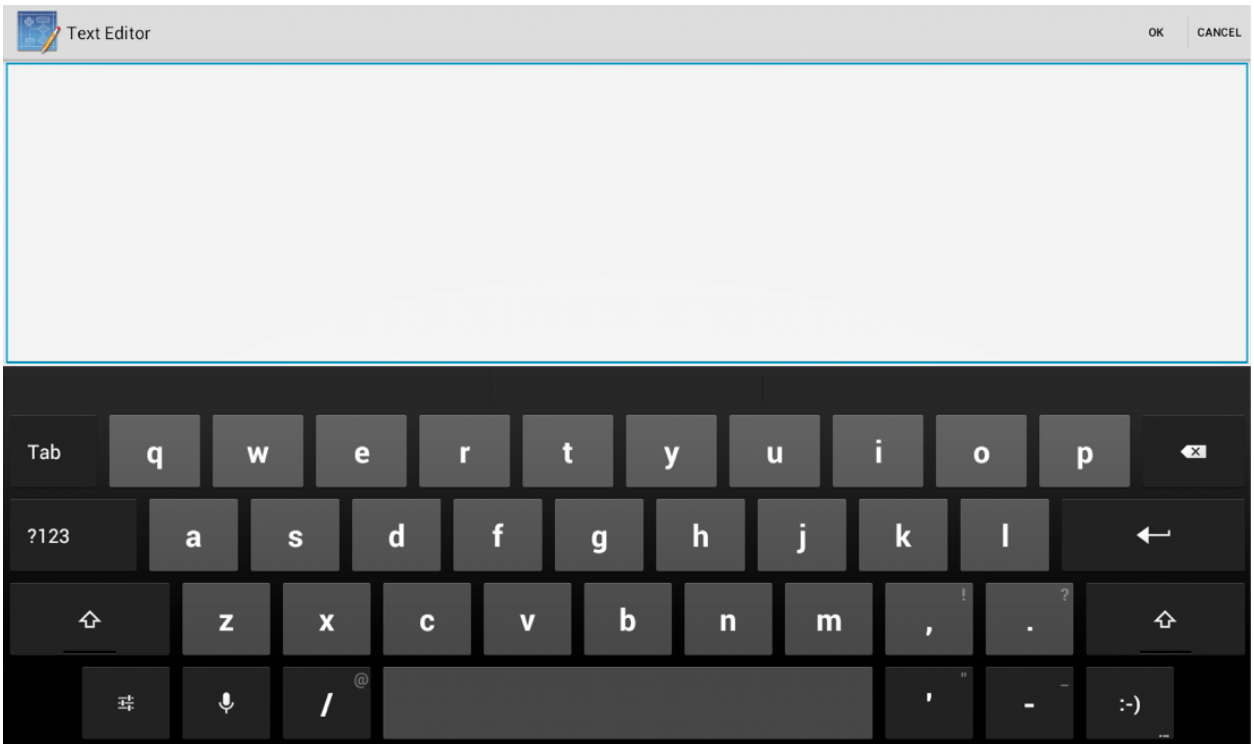
1

Use one of the Drawing Tools to create a figure.



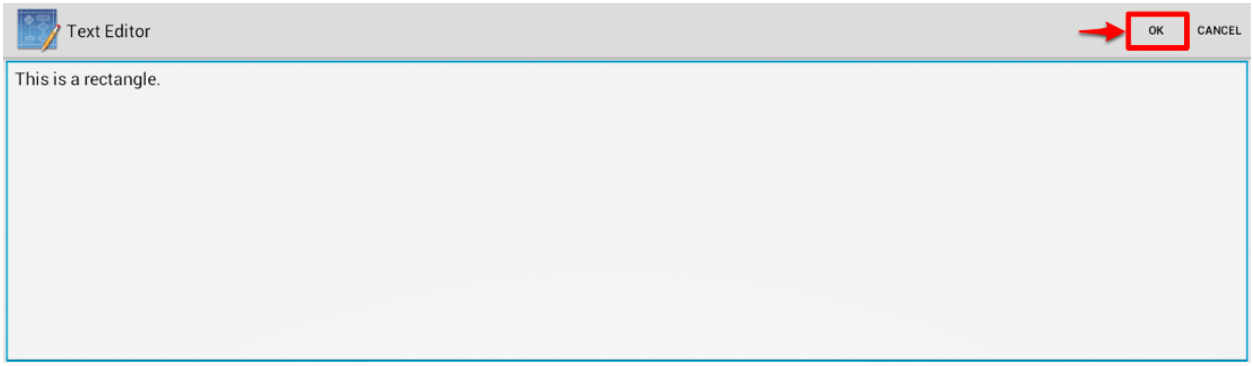
2

Double Tap on the desired figure and the editor will open.



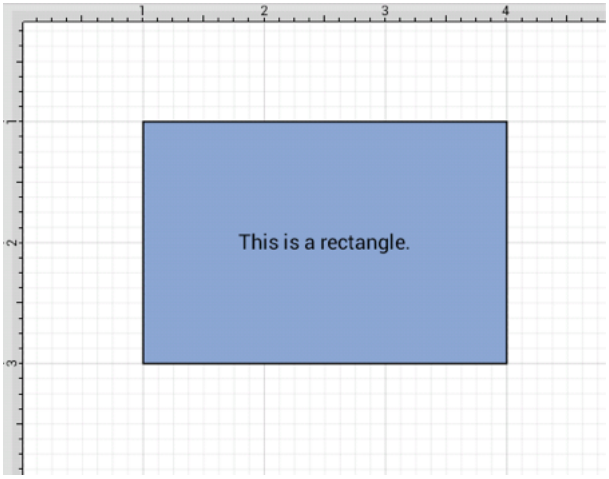
3

Use the keyboard to enter text and then tap on **OK** to close the editor.



4

The entered text will appear within the figure as shown below:

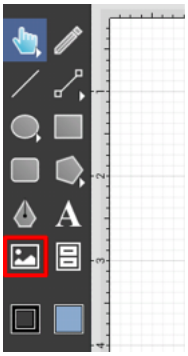


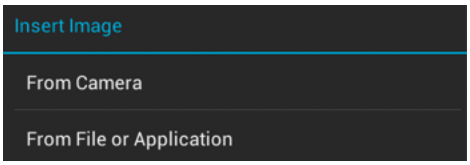
For more information on how to change the font, text size, text color and alignment, see the Handling Text section.

To simplify things, the text tool also supports adding a text area by simply tapping (without dragging) in the drawing area.

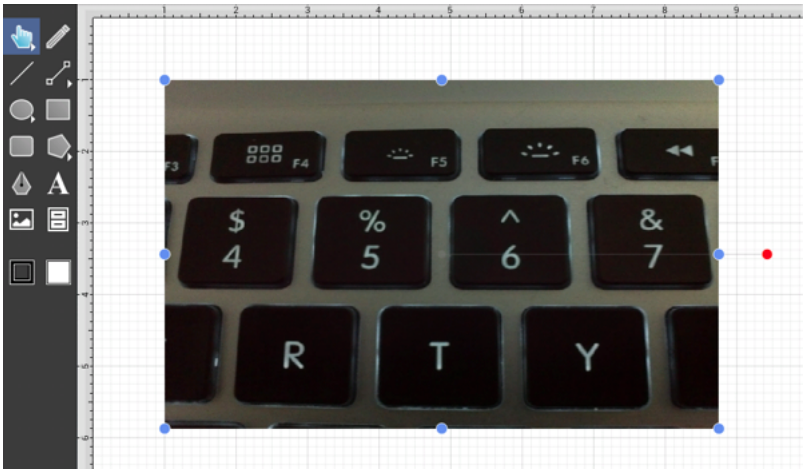
5.1.2.23. Image Tool

The **Image Tool** can be used to insert an image from an photo library or another source into the drawing. Tap on the **Image Tool** in the Drawing Toolbar to open the **Insert Image Window**, as shown below:





The **From Camera** option allows a picture to be taken from the device and inserted into the currently open drawing upon capture. In the example below, a picture of a keyboard has been taken and automatically inserted into the drawing.



The **From File or Application** option opens a submenu with available image sources for selection. Navigate through the selected photo library to find the desired image and select it to make the insertion into the currently open drawing.

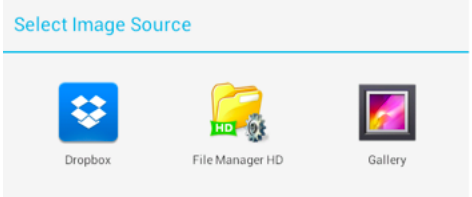
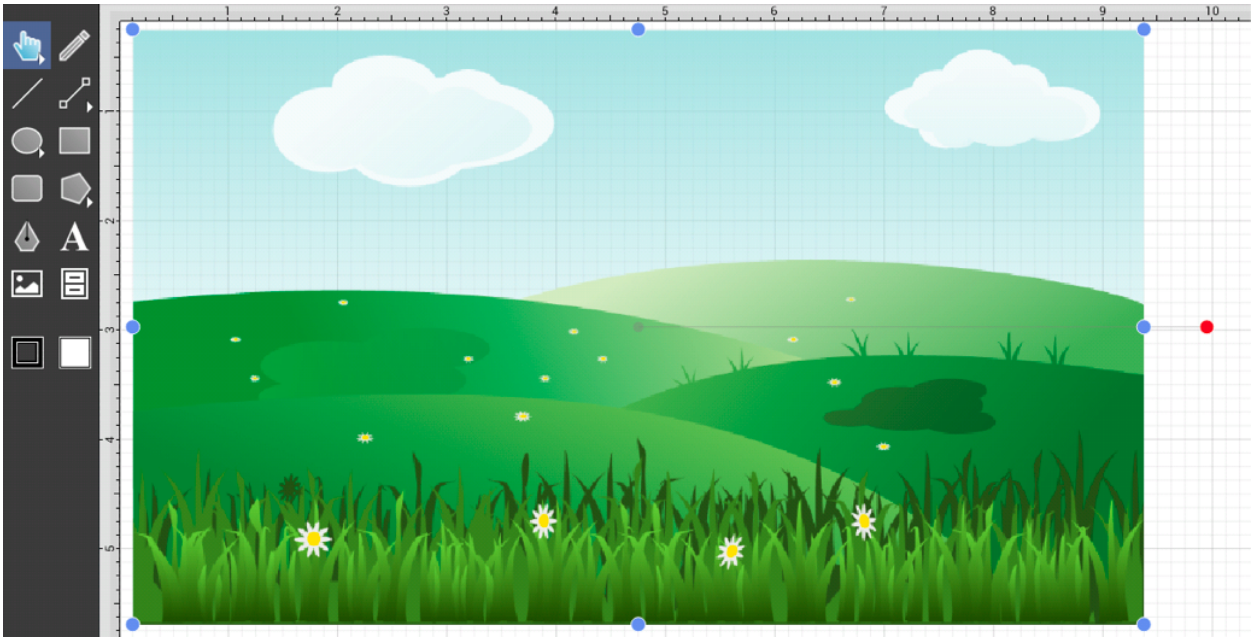


Image Source options are dynamic meaning they are supplied based on the type of device and installed applications.

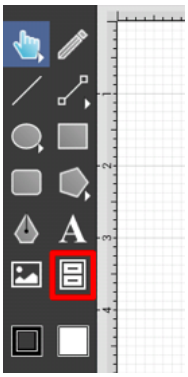
The screenshot below shows an example of an image that has been inserted into a drawing. An image is like any other type of figure in TouchDraw and has bounds handles for stretching and resizing in addition to a rotation handle.

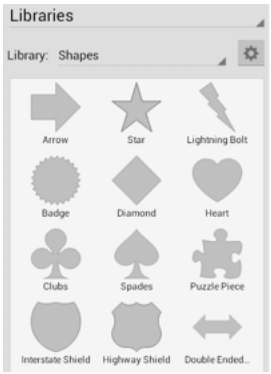


When importing an image greater than 768 pixels in width or height, TouchDraw will create a resized copy to insert into the drawing. It does this for performance and memory management reasons.

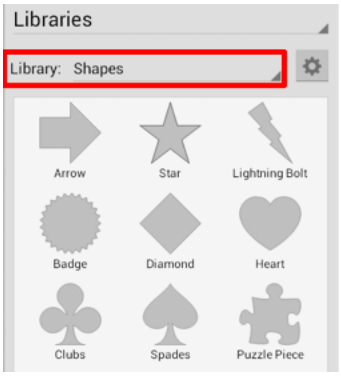
5.1.2.24. Library Tool

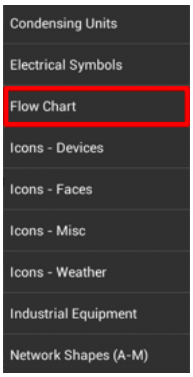
Libraries are used to add and manage stencils stored within the application and for adding these objects to a drawing. They are accessed by tapping on the **Libraries Tool** in the Drawing Toolbar, as shown below.

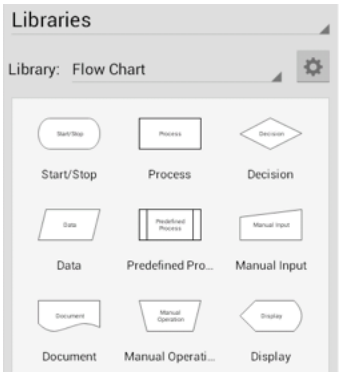




The **Libraries Sidebar Panel** opens by default to the Shapes Library. Tap on the **Library Selection Menu** to access saved stencils in a particular library. In this example, the Flow Chart option is selected.



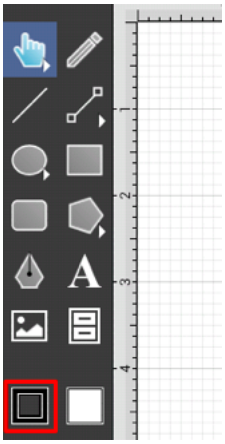


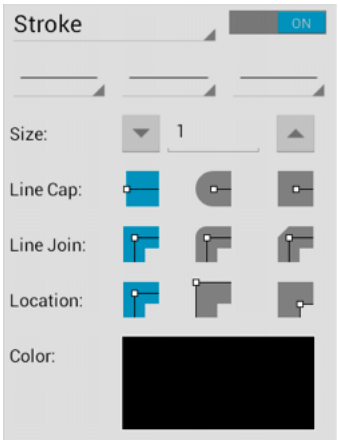


Tap on a desired stencil to add it to the current drawing. For more information, refer to the Handling Libraries section of this documentation.

5.1.2.25. Stroke Button

The **Stroke Button** provides access to options for setting the attributes of a line (stroke). Tap on the **Stroke Button** located in the Drawing Toolbar to open the Sidebar and access these attribute options.





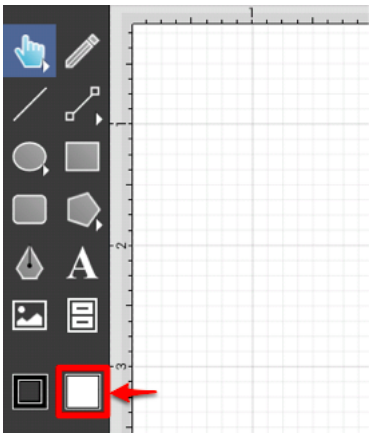
Click or Tap on the corresponding Stroke Attribute name to learn more about what the option does.

Attribute Name	Description
Stroke Visibility	The **Stroke Visibility** option is an "On/Off" toggle button for setting the visibility of strokes or lines of a figure(s). The border or line of a figure is not drawn when this option is disabled (OFF).
Start	The **Start** option sets the style of the beginning portion of a created line.
Line	The **Line** option sets the style of the line being created.
End	The **End** option sets the style of the ending portion of a created line.
Stroke Size	The **Stroke Size** option sets the width of a stroke *in pixels*.
Line Cap	The **Line Cap** option sets the cap of a line to Butt, Rounded, or Square.

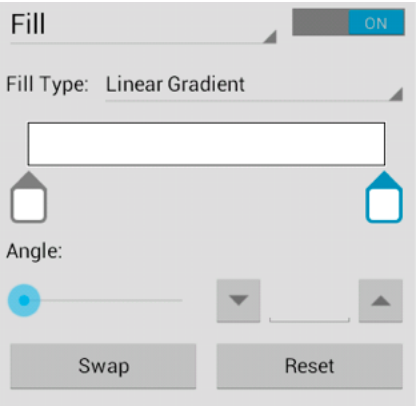
Attribute Name	Description
Line Join	The **Line Join** option sets the join of a line to Mitered, Rounded, or Beveled.
Location	The **Location** option sets the location where the line will join with another object.
Line Color	The **Line Color** options located on the left hand side of the Stroke Window are used to specify the color and transparency of a stroke.

5.1.2.26. Fill Button

The **Fill Button** provides access to options for setting the fill attributes of all objects with the exception of the Line and Connection tools. Tap on the **Fill Button** located in the Drawing Toolbar to open the Sidebar and access these attribute options.



The Sidebar will appear as shown below:



Click or Tap on the corresponding Fill Attribute name to learn more about what the option does.

Attribute Name	Description
Fill Visibility	The **Fill Visibility** option is an "On/Off" button for toggling the visibility of the fill of a figure(s). Shapes have no fill when this option is disabled (OFF).
Solid	The **Solid** option fills a figue with solid color.
Linear Gradient	The **Linear Gradient** option transitions from a specified start color to a specified end color at the designated angle.
Radial Gradient	The **Radial Gradient** option transitions from the specified start color to the specified end color by starting from the center of the figure and then moving outward in a circular manner.
Color	
Color Slider	The **Color Slider** can be used to alter the lightness or darkness of a transitioning color when a linear or radial gradient fill has been chosen.
Angle	The **Angle** option sets the angle of a linear or radial gradient and can be used to alter how color is transitioned from the start point to the end point of a figure.
Opacity	The **Opacity** option alters the opaqueness (opposite of transparency) of a selected color.
Swap	The **Swap Button** switches the transitioning color pattern set in the color slider for linear and radial gradient fill choices.
Reset	The **Reset Button** clears any selections made within the linear or radial gradient fill

Attribute Name	Description
	color attribute window.

Refer to the Handling Colors section of this documentation to learn more about color attribute changes.

5.1.2.27. Function Key Feature

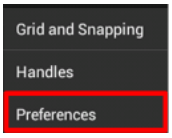
The left toolbar also works as a **Function Key** and is similar to a control click (Windows) or an option click (Macintosh). When this feature is used, it acts as an indicator to the tools that they should behave in a different manner than they normally would. For example, this feature can be used to enable multiple selection within the drawing canvas or to constrain the proportions of a figure as it is resized with one of the handles.

To enable this functionality, hold and press on the lower half of the Drawing Toolbar where no tools are present. After approximately 1 second, the toolbar will turn red as an indication of the **Function Key** being enabled. It will remain enabled as long as the utilized finger/thumb remains held on the toolbar.

The standard dark gray toolbar will reappear as a visual indicator of the function key being disabled when the finger is released.

A smaller device could cause difficulty in activating this feature in the manner described above. The Volume as

Functional Keys preference can be enabled to use the volume buttons on a device for this same purpose. This preference automatically defaults to enabled. If the preference is disabled for some reason, it can be turned on by opening the Overflow Menu in the **Drawing Editor** and selecting **Preferences** .



Simply hold down the **Volume Down Button** to select multiple figures on the Drawing Canvas or perform another **Function Key** related action.

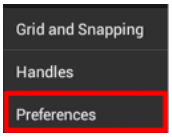
5.1.2.28. Option Key Feature

The left toolbar also works as a **Option Key**and is similar to a control click (Windows) or an option click (Macintosh). When this feature is used, it acts as an indicator to the tools that they should behave in a different manner than they normally would. For example, the **option key feature** can be used to alter the "phantom" control point position within the Drawing Canvas for a **Path** or to change a corner point back to a smooth curve after a curve segment has been created with the Path Tool.

To enable this functionality, **Double Tap and Hold** on the lower half of the Drawing Toolbar where no tools are present. After approximately 1 second, the toolbar will turn blue as an indication of the **option key feature** being enabled. It will remain enabled as long as the utilized finger/thumb remains held on the toolbar.

The standard dark gray toolbar will reappear as a visual indicator of the **option key feature** being disabled when the finger is released.

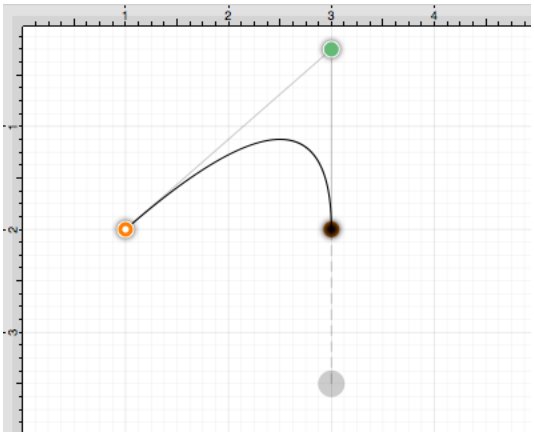
A smaller device could cause difficulty in activating this feature in the manner described above. The Volume as Functional Keys preference can be enabled to use the volume buttons on a device for this same purpose. This preference automatically defaults to enabled. If the preference is disabled for some reason, it can be turned on by opening the Overflow Menu in the **Drawing Editor** and selecting **Preferences**.



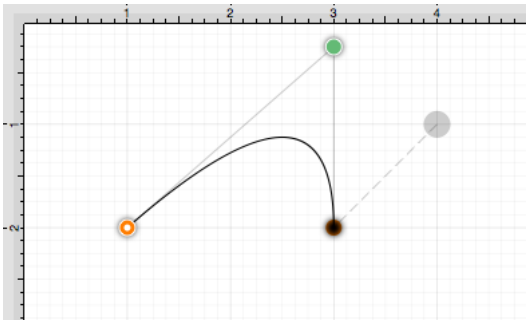
Simply hold down the **Volume Up Button** to perform the actions described below.

Option Key Feature/Tap

An **Option/Tap** combination allows the "phantom" control point position to be set to a desired location on the drawing canvas after a **Touch/Drag** combination has been performed to create a curve segment. **Double Tap and Hold** on the empty portion of the Drawing Toolbar to activate this gesture combination. The following image shows the "phantom control point at the 3,3.5 position:



An **Option/Tap** combination is completed at the 4,1 position causing the "phantom" control point to be moved to this location on the drawing canvas. Refer to the image below:

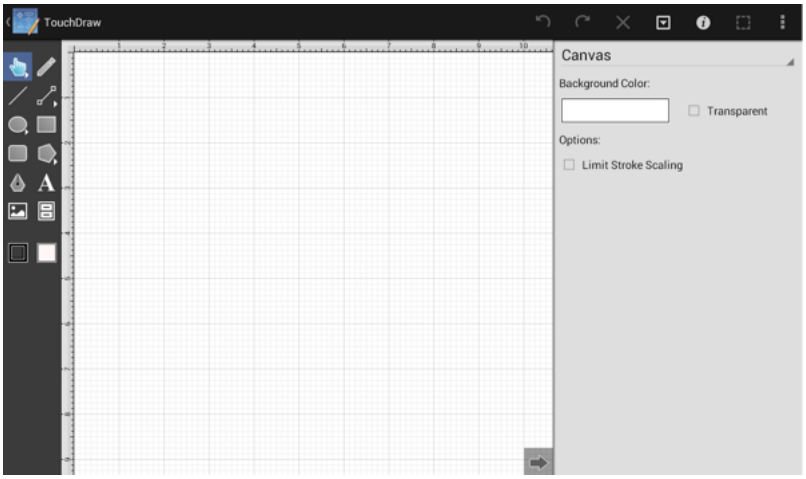


Option Key Feature/Touch/Drag

An **Option/Touch/Drag** gesture combination allows the "phantom" control point to be dragged to any point on the drawing canvas and changes a corner point back to a smooth curve after the initial **Touch/Drag** action has ben completed for creating the curve segment. This gesture combination is made possible by performing a **Double Tap and Hold** on the empty portion of the Drawing Toolbar as discussed above.

5.1.3. Sidebar

The **Sidebar** is located on the right hand side of the Drawing Editor and is used to make attribute changes for objects (shapes, lines, paths, and text), to manage drawing layers, and for inserting stencils into a drawing. Each sidebar panel is hidden by default and can be accessed by tapping on a selection from the Info Menu.



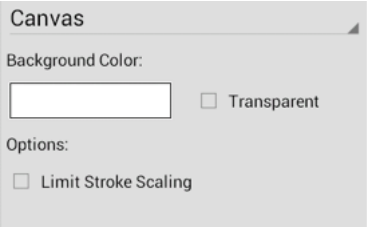
Click on the name of the Sidebar Panel to find out more details about what actions are possible when it is selected.

Sidebar Name	Description
Canvas	The **Canvas Panel** contains options for altering the background color and additional drawing canvas related settings.
Fill	The **Fill Panel** contains options for setting the fill attributes of all objects with the exception of the Line and Connection tools.
Geometry	The **Geometry Panel** contains options for gaining enhanced control of a selected figure.
Layers	The **Layers Panel** contains options for managing multiple layers of objects residing on the drawing canvas.
Libraries	The **Libraries Panel** contains options for inserting stencils into a drawing.
Page Setup	The **Page Setup Panel** contains options for altering the page size, printing units, and print margins of a drawing.
Shadow and Opacity	The **Shadow****and Opacity Panel** contains options for altering shadowing, opacity, and blending attributes of a selected figure(s).
Shape Specific	The **Shape Specific Panel** contains options for altering attributes for specific types of selected figures.
Stroke	The **Stroke Panel** contains options for setting the attributes of a line (stroke).

Sidebar Name	Description
Text	The **Text Panel** contains options for setting the text attributes of a figure(s).
Units and Rulers	The **Units and Rulers Panel** contains options for altering the unit of measure, major gridline, and additional drawing canvas related settings. These options are used to control the layout and divisions of the ruler.

5.1.3.1. Canvas

The **Canvas Panel** contains options for altering the background color and additional drawing canvas related settings. The panel will appear as shown below when the **Canvas** option is selected in the Info Menu.



Click or Tap on the corresponding Canvas Panel item name to learn more about what the option does.

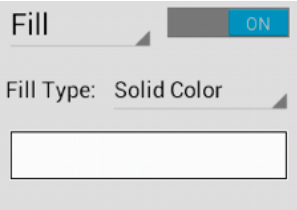
Option Name	Description
Background Color	The **Background Color** option sets the background color of the drawing. Refer to the Handling Colors section in this documentation to learn more about color selection.
Transparent	The **Transparent** option toggles whether or not the background of the drawing is transparent. For example, this option should be selected if wanting to export a drawing as transparent PNG.
Limit Stroke Scaling	The **Limit Stroke Scaling** option is used to configure TouchDraw so that lines having a thickness smaller than 1 (based on the current zoom level) are drawn at 1 pixel. This setting makes certain these lines are always visible.

Note: A change from one unit of measurement to another does not numerically change the size of figures. For example, changing from inches to centimeters where the objects were previously 1 inch wide causes the objects

to become 1 centimeter wide. You can use the Scale By... option to scale the drawing after the conversion.

5.1.3.2. Fill

The **Fill Panel** contains options for setting the fill attributes of all objects with the exception of the Line and Connection tools. The panel will appear as shown below when the **Fill** option is selected in the Info Menu.

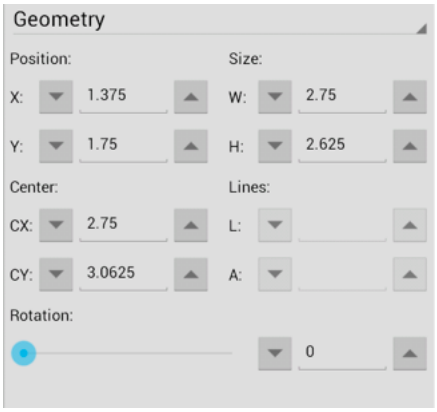


Click or Tap on the corresponding Fill Panel item name to learn more about what the option does.

Option Name	Description
Fill	The **Fill** option is an "On/Off" button for toggling the visibility of the fill of a figure(s). Shapes have no fill when this option is disabled.
Fill Type	The **Fill Type** options are located in a drop down menu underneath the Fill button. This option sets the type of fill pattern used for a figure(s). - Solid - Fills a figure with solid color. - Linear Gradient - Transitions from the specified start color to the specified end color at a designated angle. - Radial Gradient - A radial gradient transitions from the specified start color to the specified end color by starting from the center of the figure and then moving outward in a circular manner.
Color	The **Color** option is used to choose the fill color for a figure(s). See the Handling Colors section for additional details.

5.1.3.3. Geometry

The **Geometry Panel** contains options for gaining enhanced control of a selected figure. The panel will appear as shown below when the **Geometry**optionis selected in the Info Menu.



Click or Tap on the corresponding Geometry Panel item name to learn more about what the option does.

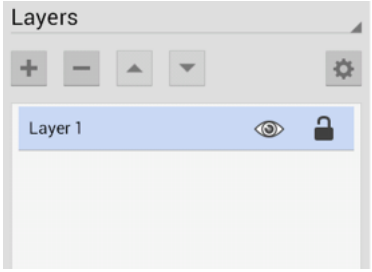
Option Name	Description
X	The **X** option sets the X position of the currently selected figure to the entered value. It functions as a nudge tool when multiple figures are selected by moving all figures in a manner relative to the entered change.
Y	The **Y** option sets the Y position of the currently selected figure to the entered value. It functions as a nudge tool when multiple figures are selected by moving all figures in a manner relative to the entered change.
W	The **W** (width) option sets the width of all currently selected figures to the entered value. The width of all figures is set to this value when multiple items are selected. To scale the width based on the relative size within the selected figures, group all of the figures and then resize or use the Nudge Overlay described in Advanced Features.
H	The **H** (height) option sets the height of the currently selected figure to the entered value. The height of all figures is set to this value when multiple items are selected. To scale the width based on the relative size within the selected figures, group all of the figures and then resize or use the Nudge Overlay described in Advanced Features.
CX	The **CX** option sets the centered X position of the currently selected figure to the entered value. It functions as a nudge tool when multiple figures are selected by moving all figures in a manner relative to the entered change.
CY	The **CY** option sets the centered Y position of the currently selected figure to the entered value. It functions as a nudge tool when multiple figures are selected by moving all figures in a manner relative to the entered change.

Option Name	Description
L	The **L** (line length) option sets the length of a selected line(s). A line must be selected for this option to be enabled.
A	The **A** (line angle) option sets the rotation angle of a selected line(s). A line must be selected for this option to be enabled.
Rotation	The **Rotation** option sets the angle of the currently selected figure to the chosen slider or keyboard entered value. In the instance of a multiple figure selection, this option will set the angle of all selected figures to the entered value and rotate them relative to their own centers. It is best to group all desired figures and then rotate them as a group when wanting to make this change relative to the center of the selection.

Note: The value displayed in the text field of each attribute setting represents the value of the first selected figure.

5.1.3.4. Layers

Layers provide the capability to incorporate more than one level of objects into a drawing. Each added layer builds on top of the previous created layer to create a multidimensional drawing. They are managed and controlled through the **Layers Panel**, which appears as shown below when the **Layers** option is selected in the Info Menu.



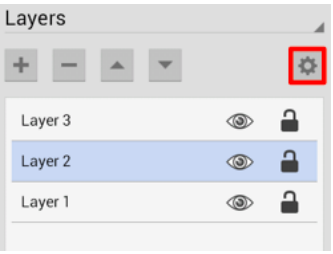
Click or Tap on the corresponding Layers Panel item name to learn more about what the option does.

Icon	Option Name	Description
	Add	The **AddButton** adds a layer to the bottom of the layer list.
	Delete	The **Delete Button** removes the top layer from the layer list.
	Move Up	The **Move UpButton** moves a selected layer up one level in the layer list.
	Move Down	The **Move Down Button** moves a selected layer down one level in the layer list.
	Layer Settings Menu	The **Layers Settings Menu** contains options for adding, deleting, re-ordering, and merging layers.
	Visibility	The **Visibility** option is an "On/Off" toggle button for setting the visibility of each created layer. It appears to the right of each layer name in the list as an "eye" icon and indicates the visibility of the layer. To hide (or show) a layer, simply **Tap** on the eye icon of the layer to be toggled. An eye icon with a line through it indicates that a particular layer is not visible, whereas an eye with no line indicates a layer is visible.
	Lock	The **Lock** option is an "On/Off" toggle button for locking or unlocking a layer. It is located to the right of the visibility icon and indicates whether or not a layer is locked. To lock (or unlock) a layer, simply **Tap** on the lock icon of the layer to be toggled. A closed lock icon indicates that a layer is locked and an open lock icon indicates a layer is unlocked.

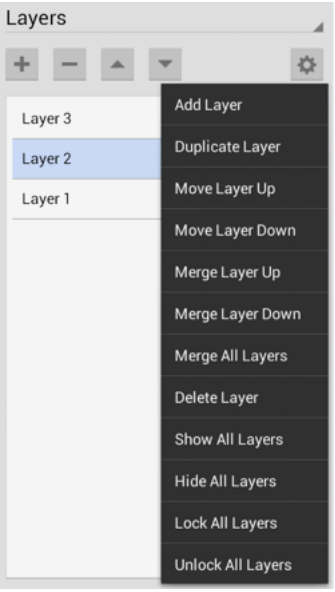
Note: Layers located at the top of the Layers List are drawn above the layers below it.

5.1.3.4.1. Layers Settings Menu

The **Layers Settings** drop down menu is used to perform specific actions on a created layer or set of layers. It is located in the upper right hand corner of the Layers Panel, as shown in the image below.



Tap on this menu to acces additional options.



Click on the corresponding Layers Setting Menu item name to learn more about what the option does.

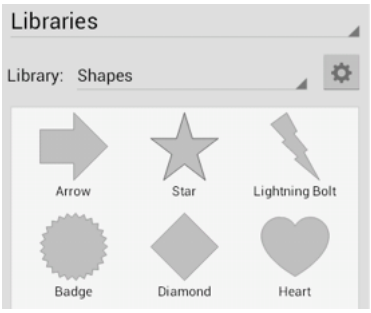
Option Name	Description
Add Layer	The **Add Layer** option adds a layer above existing layers. A new layer appears at the top of the sidebar list.
Duplicate Layer	The **Duplicate Layer** option creates an exact copy of a selected layer and adds it to the top of the sidebar list.
Move Layer Up	The **Move Layer Up** option moves a selected layer up one level in the sidebar list.
Move Layer Down	The **Move Layer Down** option moves a selected layer down one level in the sidebar list.
Merge Layer Up	The **Merge Layer Up** option merges the selected layer with the one residing above it

Option Name	Description
	in the sidebar list.
Merge Layer Down	The **Merge LayerDown** option merges the selected layer with the one residing below it in the sidebar list.
Merge All Layers	The **Merge All Layers** option merges all existing layers into a single layer.
Delete Layer	The **Delete Layer** option permanently removes a selected layer from the sidebar list.
Show All Layers	The **Show All Layers** option makes all layers within the currently open drawing visible.
Hide All Layers	The **Hide All Layers** option hides all layers within the currently open drawing.
Lock All Layers	The **Lock All Layers** option locks all layers within the currently open drawing.
Unlock All Layers	The **Unlock All Layers** option unlocks all layers within the currently open drawing.

Note: The **Move** and **Merge** options are enabled when two or more layers exist in the sidebar list. Corresponding up and down options for these categories require a layer to be available above or below the selected layer to appear as a menu selection.

5.1.3.5. Libraries

Libraries are used to add and manage stencils stored within the application and for adding these objects to a drawing. They are managed and controlled through the **Libraries Panel**, which appears as shown below when the **Libraries** option is selected in the Info Menu.

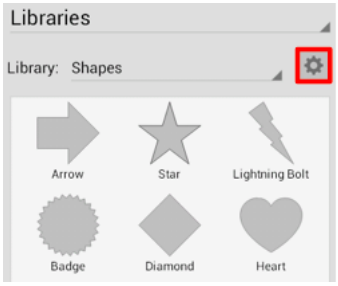


Click or Tap on the corresponding Libraries Panel item name to learn more about what the option does.

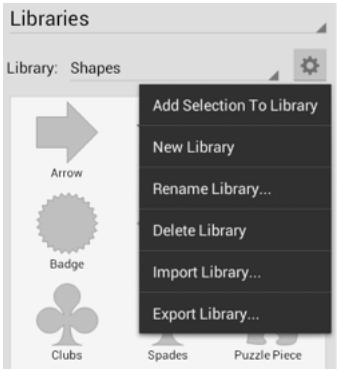
Icon	Option Name	Description
	Library Selection Menu	The **Library Selection Menu** can be used to select a specific library for stencil additions, library modifications, or drawing stencil insertion.
	Libraries Settings Menu	The **Libraries Settings Menu** contains options for adding or deleting stencils and library manipulation.
	Stencil Selection Area	The **Stencil Selection Area** shows all stencils within a selected library and can be used to make drawing additions.

5.1.3.5.1. Libraries Settings Menu

The **Libraries Settings** drop down menu is used to create, alter, or delete librairies. It is located in the upper right hand corner of the Libraries Panel, as shown in the image below.



Tap on this menu to acces additional options.

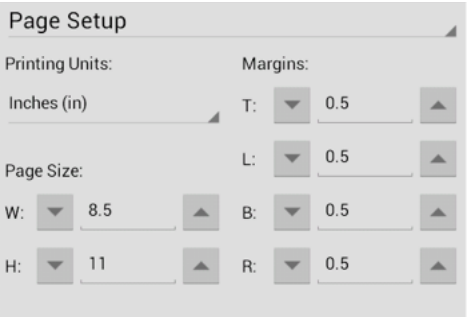


Click or Tap on the corresponding Libraries Settings Menu item name to learn more about what the option does.

Option Name	Description
Add Selection To Library	The **Add Selection To Library** option inserts a new stencil into the selected library.
New Library	The **New Library** option creates a new library in TouchDraw.
Rename Library...	The **Rename Library...** option assigns a new name to a selected library.
Delete Library	The **Delete Library** option removes a library from TouchDraw
Import Library...	The **Import Library...** option imports a library into TouchDraw from another location.
Export Library...	The **Export Library...** option exports a library from TouchDraw to a chosen directory.

5.1.3.6. Page Setup

The **Page Setup Panel** contains options for altering the page size, printing units, and print margins of a drawing. The panel will appear as shown below when the **Page Setup** option is selected in the Info Menu.



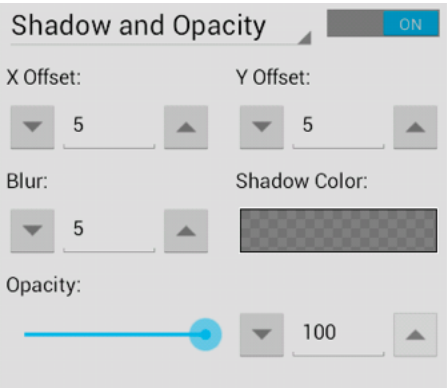
Click or Tap on the corresponding Page Setup Panel item name to learn more about what the option does.

Option Name	Description
Printing Units	The **Printing Units** option sets the unit of measurement used to define the

Option Name	Description
	attributes on this page
Page Width	The **Page Width (W)** option sets the width of the page in printing units.
Page Height	The **Page Height (H)** option sets the height of the page in printing units.
Top Margin Bottom Margin Left Margin Right Margin	The **Top Margin (T), Bottom Margin (B), Left Margin (L)andRight Margin (R)** options set the page margins in user specified printing units.

5.1.3.7. Shadow and Opacity

The **Shadow and Opacity Panel** contains options for altering shadowing, opacity, and blending attributes of a selected figure(s). The panel will appear as shown below when the **Shadow and Opacity** option is selected in the Info Menu.



Click or Tap on the corresponding Shadow and Opacity Panel item name to learn more about what the option does.

Option Name	Description
Shadow Visibility	The **Shadow Visibility** option is an On/Off toggle for managing the visibility of the shadow of a figure(s). If visibility it turned off, a shadow is simply not drawn at all.
X Offset	The **X Offset** option sets the offset of the shadow in the X axis.
Y Offset	The **Y Offset** option sets the offset of the shadow in the Y axis.

Option Name	Description
Blur	The **Blur** option option sets the amount of blur applied to the shadow.
Shadow Color	The **Shadow Color** option sets the shadow color for a figure(s). The visibility toggle must be **On** for changes to appear in the drawing canvas.Refer to the Handling Colors section of this documentation to learn more about color attribute alterations.
Opacity	The **Opacity** option can be used to alter the opaqueness (opposite of transparency) of a selected color.

5.1.3.8. Shape Specific

The **Shape Specific Panel** contains options for altering attributes for specific types of selected figures. The panel will appear as shown below when the **Shape Specific** option is selected in the Info Menu.

Click or Tap on the corresponding Shape Specific Panel item name to learn more about what the option does.

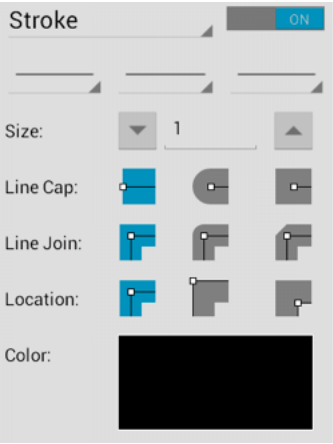
Option Name	Description
Radius	The **Radius** option sets the radius of the currently select circle to the entered value. In the instance of multiple figure selection, this option will set the radius of all selected figures to the entered value.
# of Sides	The **# of Sides** option sets the number of sides for a polygon. In the instance of a multiple figure selection, this option will set the number of sides of all selected figures to the entered value.

Option Name	Description
Corner Size	The **Corner Size** option sets the size of the corner for orthogonal or elbow connection lines and rounded rectangles. The units for the corner size are the units of measure of the drawing. For example, if the units of measure for the drawing were inches and the size of the corner is set to ".25", the corner size is 1/4 of an inch.
# of Points	The **# of Points** option sets the number of points for a star. In the instance of multiple figure selection, this option will set the number of points for all selected figures to the entered value.

The value displayed in the text field of each attribute setting represents the value of the first selected figure.

5.1.3.9. Stroke

The **Stroke Panel** contains options for setting the attributes of a line (stroke). The panel will appear as shown below when the **Stroke** option is selected in the Info Menu.



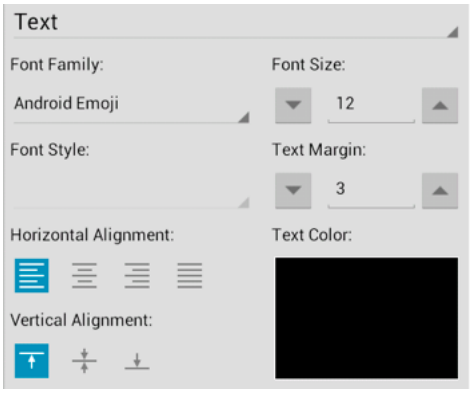
Click or Tap on the corresponding Stroke Panel item name to learn more about what the option does.

Attribute Name	Description
Stroke Visibility	The **Stroke Visibility** option is an "On/Off" toggle for setting the visibility of strokes or lines of a figure(s). The border or line of a figure is not drawn when this option is disabled.

Attribute Name	Description
Start	The **Start** option sets the style of the beginning portion of a created line.
Line	The **Line** option sets the style of the line being created.
End	The **End** option sets the style of the ending portion of a created line.
Size	The **Size** option sets the width of a stroke *in pixels*.
Line Cap	The **Line Cap** option sets the cap of a line to Butt, Rounded, or Square.
Line Join	The **Line Join** option sets the join of a line to Mitered, Rounded, or Beveled.
Location	The **Location** option sets the location where the line will join with another object.
Color	The **Color** option is used to specify the color of a stroke. Refer to the Handling Colors section of this documentation to learn more about color attribute alterations.

5.1.3.10. Text

The **Text Panel** contains options for setting the text attributes of a figure(s). The panel will appear as shown below when the **Text** option is selected in the Info Menu.



Click or Tap on the corresponding Text Panel item name to learn more about what the option does.

Option Name	Description
Font Family	The **Font Family** option is used to choose a set of fonts with the same typeface, but varying qualities such as size and weight.

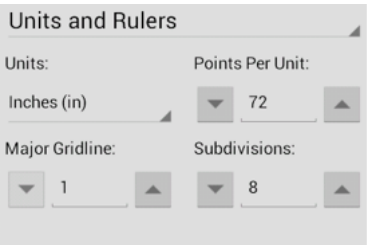
Option Name	Description
Font Size	The **Font Size** option sets the height of characters in a selected font family.
Font Style	The **Font Style** option sets the style or angle of text within a figure(s).
Text Margin	The **Text Margin** option set the margins for text within a figure(s). The measurement spans from the text box edge to the actual text.
Alignment	The **Alignment** options set the vertical and horizontal text alignment modes for text within a figure(s).
Text Color	The **Text Color** option sets the color of text appearing in a figure(s).

Note: Refer to the Handling Text section of this documentation to learn more about attribute changes or editing text for figures.

5.1.3.11. Units and Rulers

The **Units and Rulers Panel** contains options for altering the unit of measure, major gridline, and additional drawing canvas related settings. These options are used to control the layout and divisions of the ruler. Unit settings are additionally used when drawings are exported in alternative formats such as a PDF file.

The panel will appear as shown below when the **Units and Rulers** option is selected in the Info Menu.



Click or Tap on the corresponding Units and Rulers Panel item name to learn more about what the option does.

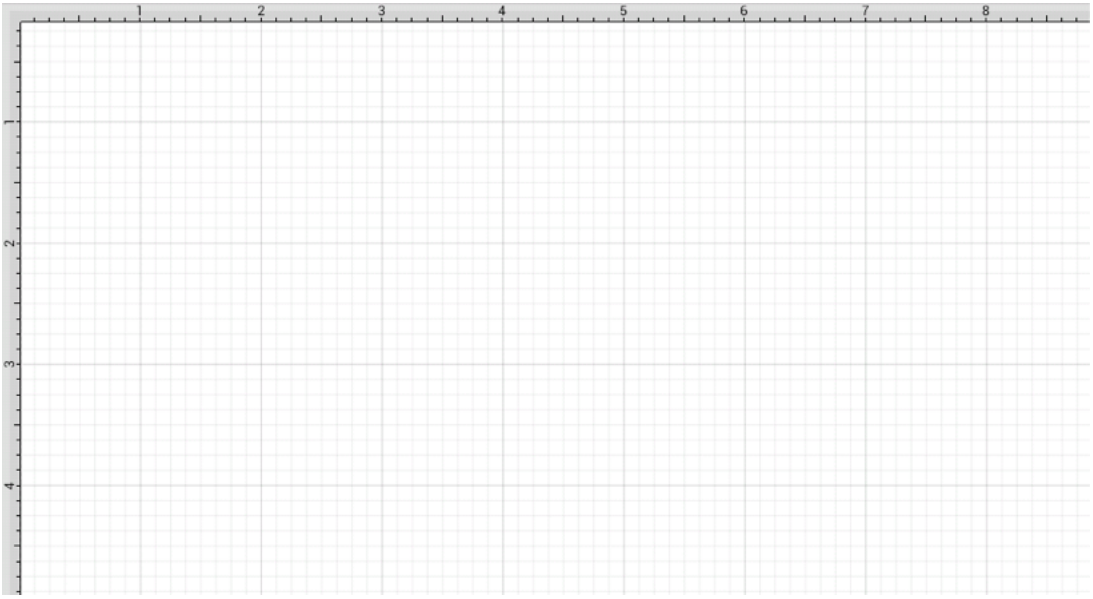
Option Name	Description
Units	The **Units Section** contains options for setting the form of unit measurement on the

Option Name	Description
	drawing canvas (inches, pixels, etc.).
Points per Unit	The **Points per Unit** option is used to configure the number of points on the screen that are equal to one unit in the current unit of measure.
Major Gridline	The **Major Gridline** option sets the interval (in the current unit of measure) that a major gridline will be drawn. For example, if the unit of measure is centimeters and the major gridline is set to 2, it will draw the major gridline every two centimeters.
Subdivisions	The **Subdivisions** option sets the number of subdivisions (minor gridlines) that are drawn between the Major Gridlines. For example, if the unit of measure is centimeters and the major gridline is set to 2, and the subdivisions is set to 4, it will draw a minor gridline ever 1/2 cm (5mm)

When changing from one unit of measure to another, the size of the figures numerically stays the same. For example, if inches was the starting unit of measurement and changed to centimeters, the objects that were 1 inch wide before, would now be 1 centimeter wide.

5.1.4. Drawing Canvas

The **Drawing Canvas** is the area of the screen that displays the currently active drawing. All added figures appear in this portion of the Drawing Editor.

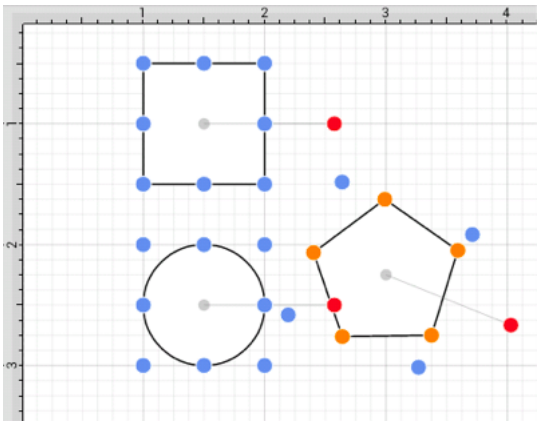


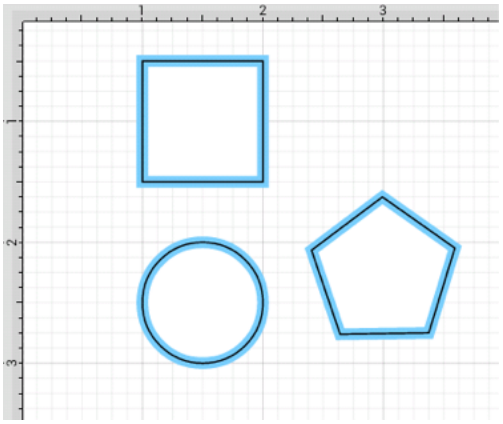
The **Selection Button** in the Top Toolbar can be used access the Selection Menu for altering alter figure size and positioning within the drawing canvas.

5.1.4.1. Easy Drag Mode

TouchDraw includes an **Easy Drag Mode** that makes it simpler to move and select figures without having to worry about touching one of the handles (which could lead to an unwanted resize). This is also particularly useful when trying to move a small object, without having to zoom way in.

The following figures show how a selected figure will look when selected without the option enabled and how they appear when **Easy Drag Mode** is enabled:





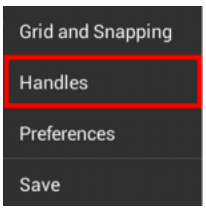
To enable this option:

1

Press on the **Overflow Button** to open the Overflow Menu.

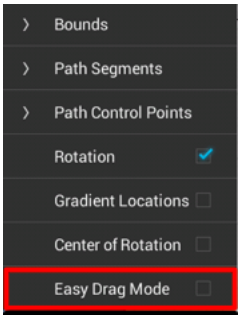
2

Press on the **Handles Submenu**.

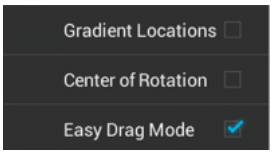


3

Tap on **Easy Drag Mode**.

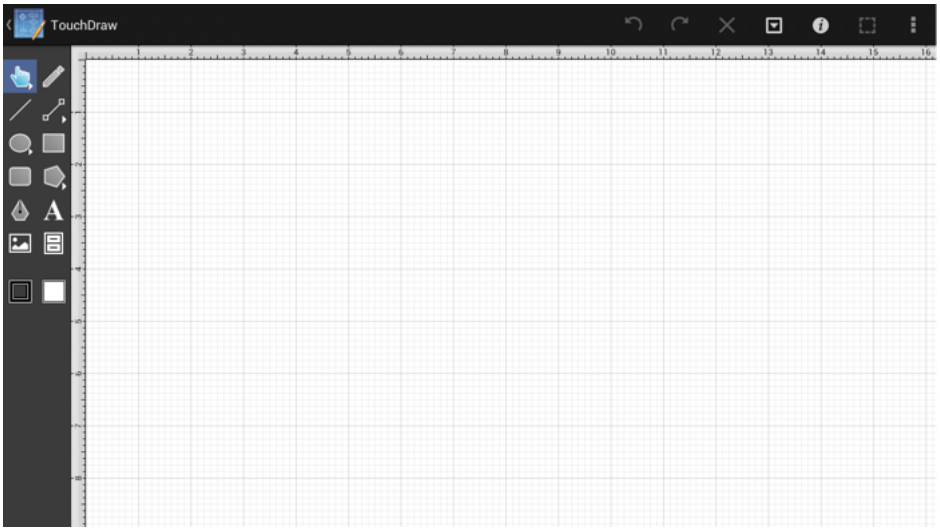


A blue checkmark will appear next to the option when it is enabled.



5.2. Editing Basics

The **Drawing Editor** contains the features and tools necessary for creating and editing new or existing drawings. The editor appears after creating a new drawing or opening an existing file and consists of three sections as shown in the image below.



Click on the name of the **Drawing Editor** section to learn more about what actions can be performed.

Section Name	Description
Top Toolbar	The **Top Toolbar** provides access to most object actions and drawing properties.
Left Toolbar	The **Left Toolbar** is the activation location for application drawing tools.
Drawing Canvas	The **Drawing Canvas** is used to view, create, and change drawings.

5.2.1. Selecting a Figure

TouchDraw contains five types of figures:

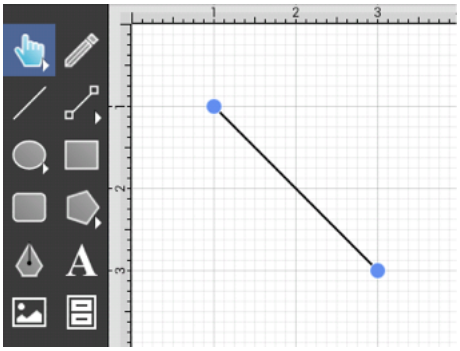
- Lines (including open paths)
- Shapes (including closed paths)

- Text
- Images
- Stencils and Groups (compound figures)

For the purposes of selecting a figure, there are really only two types: Lines and shapes.

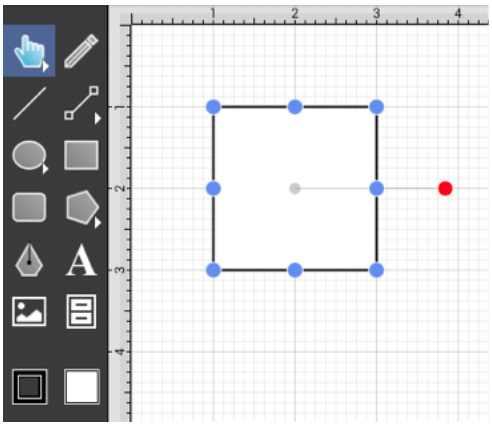
Images, text figures and compound figures all behave like shapes for selection, so we won't discuss them separately.

To select a line, tap on the line and its handle end points will appear.



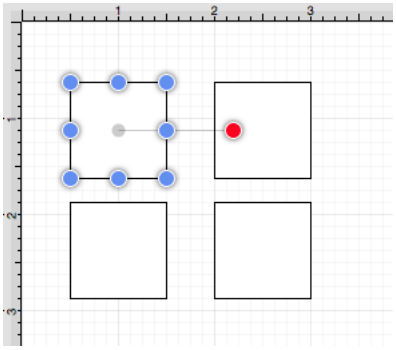
We understand that it is difficult to be as accurate as you are with a mouse when using an Android device, so TouchDraw is designed to allow for some margin of error; however you do need to try to tap as close to the line as possible. You will receive feedback that the line has been selected when the handles for the endpoints are displayed.

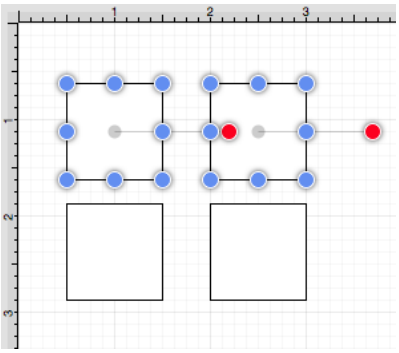
To select a shape, tap anywhere within the shape and it's handles will appear.



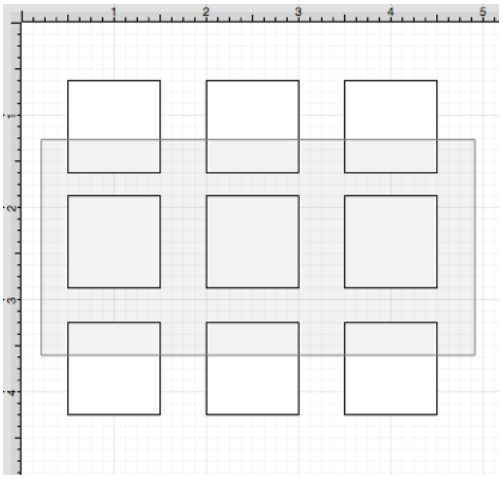
Multiple Selections

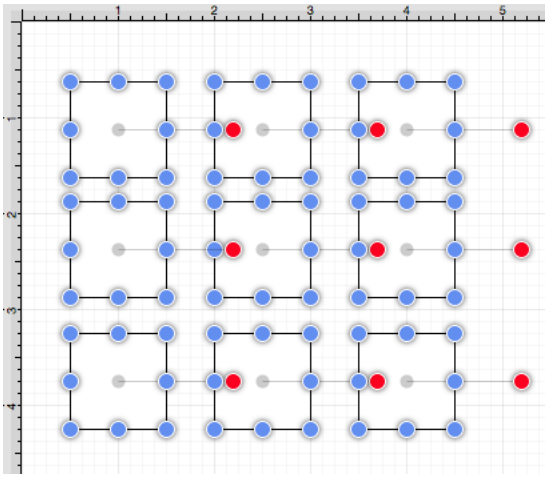
By default, a previously selected shape will be deselected when another is selected; however, TouchDraw does support multiple selections. Use the Function Key Feature of the **Left Toolbar** to make multiple selections. Press and hold the Left Toolbar for ~1 second until it turns red and continue to hold a finger on the toolbar while using the other hand to tap on additional figures. This feature can be used to add or remove figures from the multiple selection.



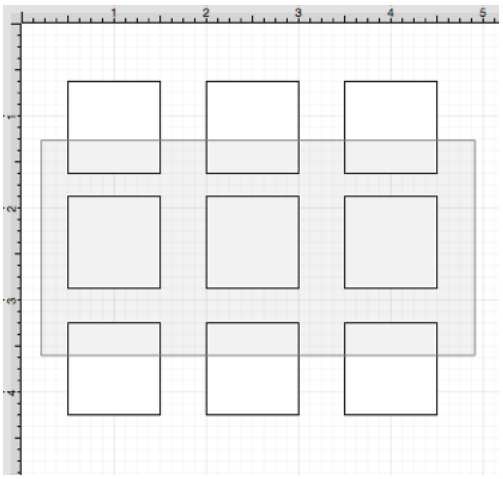


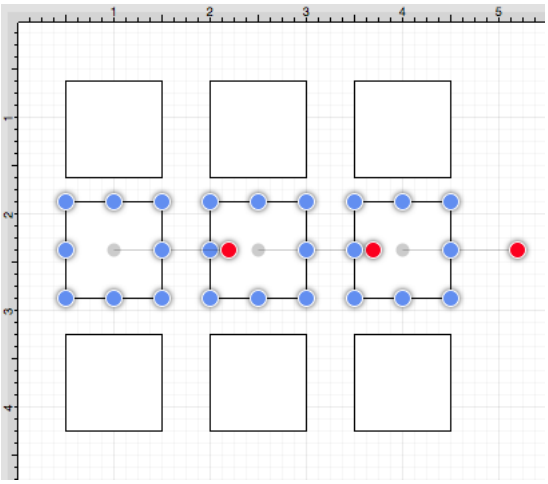
The **Selection Rectangle** may also be used to select multiple figures. Touch and drag the **Selection Rectangle** from left to right or right to left over an area within the Drawing Canvas and then release the utilized finger once the rectangle covers the desired area to complete the selection. When the rectangle is dragged from left to right, it will select all figures within its bounds and every figure intersecting it, as shown below.





Dragging the **Selection Rectangle** from right to left from any point within the Drawing Canvas informs TouchDraw to select only the figures within the rectangle's bounds, as shown below.



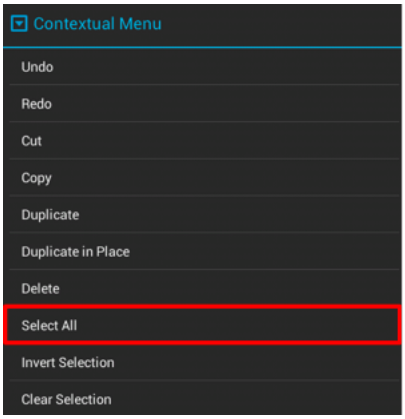


You can also enable the Volume as Function Keys preference for smaller devices and use the **Volume Down Button** to perform this same action.

Using the Contextual Menu

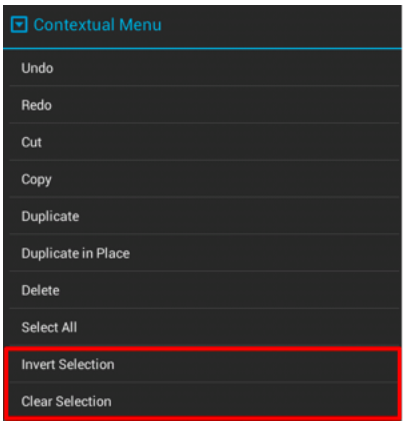
The Contextual Menu contains options for selecting all figures within a currently open drawing and inverting or clearing a current selection within the drawing canvas. Press on the **Contextual Menu Button** in the Top Toolbar to access these options.

Tap on the **Select All** option to select all figures within a drawing.



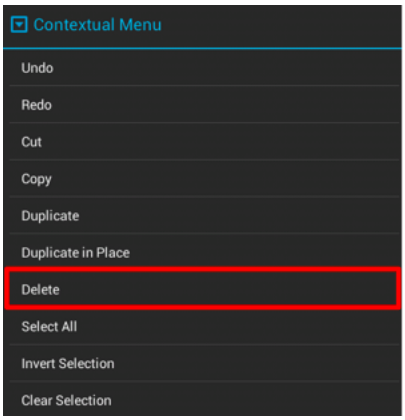
Use the **Invert Selection** option to invert the current selection or the **Clear Selection** option to deselect all

currently selected figures within the Drawing Canvas .



5.2.2. Deleting a Figure

A figure must be selected before it can be deleted. To delete a selected figure, touch and hold anywhere in the drawing canvas for ~1 second or press on the **Contextual Menu Button** to bring up the Contextual Menu and press on the **Delete** option.

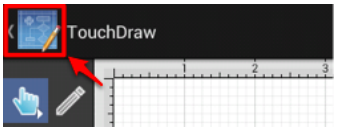


Pressing on the **Delete Button** located in Top Toolbar is an alternative method for removing a selected figure.

Please keep in mind that TouchDraw has support for Undo and Redo. If a figure is deleted by accident, press the **Undo Button** in the Top Toolbar to redisplay the object.

5.2.3. Saving and Exiting

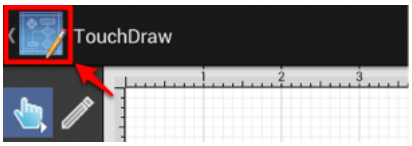
Use the **App Button** to save a drawing that is currently being edited and/or viewed and return to the Drawing Chooser.

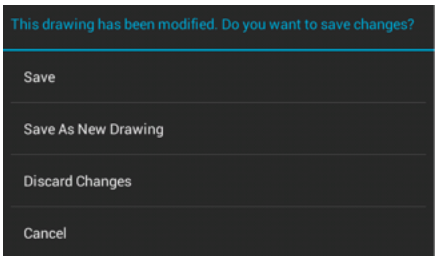


If changes have not been made to the currently viewed drawing, TouchDraw will return to the Drawing Chooser without saving.

5.2.3.1. Saving a Drawing

To avoid the concern of losing changes before exiting back to the Drawing Chooser, use the **Save** option to save current changes. To access this option, tap on the **App Button** to open the prompt window shown below.



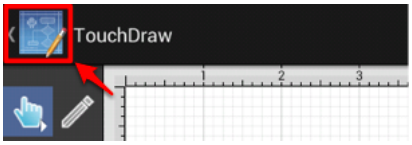


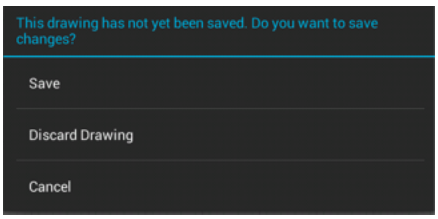
Press on the **Save** option to save changes and exit the Drawing Editor.

This prompt window will only appear if the drawing has been altered. If no alterations have been made, TouchDraw will return to the Drawing Chooser when the Drawings Button has been pressed.

5.2.3.2. Discarding a Drawing

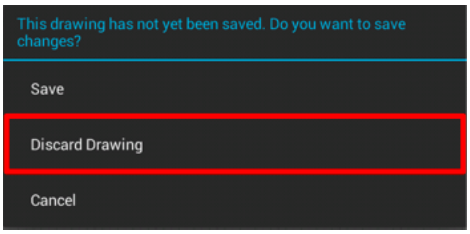
To exit the **Drawing Editor** without saving a new drawing, use the **Discard Drawing** option to exit and return to the Drawing Chooser. To access this option, tap on the **App Button** to open the prompt window below.



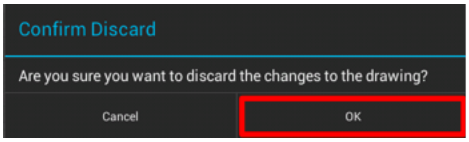


This option will only appear if a new drawing has been created and never been saved within TouchDraw.

Press on the **Discard Drawing** option to return to the Drawing Chooser without saving.

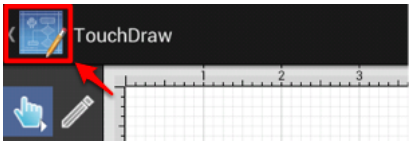


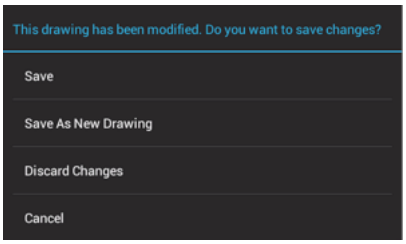
A confirmation window will appear after pressing on the **Discard Drawing** option. Press on the **OK Button** to return to the Drawing Chooser without saving the new drawing or press on the **Cancel Button** to return to the Drawing Editor.



5.2.3.3. Discarding Changes

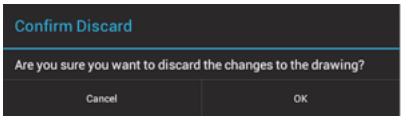
To exit the **Drawing Editor** without saving any applied changes, use the **Discard Changes** feature to exit and return to the Drawing Chooser. To access this option, tap on the **App Button** to open the prompt window below.





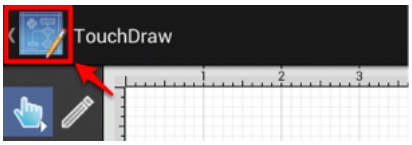
This option will only appear if a drawing has previously been saved and changes have been made since the save.

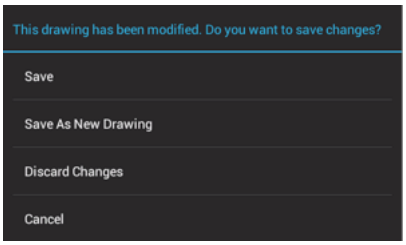
Press on the **Discard Changes** option to exit without saving. A confirmation prompt will appear as shown below. Press on the **OK Button** to discard all changes since the previous save or press on the **Cancel Button** to close the prompt without discarding.



5.2.3.4. Saving as a New Drawing

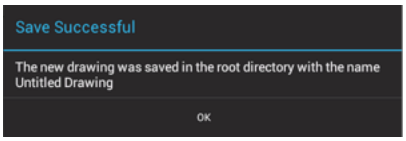
To exit the **Drawing Editor** and save any applied changes as a new drawing (as opposed to overwriting the existing drawing), use the **Save As New Drawing** option. To access this option, tap on the **App Button** to open the prompt window shown below.





This option will only appear if the the drawing has previously been saved.

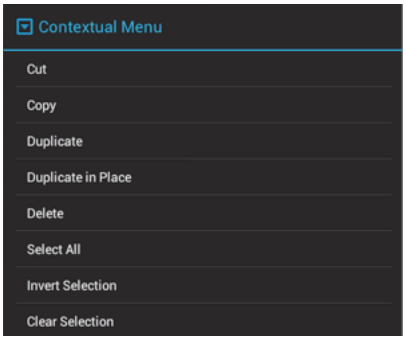
Press the **Save As New Drawing** option to save the drawing with a new file name and then return the Drawing Chooser. A confirmation window opens with information regarding where the new drawing was saved and its name. Press on the **OK Button** to exit the prompt and return to the drawing chooser.



5.2.4. Using the Clipboard

The **Clipboard** holds the most recent change made to a figure within the drawing editor. Changes are stored on the clipboard when an item is copied, cut or undone. They are reapplied by choosing the Paste or Redo commands.

All **Clipboard** actions are accessible through the Contextual Menu. Touch and hold on the drawing canvas for ~1 second or press on the **Contextual Menu Button** in the Top Toolbar to bring up the Contextual Menu. It will appear as shown below:



Undo and Redo actions are also accessible through the Top Toolbar, as shown below.

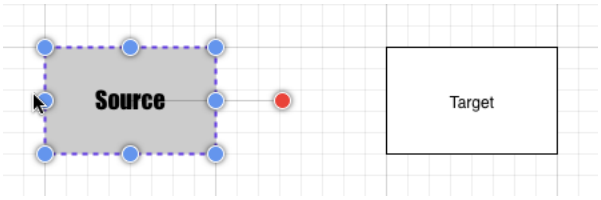
5.2.4.1. Paste Style

The **Paste Style** button allows formatting to be copied from one shape and pasted (applied) to another.

The process for this command is shown in the following example:

1

Select the source shape/figure with the formatting to applied to another object.

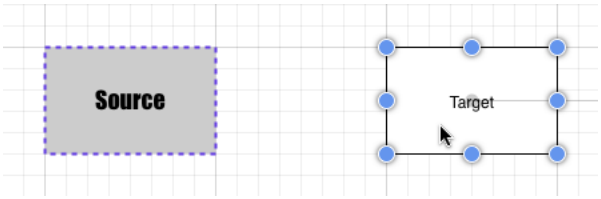


2

Open the Contextual Menu and Copy the shape to the clipboard.

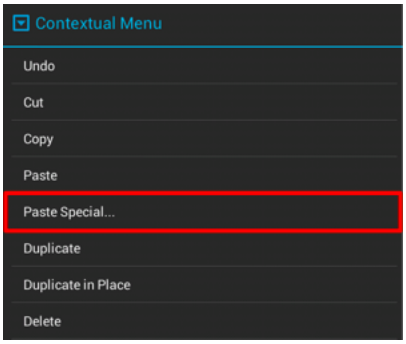
3

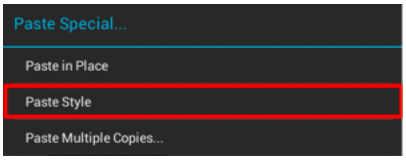
Select the target shape.



4

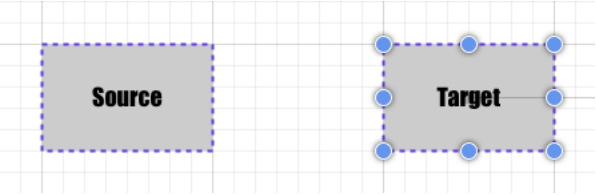
Select the **Paste Style** option from **Paste Special... Submenu** in the Contextual Menu.





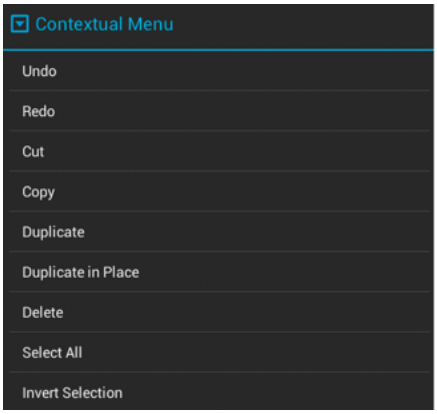
5

The formatting from the source figure is applied to the target figure.



5.2.4.2. Copying a Figure

A figure or group of figures must be selected before copying can occur. After a selection has been made, touch and hold on the drawing canvas for ~1 second or press on the **Contextual Menu Button** in the Top Toolbar to bring up the Contextual Menu, as shown below.

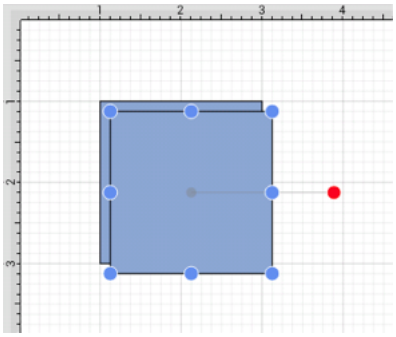


Press on the **Copy** option to copy the currently selected figure or group of figures into the clipboard.

5.2.4.3. Duplicating a Figure

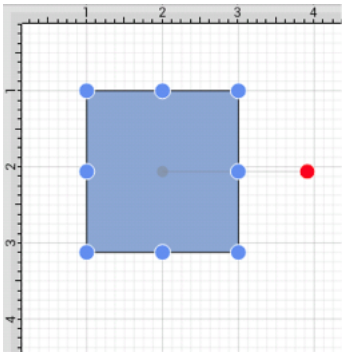
A figure can be duplicated to make sharing the same attributes easy. At least one figure must be selected for these options to appear in the Contextual Menu. Options for duplicating a figure are accessed by either touching and pressing on the drawing canvas for ~1 second or pressing on the **Contextual Menu Button** in the Top Toolbar, as shown below.

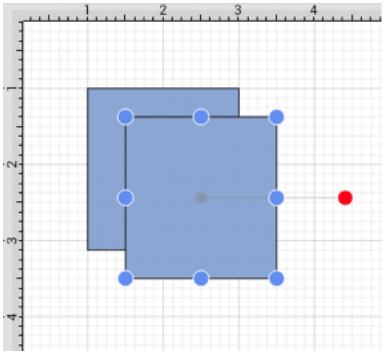
Tap on the **Duplicate** option to create a copy of a selected figure(s) and have it placed at an offset position in the Drawing Canvas, as shown below.



Tap on the **Duplicate in Place** option to create a copy of a selected figure(s) and have it placed in the same exact location as the original.

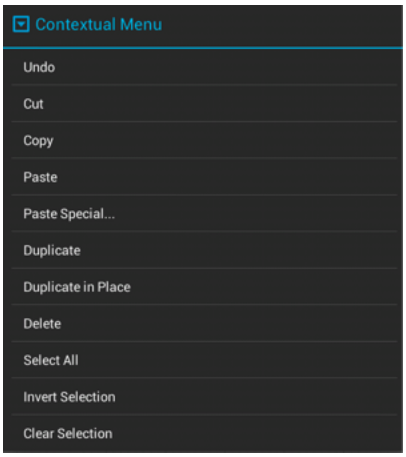
Hold and drag the top figure to a new position in the drawing canvas to see both the original and the copy.



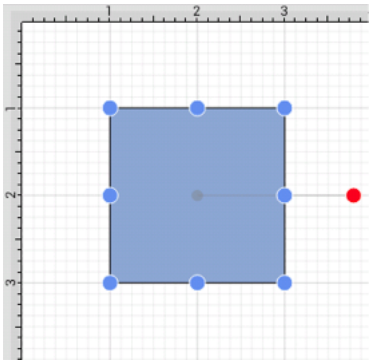


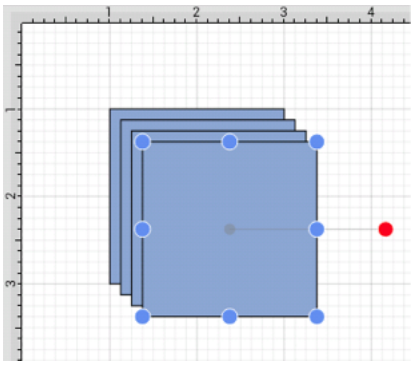
5.2.4.4. Cut and Paste

Cutting and pasting works in the same manner as copy and delete. A figure or group of figures must be selected to use one of these application functions. After a selection has been made, touch and hold on the drawing canvas for ~1 second or press on the **Contextual Menu Button** in the Top Toolbar to bring up the Contextual Menu, as shown below:

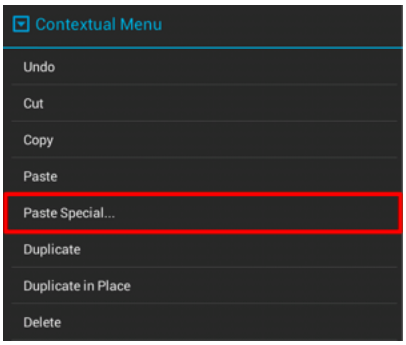


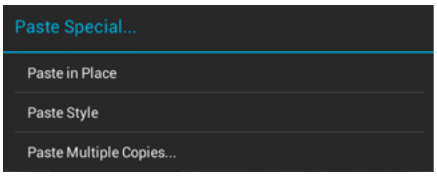
The **Cut** option removes the figure from the drawing canvas and adds it to the clipboard. The **Paste** option directs TouchDraw to paste the contents of the clipboard into the drawing. Pasting the clipboard contents multiple times into the drawing canvas causes the figure(s) to be placed in slightly offset positions as shown below.



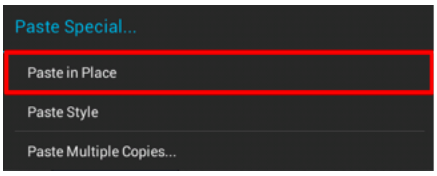


The Paste Special... Submenu can be used to perform additional pasting actions.

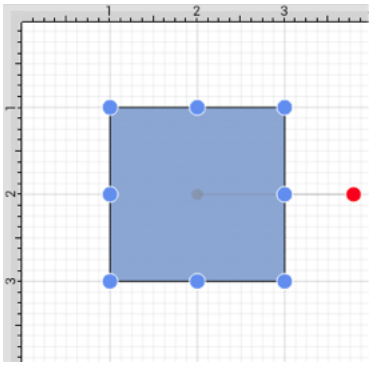


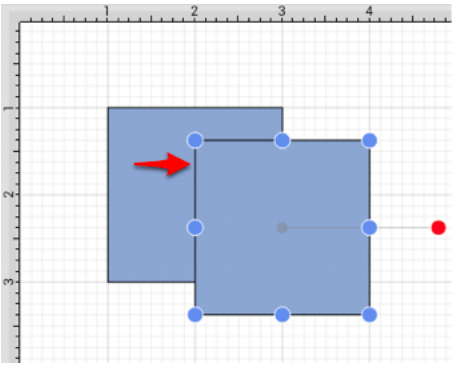


To paste a figure in the same exact location, open the Contextual Menu, press on the **Paste Special... Submenu**, and then press on the **Paste in Place** option.

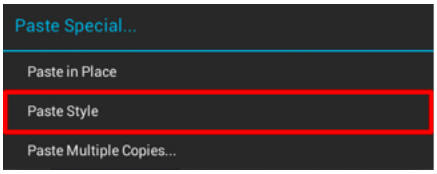


To see the pasted figure select the figure and drag in any direction. In the example below, the pasted figure is dragged to the right.

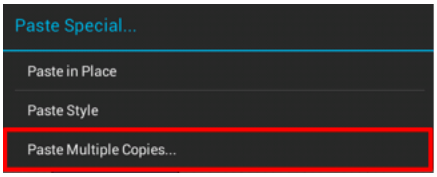




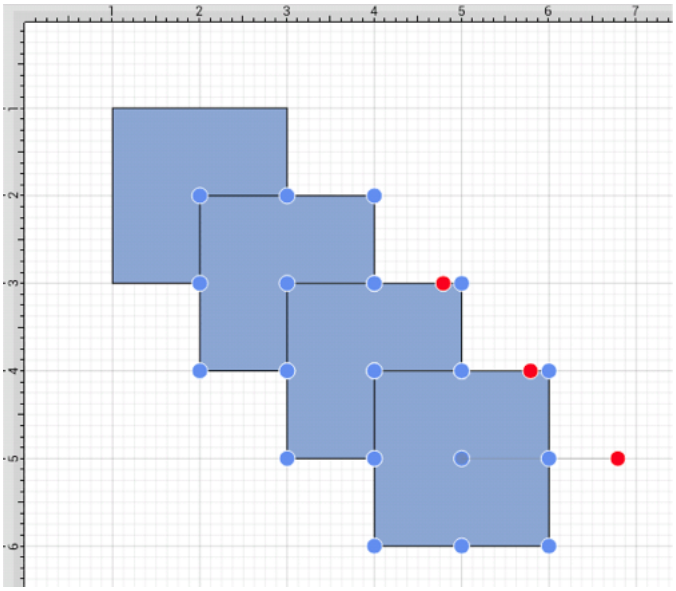
To paste the style of a figure, open the Contextual Menu, press on the **Paste Special... Submenu**, and then press on the **Paste Style** option. Refer to the Paste Style section of this documentation to learn more.



To paste multiple instances of a figure into the clipboard, open the Contextual Menu, press on the **Paste Special... Submenu**, and then press on the **Paste Multiple Copies...** option. A window for setting the offset axis values and the number of copies will appear in the upper right hand corner of the drawing editor. Tap on the up and down arrows beside each option to change the value. Press on the **Paste Button** when finished to complete the paste.



Tap anywhere within the drawing editor to close this window. Multiple pastes of the clipboard content will cause each figure to be placed in slightly offset positions as shown below:

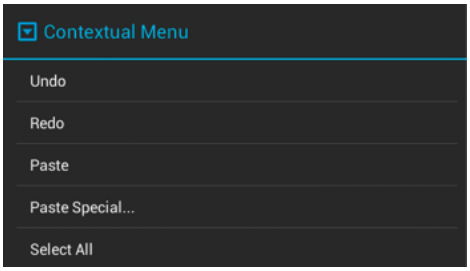


5.2.5. Undo and Redo

The **Undo** command reverts the last change that was made to a drawing and is accessible through the Top Toolbar. This button is disabled (dimmed) when no changes have been made and enabled as soon as something is altered in the Drawing Editor.

The **Redo** command cancels the last undone change made to the drawing canvas and is accessible through the Top Toolbar. This button is disabled (dimmed) when nothing has been undone and is enabled as soon as the **Undo** command has been used or something is altered.

Touching and holding on the drawing canvas for ~1 second or pressing on the **Contextual Menu Button** in the Top Toolbar will bring up the Contextual Menu and provide access to these options as well.



As an Android tablet has limited available memory (RAM), TouchDraw limits the size of the undo stack to the last 20 operations, in order prevent iOS from shutting down TouchDraw for excessive memory usage.

5.3. Handling Figures

TouchDraw supplies a variety of options for handling figures within the Drawing Editor. An individual figure or group of figures can be:

- Moved
- Stretched
- Resized
- Rotated
- Flipped
- Scaled
- Shifted

The following pages describe these actions in further detail and provide steps for using each method of figure handling.

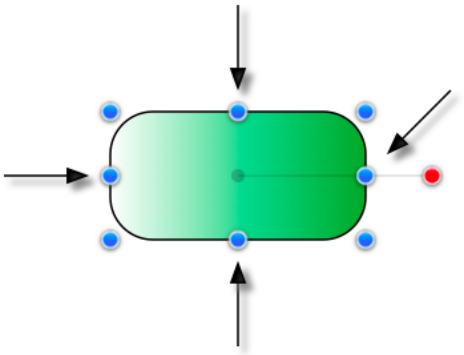
5.3.1. Moving a Figure

A figure must be selected to be moved to another location on the drawing canvas. Perform a **Drag** gesture to move an already selected figure or use a **Touch/Drag** gesture combination within the figures bounds to accomplish the move in one step. To change the position of a group of selected figures, perform a **Touch/Drag** gesture combination within bounds of any selected object to move the entire selection to a desired location. A move is completed when the **Touch/Drag** gesture combination is released.

See the Easy Drag Mode section to learn more about an easier way to move smaller objects around the drawing view without worrying about inadvertently dragging one of their handles.

5.3.2. Stretching a Figure

Most shapes haves handles in the top center, bottom center, left middle and right middle that allow them to be stretched for increased width or height. The screenshot below demonstrates these handles for a rounded rectangle.



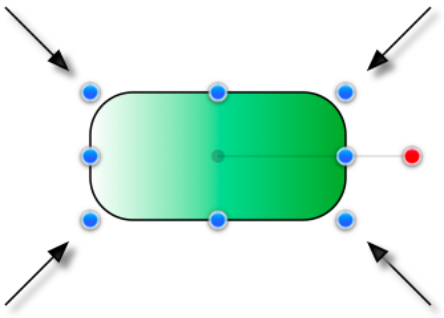
To stretch a figure, touch one of the shown handles and then drag the used finger in the desired direction. The figure will stretch itself to fit to the new location of the handle as dragging takes place.

If the Function Key Feature is enabled when the figure is stretched, it will maintain it's current aspect ratio.

Multiple figures can be stretched in this same manner once they have been placed into a Group.

5.3.3. Resizing a Figure

In addition to the handles described in Stretching a Figure, shapes also have handles in the upper left, upper right, lower left and lower right for resizing a selected figure. The screenshot shown below points out these handles for a rounded rectangle:



To

Resize a Figure

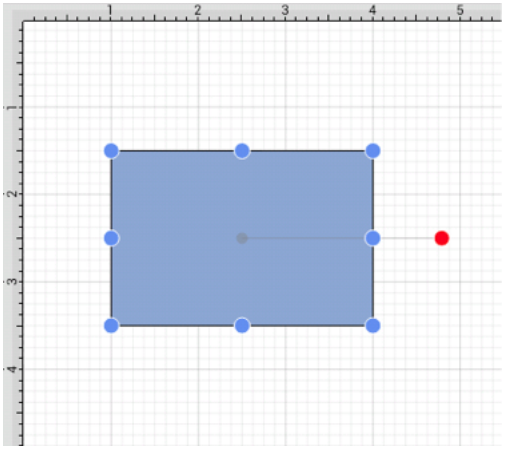
, touch one of the above shown handles and then drag with the same finger. The width and height of a figure will change dynamically as the handle is dragged.

If the Function Key Feature is enabled when a figure is resized, it will maintain it's current aspect ratio.

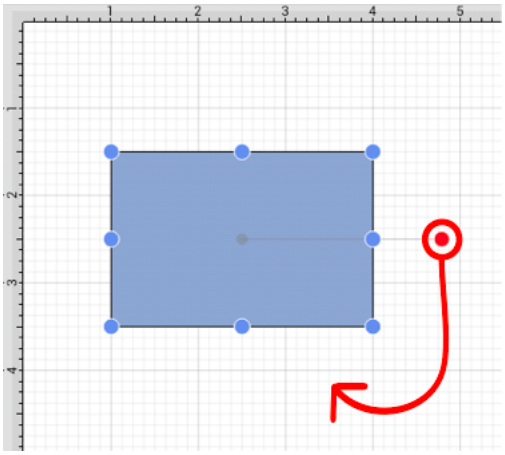
Multiple figures can be resized at once by placing them into a Group.

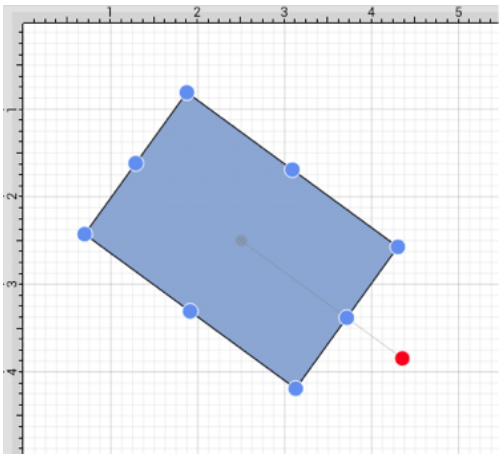
5.3.4. Rotating a Figure

Every figure, with the exception of lines, can be rotated. A red handle will be shown to the right of a figure when it is selected for rotation. This red handle can be dragged to change the rotation angle of a selected shape. A semi-transparent gray line going from the rotation handle to the figure's center of rotation point (typically represented by a gray circle in the middle) will also be displayed.



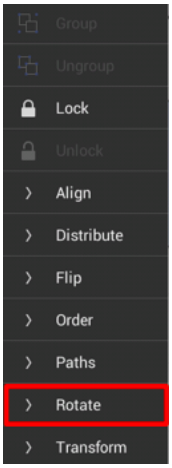
Perform a **Touch/Drag** gesture combination on the red handle to rotate the object in increments of 1° around it's center of rotation point.



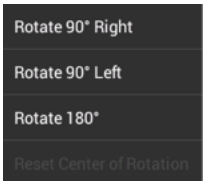


Activating the Function Key Feature while rotating a figure causes the action to occur in 15° increments.

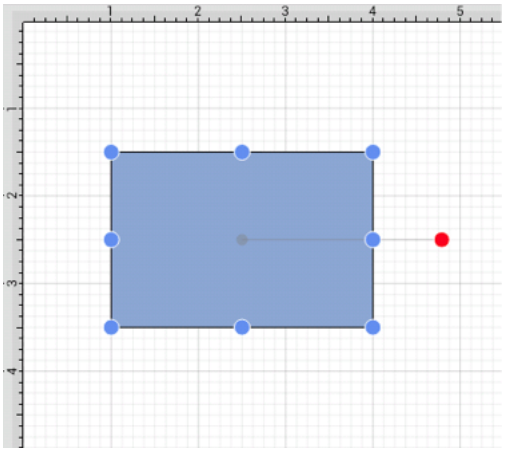
A figure may be rotated at 90° increments to the right or left by using the **Rotate 90° Right** or **Rotate 90° Left** options in the Rotate Submenu. To access this menu, press on the **Selection Button** in the Top Toolbar to open the Selection Menu.

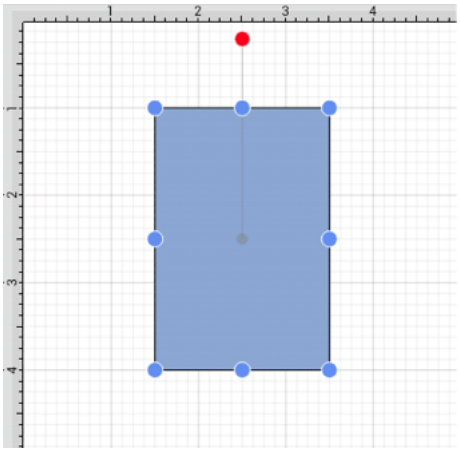


Select the **Rotate Submenu** to access the rotation options.

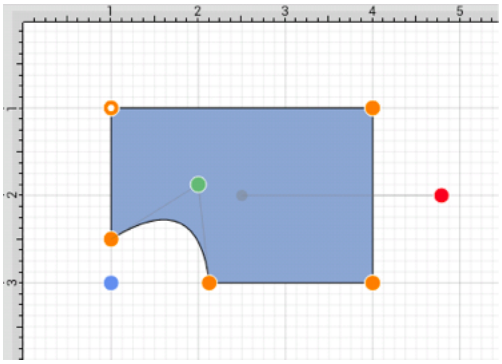


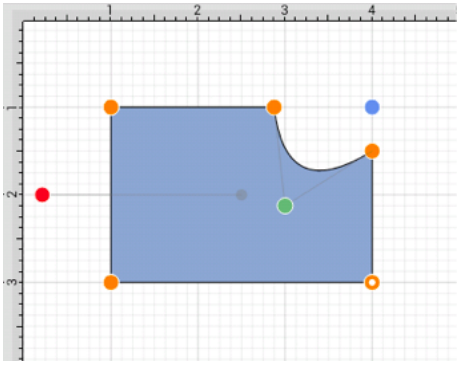
The example below shows what a figure looks like prior to and after being rotating 90 degrees to the left.





The **Rotate 180°** command may also be used to rotate a figure and is accessible through the same menu as discussed above. Below is an example of what a figure looks like prior to and after being rotated 180 degrees.

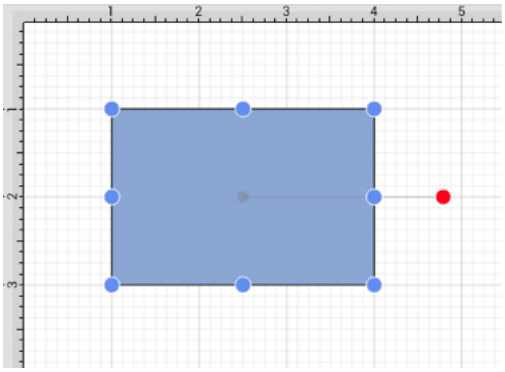




The **Center of Rotation** can be changed to a different point within a shape or reset after it has been altered. See Changing the Center of Rotation or Resetting the Center of Rotation for additional information.

5.3.4.1. Changing the Center of Rotation

A selected shape will show a gray semi-transparent circle connected to the rotation handle. This gray circle indicates a selected shape's **Center of Rotation** and can be changed to any desired point within the shape's bounds. By default, the option to change a shape's **Center of Rotation** is not enabled.



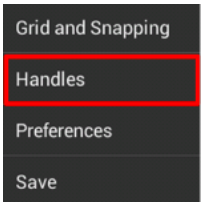
To enable the **Center of Rotation** handle:

1

Press on the **Overflow Button** to open the Overflow Menu.

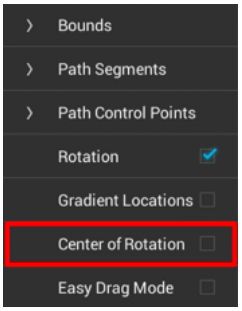
2

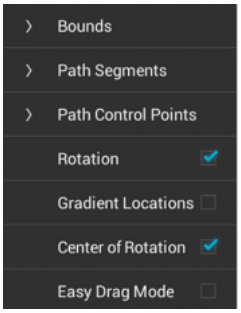
Press on the **Handles Submenu**.



3

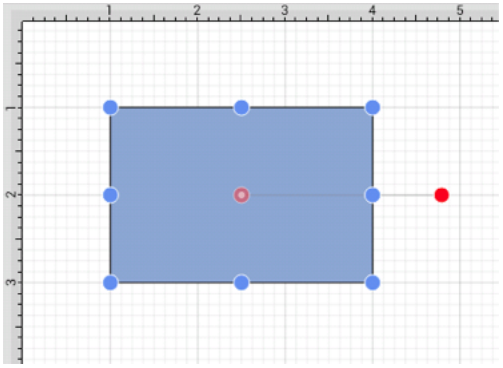
Tap on the **Center of Rotation** option.



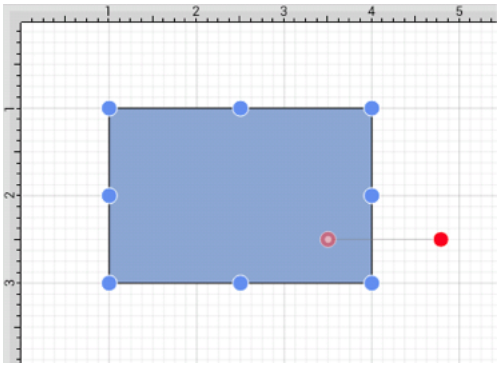


Note: Tap anywhere within the Drawing Editor to close the menu.

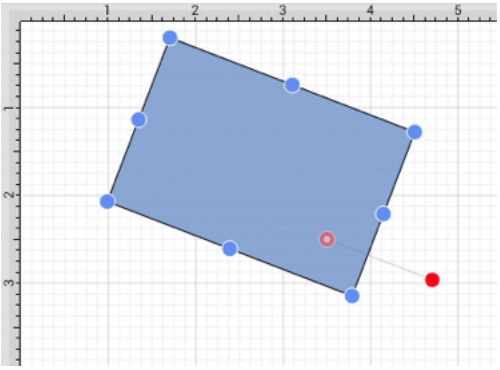
A new handle will replace the original semi-transparent circle once this option has been enabled.



To alter the **Center of Rotation**, touch, hold, and drag the newly visible handle to a desired location.



The shape will rotate around the new point rather than its natural center once it has been set.

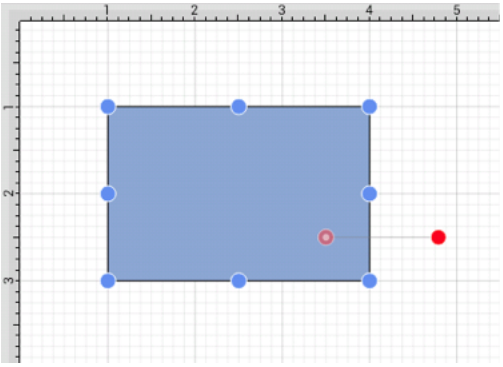


5.3.4.2. Resetting the Center of Rotation

A selected shape will show a gray semi-transparent circle connected to the rotation handle. This gray circle indicates a selected shape's **Center of Rotation** and can be changed to any desired point within the shape's bounds.This point can be set back to its natural center after it's location has been altered. Follow the steps below to **Reset the Center of Rotation**:

1

Select the desired shape.

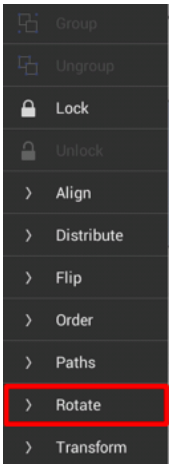


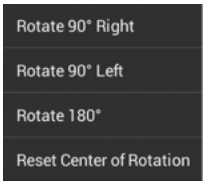
2

Press on the **Selection Button** to open the Selection Menu.

3

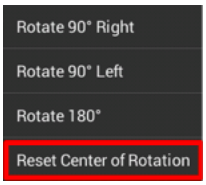
Press on the **Rotate Submenu**.





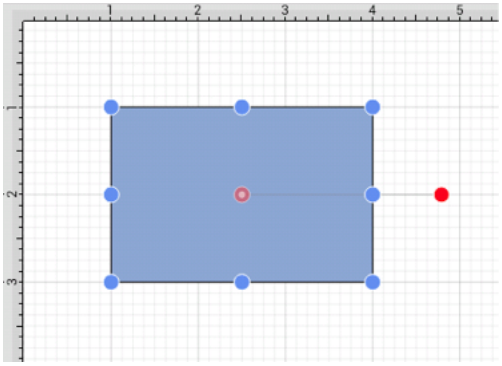
4

Press on the **Reset Center of Rotation** option.



5

The point will be adjusted back to its natural center.

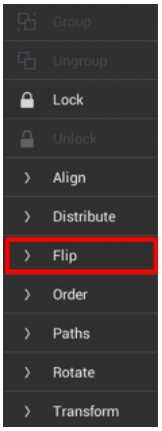


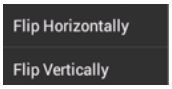
Note: The **Reset Center of Rotation Button** is available when the Center of Rotation option has been enabled.

5.3.5. Flipping a Figure

A figure can be flipped either horizontally or vertically in the drawing canvas. These options are accessed by pressing on the **Selection Button** in the Top Toolbar.

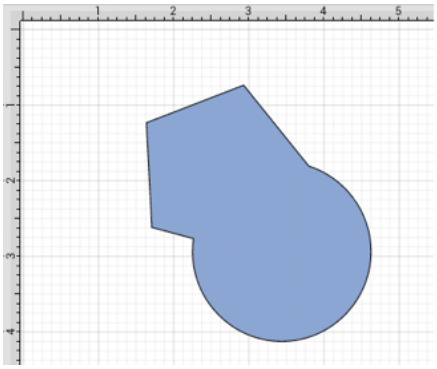
Press on the **Flip Submenu** to access available flipping options.

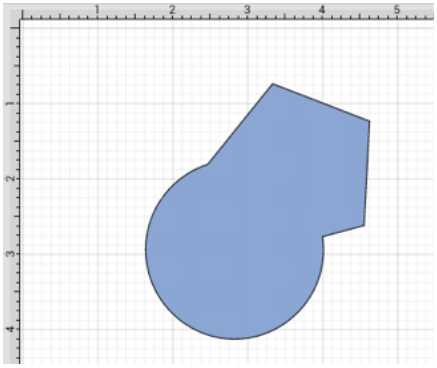




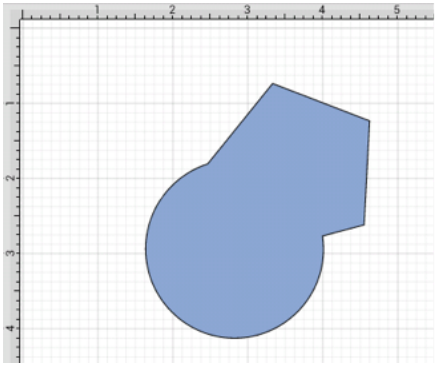
A figure must be selected to choose one of the above options.

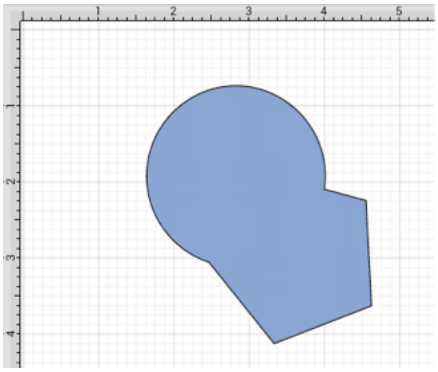
Press on the **Flip Horizontally** option to interchange a figure horizontally. The images below show a before and after of this figure transition:





Press on **Flip Vertically** option to interchange a figure vertically. The images below show a before and after of this figure transition.





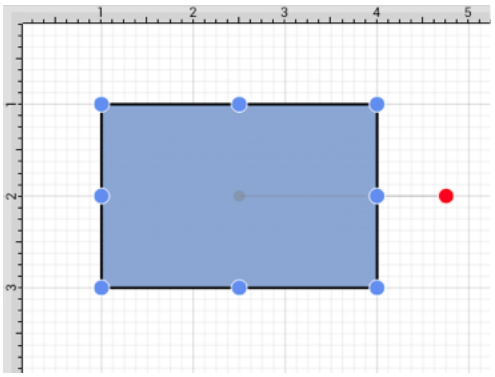
5.3.6. Scaling a Figure

The **Scale By...** option can be used to alter figure size based on input coordinates to create a smaller or larger figure spanning over a specific area. This option is accessed by pressing on the **Selection Button** in the Top Toolbar.

To **Scale a Figure** or group of figures:

1

Select a figure(s) to be altered.

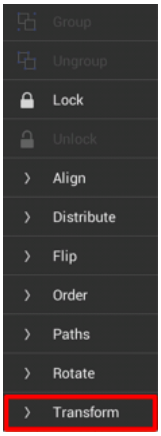


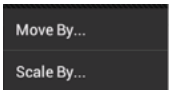
2

Press on the **Selection Button** to open the Selection Menu.

3

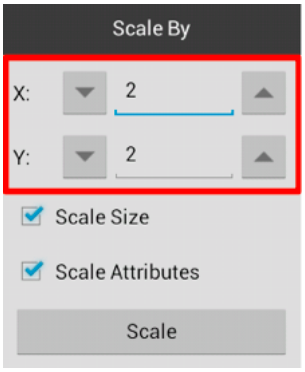
Press on the **Transform Submenu** to access the **Scale By...** option.

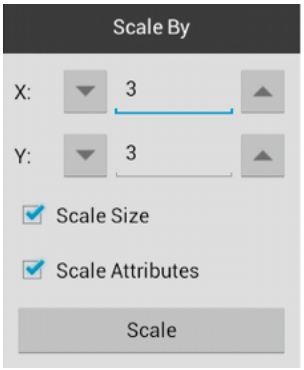




4

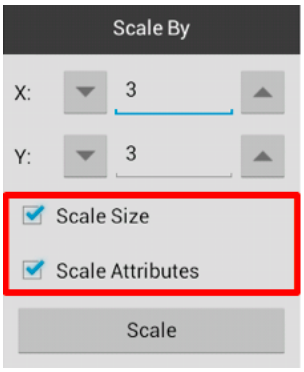
Enter the desired **X** and **Y** coordinates into the **Scale By**popup window by using the incremental buttons located on the right and left side of each field or by pressing on the number field to bring up the keyboard.





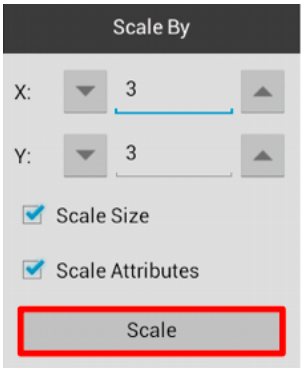
5

Select or deselect desired options in the **Scale By** popup window.



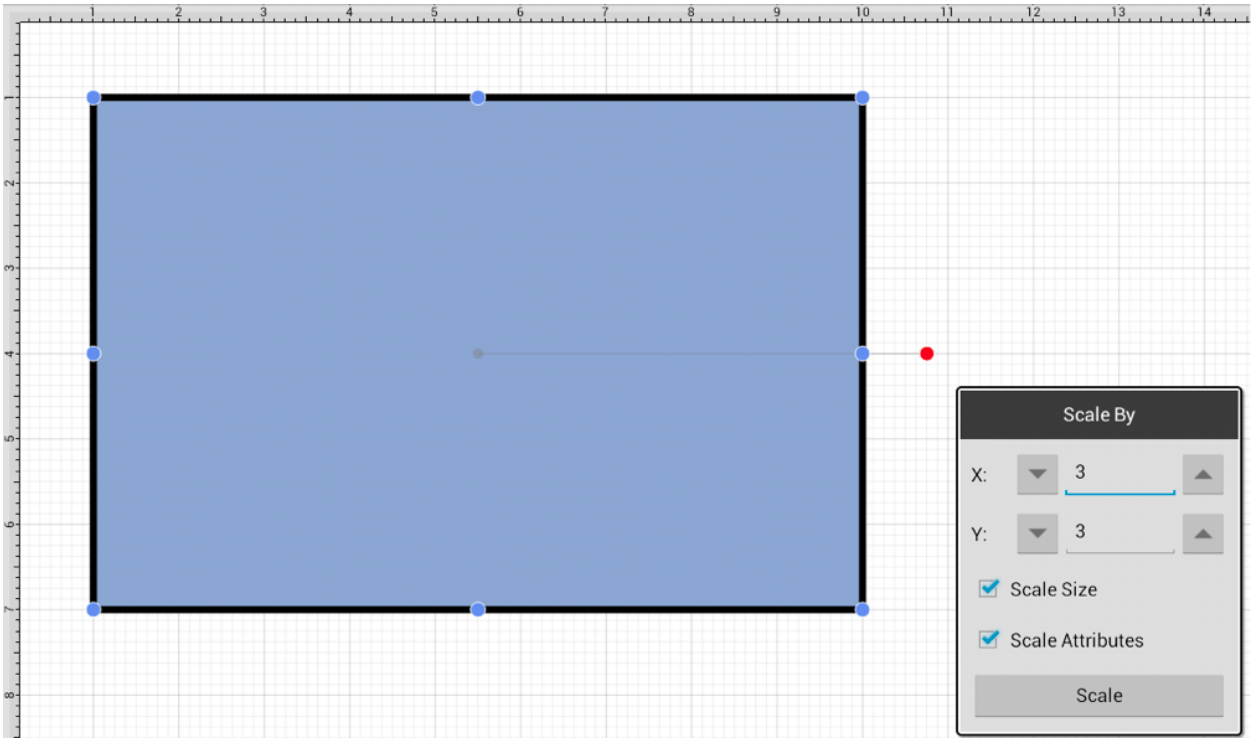
6

Press on the **Scale Button** when finished.



7

The selected figure will be scaled according to the entered coordinates and selected options. It will appear in scaled form with the **Scale By** popup window remaining open to make further changes.

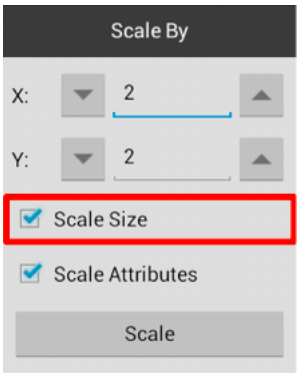


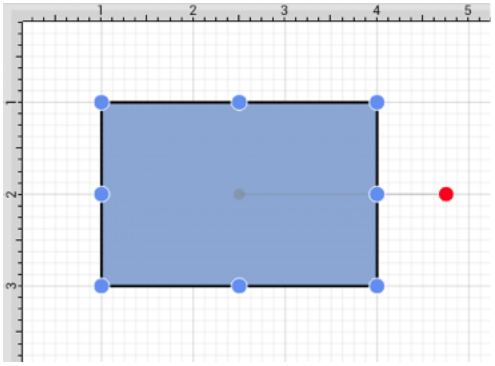
Note:Scale By... changes can be reverted by using the Undo Button in the Top Toolbar.

5.3.6.1. Scale Size

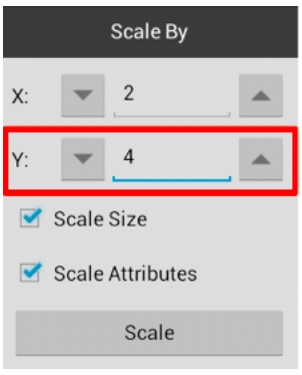
The **Scale Size** option informs TouchDraw to scale the size of the selected figure(s) based on the entered

Factor X and **Factor Y** values. If enabled, the check box next to this option will contain a blue checkmark, as shown below:

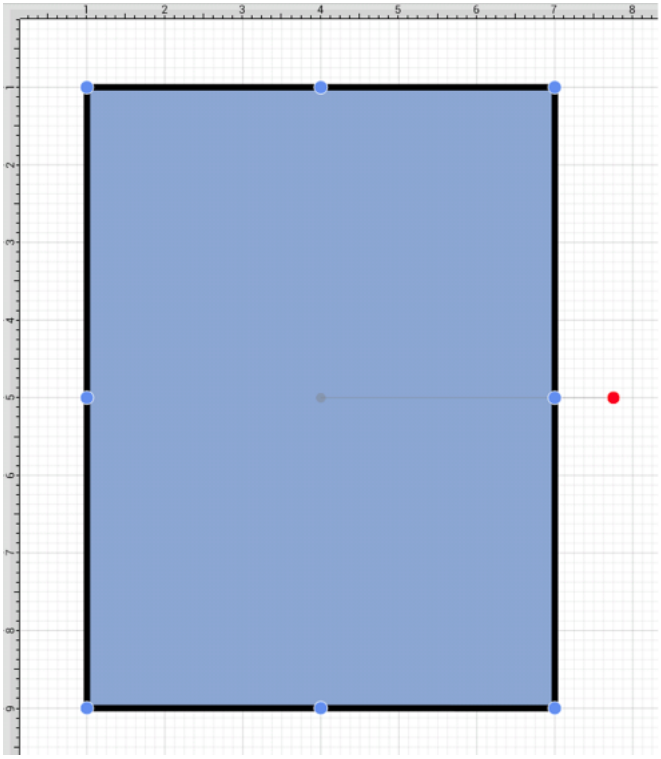




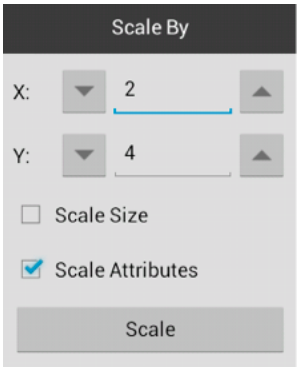
This option must be enabled for the selected figure(s) to be scaled by the entered values.

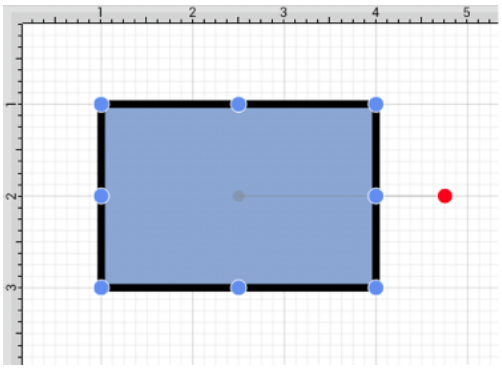


If **Factor Y** is changed to 4 for the above figure, it will appear as shown below:



If the **Scale Size** option is disabled (no checkmark), the size will not be scaled. However, if the Scale Attributes option remains enabled, then the attributes (stroke, text, etc.) will be scaled according to the entered values, as shown below:

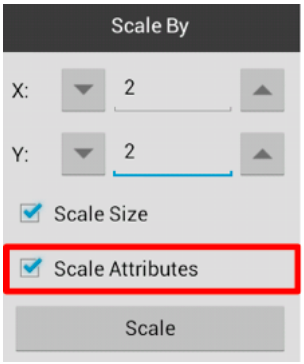


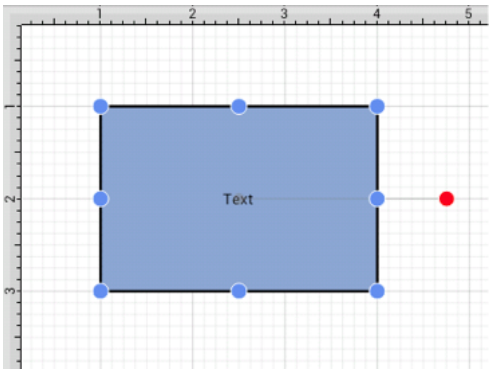


Note: Please note that if both options have been disabled, then the selected figure(s) will not be scaled.

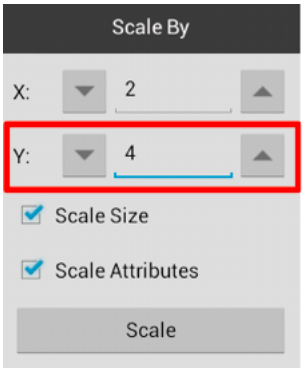
5.3.6.2. Scale Attributes

The **Scale Attributes** option informs TouchDraw to scale the attributes (stroke, text, etc) of the selected figure(s) based on the entered **Factor X** and **Factor Y**. If enabled, the check box will contain a blue checkmark, as shown below:

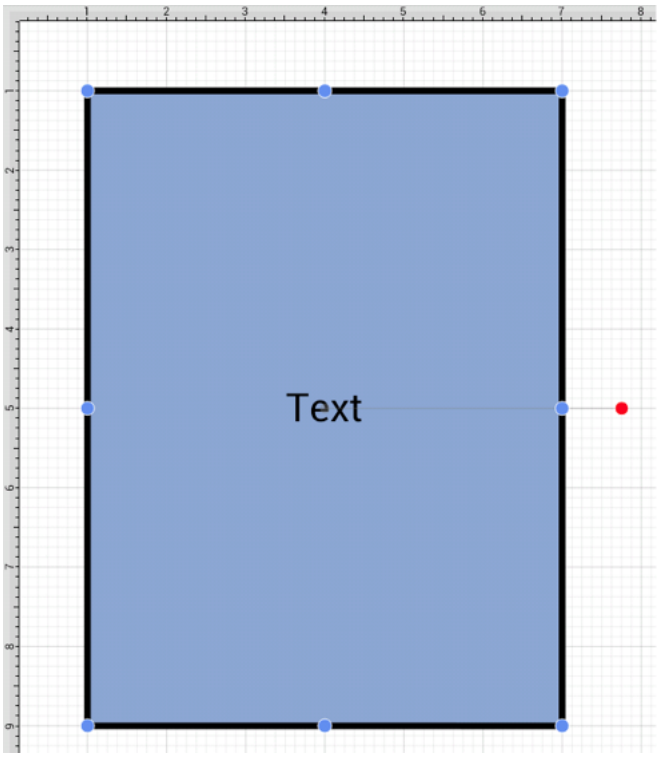




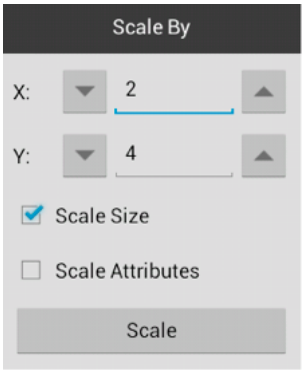
If the Scale Size option has been enabled as well, then the selected figure's size and attributes will be scaled according to entered values. If 4 is entered for **Factor Y**, then the height of the selected figure(s) will be scaled by that value.



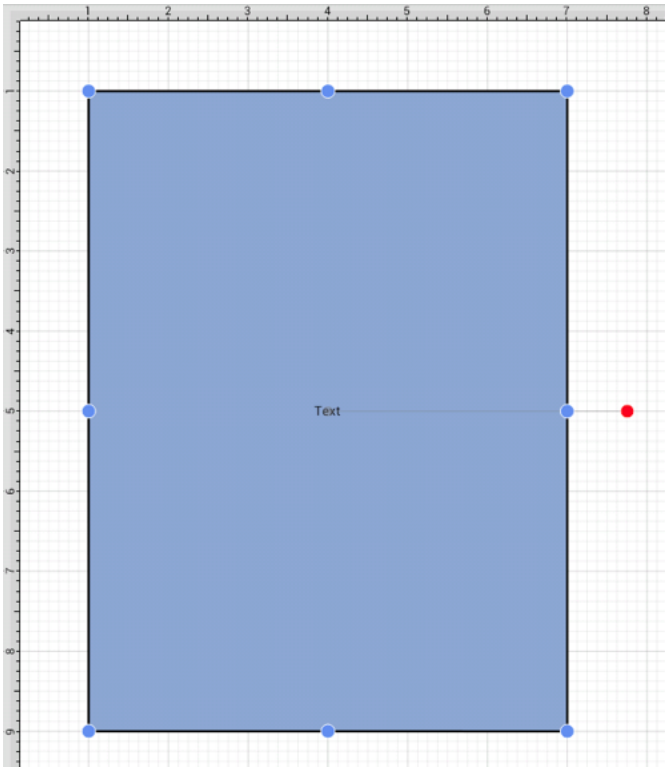
The above figure would appear as shown below:



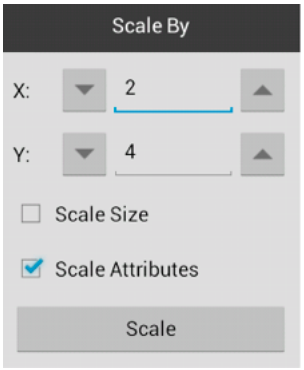
When the **Scale Attributes** option is disabled (no checkmark), only the **size** of the selected figure(s) will be scaled by the entered **Factor** values.

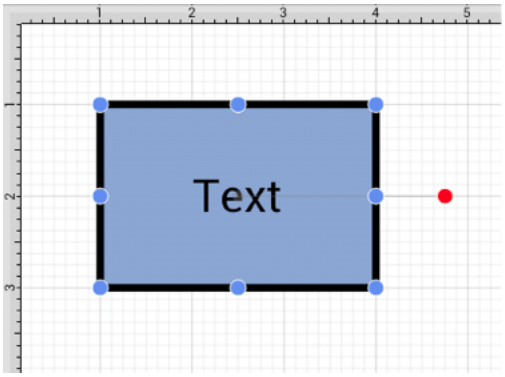


In the example below, the size of the figure is scaled; however, the stroke and text attributes are not.



If **Scale Attributes** is the only enabled option, then only the attributes of the selected figure(s) will be scaled according to the entered **Factor** values.





Note: Please note that if both options have been disabled, then the selected figure(s) will not be scaled.

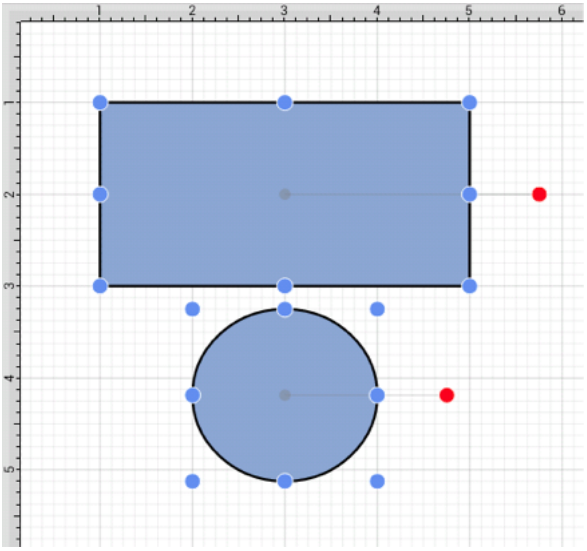
5.3.7. Shifting a Figure

The **Move By...** option can be used to shift a selected figure or group of figures by an entered set of coordinates. This option changes the location of a figure based on input coordinates and is accessed by pressing on the **Selection Button** in the Top Toolbar.

To **Shift a Figure** or group of figures:

1

Select a figure or grouping of figures to be shifted.

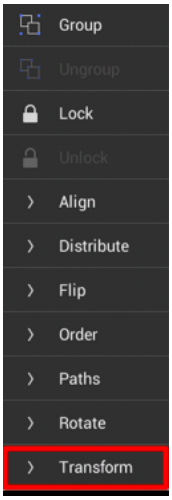


2

Press on the **Selection Button** to open the Selection Menu.

3

Press on the **Transform Submenu**.



4

Press on the **Move By...** option to open the **Move By** popup window.

5

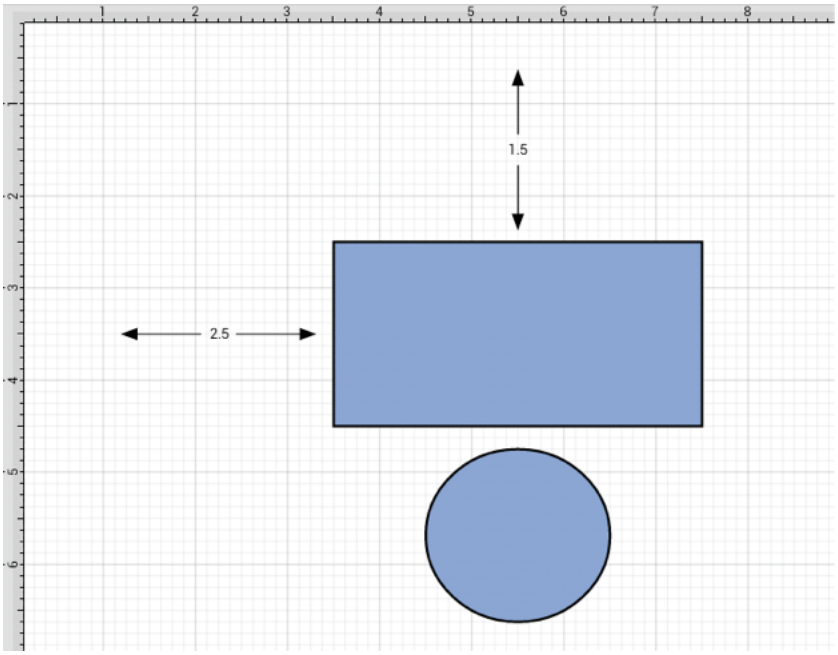
Enter the desired **X** and **Y** grid coordinates in the **Move By** popup windowby using the "up" and "down" arrow buttons located on the right and left side of each field or by pressing on the number field to bring up the text editor.

6

Press on the **Move Button** to finish the shift.

7

The selected figure or group of figures will shift in accordance to the entered coordinates and the **Move By** popup window remains open to allow for further changes.



Note: Tap anywhere within the drawing canvas to close the **Move By** popup window.

5.3.8. Arranging Figures

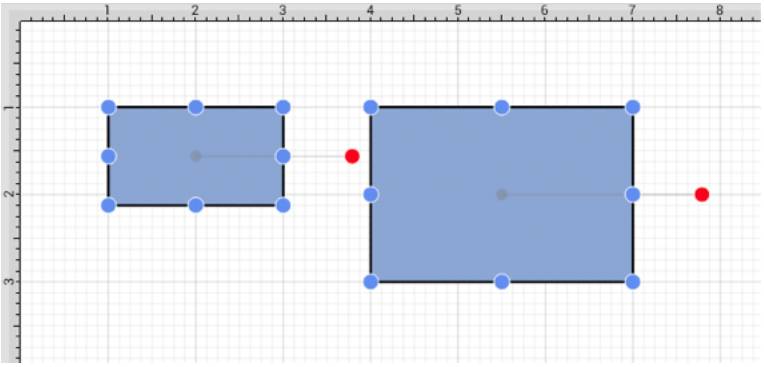
TouchDraw allows figures within the drawing view to be grouped or locked. Grouped figures are treated as a single object where all attribute, movement, and sizing changes are applied to the group as a whole. Locked figures cannot be moved or resized, but still allow for attribute changes such as the fill color or stroke properties. Figures can be ungrouped or unlocked any time object modification requirements change and then regrouped or locked again as needed.

5.3.9. Grouping Figures

Shapes residing on the drawing canvas can be manipulated and treated as a single figure with the **Group** feature. More than one figure will need to be selected in order for this option to be enabled. Use the Function Key Feature to select multiple figures. To group a set of figures:

1

Select the figures to be grouped.

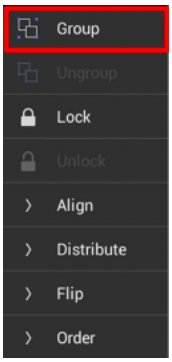


2

Press on the **Selection Button** to open the Selection Menu.

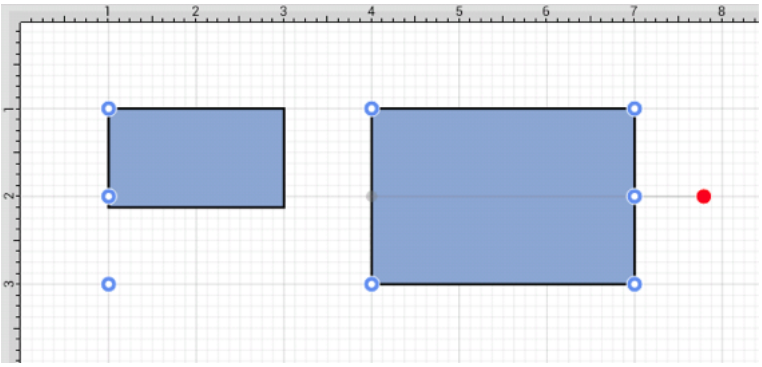
3

Press on the **Group** option. The Ungroup Option will only appear in the **Selection Menu** if a set of already grouped figures has been selected.



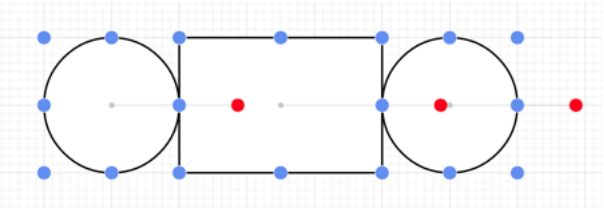
4

Two selected figures will appear as shown below after they have been grouped.

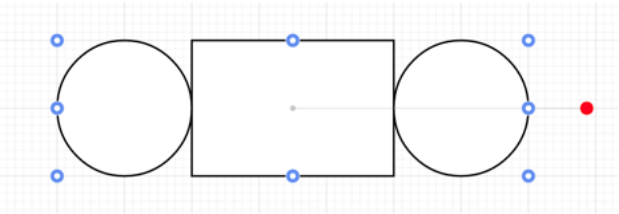


Paths are an exception to the multiple selection rule because a path or path shape can be added to a group by itself. This allows for path interaction without having to worry about the occurrence of reshaping when grabbing one of the available handles.

The screenshots below show a before and after for creating a group from multiple selected figures.



Multiple selected figures will appear as shown below once they have been grouped.



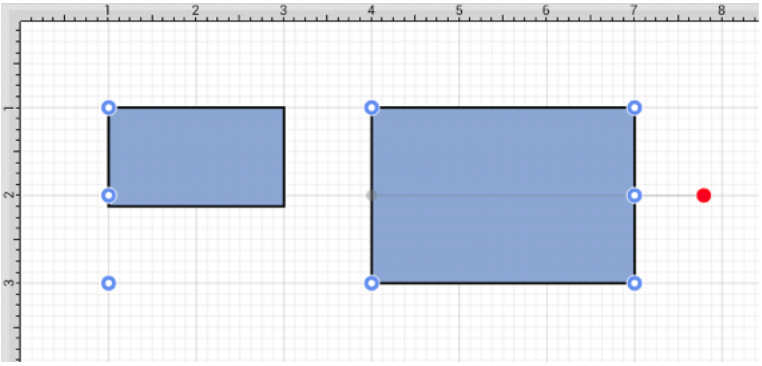
New bounds handles will appear after the selected figures are grouped. These handles correspond to the group as a whole rather than each individual figure. A new rotation handle is provided for making an entire group rotation. The standard "blue" handles are replaced by "blue handles with dots" to provide a visual indicator as to whether the entire group or a separate figure has been selected.

5.3.10. Ungrouping Figures

A **Group** must be selected for the ungrouping option to be enabled. To ungroup a set of grouped figures:

1

Select the set of figures to be ungrouped.

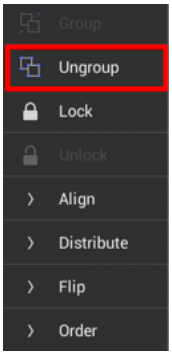


2

Press on the **Selection Button** to open the Selection Menu.

3

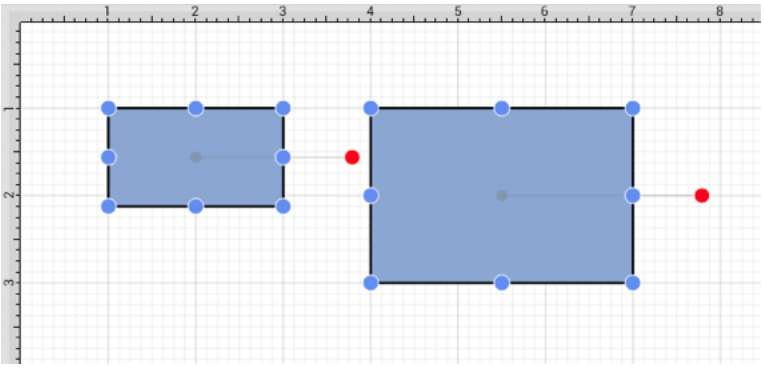
Press on the **Ungroup** option. The Group Option will only appear in the **Selection Menu** if a set of ungrouped figures has been selected.



Both grouping buttons will appear in the **Selection Menu** when an individual figure and a group of figures has been selected at the same time.

4

Two selected figures will appear as shown below after they have been ungrouped.



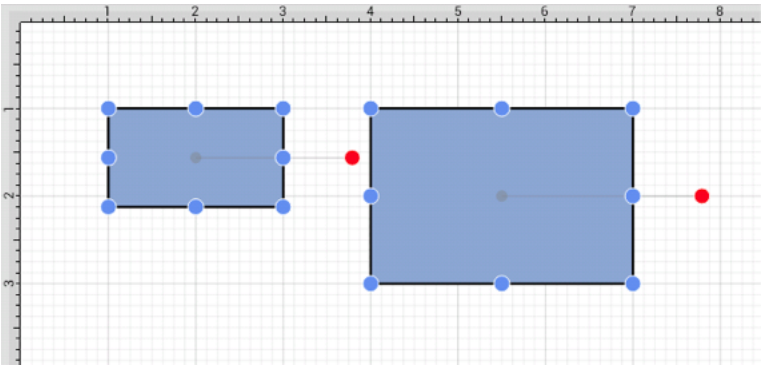
Note: Any transformations made to the group (such as rotating, resizing, etc...) will be retained by previously grouped objects after the ungrouping action has been completed. Grouping provides a nice way to quickly make bulk changes to multiple figures or all objects within a drawing.

5.3.11. Locking Figures

A **Locked Figure** is one that cannot be moved or resized until it has been unlocked. Attributes such as stroke, fill, shadow, etc... can still be manipulated on a locked figure. A minimum of one figure must be selected in order for this option to be enabled. To lock a figure(s):

1

Select the figure(s) to be locked.

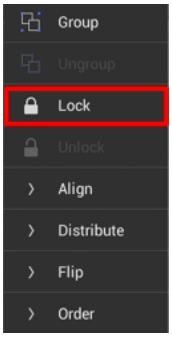


2

Press on the **Selection Button** to open the Selection Menu.

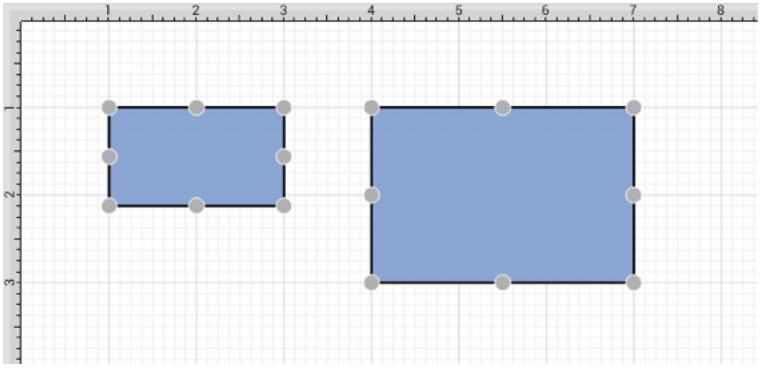
3

Press on the **Lock** option. The Unlock Option will only appear in the **Selection Menu** if a set of already locked figures has been selected.



4

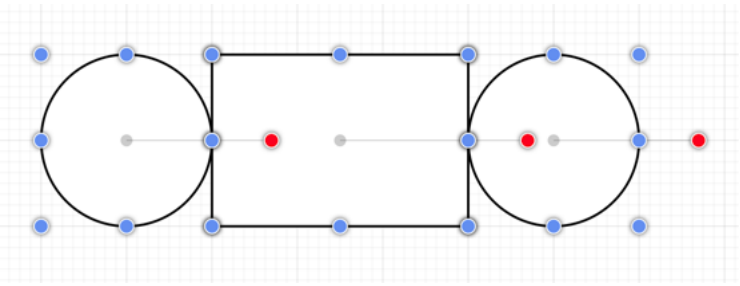
The **Grouped Figures** will appear as below.



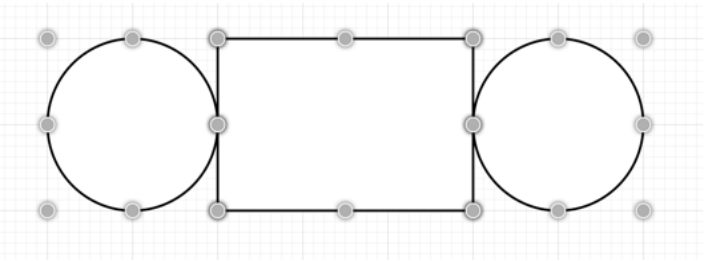
Use the Function Key Feature to select multiple figures for locking.

This **Selection Menu** option is only enabled when an unlocked figure or group of figures has been selected within the drawing canvas.

A group of figures will appear as shown below when they are unlocked.



The group will appear as shown below once they have been locked.



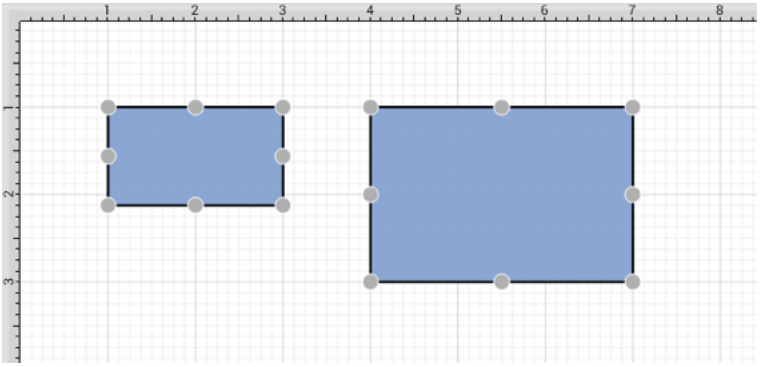
The handles appear gray after a figure(s) or group of figures are locked. This handle attribute change serves as a visual indicator of the selected figure(s) being locked.

5.3.12. Unlocking Figures

A figure(s) or group of figures can be unlocked to allow for moving and resizing. To unlock an individual figure or set of locked figures:

1

Select the figure(s) to be unlocked.

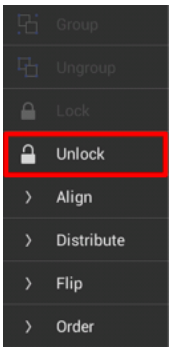


2

Press on the **Selection Button** to open the Selection Menu.

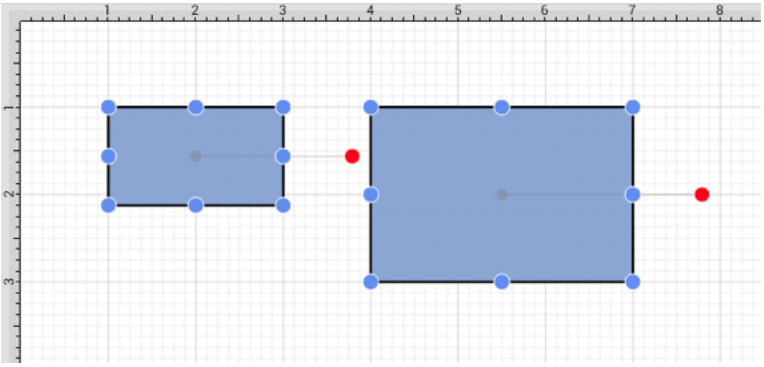
3

Press on the **Unlock** option. The Lock Option will only appear in the **Selection Menu** if the selected figures are currently unlocked.



4

The **Ungrouped Figures** will appear as below.



Use the Function Key Feature to select more than one locked figure.

This **Selection Menu** option is only enabled when a locked figure or group of figures has been selected within the drawing canvas.

5.3.13. Aligning Figures

TouchDraw provides methods for aligning a set of figures to an attribute of the first selected figure in the set.

Relative Alignment

The first type of alignment that can be done is relative alignment, where figures are aligned in relation to one another. The list below outlines the relative alignment options available.

- Top
- Vertical Center
- Bottom
- Left
- Horizontal Center
- Right

Grid Alignment

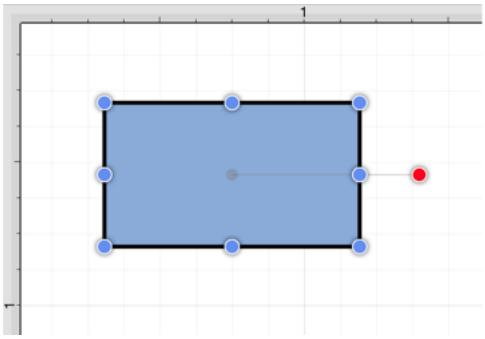
In addition to relative alignment, a figure (or set of figures) can also be aligned to the grid of the drawing canvas in the case that they were drawn or modified while the snap to grid option was disabled.

5.3.13.1. Align to Grid

The **Align to Grid** option is available to align figures with the grid. A minimum of one figure must be selected to use this option. The **Align to Grid** option must be turned on if figures are drawn with the grid turned off and need to be aligned with the grid. To align a figure or set of figures to the grid:

1

Select the figures to be aligned.

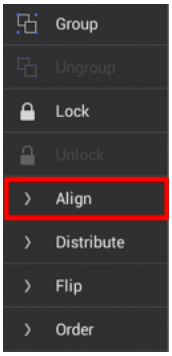


2

Press on the **Selection Button** to open the Selection Menu.

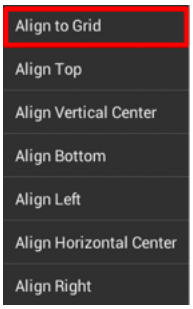
3

Press on the **Align Submenu**.



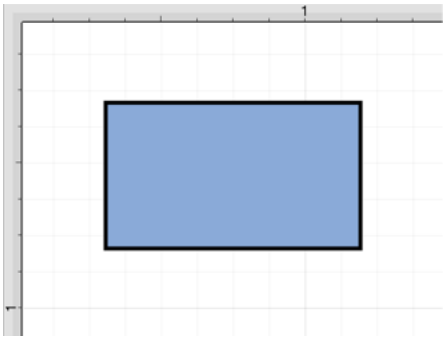
4

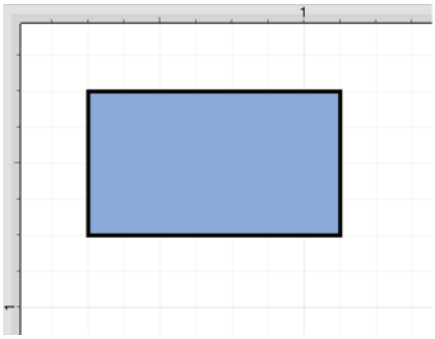
Press on the **Align to Grid** option.



The option will first align the upper left hand corner of the selected figures to the grid and then resize it to make *all four corners* align with the grid.

The following screenshots show a before and after of a shape that has been aligned to the grid.





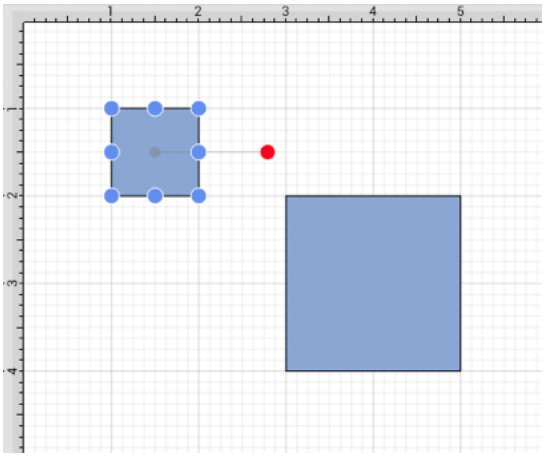
The Snap To Grid option must be disabled to place an figure anywhere within the grid lines on the drawing canvas. This option must be enabled for the **Align to Grid** option to provide the results shown above.

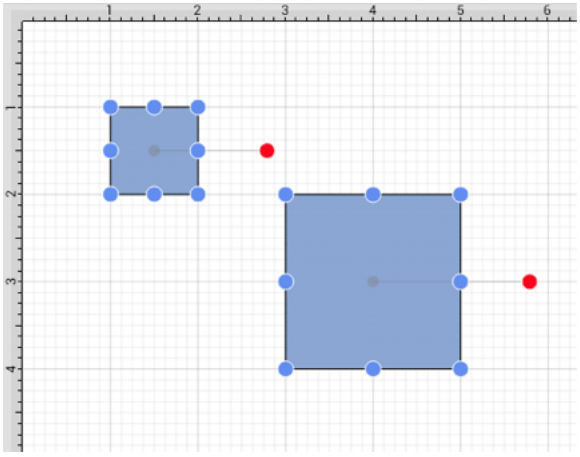
5.3.13.2. Align Top

The **Align Top** option moves all currently selected figures to match the top (Y position) of the **first** selected figure. At least two figures must be selected for this application option to be enabled. In the example below, the lower right square was selected first. To align selected figures with the top position of the first selected figure:

1

Select the figures to be aligned. In this example, the top left square is selected first.



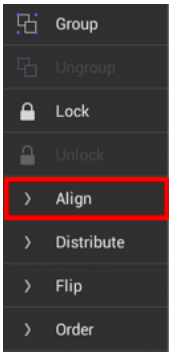


2

Press on the **Selection Button** to open the Selection Menu.

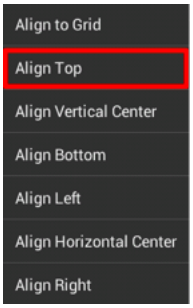
3

Press on the **Align Submenu**.

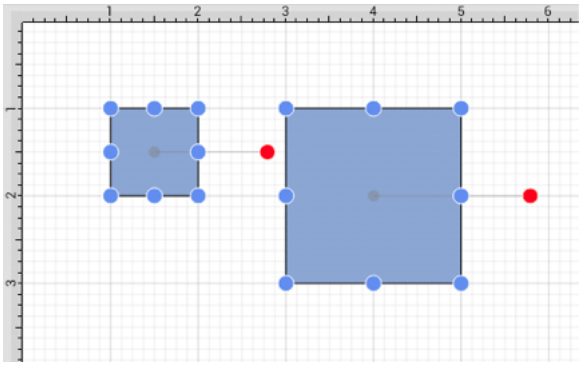


4

Press on the **Align Top** option.



The second selected figure is aligned with the top (Y position) of the first selected figure, as shown below.



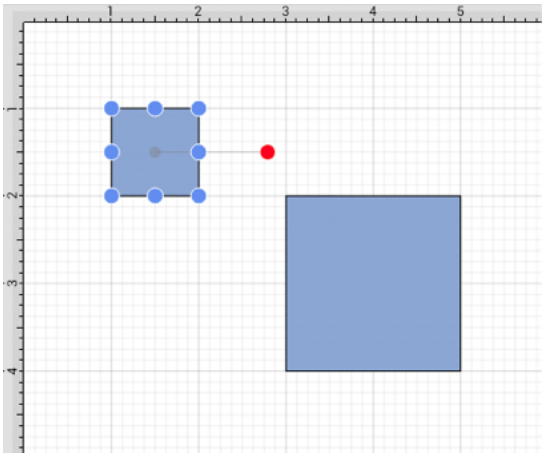
Use the Function Key Feature to select multiple figures. Tap anywhere on the drawing canvas to close the **Selection Menu**.

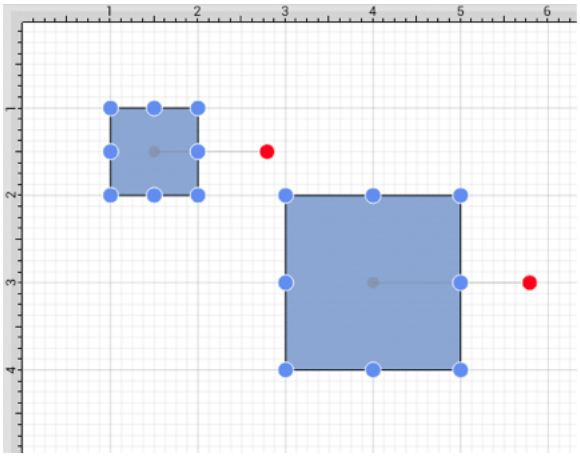
5.3.13.3. Align Vertical Center

The **Align Vertical Center** option moves all currently selected figures to match the vertical center (Y position + 1/2 of the height of all figures) of the **first** selected figure. At least two figures must be selected for this application option to be enabled. In the example below, the lower right square is selected first. To align the vertical center of a set of figures:

1

Select the figures to be aligned. In this example, the top left square is selected first.



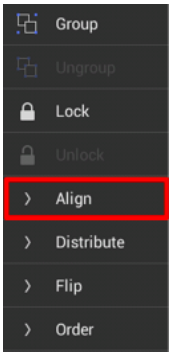


2

Press on the **Selection Button** to open the Selection Menu.

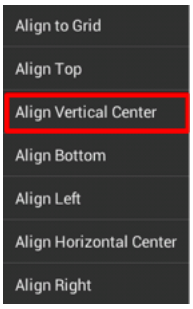
3

Press on the **Align Submenu**.



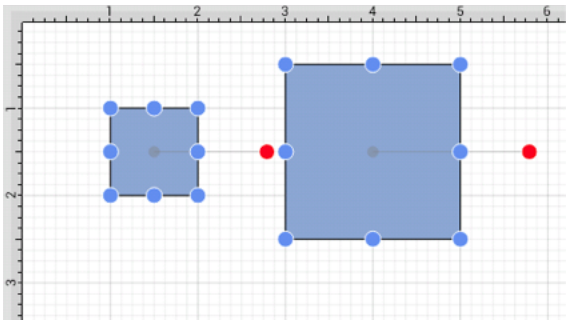
4

Press on the **Align Vertical Center** option.



5

The second figure is aligned to match the vertical center (Y position + 1/2 of the height of all figures) of the **first** selected figure, as shown below.



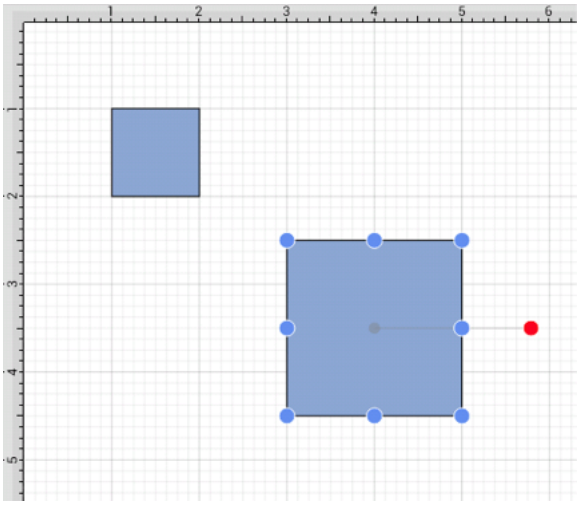
Note: Use the Function Key Feature to select multiple figures. Tap anywhere on the drawing canvas to close the **Selection Menu**.

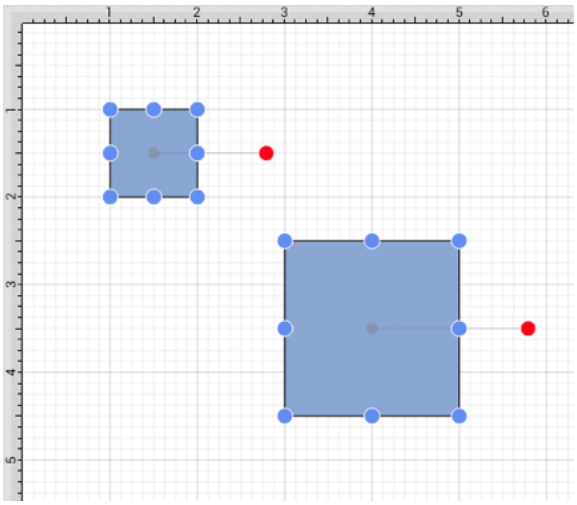
5.3.13.4. Align Bottom

The **Align Bottom** option moves all currently selected figures to match the the bottom (Y position + Height) of the **first** selected figure. At least two figures must be selected for this application feature to be enabled. In the example below, the lower right square is selected first. To align figures with the bottom position of the **first** selected figure:

1

Select the figures to be aligned. In this example, the bottom right square is selected first.



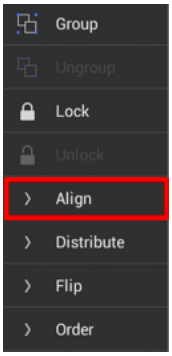


2

Press on the **Selection Button** to open the Selection Menu.

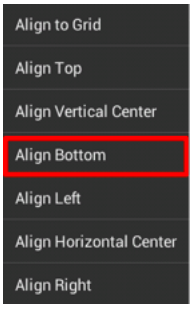
3

Press on the **Align Submenu**.



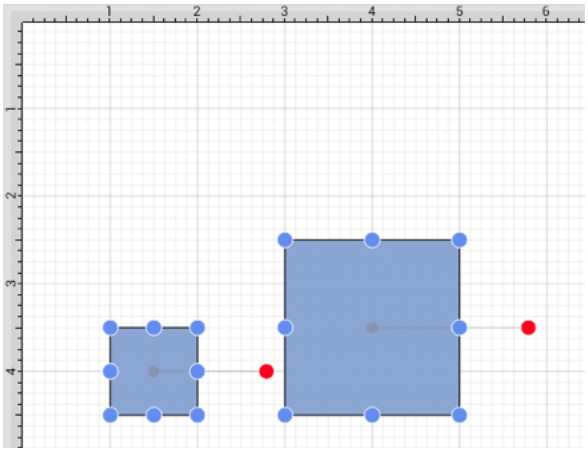
4

Press on the **Align Bottom** option.



5

The second figure is aligned to match the the bottom (Y position + Height) of the **first** selected figure.



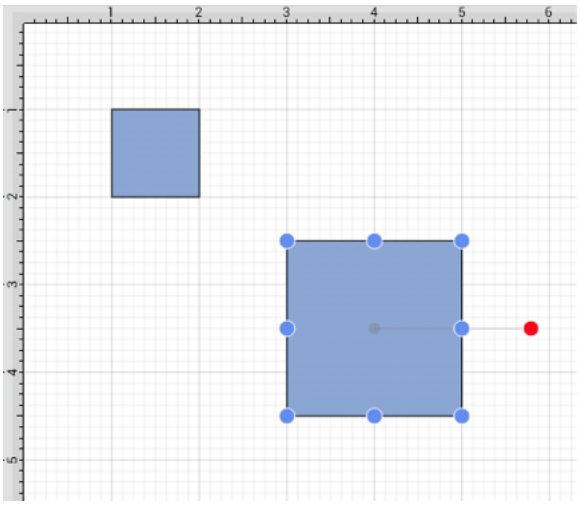
Note: Use the Function Key Feature to select multiple figures. Tap anywhere on the drawing canvas to close the **Selection Menu**.

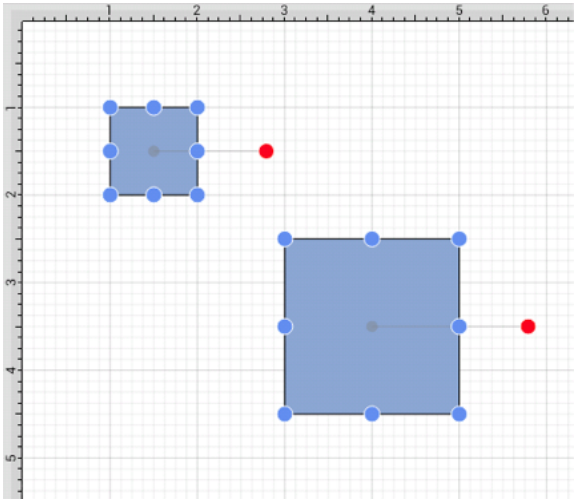
5.3.13.5. Align Left

The **Align Left** option moves all currently selected figures to match the left (X position) of the **first** selected figure. At least two figures must be selected for this application feature to be enabled. In the example below, the lower right square is selected first. To align figures with the left position of the **first** selected figure:

1

Select the figures to be aligned. In this example, the bottom right square is selected first.



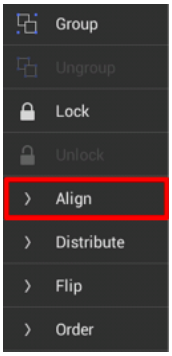


2

Press on the **Selection Button** to open the Selection Menu.

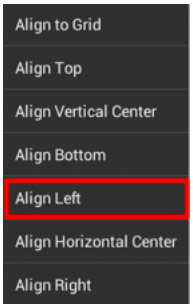
3

Press on the **Align Submenu**.



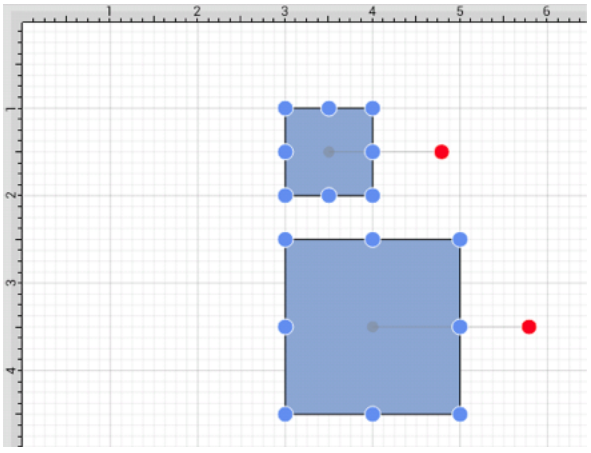
4

Press on the **Align Left** option.



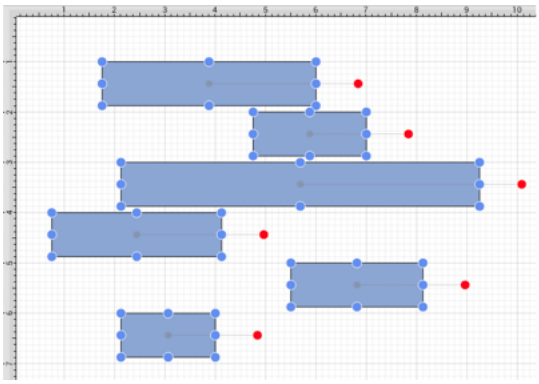
5

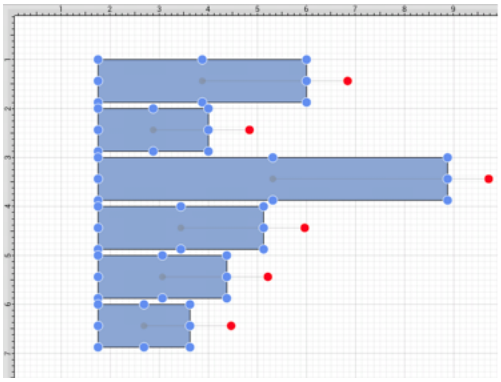
Additionally selected figures are adjusted to match the the bottom (X Position) of the **first** selected figure.



Use the Function Key Feature to select multiple figures. Tap anywhere on the drawing canvas to close the **Selection Menu**.

The following figures show an example of using the **Align Left** action.



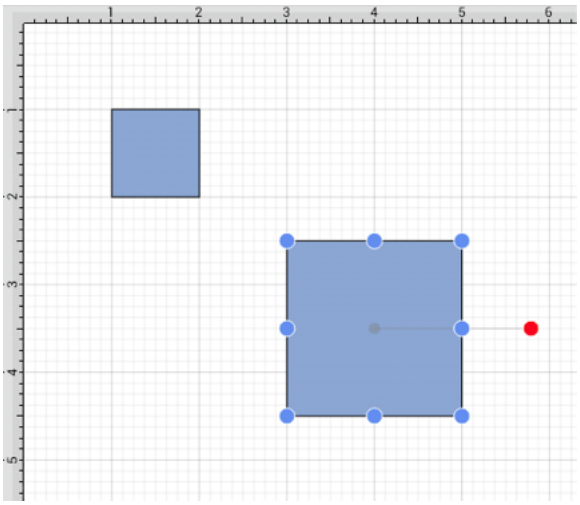


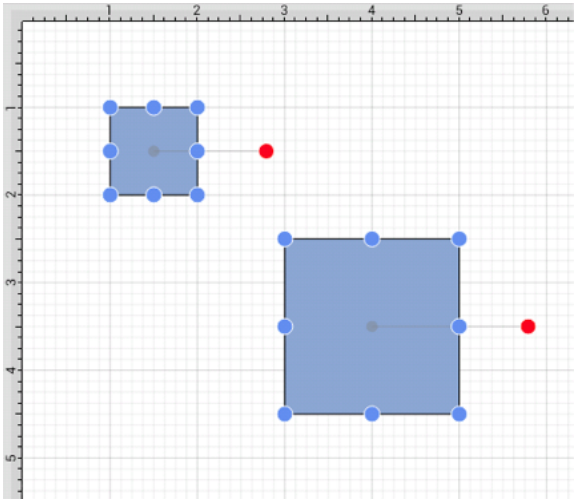
5.3.13.6. Align Horizontal Center

The **Align Horizontal Center** option moves all currently selected figures to match the horizontal center (X position + 1/2 of the width) of the **first** selected figure. At least two figures must be selected for this application feature to be enabled. In the example below, the lower right square is selected first. To align figures with the horizontal center of the first selected figure:

1

Select the figures to be aligned. In this example, the bottom right square is selected first.



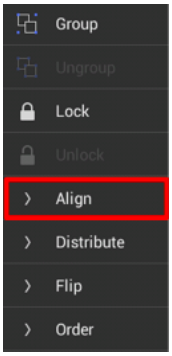


2

Press on the **Selection Button** to open the Selection Menu.

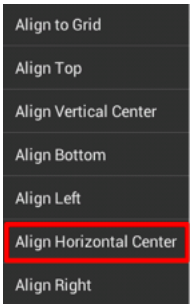
3

Press on the **Align Submenu**.



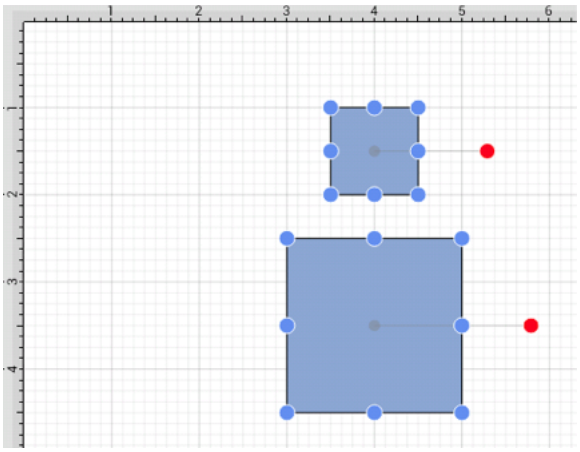
4

Press on the **Align Horizontal Center** option.



5

Additionally selected figures are adjusted to match the the bottom (X position + 1/2 of the width) of the **first** selected figure.



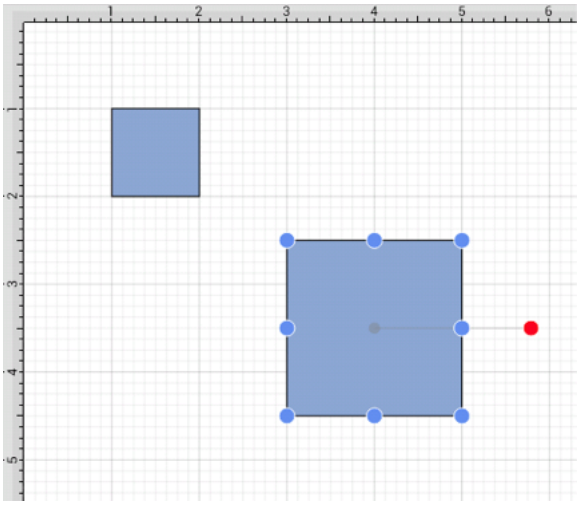
Note: Use the Function Key Feature to select multiple figures. Tap anywhere on the drawing canvas to close the **Selection Menu**.

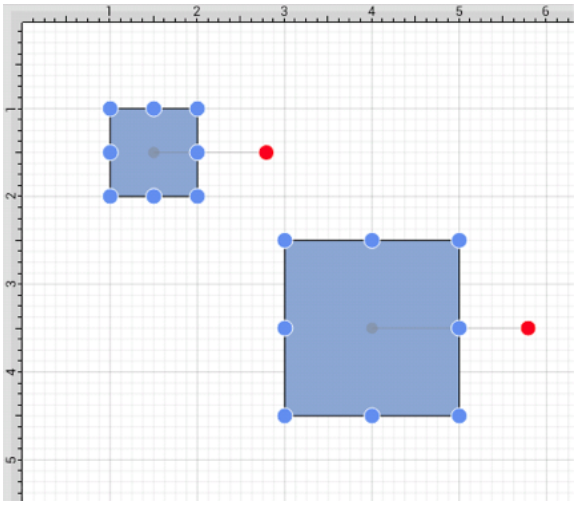
5.3.13.7. Align Right

The **Align Right** option moves all currently selected figures to match the right (X position + Width) of the **first** selected figure. At least two figures must be selected for this application feature to be enabled. In the example below, the lower right square is selected first. To align figures with the right position of the first selected figure:

1

Select the figures to be aligned. In this example, the bottom right square is selected first.



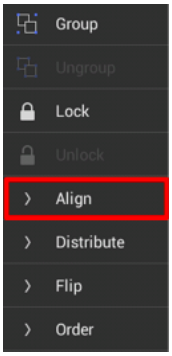


2

Press on the **Selection Button** to open the Selection Menu.

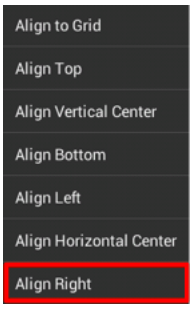
3

Press on the **Align Submenu**.



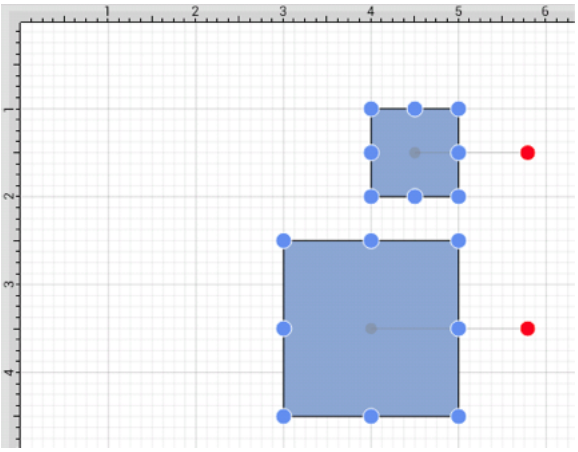
4

Press on the **Align Right** option.



5

Additionally selected figures are adjusted to match the the bottom (X position + 1/2 of the width) of the **first** selected figure.



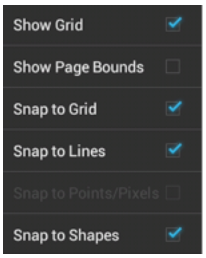
Note: Use the Function Key Feature to select multiple figures. Tap anywhere on the drawing canvas to close the **Selection Menu**.

5.3.14. Snapping Figures

TouchDraw supplies options for snapping figures to specific points on the grid, positions on the drawing canvas or positions relative to other shapes. Figures can be snapped to these locations:

- Grid
- Lines
- Points/Pixels
- Shapes

The Overflow Menu provides access to these settings and can be used to make changes for the currently active drawing canvas.



5.3.14.1. Snap to Grid

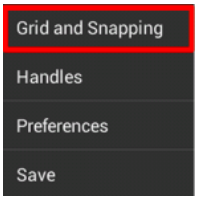
The **Snap to Grid** option toggles whether or not figures (and their handles) should be aligned to the grid as they are created and modified. This option is enabled by default in TouchDraw. To enable/disable this option:

1

Press on the **Overflow Button** to open the Overflow Menu.

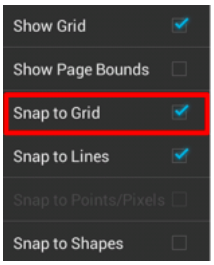
2

Press on the **Grid and Snapping Submenu**.

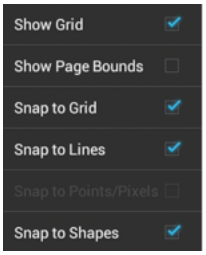


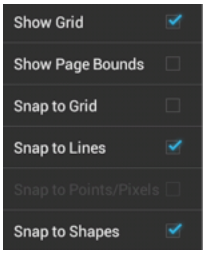
3

Press on the **Snap to Grid** option to enable or disable it.



The **Snap to Grid** option will show a blue checkmark when enabled and no checkmark when disabled.





5.3.14.2. Snap to Lines

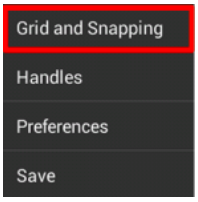
The **Snap to Lines** option allows dragged handles to be snapped to the endpoints or the midpoints of lines in the drawing canvas. This option is enabled by default in TouchDraw. To enable/disable this option:

1

Press on the **Overflow Button** to open the Overflow Menu.

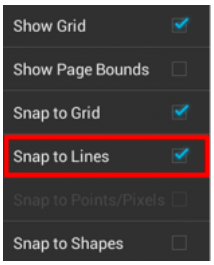
2

Press on the **Grid and Snapping Submenu**.

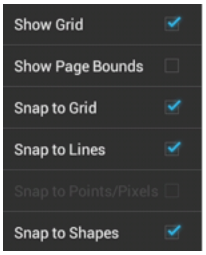


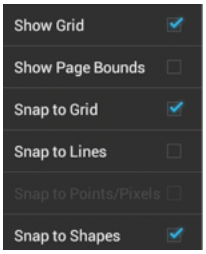
3

Tap on the **Snap to Lines** option.



The **Snap to Lines** option will show a blue checkmark when enabled and no checkmark when disabled.





5.3.14.3. Snap to Points/Pixels

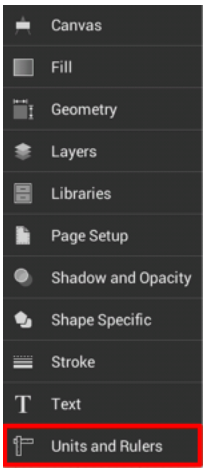
The **Snap to Points/Pixels** option aligns objects to whole pixel numbers for simplified modification and increased accuracy. This option remains disabled until the unit of measure for the drawing is changed to pixels. To change the grid unit of measurement:

1

Press on the **Info Button** to access the **Units and Rulers** option.

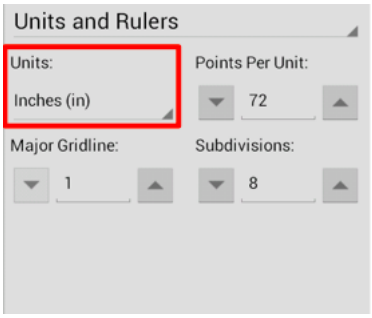
2

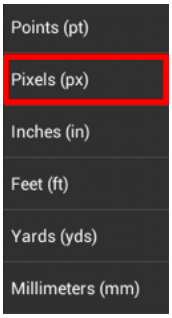
Press on the **Units and Rulers** option to open the sidebar panel.

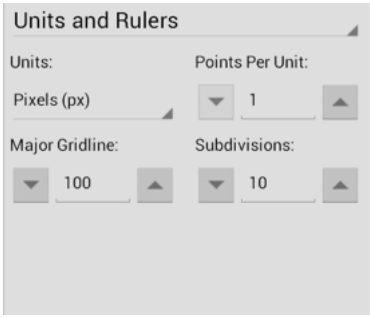


3

By default, Inches is the selected unit of measurement. Press on the **Units** option and then choose **Pixels** or **Points** in the provided menu to change the grid to pixels. In this example, **Pixels** is chosen.

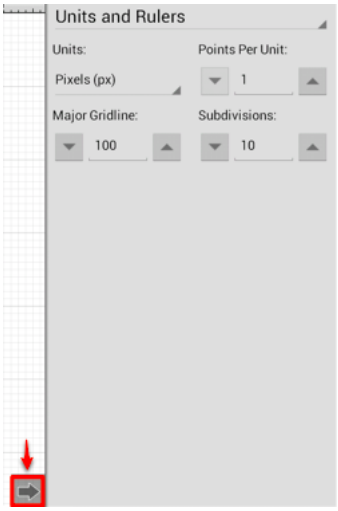






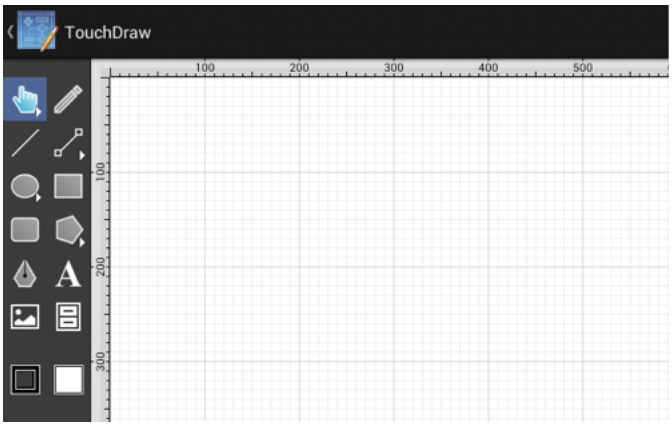
4

Tap on the **Hide Sidebar Button** located at the bottom of the **Units and Rulers Sidebar Panel** to close it.



5

The grid will appear as shown below.



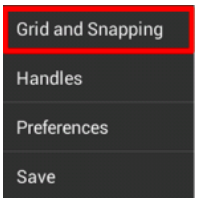
To enable/disable the **Snap to Pixels** option:

1

Press on the **Overflow Button** to open the Overflow Menu.

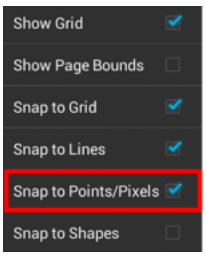
2

Press on the **Grid and Snapping Submenu**.

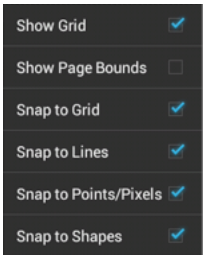


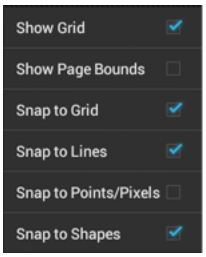
3

Tap on the **Snap to Pixels** option.



The **Snap to Pixels** option will show a blue checkmark when enabled and no checkmark when disabled.





5.3.14.4. Snap to Shapes

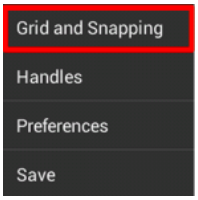
The **Snap to Shapes** option snaps a figure to a selected shape vertex or center point. This option is enabled by default in TouchDraw. To enable/disable this option:

1

Press on the **Overflow Button** to open the Overflow Menu.

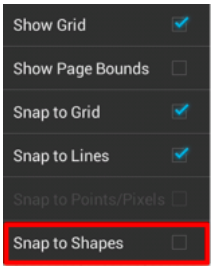
2

Press on the **Grid and Snapping Submenu**.

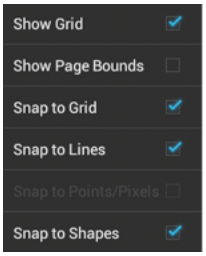


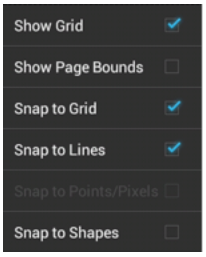
3

Tap on the **Snap to Shapes** option.

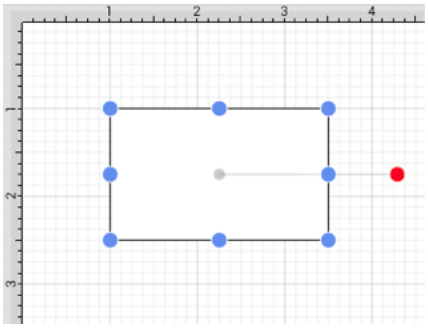


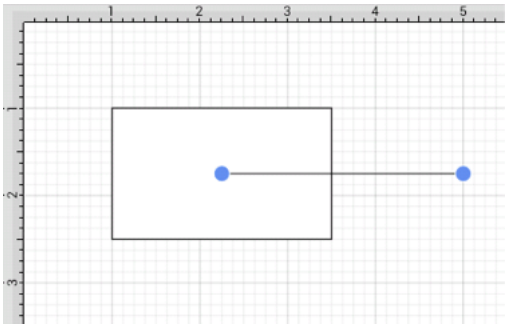
The **Snap to Shapes** option will show a blue checkmark when enabled and no checkmark when disabled.



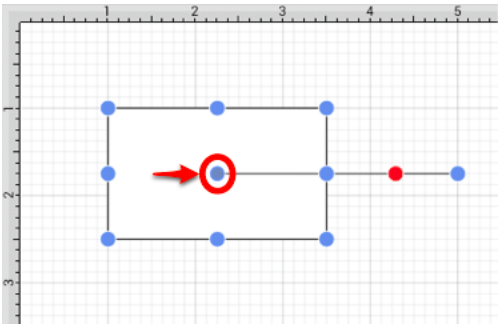


To see this option in action, disable the Snap to Grid option, make certain **Snap to Shapes** is enabled, and then draw a star or rectangle. Once the shape is completed, select the Line Tool and try to draw a line from one of the vertexes of the shape or its center point. The drawn line will snap to one of these locations.





In the example below, the line snaps to the center point of the rectangle.



5.3.15. Ordering Figures

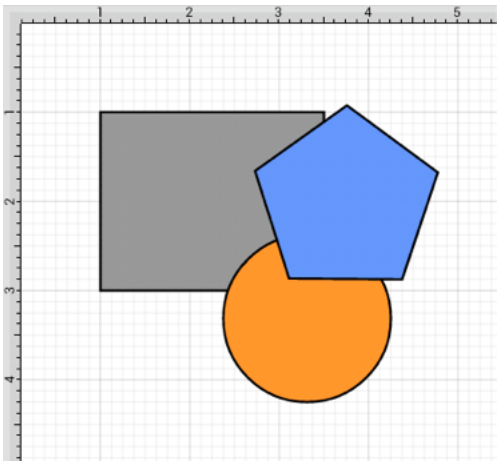
TouchDraw supplies application functions for altering the order of a figure or multiple figures within a specific layer on the drawing canvas. Figures can be moved to the front of a layer or moved forward by one level from their previous position. They may also be moved to the back of a layer or moved backward by one level within a layer.

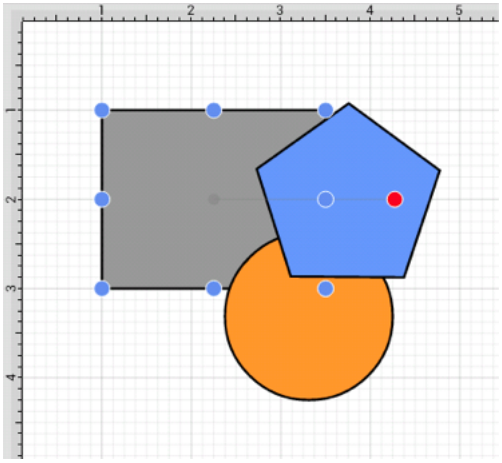
5.3.15.1. Bring to Front

The **Bring to Front** option moves a currently selected figure(s) to the front of all figures residing in the same layer. At least one figure within a layer must be selected for this option to be enabled. To bring a figure(s) to the front of a layer:

1

Select the figure(s) to be moved to the front of the current layer. In this example, the rectangle has been selected.



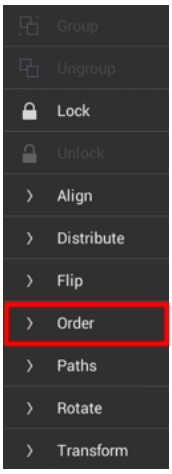


2

Press on the **Selection Button** to open the Selection Menu.

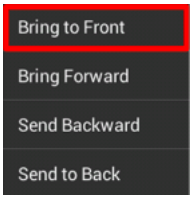
3

Press on the **Order** Submenu.



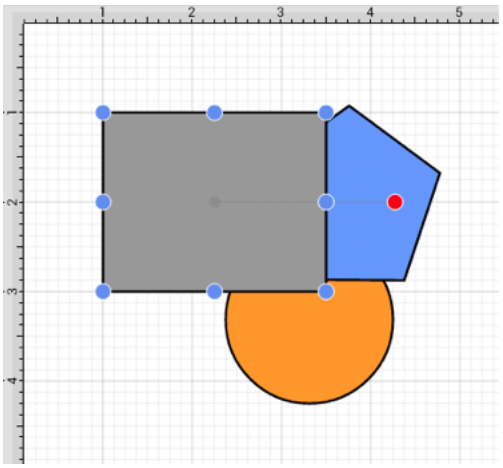
4

Press on the **Bring to Front** option.



5

The following image displays the position of the selected rectangle in this example after using the **Bring to Front** option.

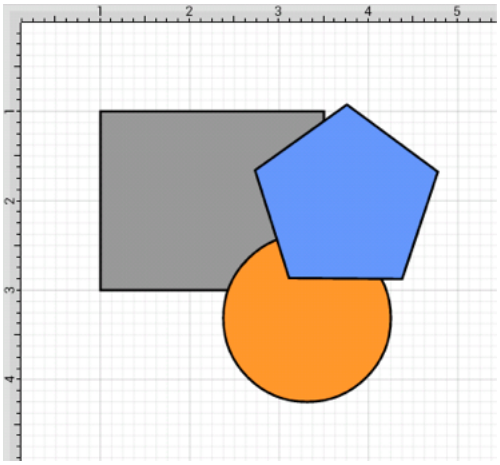


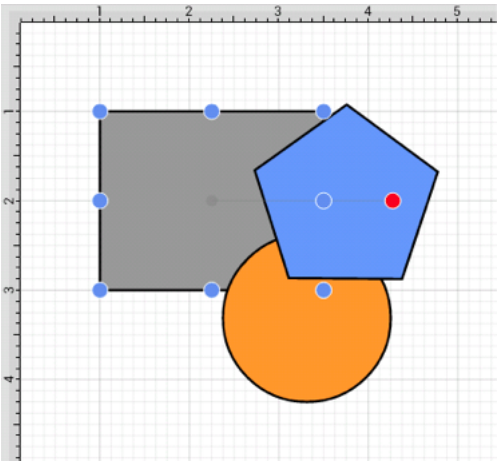
5.3.15.2. Bring Forward

The **Bring Forward** option moves a currently selected figure(s) one step closer to the top of the stack within the layer they reside in. At least one figure within a desired layer must be selected for this option to be enabled. To bring a figure(s) forward within a layer:

1

Select the figure(s) to be moved one step closer within the layer. In this example, the rectangle has been selected.



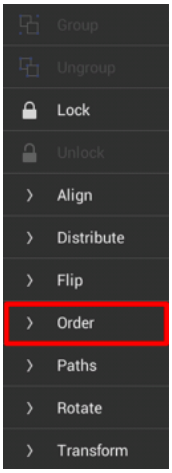


2

Press on the **Selection Button** to open the Selection Menu.

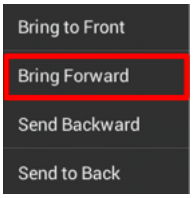
3

Press on the **Order Submenu**.



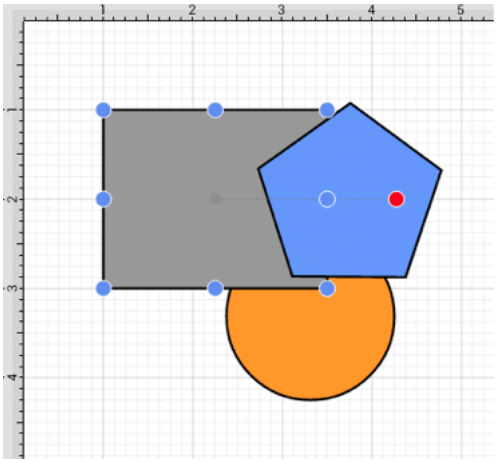
4

Press on the **Bring Forward** option.



5

The following image displays the position of the selected rectangle in this example after using the **Bring Forward** option.



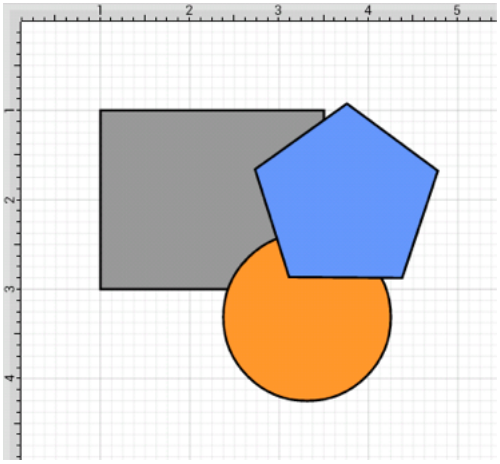
Note: The **Bring Forward** option can be chosen multiple times to continue moving a selected figure(s) to the front of a layer.

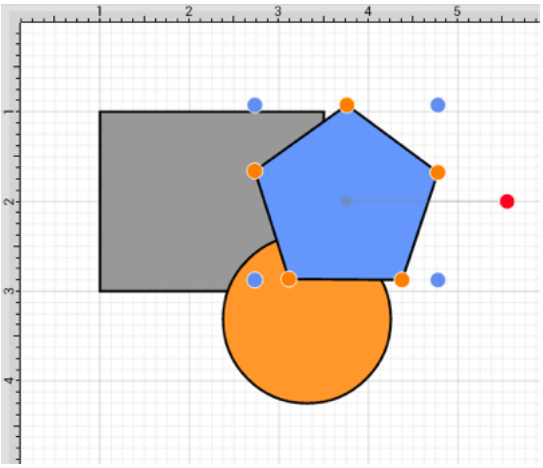
5.3.15.3. Send Backward

The **Send Backward** option moves a currently selected figure(s) one step closer to the bottom of a stack within their residing layer. At least one figure within a layer must be selected for this option to be enabled. To send a figure(s) back one step within a layer:

1

Select the figure(s) to be moved one step back in the current layer. In this example, the pentagon has been selected.



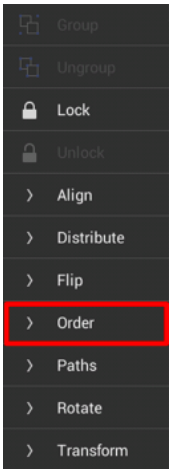


2

Press on the **Selection Button** to open the Selection Menu.

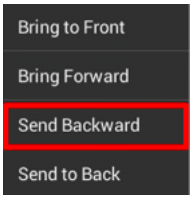
3

Press on the **Order Submenu**.



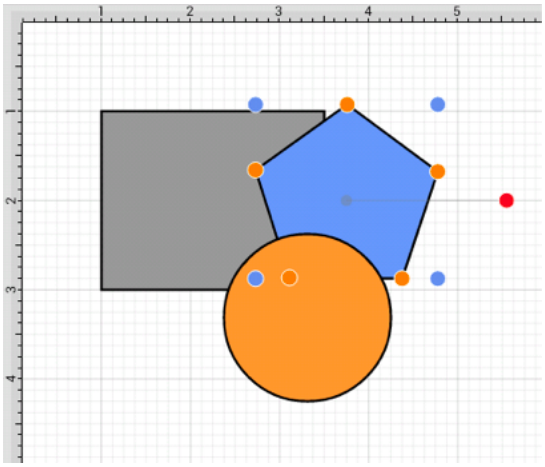
4

Press on the **Send Backward** option.



5

The following image displays the position of the selected pentagon in this example after using the **Send Backward** option. It has been moved to the back of the orange circle, but remains in front of the grey rectangle.



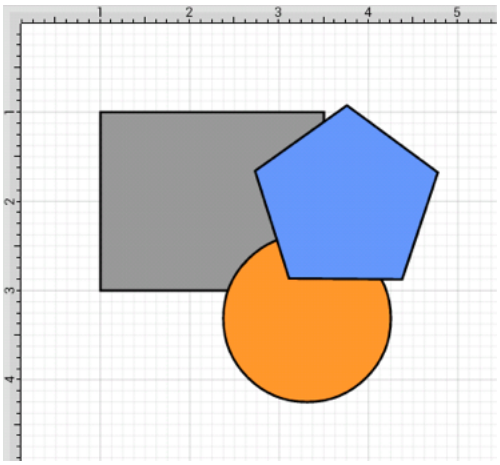
Note: The **Send Backward** option can be chosen multiple times to continue moving a selected figure(s) to the back of a layer.

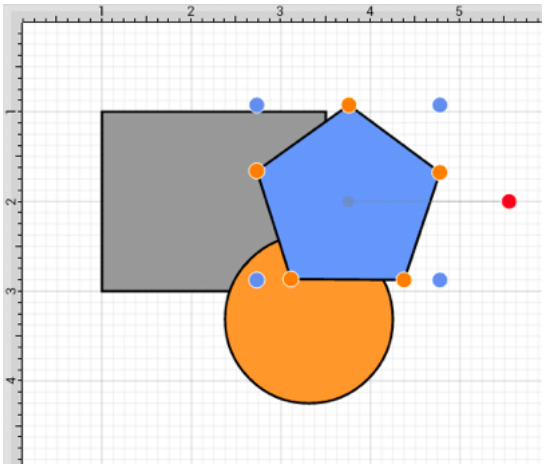
5.3.15.4. Send to Back

The **Send to Back** option moves a currently selected figure(s) behind all other figures residing within the same layer. At least one figure within a layer must be selected for this option to be enabled. To send a figure(s) to the back of a layer:

1

Select the figure(s) to be moved to the back of the current layer. In this example, the pentagon has been selected.



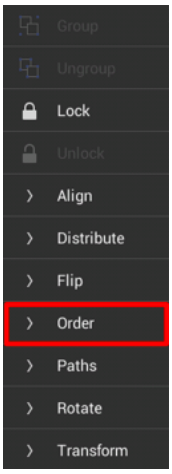


2

Press on the **Selection Button** to open the Selection Menu.

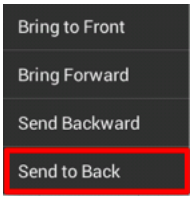
3

Press on the **Order Submenu**.



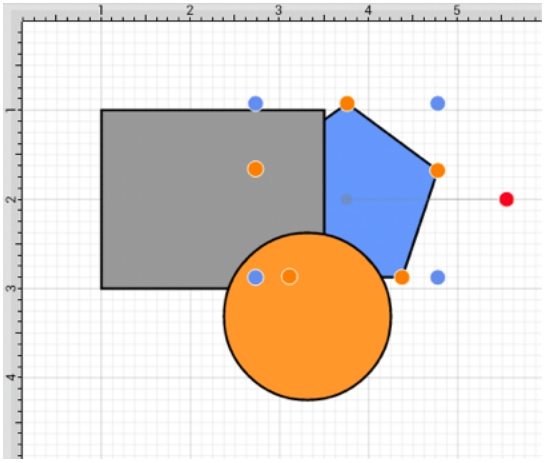
4

Press on the **Send to Back** option.



5

The following image displays the position of the selected pentagon in this example after using the **Send To Back** option.



5.3.16. Distributing Figures

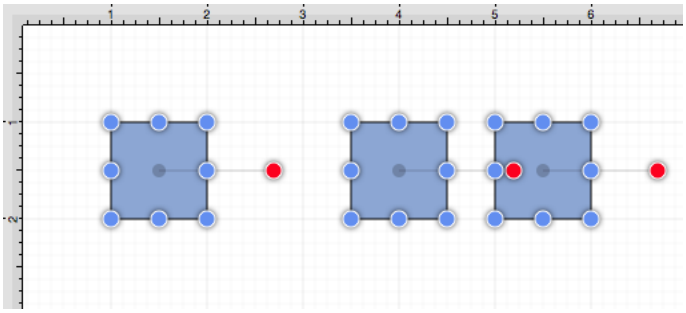
TouchDraw offers options for apportioning figures evenly in relation to each other. A set of figures can be laid out to have equal spacing between each figure measured either horizontally or vertically.

5.3.16.1. Distribute Horizontally

The **Distribute Horizontally** option adjusts the positioning of selected figures to create an even amount of horizontal space between each figure. This option is enabled when three or more unlocked figures are selected in the drawing canvas. To distribute a set of figures horizontally:

1

Select the figure(s) to be distributed horizontally.

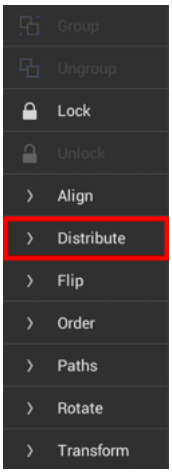


2

Press on the **Selection Button** to open the Selection Menu.

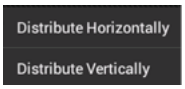
3

Press on the **Distribute Submenu**.

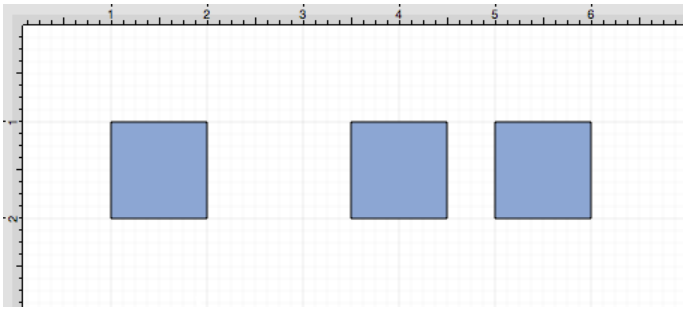


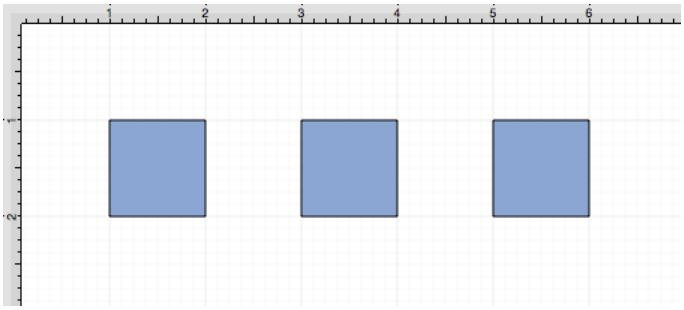
4

Press on the **Distribute Horizontally** option.



The following images display the positions of a selected set of figures prior to and after using the **Distribute Horizontally** option.





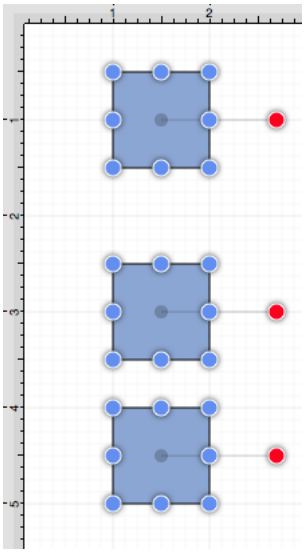
In the above example, the first and middle figures were originally 2.5 inches apart. The spacing between the middle and last figure totaled 1.5 inches. After this option has been applied, the horizontal space between each figure is adjusted to 2 inches to provide three evenly spaced figures.

5.3.16.2. Distribute Vertically

The **Distribute Vertically** option adjusts the positioning of selected figures to create an even amount of vertical space between each figure. This option is enabled when three or more unlocked figures are selected in the drawing canvas. To distribute a set of figures vertically:

1

Select the figures to be distributed vertically.

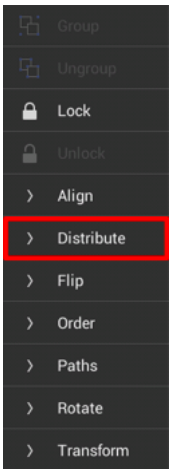


2

Press on the **Selection Button** to open the Selection Menu.

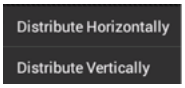
3

Press on the **Distribute Submenu**.

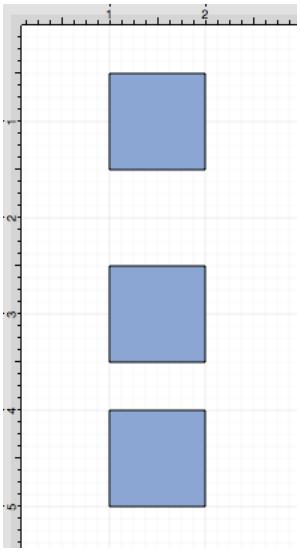


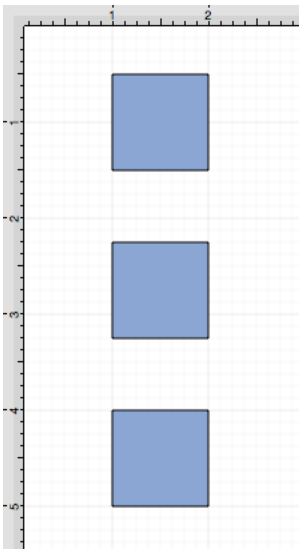
4

Press on the **Distribute Vertically** option.



The following images display the positions of a set of figures prior to and after using the **Distribute Vertically** option.





In the above example, the spacing between the top and middle squares totals 2 inches. The middle and bottom figures have a vertical spacing of 1.5 inches. After this option has been applied, the vertical space between each figure is adjusted to 1.75 inches to provide three evenly spaced figures.

5.3.17. Combining Shapes

TouchDraw offers multiple options for combining two shapes within the drawing canvas. Options for selected shapes include:

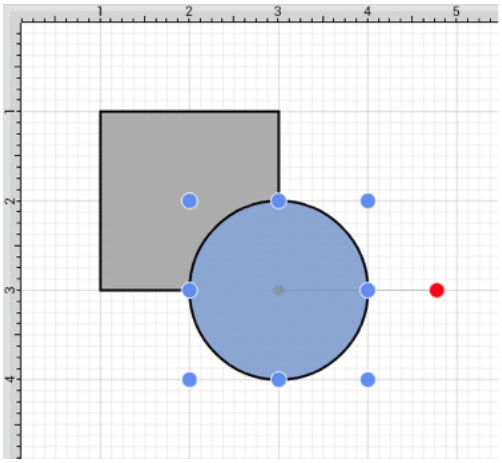
- Add Shapes
- Subtract Shapes
- Intersect Shapes
- Exclude Shapes

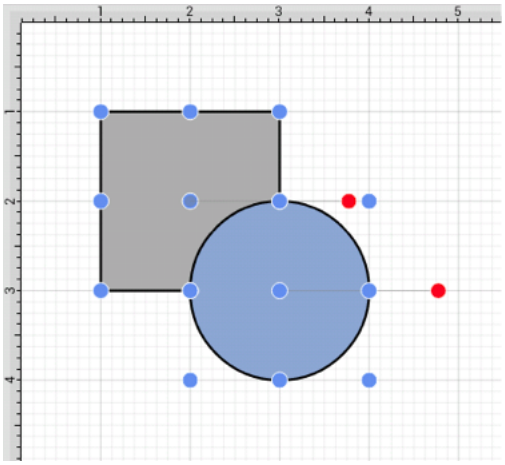
5.3.17.1. Add Shapes

The **Add Shapes** option combines two selected shapes into one figure. It remains disabled until two figures have been selected.

To **Add** selected shapes:

1Select the shapes to be combined.





1Press on the

Selection Button

to open the

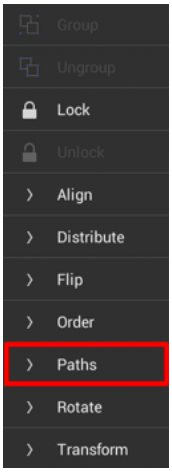
Selection Menu

.

1Press on the

Paths Submenu

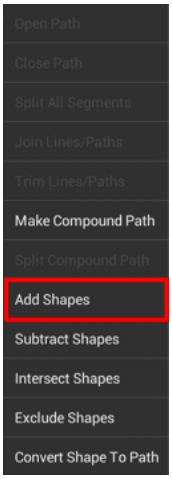
.



1Press on the

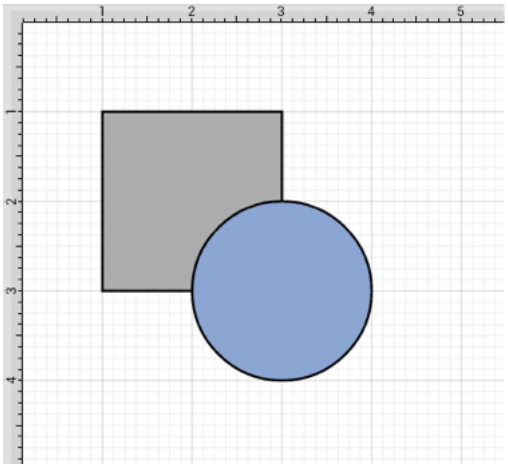
Add Shapes

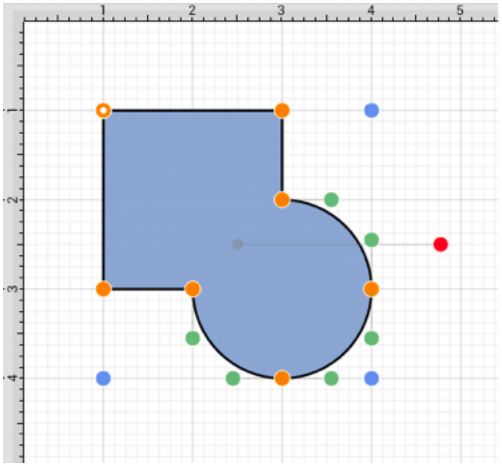
option.



The selection of two non-intersecting shapes has no effect on their appearance, but does cause the figures to be treated as one shape.

The following images display two selected shapes prior to and after using the **Add Shapes** option.





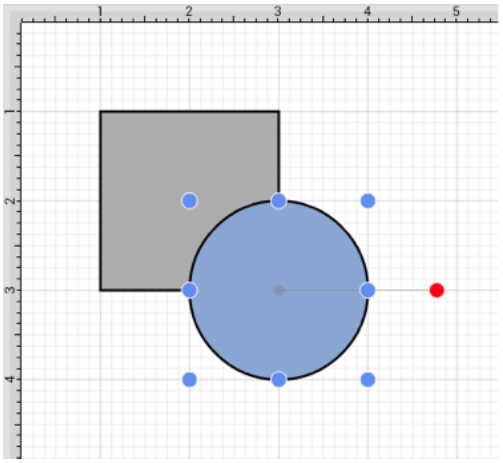
5.3.17.2. Subtract Shapes

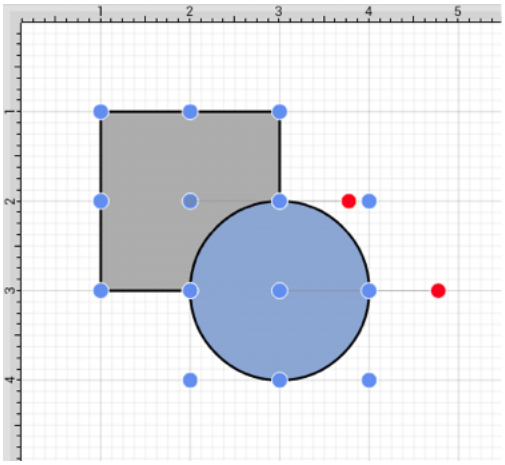
The **Subtract Shapes** option removes the intersecting portions of the second selected shape from the first figure selected in the drawing canvas. This option remains disabled until two figures have been selected.

To **Subtract** selected shapes:

1

Select the shapes to be combined. In this example, the circle is selected first.



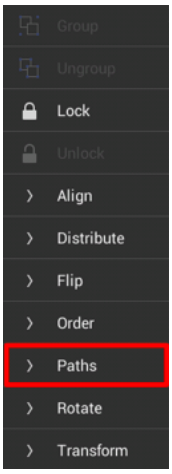


2

Press on the **Selection Button** to open the Selection Menu.

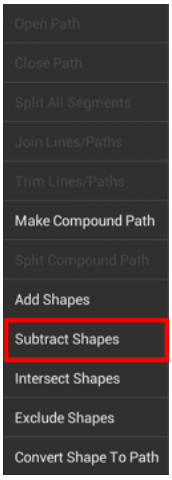
3

Press on the **Paths Submenu**.



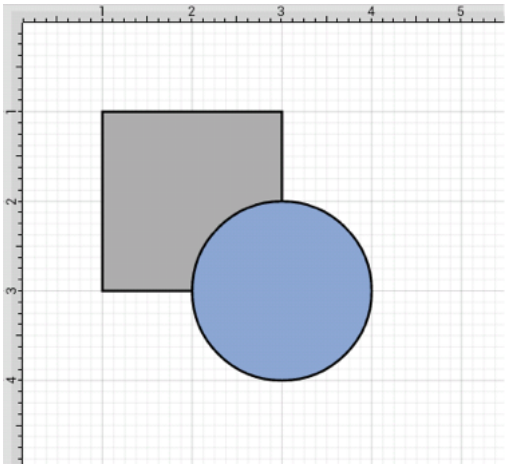
4

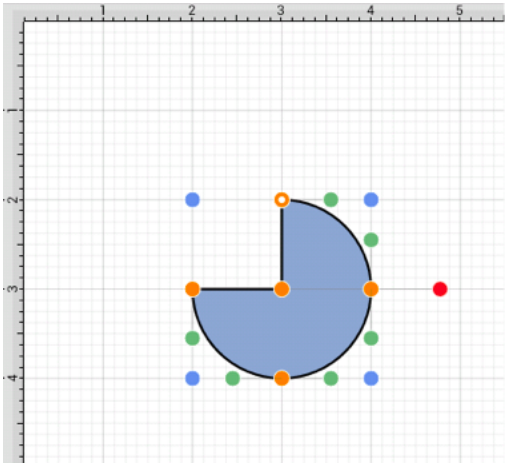
Press on the **Subtract Shapes** option.



The selection of two non-intersecting shapes causes the second shape to be removed entirely.

The following images display two selected shapes prior to and after using the **Subtract Shapes** option.





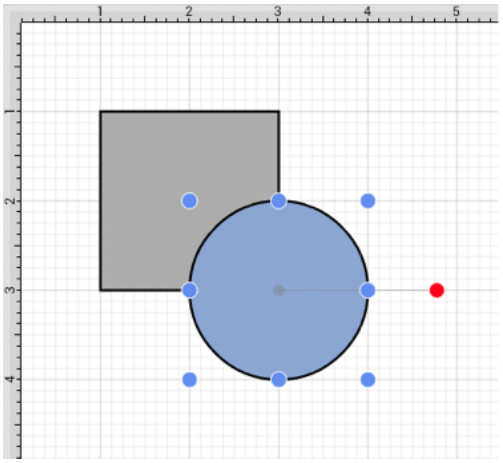
5.3.17.3. Intersect Shapes

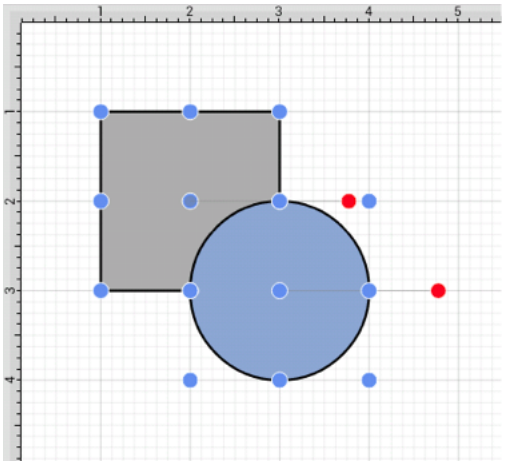
The **Intersect Shapes** option removes all non-intersecting portions of selected figures from the drawing canvas. This option remains disabled until two figures have been selected.

To **Intersect** selected shapes:

1

Select the shapes to be combined.



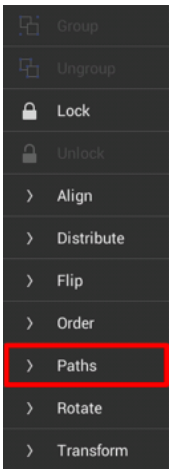


2

Press on the **Selection Button** to open the Selection Menu.

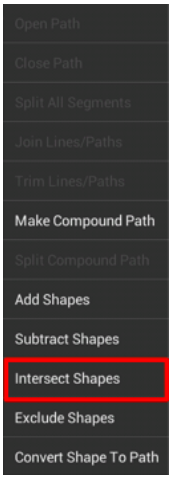
3

Press on the **Paths Submenu**.



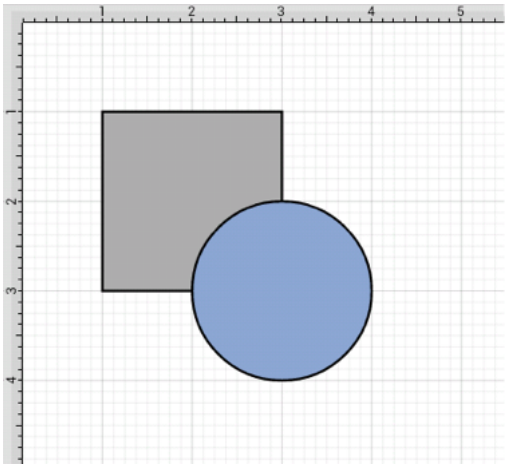
4

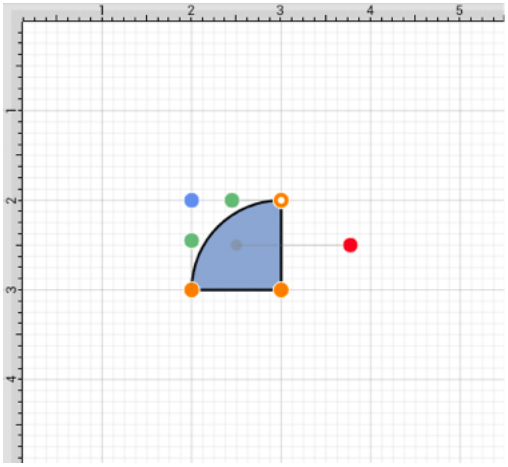
Press on the **Intersect Shapes** option.



The selection of two non-intersecting shapes causes the second shape to be removed entirely.

The following images display two selected shapes prior to and after using the **Intersect Shapes** option.





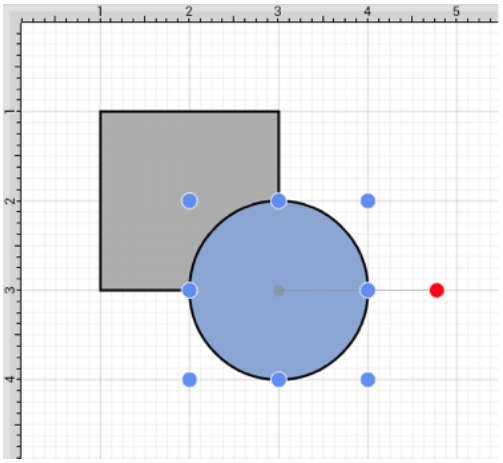
5.3.17.4. Exclude Shapes

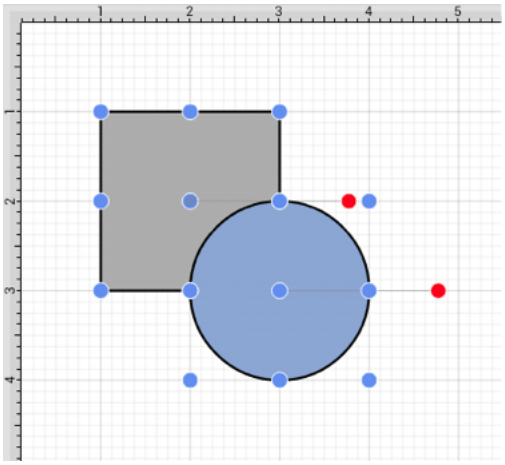
The **Exclude Shapes** option removes the intersecting portions of selected figures from the drawing canvas. This option remains disabled until two figures have been selected.

To **Exclude** selected shapes:

1

Select the shapes to be combined.



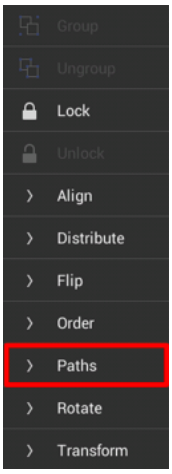


2

Press on the **Selection Button** to open the Selection Menu.

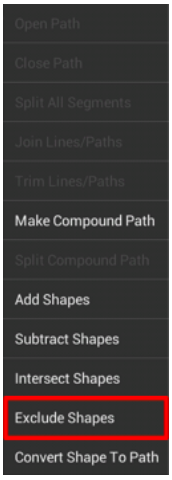
3

Press on the **Paths Submenu**.



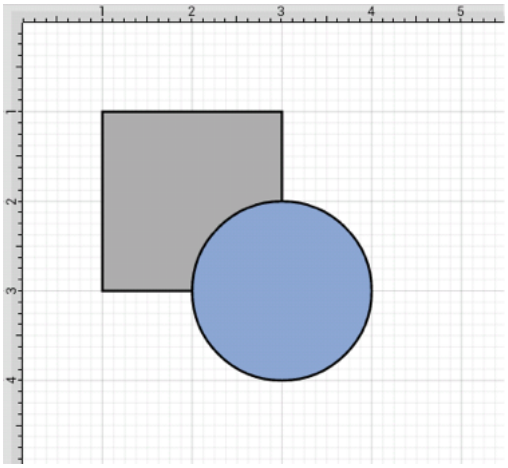
4

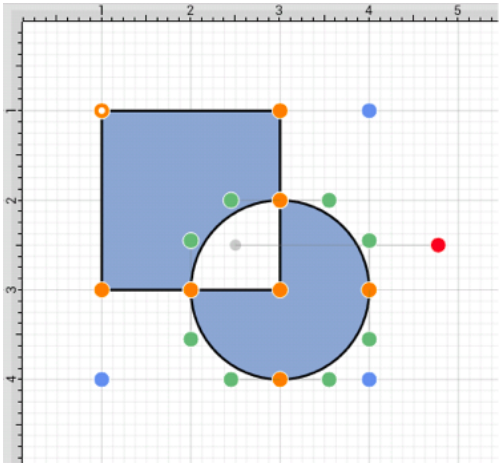
Press on the **Exclude Shapes** option.



The selection of two non-intersecting shapes has no effect on appearance, but does cause the figures to be treated as one shape.

The following images display two selected shapes prior to and after using the **Exclude Shapes** option.





5.4. Handling Colors

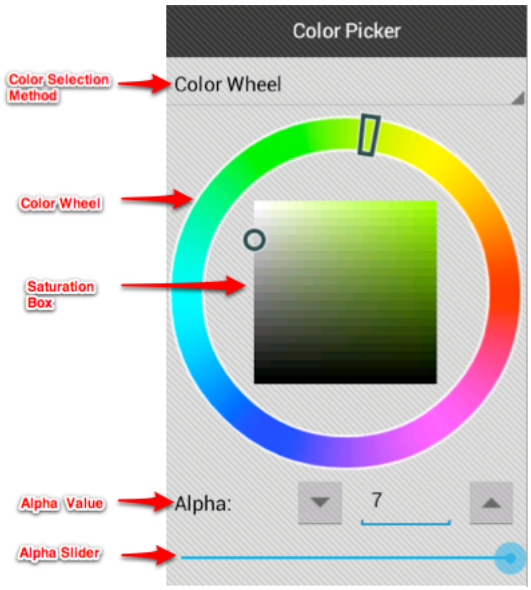
TouchDraw provides multiple ways to select and change the color attributes of figures or text within the drawing canvas. Color attributes can be changed for these items:

- Shapes
- Strokes
- Text
- Canvas Background

Additional attributes are available for changing the shadow and fill style of a selected figure(s). All color attributes are accessible through the Drawing Toolbar and are managed through the standard Color Picker.

5.4.1. Color Picker

The **Color Picker** is used to set the fill, stroke, text, and shadow colors for currently selected figures or new additions to an active drawing. As shown in the image below, the **Color Picker** is made up of several components which allow for different types of interactions to occur.

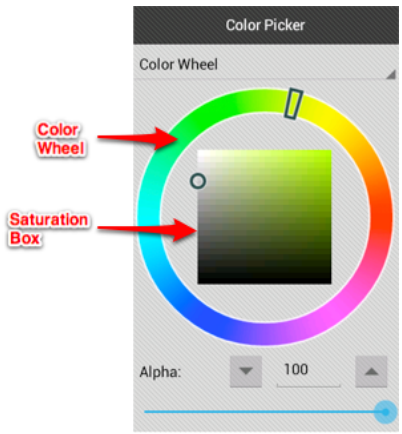


Click or Tap on the corresponding Color Picker item name in the table below to learn more about what the control does.

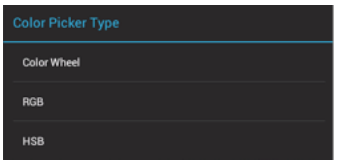
Control Name	Description
Color Selection Method	The **Color Selection Method** controls offer three methods for selecting a color: - Color Wheel - RGB - HSB
Alpha Value	The **Alpha Value** control shows the current opacity (inverse of transparency) value for the Alpha Slider and can be used to manually edit the value.
Alpha Slider	The **Alpha Slider** can be used to alter the opaqueness (opposite of transparency) of a selected color.

5.4.1.1. Color Wheel

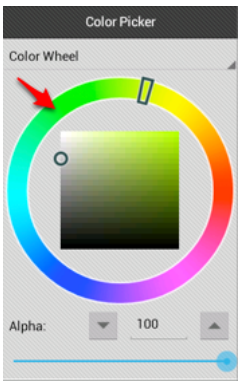
The **Color Wheel** is the most common way to select a color within TouchDraw. This color selection method consists of a **Color Wheel** for selecting an exact hue and a **Saturation Box** for altering the lightness or darkness of the chosen hue, as shown below.

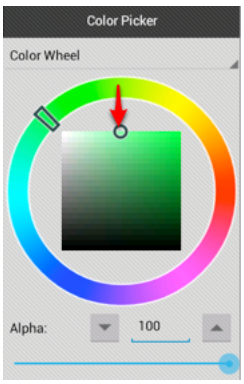


To use the **Color Wheel** for making a color selection, press on the **Color Selection Method Button** and press on **Color Wheel** option (if not already selected).



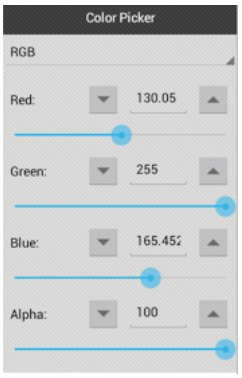
Tap on the desired hue in the **Color Wheel** and then tap on the desired lightness or darkness value in the **Saturation Box**.



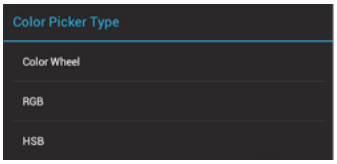


5.4.1.2. RGB

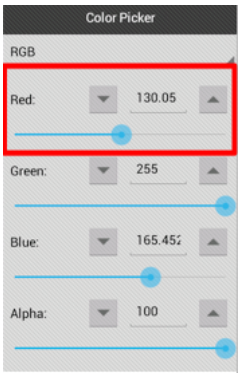
The **RGB** color selection method can be used to alter the amount of red, green, and blue within a chosen hue.

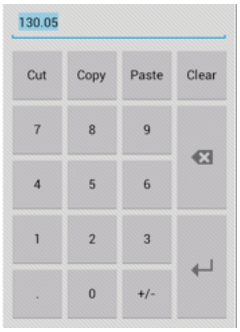


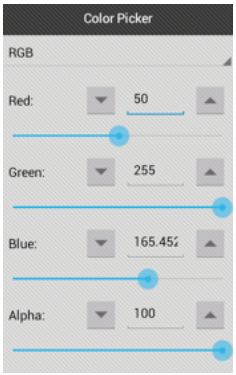
To use the **RGB Color Selection** option, press on the **Color Selection Method Button** and then press on **RGB** option (if not already selected).



Tap on the "Up" or "Down" arrows next to each color option to change the value or perform a **Touch/Drag** gesture combination to move the slider located underneath each color. A tap on the actual value brings up a number keypad for manual entry. In this example, the amount of **Red** in the hue is changed to **50**.





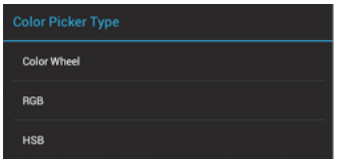


Note: Color changes appear instantaneously when a figure(s) has been selected.

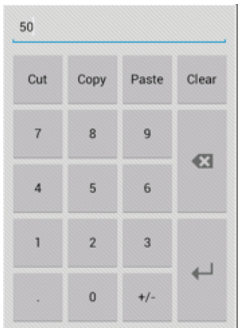
5.4.1.3. HSB

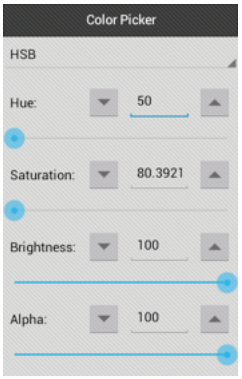
The **HSB Color Selector** can be used to alter the hue, saturation, and brightness of a selected color.

To use the **HSB** color selection option, press on the **Color Selection Method Button** and then press on **HSB** option (if not already selected).



Tap on the "Up" or "Down" arrows next to each color option to change the value or perform a **Touch/Drag** gesture combination to move the slider located underneath each color. A tap on the actual value brings up a number keypad for manual entry. In this example, the hue is changed to 50.





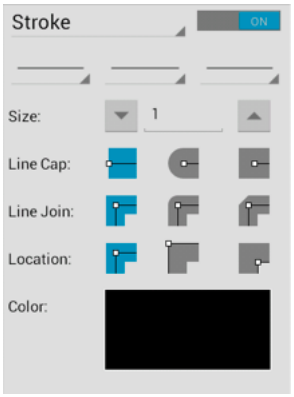
Color changes appear instantaneously when a figure(s) has been selected.

5.4.1.4. Stroke Color

The **Stroke Color** of a selected figure can be changed to meet a desired preference. It can be altered for a selected figure(s) or in instances where no figures have been selected. If a figure has not been selected, the color change applies to any figure added after the change. This attribute can be changed in one of the following ways:

1

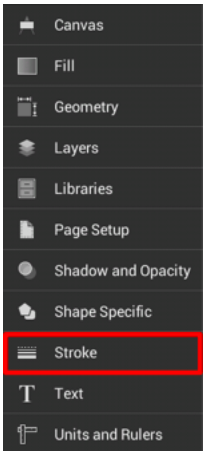
Press on the **Stroke Button** located in the Drawing Toolbar.

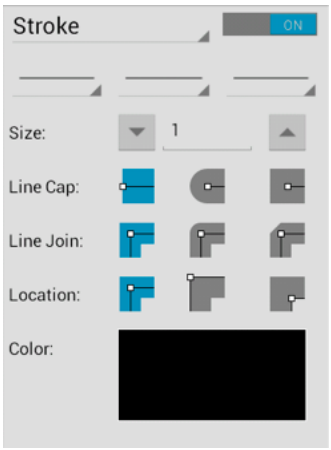


2

Press on the **Info Button** to open the Info Menu.

Then press on the **Stroke**option to open the **Stroke Panel**.

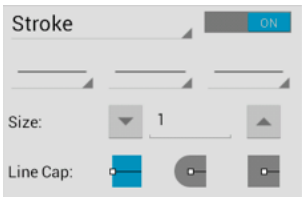




To alter the **Stroke Color**:

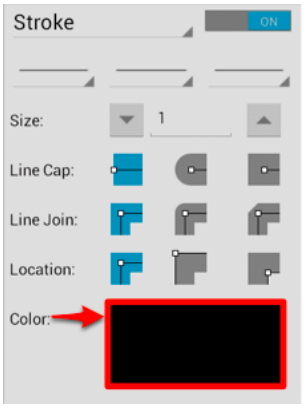
1

Tap on the **On/Off** toggle in the **Stroke Panel** to turn on the option.



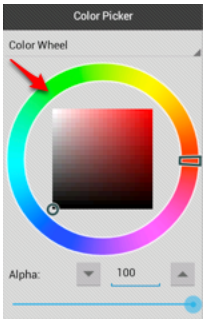
2

Next, press on the **Color Button** to open the Color Picker.



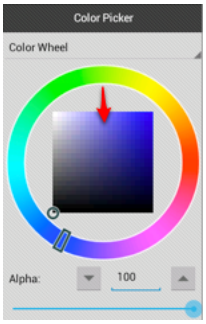
3

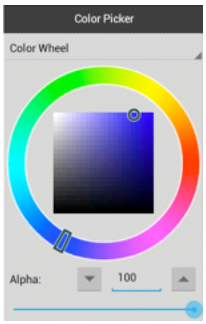
Tap on a color range within the outside of the wheel view.



4

Choose the desired lightness or darkness of the selected color in the saturation square.



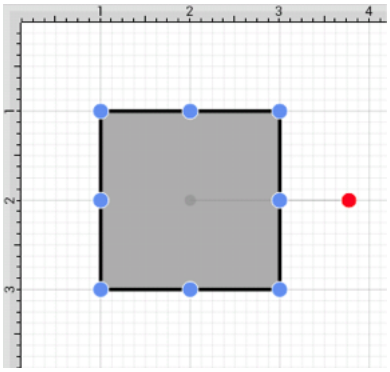


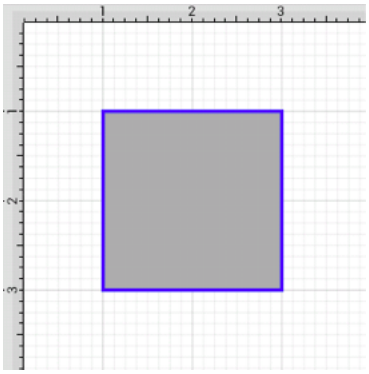
5

Perform a **Touch/Drag** gesture combination or **Press** on additional options within the Color Pickerto make further attribute changes.

6

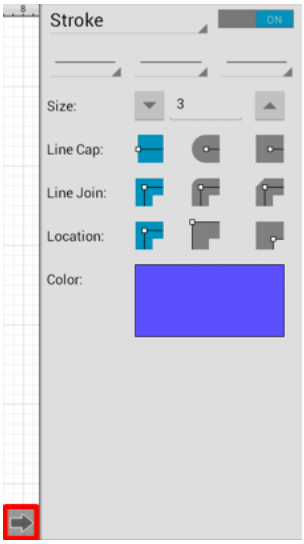
Tap anywhere within the Drawing Editor to close the **Color Picker**. The following example shows a figure with the stroke color changed from black to blue.





7

To close the **Stroke Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.



Note: A color change will be seen instantaneously when a stroke figure is selected. If no figures have been selected, the color change will apply to all subsequently created stroke figures.

5.4.2. Fill Color

The **Fill Color** of a selected figure can be changed to meet a desired preference. It can be altered for a selected figure(s) or in instances where no figures have been selected. If a figure has not been selected, the color change applies to any figure added after the change. This attribute can be changed in one of the following ways:

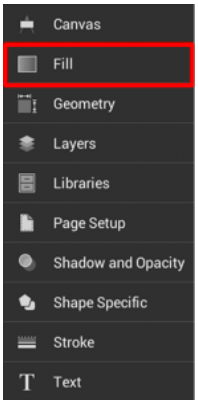
1

Press on the **Fill Button** located in the Drawing Toolbar.

2

Press on the **Info Button** to open the Info Menu.

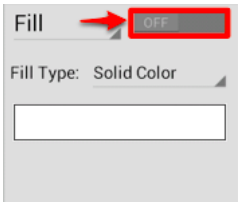
Then press on the **Fill** option to open the **Fill Panel**.

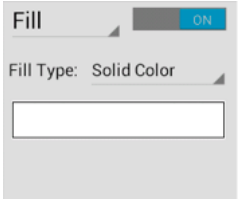


To alter the **Fill Color**:

1

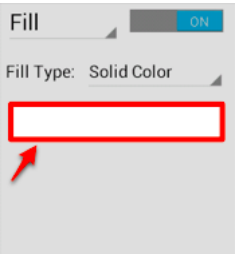
Tap on the **On/Off** toggle in the **Fill Panel** to turn on the option.





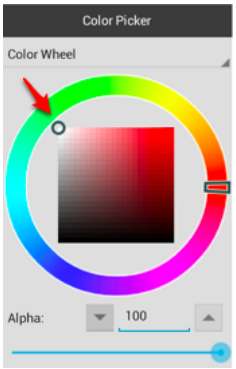
2

Next, press on the **Color Button** to open the Color Picker.



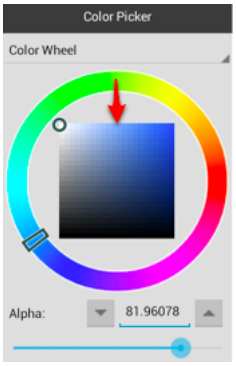
3

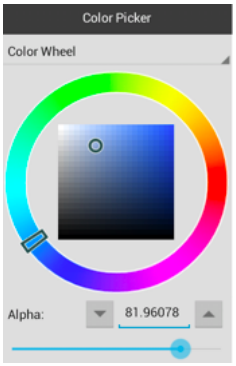
Tap on a color range within the outside of the color wheel view.



4

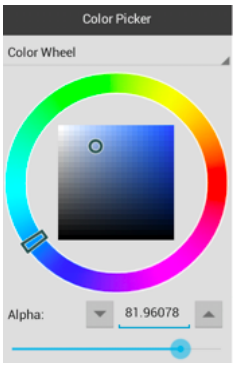
Choose the desired lightness or darkness of the selected color in the saturation square.





5

Perform a **Touch/Drag** gesture combination or **Press** on additional options within the Color Pickerto make further attribute changes.

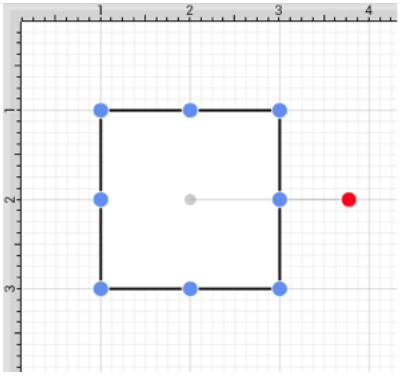


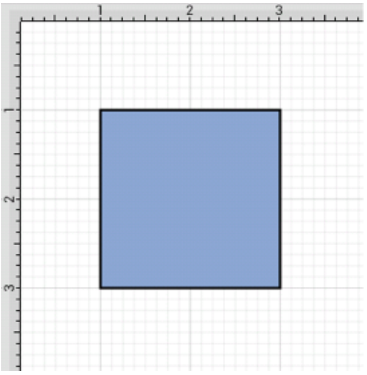
6

Tap anywhere within the Drawing Editor to close the **Color Picker**. To close the **Fill Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.

7

The following example shows a figure with a light blue fill.





A color change will be seen instantaneously when a figure is selected. If no figures have been selected, the color change will apply to all subsequently created figures.

5.4.2.1. Solid

The **Solid** fill style attribute sets the fill of a selected or any created figure(s) to a solid color and can be accessed in one of the following ways:

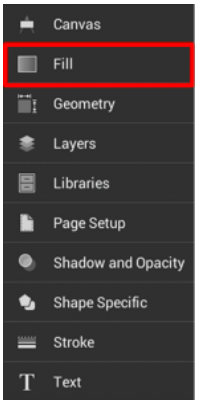
1

Press on the **Fill Button** located in the Drawing Toolbar.

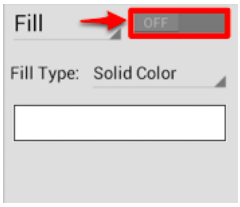
2

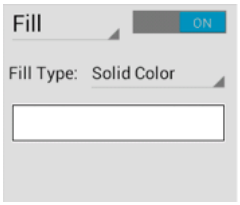
Press on the **Info Button** to open the Info Menu.

Then press on the **Fill** option to open the **Fill Panel**.



The **Fill** option must be enabled for a style change to be applied to any currently selected or new figures. Once the **Fill Panel** has opened, perform a **Tap** on the **On/Off** toggle to enable the **Fill** option.

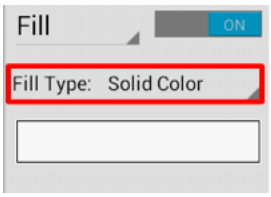


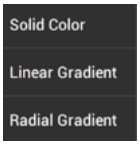


To change the **Fill Type** to solid:

1

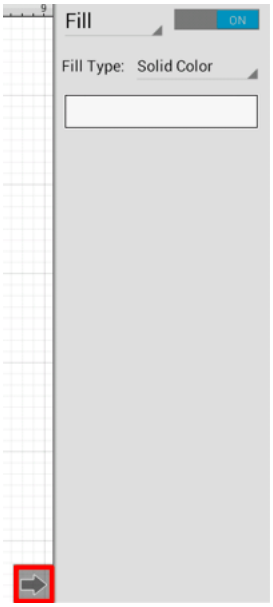
Press on the **Fill Type Button** and press on the **Solid Color** option(if not already selected).





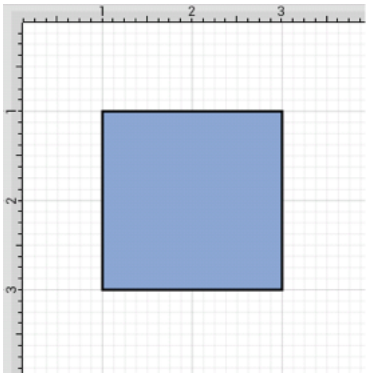
2

To close the **Fill Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.



A style change will be seen instantaneously when a figure is selected. If figures have not been selected, the style change will apply to all subsequently created figures.

The following example shows a square with the **Fill Style** set to solid and Color set to blue:



5.4.2.2. Linear Gradient

The **Linear Gradient**fill style option is located in the Fill Panel. This attribute transitions the fill from a specific start color to the specified end color at a designated angle within a selected or created figure(s) and can be accessed in one of the following ways:

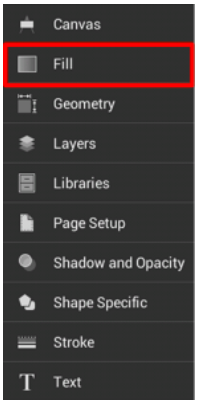
1

Press on the **Fill Button** located in the Drawing Toolbar.

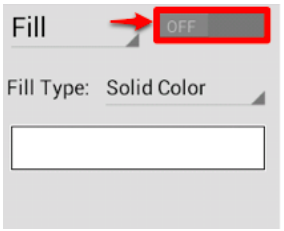
2

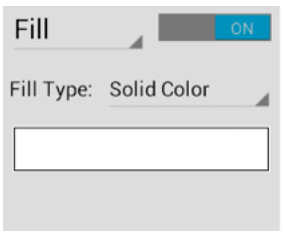
Press on the **Info Button** to open the Info Menu.

Then press on the **Fill**option to open the **Fill Panel**.



The **Fill** option must be enabled for a style change to be applied to any currently selected or new figures. Once the **Fill Panel** has opened, perform a **Tap** on the **On/Off** toggle to enable the **Fill** option.

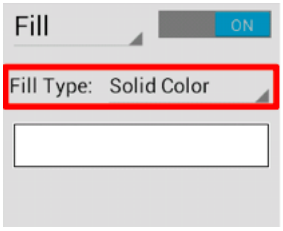


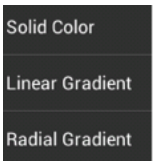


To change the **Fill Type** to Linear Gradient:

1

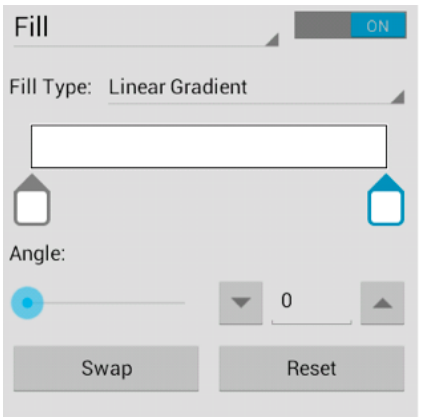
Press on the **Fill Type Button** and then press on the **Linear Gradient** option(if not already selected).





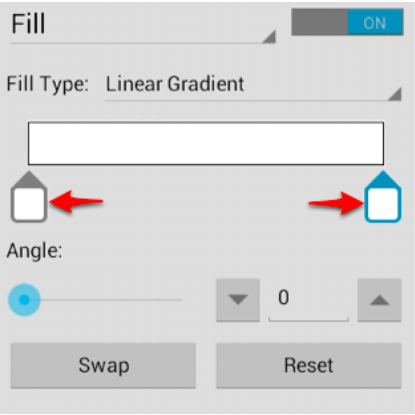
2

The **Fill Panel** will expand, as shown below.



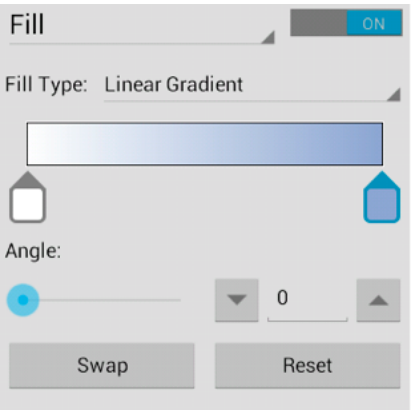
3

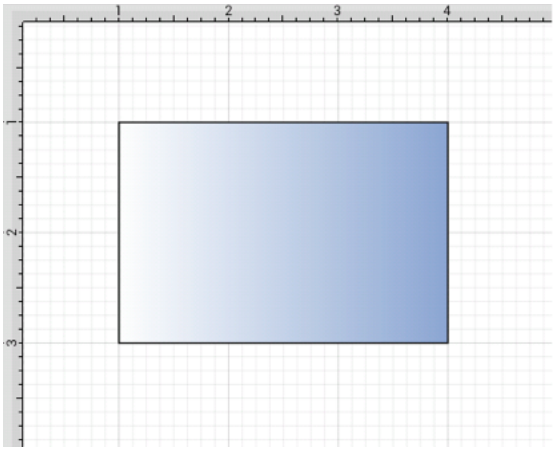
Double Tap on either **Gradient Handle** to open the Color Picker and choose a hue.



4

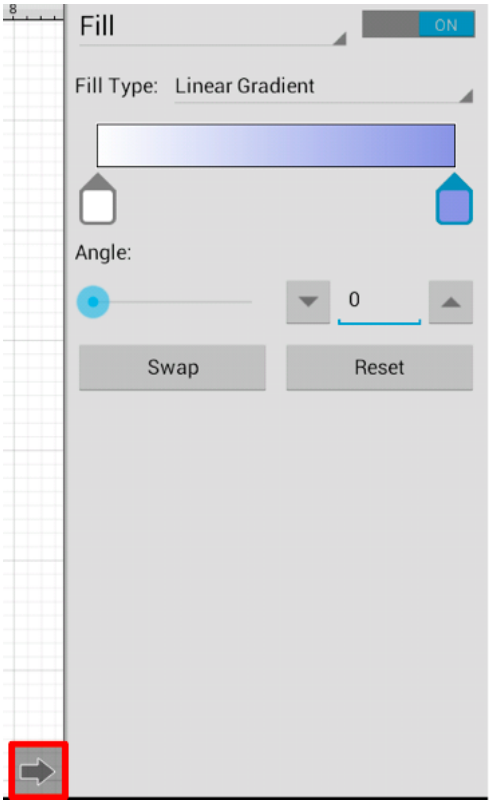
The following example shows a rectangle with the **Fill Style** set to linear gradient and Color set to blue:





5

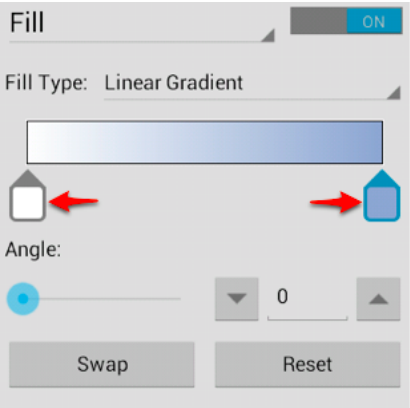
To close the **Fill Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.



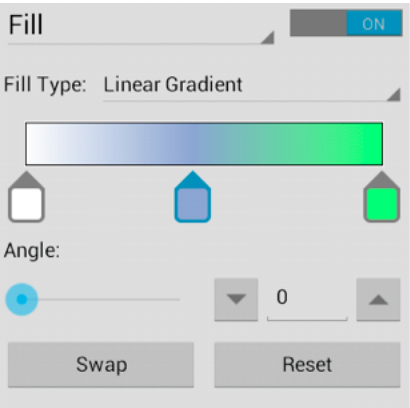
Note: A style change will be seen instantaneously when a figure is selected. If figures have not been selected, the style change will apply to all subsequently created figures.

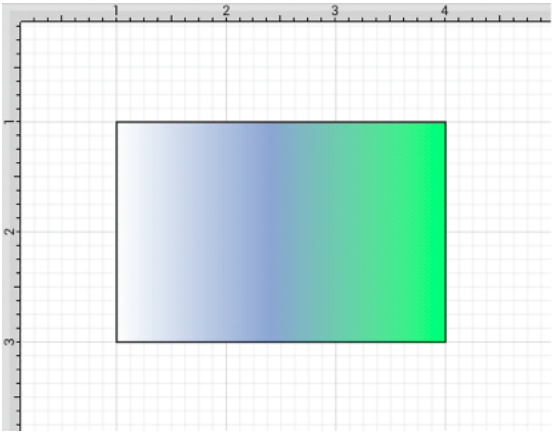
Working with Linear Gradients

Gradient Handles can be added by tapping on any location underneath the transition bar. Once a new handle has been added, **Double Tap** on the handle to open the Color Picker and add an additional color. A **Touch/Drag** gesture combination can be used to move either **Gradient Handle** to alter the color transition of the fill.



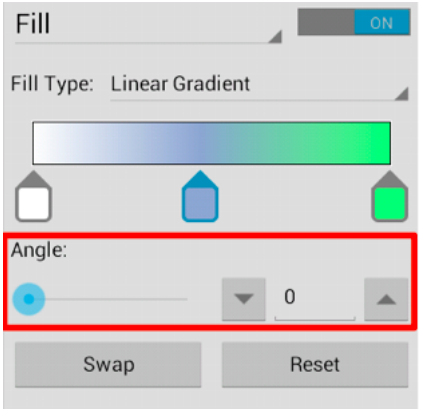
More than one color can be added by setting each individual gradient handle to one of the desired colors. In the example below, three gradient handles are used with these colors: white, blue, and green.

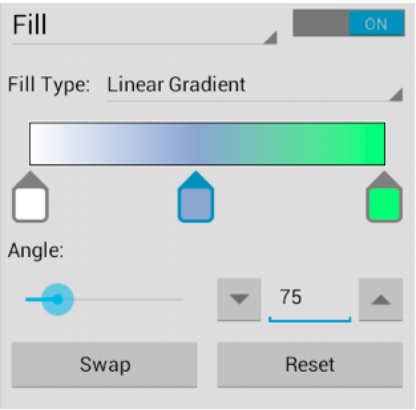




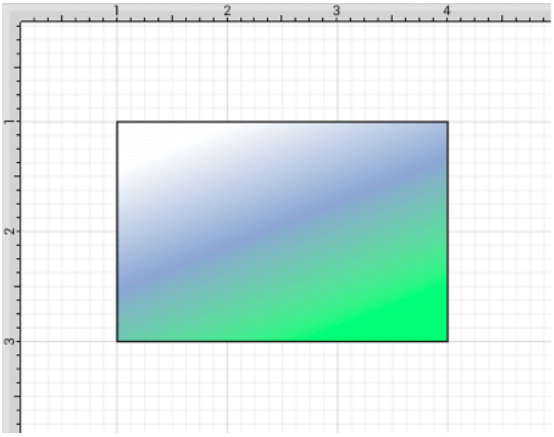
Angle

Perform a **Touch/Drag** gesture combination on the **Angle Slider** or **Press** on the "Up" and "Down" arrow buttons to change the angle value of a linear fill.



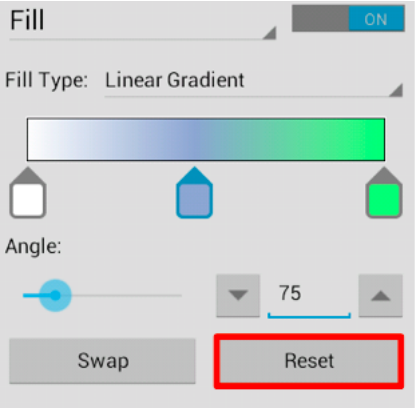


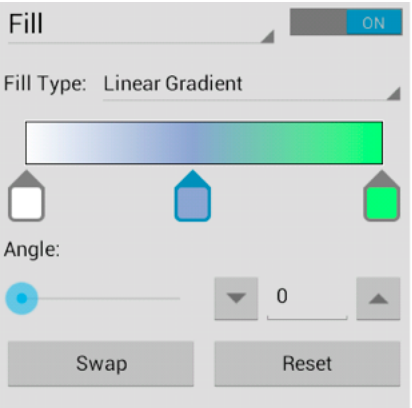
In the example below, the **Angle** has been set to 75.

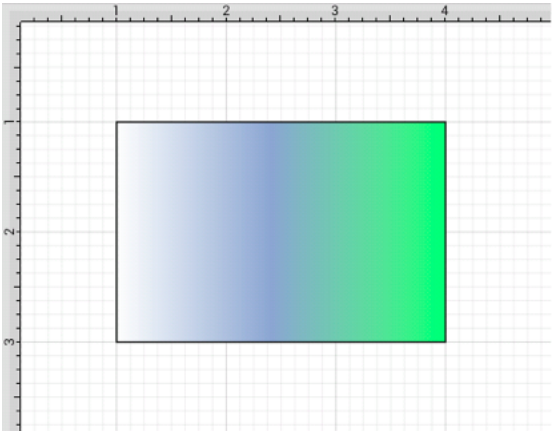


Reset Button

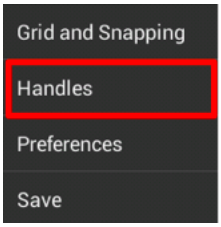
Use the **Reset Button** to reset the angle back to zero and the gradient handles on the figure back to their original position.



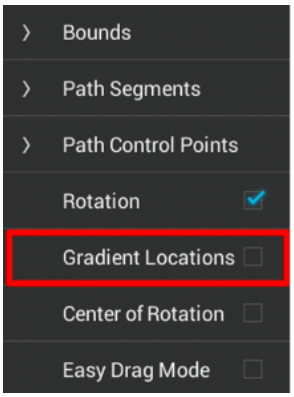


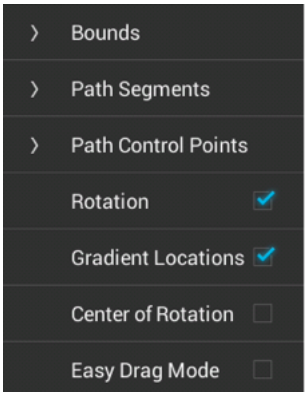


The **Reset Button** can also be used to reset the gradient handles on a figure(s) after they have been moved to another location. In order for this to be seen, you must have the Gradient Locations option enabled. To enable this option, tap on the **Overflow Button** in the Top Toolbar and then tap on the Handles Submenu.



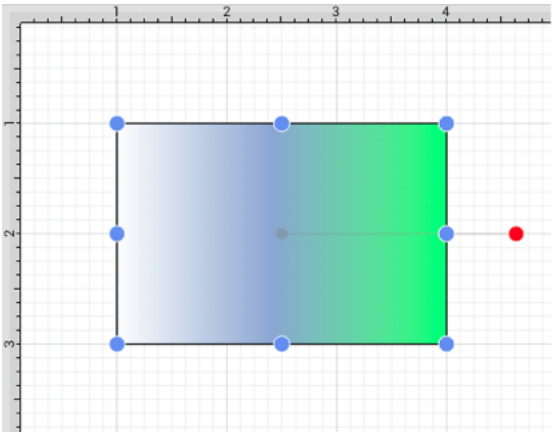
Then tap on the **Gradient Locations** option to enable it. When enabled, it will show a blue checkmark.

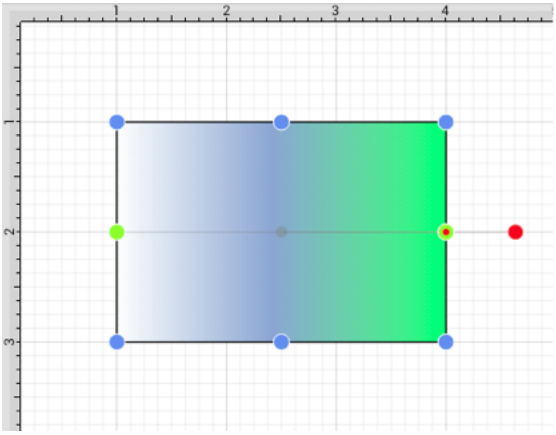




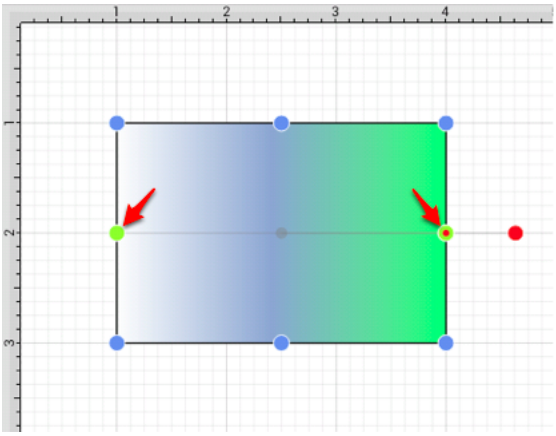
Once this option is enabled, you will see two additional handles on each selected figure. These may be used to adjust the angle and progression of colors for the linear gradient. Below you will see what a figure looks like

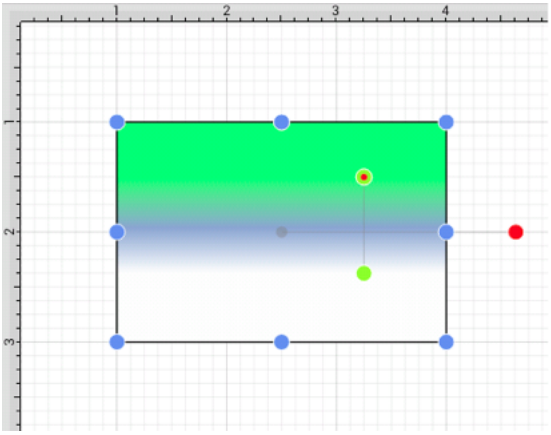
when this option has not been enabled and then after it is enabled.



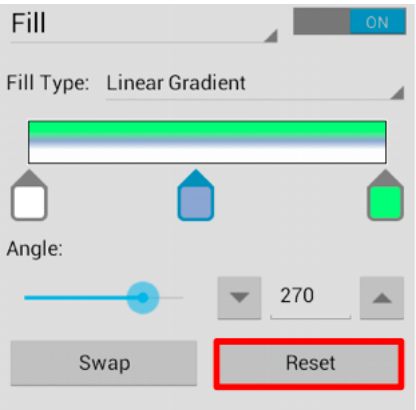


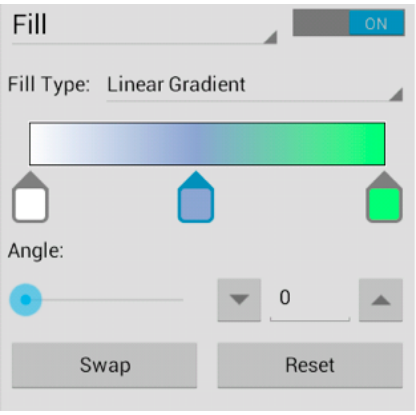
The two handles may be moved to any location within or outside of a figure to change the angle or fill pattern. To do so, press and hold on the handle. Then drag the handle in any desired direction without lifting your finger. The left gradient handle is selected in the example below. It is moved upward and to the right within the figure.

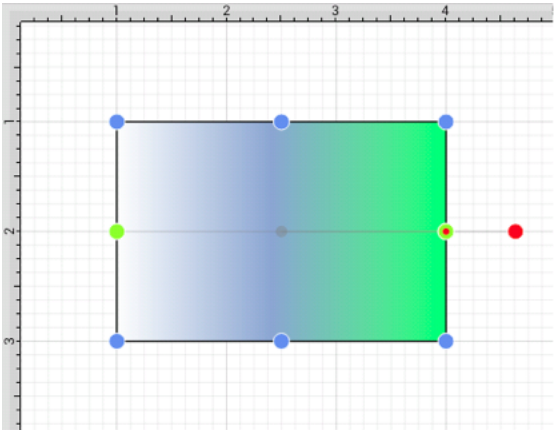




After one or both gradient handles has been moved, click on the **Reset Button** to set the linear gradient handles back to their original location.

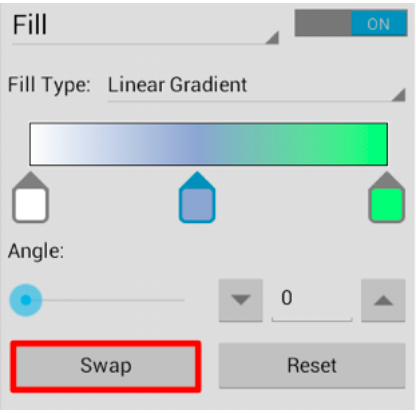


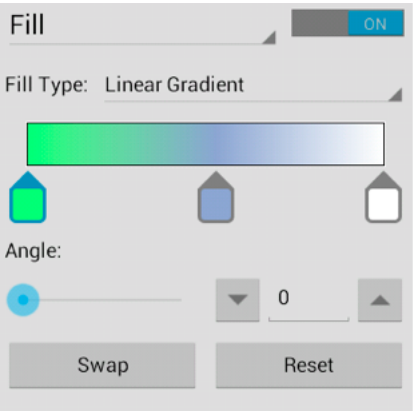


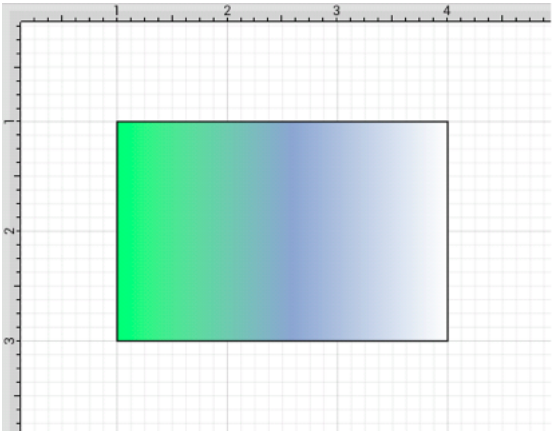


Swap Button

Use the **Swap Button** to reverse the current angle and color slider settings.







5.4.2.3. Radial Gradient

The **Radial Gradient** fill style option is located in the Fill Panel. This attribute transitions the fill from the specified start color to the specified end color by starting from the center of a selected or created figure(s) and then moving outward in a circular manner and can be accessed in one of the following ways:

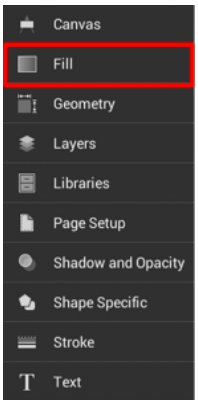
1

Press on the **Fill Button** located in the Drawing Toolbar.

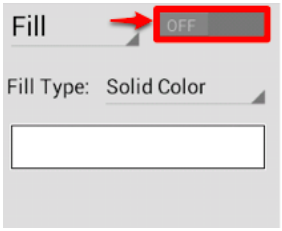
2

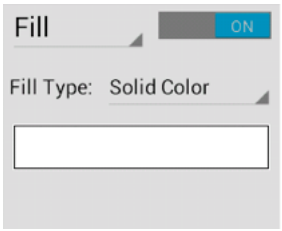
Press on the **Info Button** to open the Info Menu.

Then press on the **Fill** option to open the **Fill Panel**.



The **Fill** option must be enabled for a style change to be applied to any currently selected or new figures. Once the **Fill Panel** has opened, perform a **Tap** on the **On/Off** toggle to enable the **Fill** option.

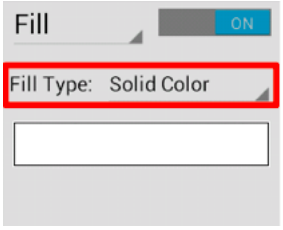


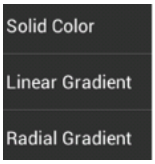


To change the **Fill Type** to Radial Gradient:

1

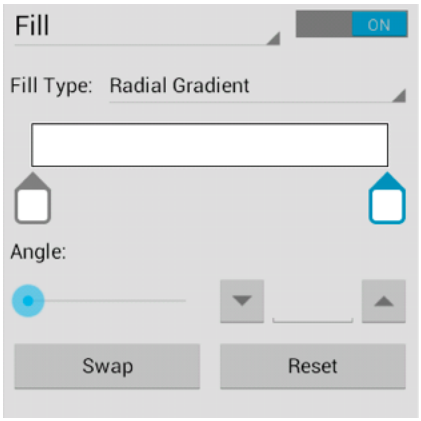
Press on the **Fill Type Button** and then press on the **Radial Gradient** option(if not already selected).





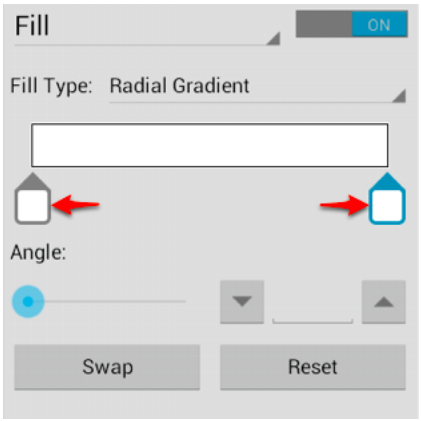
2

The **Fill Panel** will expand, as shown below.



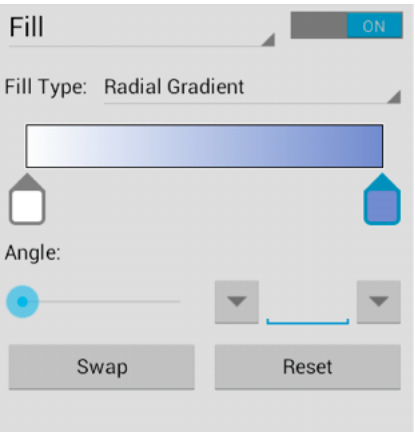
3

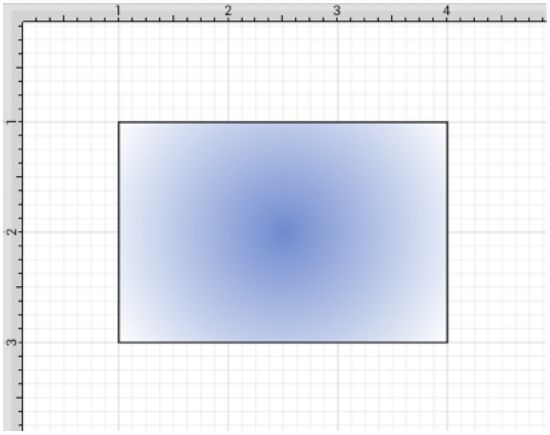
Double Tap on either of the **Gradient Handles** to open the Color Picker and chooser a hue.



4

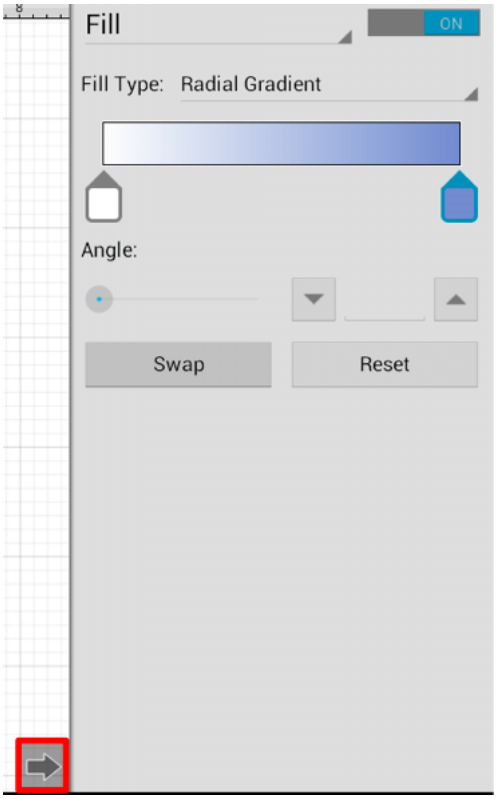
The following example shows a rectangle with the **Fill Style** set to linear gradient and Color set to blue:





5

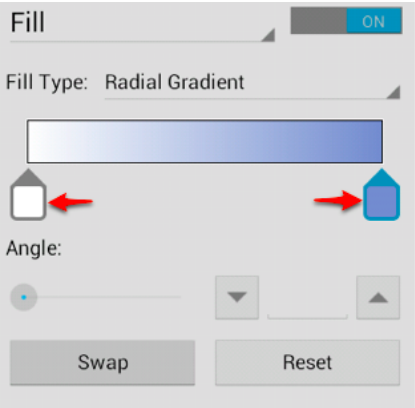
To close the **Fill Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.



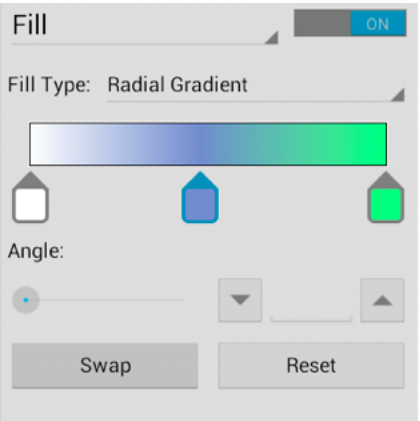
A style change will be seen instantaneously when a figure is selected. If figures have not been selected, the style change will apply to all subsequently created figures.

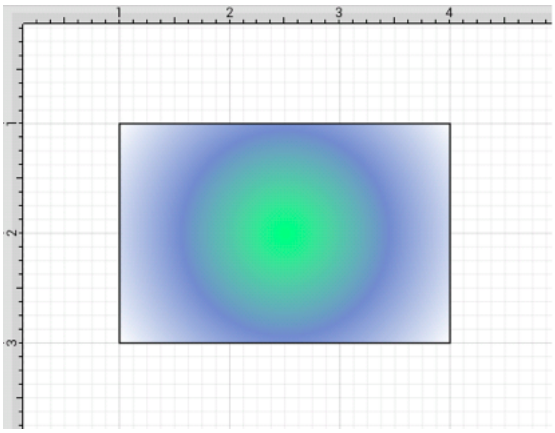
Working with Radial Gradients

Gradient Handles can be added by tapping on any location underneath the transition bar. Once a new handle has been added, **Double Tap** on the handle to open the Color Picker and add an additional color. A **Touch/Drag** gesture combination can be used to move either **Gradient Handle** to alter the color transition of the fill.



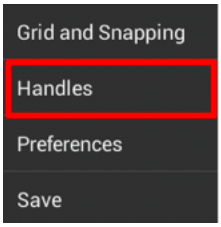
More than one color can be added by setting each individual gradient handle to one of the desired colors. In the example below, three gradient handles are used with these colors: white, blue, and green.



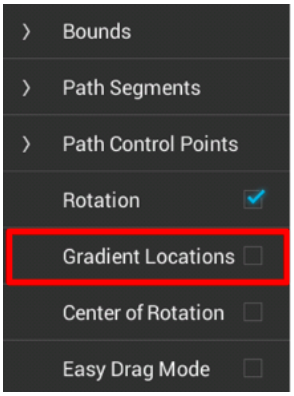


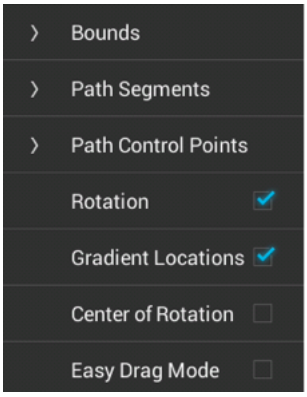
Reset Button

The **Reset Button** can be used to reset the center point of the radial gradient after it has been moved. In order for this to be seen, you must have the Gradient Locations option enabled. To enable this option, tap on the **Overflow Button** in the Top Toolbar and then tap on the Handles Submenu.



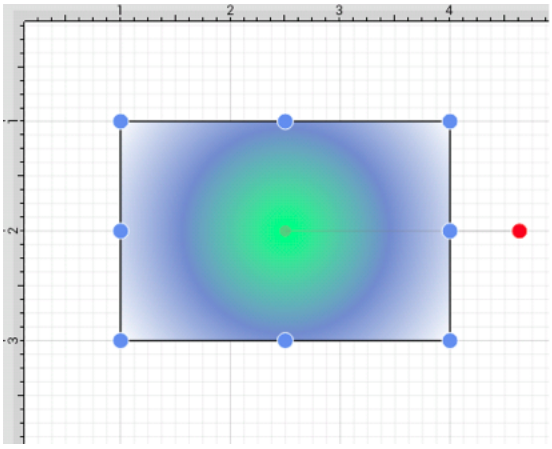
Then tap on the **Gradient Locations** option to enable it. When enabled, it will show a blue checkmark.

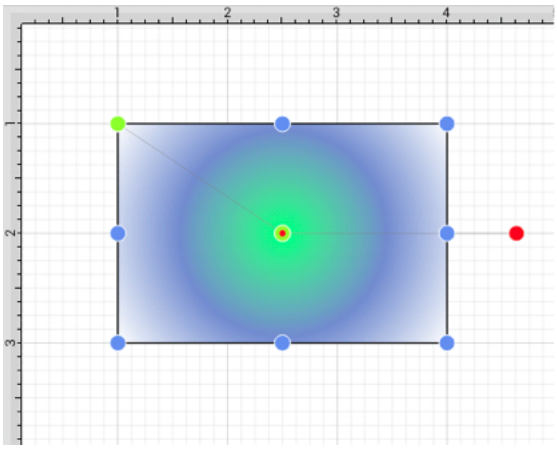




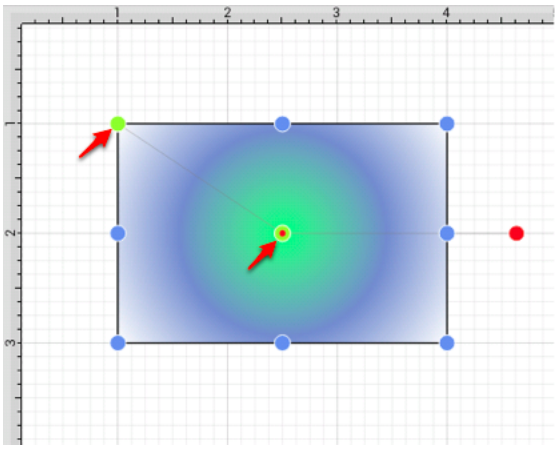
Once this option is enabled, you will see two additional handles on each selected figure. These may be used to adjust the angle and progression of colors for the radial gradient. Below you will see what a figure looks like

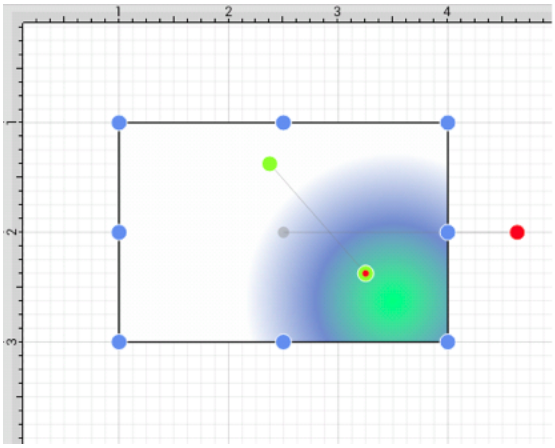
when this option has not been enabled and then after it is enabled.



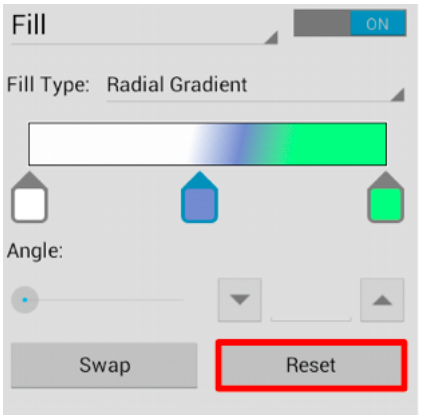


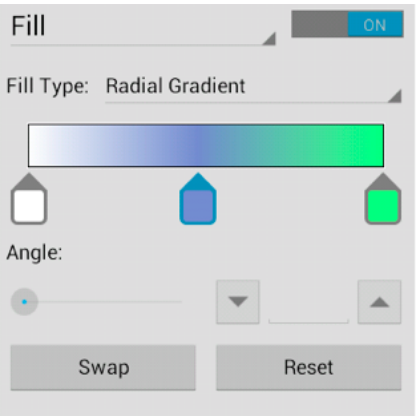
The two handles may be moved to any location within or outside of a figure to change the angle or fill pattern. To do so, press and hold on the handle. Then drag the handle in any desired direction without lifting your finger. Once this option is enabled, you will be able to move the center point to another location within a figure (see below).

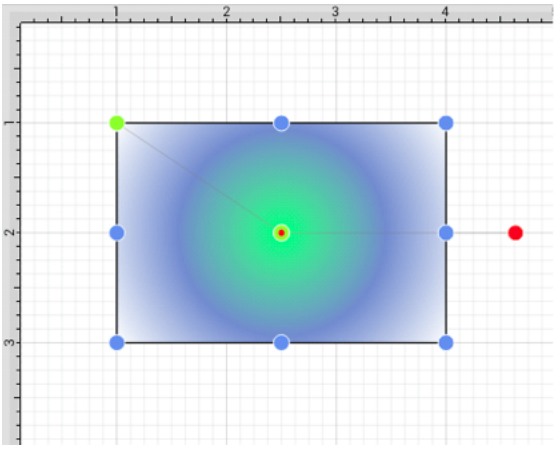




After one or both gradient handles has been moved, click on the **Reset Button** to set the radial gradient handles back to their original location.

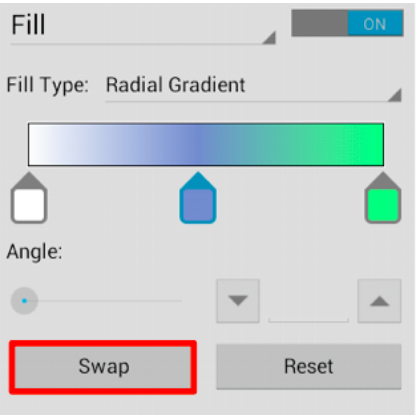


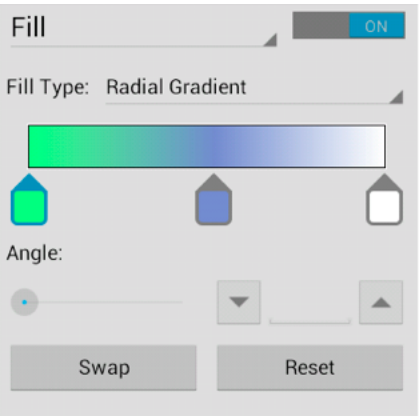


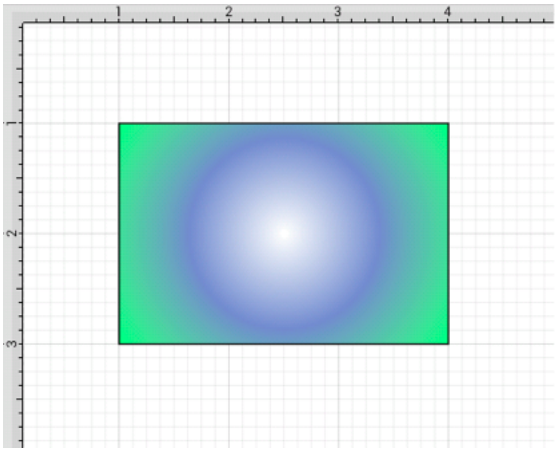


Swap Button

Use the **Swap Button** to reverse the current color slider settings.







5.4.3. Shadow Color

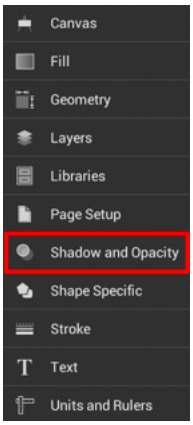
The **Shadow Color** of a selected figure can be changed to meet a desired preference. It can be altered for a selected figure(s) or in instances where no figures have been selected. If a figure has not been selected, the color change applies to any figure added after the change. To alter the shadow color:

1

Press on the **Info Button** in the Top Toolbar to open the Info Menu.

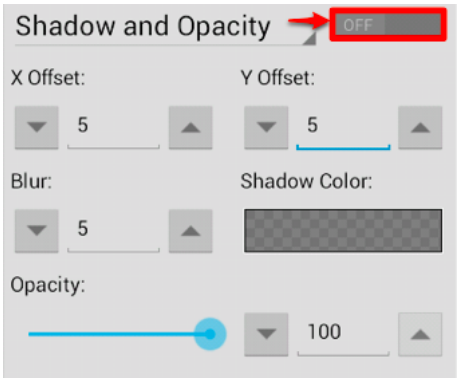
2

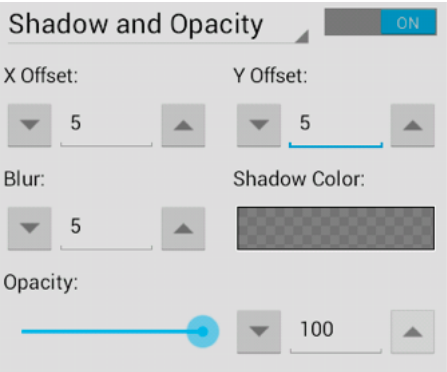
Press on the **Shadow and Opacity** option to open the **Shadow Panel**.



3

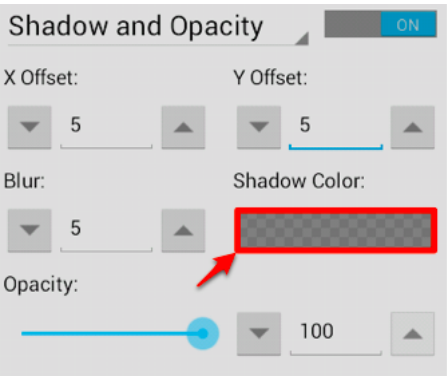
The **Shadow** option must be enabled for a change to be applied to any currently selected or new figures. Once the **Shadow Panel** has opened, perform a **Tap** on the **On/Off** toggle to enable this option.





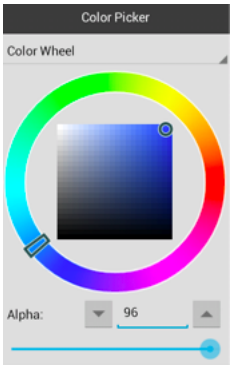
4

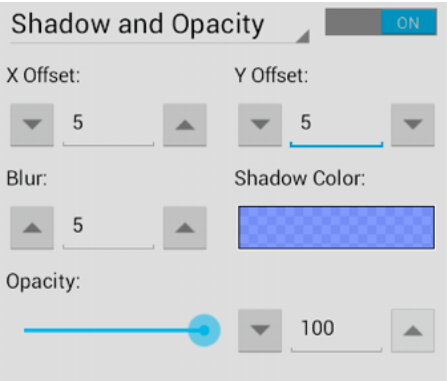
Press on the **Shadow Color Button**.



5

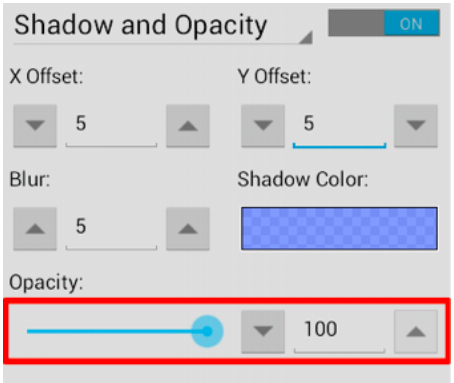
Use the Color Picker to choose a hue.





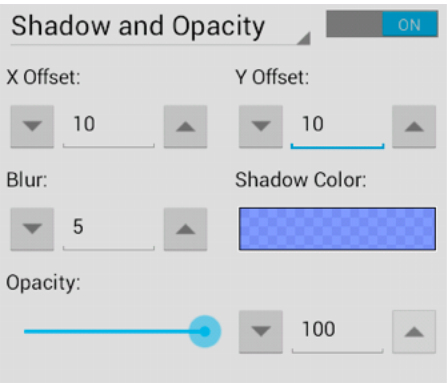
6

Perform a **Touch/Drag** gesture combination on the **Opacity Slider** to change the degree to which the shadow can be seen through.



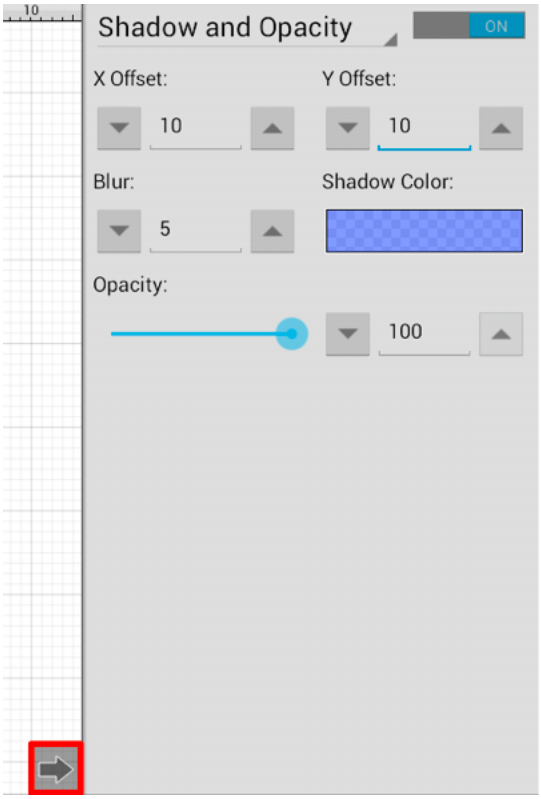
7

Tap on the "Up" and "Down" arrow buttons next to the **X Offset**, **Y Offset**, and **Blur** options in the **Shadow and Opacity Panel** to further alter shadow appearance. In the example below, the **X** and **Y Offsets** have been set to 10.



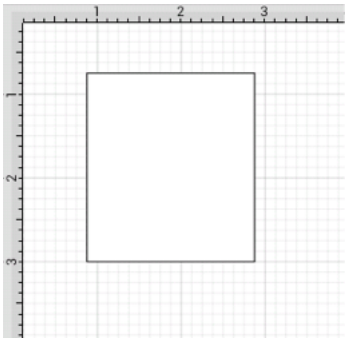
8

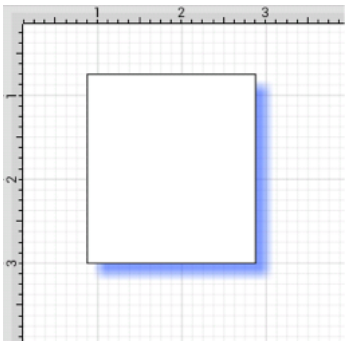
To close the **Shadow and Opacity Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.



A color change will be seen instantaneously when a figure is selected. If no figures have been selected, the color change will apply to all subsequently created figures.

The following examples show a square prior to adding a shadow and after the color has been altered.





5.4.4. Text Color

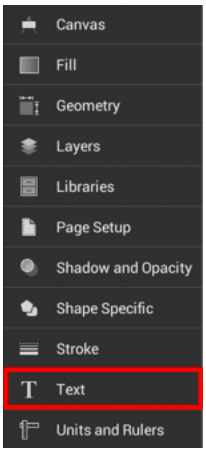
The **Text Color** of a selected figure can be changed to meet a desired preference. It can be altered for a selected figure(s) or in instances where no figures have been selected. If a figure has not been selected, the color change applies to any figure added after the change. To alter the text color attribute:

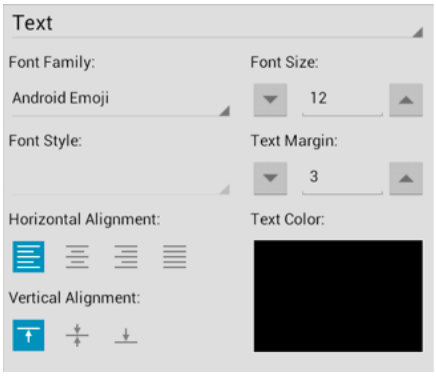
1

Press on the **Info Button** in the Top Toolbar to open the Info Menu.

2

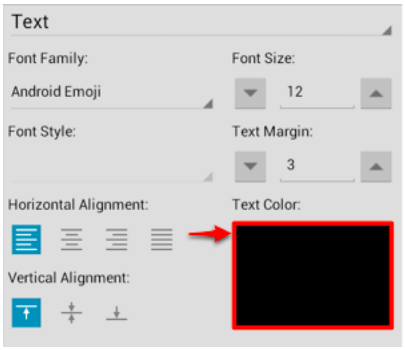
Press on the **Text** option to open the **Text Panel**.

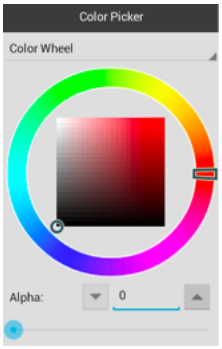




3

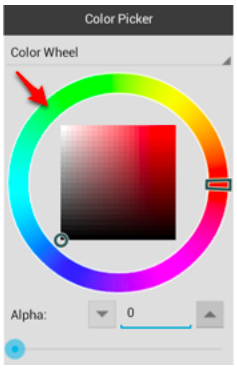
Press on the **Text Color Button** to open the Color Picker and choose a hue.

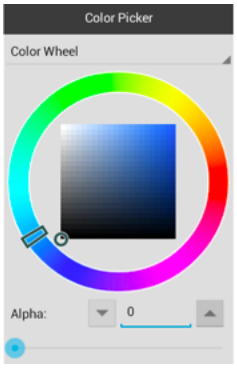




4

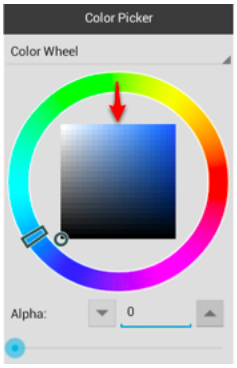
Tap on a color range within the outside of the wheel view.

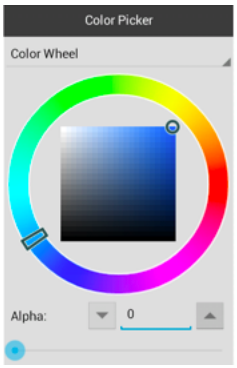




5

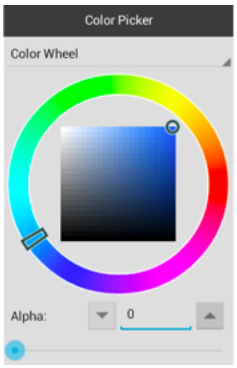
Choose the desired lightness or darkness of the selected color in the saturation square.





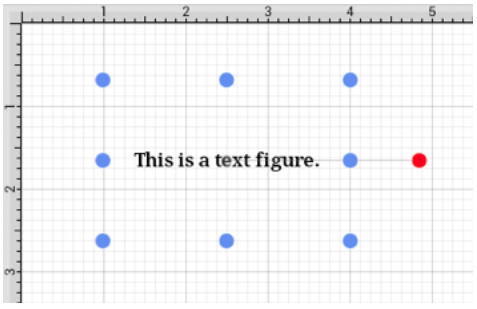
6

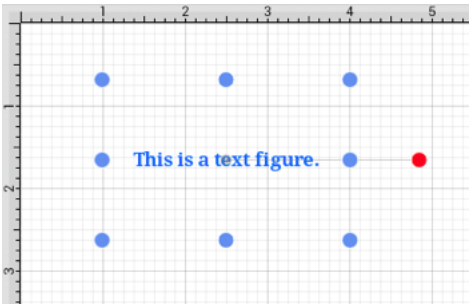
Perform a **Touch/Drag** gesture combination or **Press** on additional options to further alter the selected hue.



7

Then tap anywhere in the Drawing Editor to close the **Color Picker**. The following example shows a text figure where the text color has been changed from black to blue.





Note: A color change will be seen instantaneously when text is selected. If text has not been selected, the color change will apply to all subsequent text entries.

5.4.5. Canvas Background Color

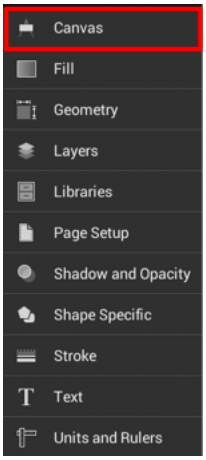
The **Canvas Background****Color** can be changed to meet a desired preference. Follow the steps below to alter this attribute:

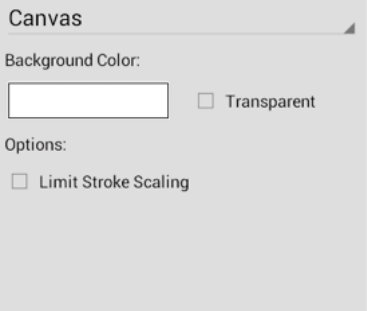
1

Press on the **Info Button**in the Top Toolbar to open the Info Menu.

2

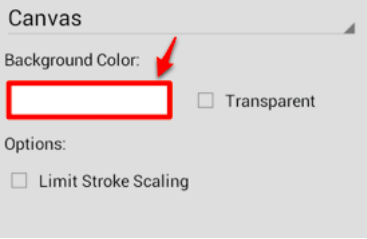
Press on the **Canvas** option to open the **Canvas Panel**.





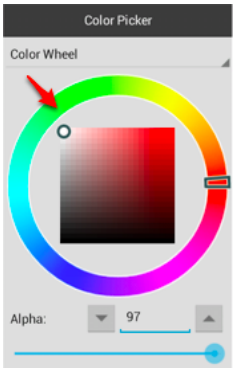
3

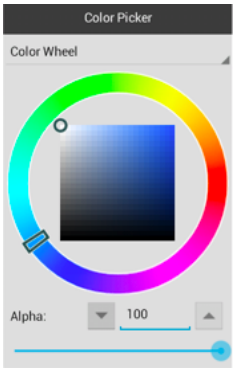
Press on the **Background Color Button** to open the Color Picker and choose a hue.



4

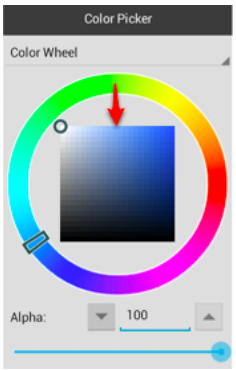
Tap on a color range within the outside of the wheel view.

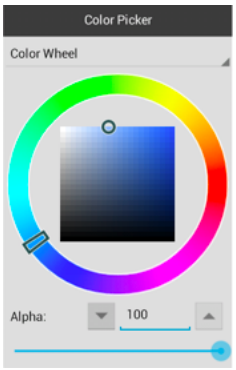




5

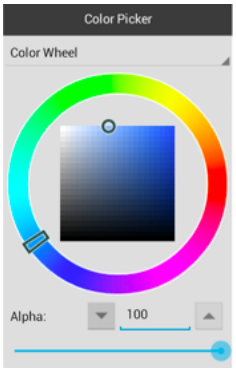
Choose the desired lightness or darkness of the selected color in the saturation square.





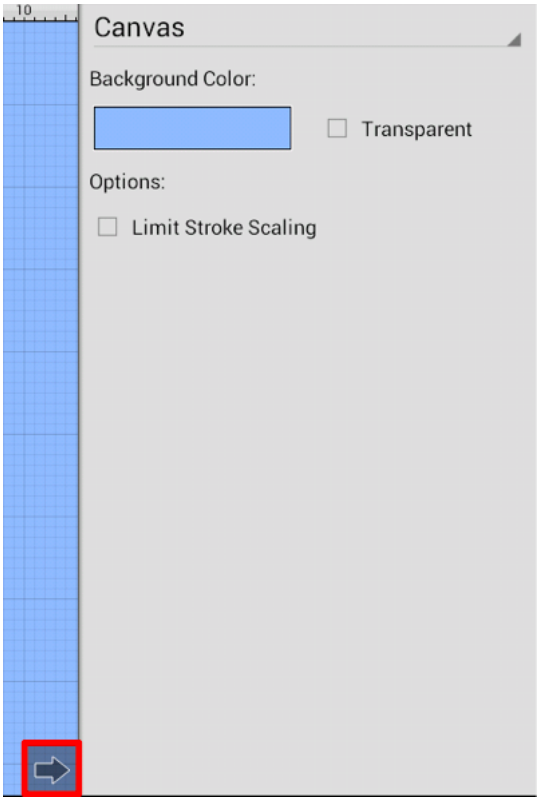
6

Perform a **Touch/Drag** gesture combination or **Press** on additional options to further alter the selected hue.



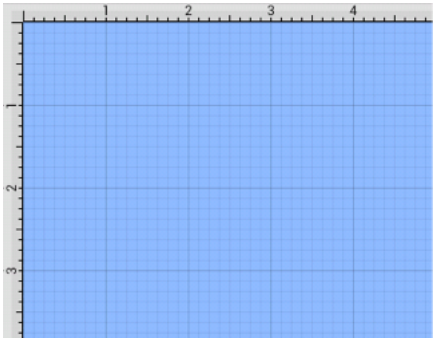
7

Tap anywhere in the Drawing Editor to close the **Color Picker**. Alter any additional options and then **Press** on the **Hide Sidebar Button** located at the bottom of **Canvas Panel** to close it.

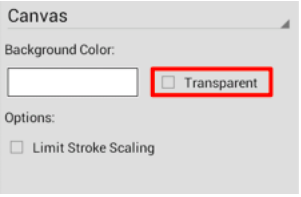


8

The **Canvas Background Color** change will appear instantaneously.



Tap on the **Transparent Option** in the Canvas Panel to hide the color change in the Drawing Editor. A checkmark serves as the visual indicator that the option has been enabled, as shown below.

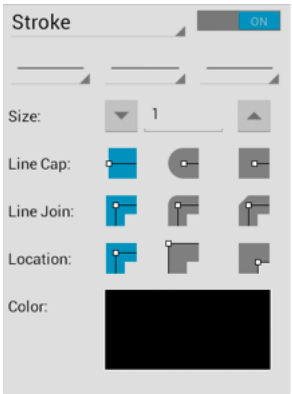


5.5. Handling Strokes

TouchDraw provides multiple options for altering the attributes of a stroke (line) for existing or new figures(s) within the drawing canvas. The **Stroke Panel**, accessible through the Info Menu or the Drawing Toolbar, can be used to change:

- Stroke Size
- Line or Endpoint Styles
- Line Caps
- Line Joins
- Line Location
- Line Colors

The **Stroke Panel** appears as shown below:

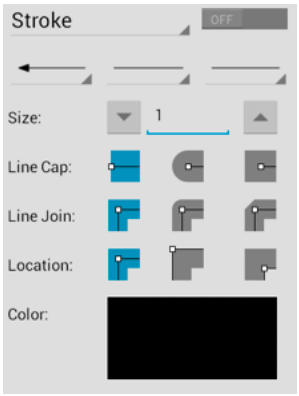


5.5.1. Stroke Visibility

The **Stroke Visibility** option is an **On/Off** toggle button used to set the visibility of strokes/lines of a figure(s). If the visibility option is turned off, the border/line of a selected or added figure(s) is not drawn at all. The **Stroke Visibility** toggle can be accessed in one of two ways:

1

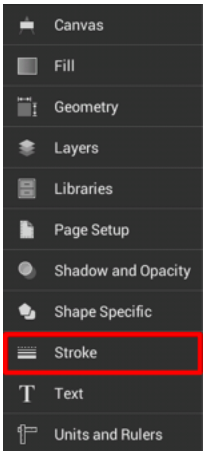
Press on the **Stroke Button** located in the Drawing Toolbar.

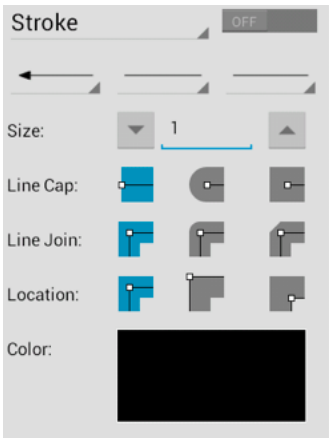


2

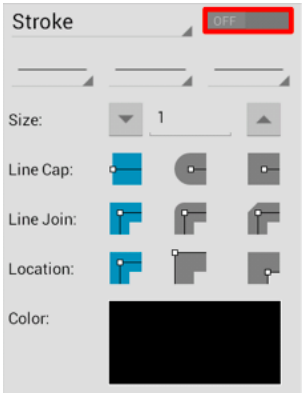
Press on the **Info Button** in Top Toolbar to open the Info Menu.

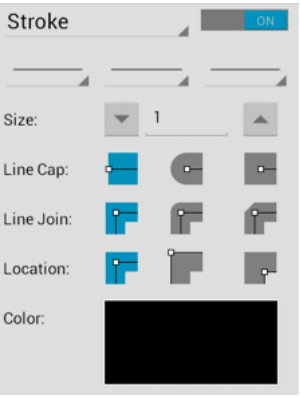
Then press on the **Stroke** option to open the **Stroke Panel**.



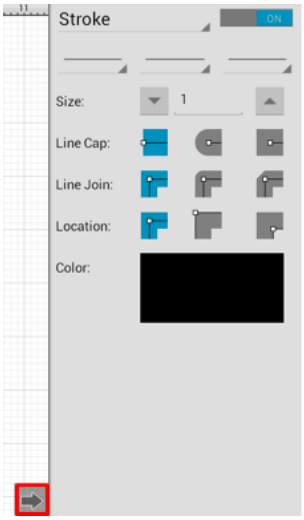


To turn on **Stroke Visibility**,perform a **Tap** on the **On/Off** toggle in the **Stroke Panel**.

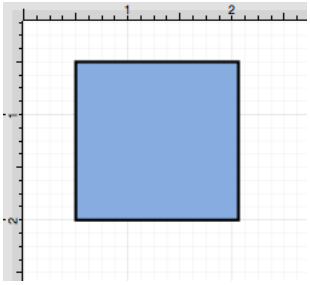


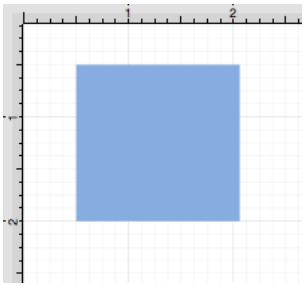


To close the **Stroke Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.



If **Stroke Visibility** is on, an outline around the figure will be present and if it is off and Fill Visibility is on, the figure will appear with no border, as shown below:





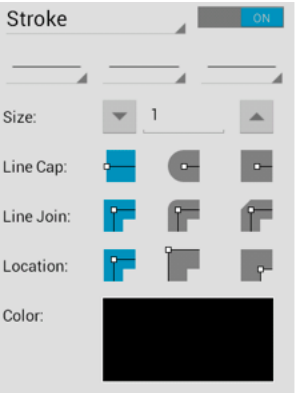
Stroke attribute changes will not be reflected in a selected or added figure(s) until this option has been turned on.

5.5.2. Stroke Style

The **Stroke Style** or line dash pattern and end decorations of a figure are altered by accessing the **Stroke Panel**. This panel can be opened in one of the following ways:

1

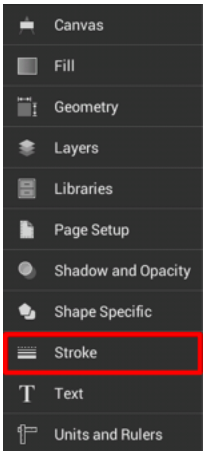
Press on the **Stroke Button** located in the Drawing Toolbar.

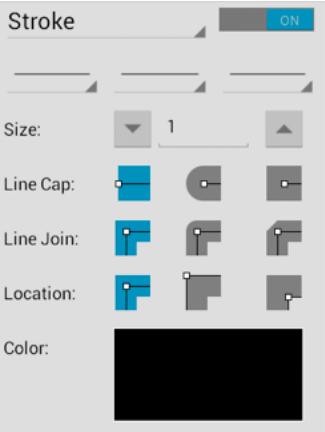


2

Press on the **Info Button** in Top Toolbar to open the Info Menu.

Then press on the **Stroke** option to open the **Stroke Panel**.

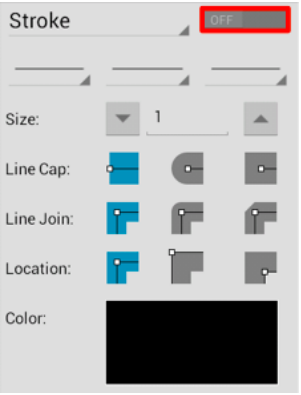


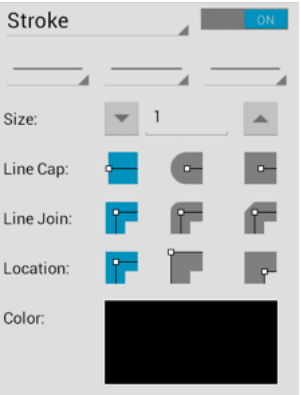


To alter the **Stroke Style**:

1

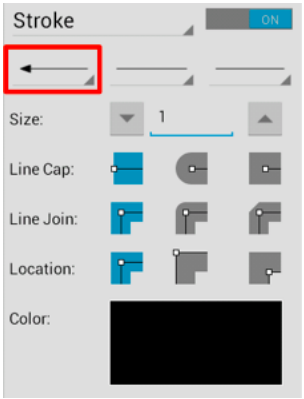
Enable the Stroke Visibility option (if disabled) by tapping on the On/Off toggle in the upper right corner of the **Stroke Panel**.





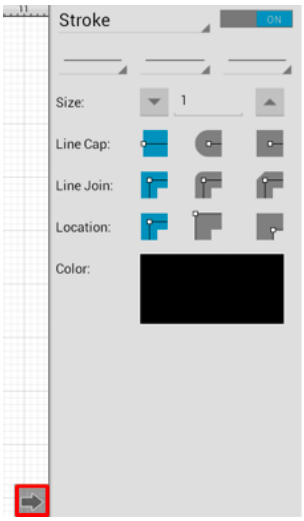
2

Tap on the desired section (Beginning, Middle, or End) of the **Line Style** section in the **Stroke Panel** to change the style (arrowhead, dashed, solid, etc.) of a line.

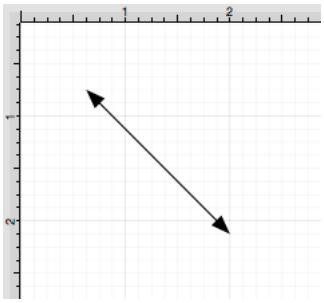


3

To close the **Stroke Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.



For example, a Line with an arrowed **Start** and **End Style** would appear as shown below:



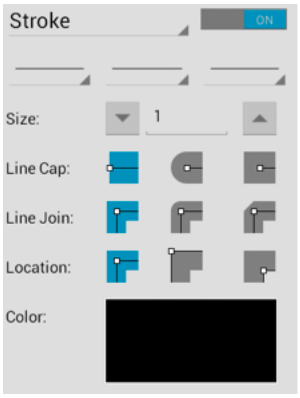
Note: A line style change will be seen instantaneously when a stroke figure is selected. If no figures have been selected, the line style change will apply to all subsequently created stroke figures.

5.5.3. Stroke Size

The **Stroke Size** of a figure (width of a stroke *in pixels)* can be altered by accessing the **Stroke Panel**. This panel can be opened in one of the following ways:

1

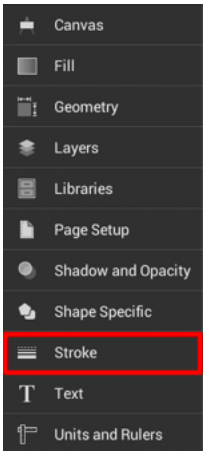
Press on the **Stroke Button** located in the Drawing Toolbar.

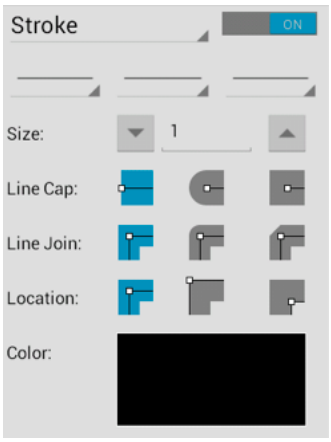


2

Press on the **Info Button** in Top Toolbar to open the Info Menu.

Then press on the **Stroke** option to open the **Stroke Panel**.

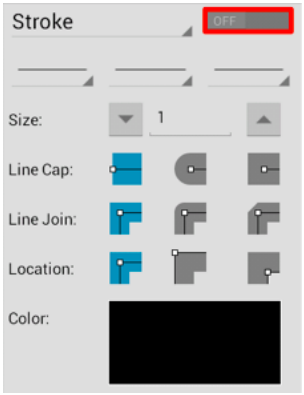


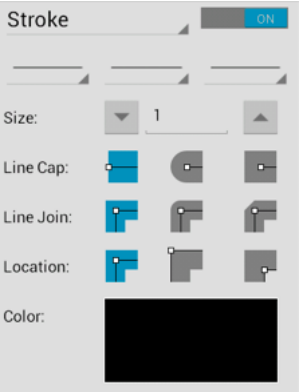


To alter the **Stroke Size**:

1

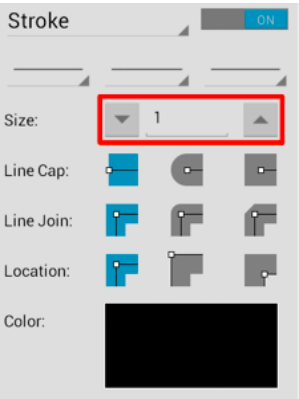
Enable the Stroke Visibility option (if disabled) by tapping on the On/Off toggle in the upper right corner of the **Stroke Panel**.





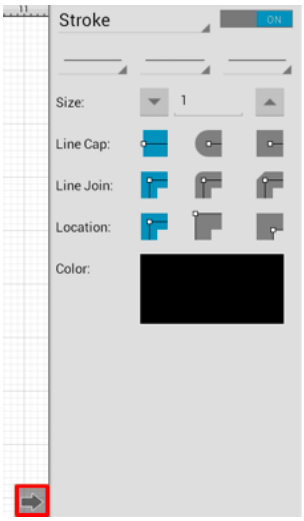
2

Press on the "Up" or "Down" arrow buttons to increase or decrease the size by increments of one or perform a **Single Tap** on the text entry field to open the text editor and type in a value.



3

To close the **Stroke Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.



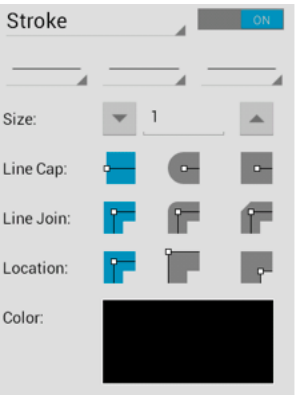
Note: A size change will be seen instantaneously when a stroke figure is selected. If no figures have been selected, the size change will apply to all subsequently created stroke figures.

5.5.4. Line Cap

The **Line Cap** (Butt, Rounded, or Square) of a figure can be altered by accessing the **Stroke Panel**. This panel can be opened in one of the following ways:

1

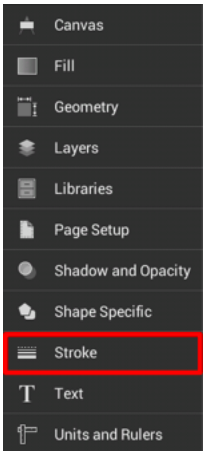
Press on the **Stroke Button** located in the Drawing Toolbar.

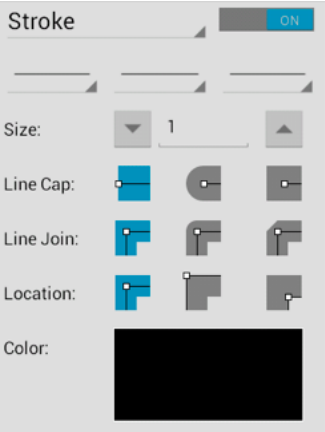


2

Press on the **Info Button** in Top Toolbar to open the Info Menu.

Then press on the **Stroke**option to open the **Stroke Panel**.

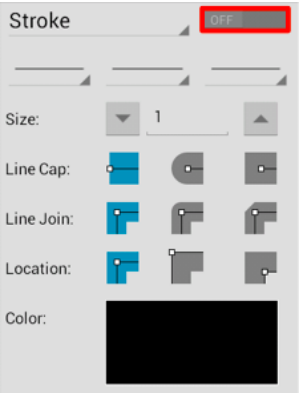


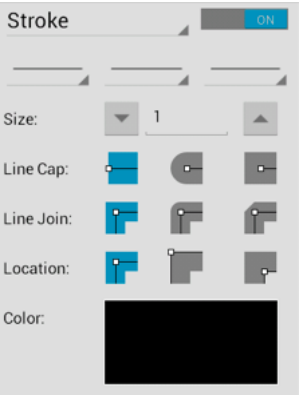


To alter the **Line Cap**:

1

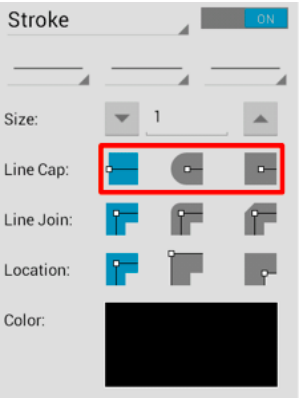
Enable the Stroke Visibility option (if disabled) by tapping on the On/Off toggle in the upper right corner of the **Stroke Panel**.





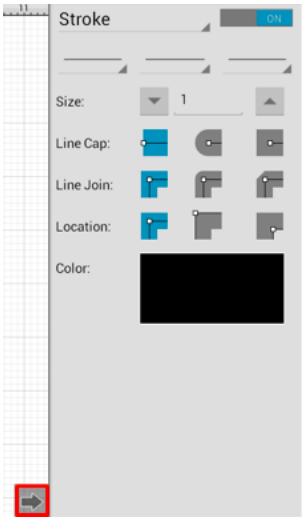
2

Press on the desired **Line Cap Type** option.



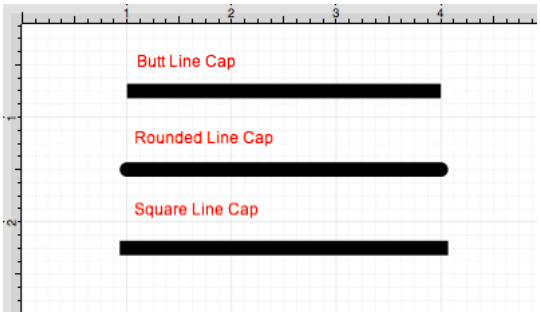
3

To close the **Stroke Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.



4

For example, the image below shows what a Line would look like with a **Butt**, **Rounded,** and **Square Line Cap**.



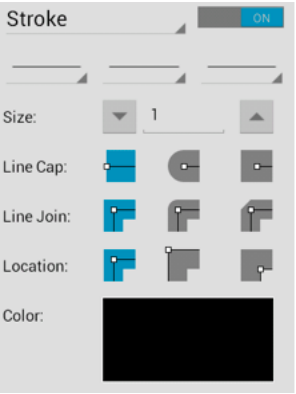
Note: A line cap change will be seen instantaneously when a stroke figure is selected. If no figures have been selected, the line cap change will apply to all subsequently created stroke figures.

5.5.5. Line Join

The **Line Join**(Mitered, Rounded, or Bevelled) of a figure can be altered by accessing the **Stroke Panel**. This panel can be opened in one of the following ways:

1

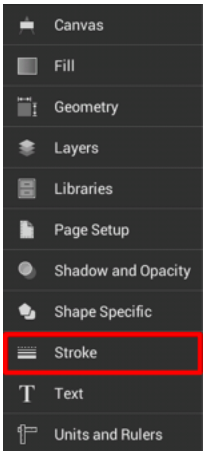
Press on the **Stroke Button** located in the Drawing Toolbar.

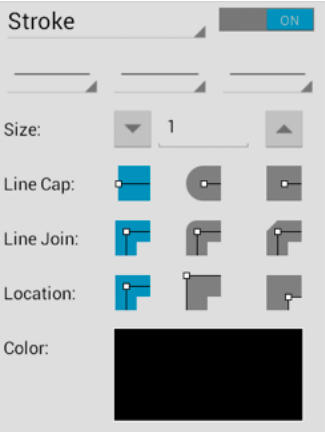


2

Press on the **Info Button** in Top Toolbar to open the Info Menu.

Then press on the **Stroke** option to open the **Stroke Panel**.

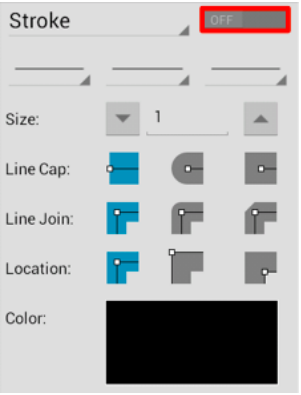


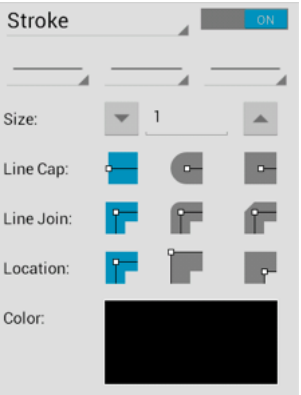


To alter the **Line Cap Type**:

1

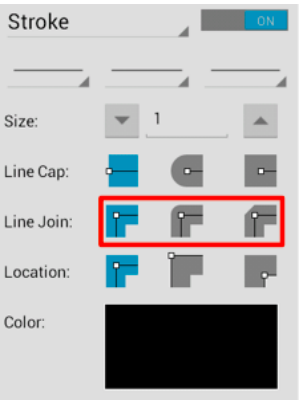
Enable the Stroke Visibility option (if disabled) by tapping on the **On/Off** toggle in the upper right corner of the **Stroke Panel**.





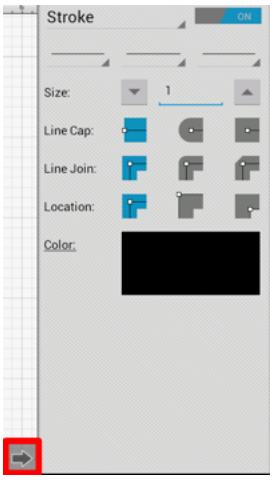
2

Press on the desired **Line Join Type**option.



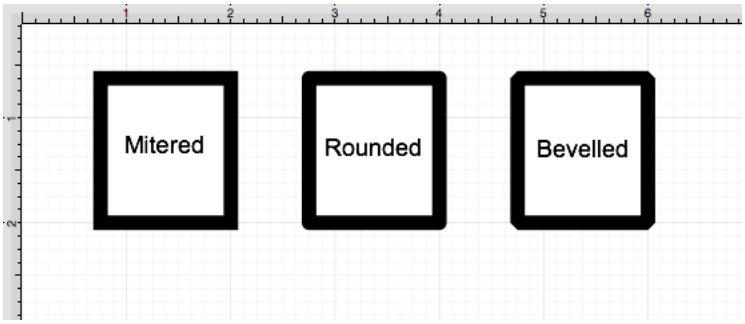
3

To close the **Stroke Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.



4

The image below shows what a Square would look like with a **Mitered**, **Rounded**, and **Bevelled Line Join**.



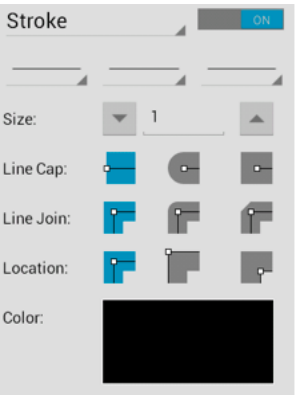
Note: A line join change will be seen instantaneously when a stroke figure is selected. If no figures have been selected, the line join change will apply to all subsequently created stroke figures.

5.5.6. Line Location

The **Line Location** of a figure can be altered by accessing the **Stroke Panel**. This panel can be opened in one of the following ways:

1

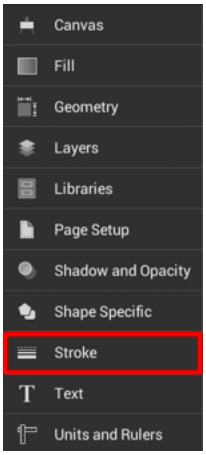
Press on the **Stroke Button** located in the Drawing Toolbar.

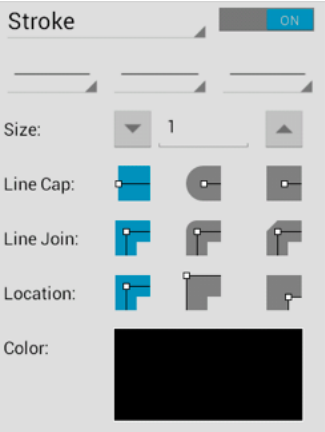


2

Press on the **Info Button** in Top Toolbar to open the Info Menu.

Then press on the **Stroke**option to open the **Stroke Panel**.

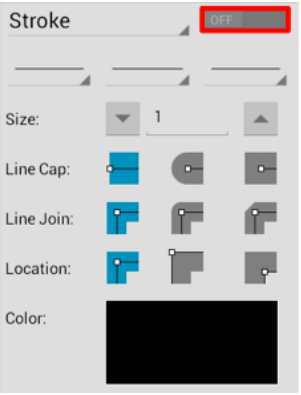


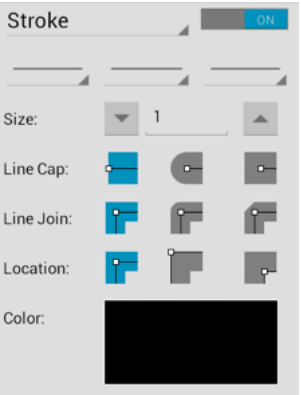


To alter the **Line Cap Type**:

1

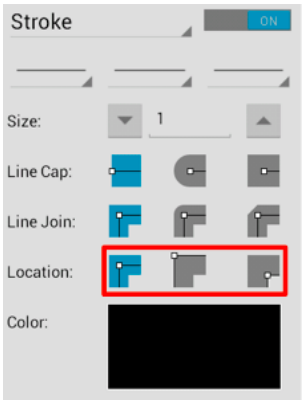
Enable the Stroke Visibility option (if disabled) by tapping on the **On/Off** toggle in the upper right corner of the **Stroke Panel**.





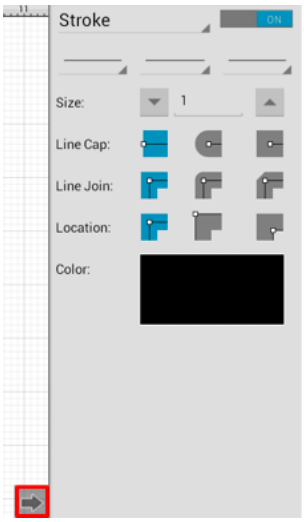
2

Press on the desired **Line Location** option.



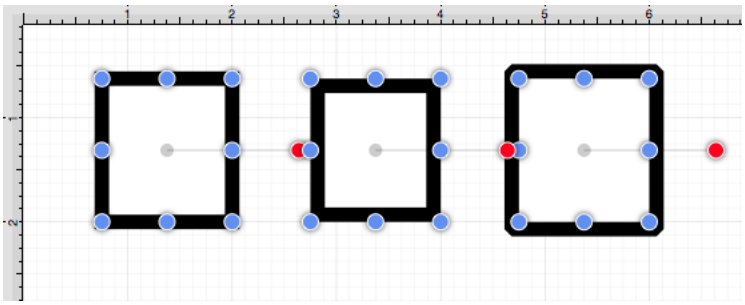
3

To close the **Stroke Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.



4

The example below shows what a Rectangle looks like when each **Line Location** choice is selected: *Center, Inside, and Outside*.



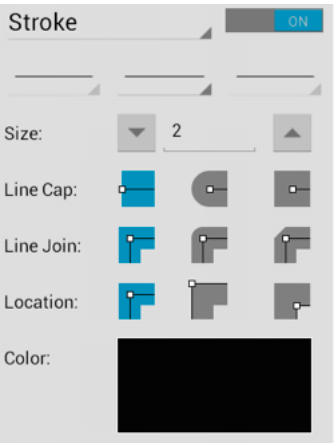
Note: A line location change will be seen instantaneously when a stroke figure is selected. If no figures have been selected, the line join change will apply to all subsequently created stroke figures.

5.5.7. Line Color

The **Line (Stroke) Color** of a selected figure can be changed to meet a desired preference. It can be altered for a selected figure(s) or in instances where no figures have been selected. If a figure has not been selected, the color change applies to any figure added after the change. This figure attribute can be altered in one of the following ways:

1

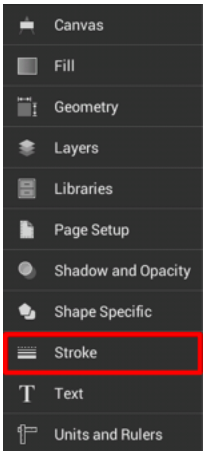
Press on the **Stroke Button** located in the Drawing Toolbar.

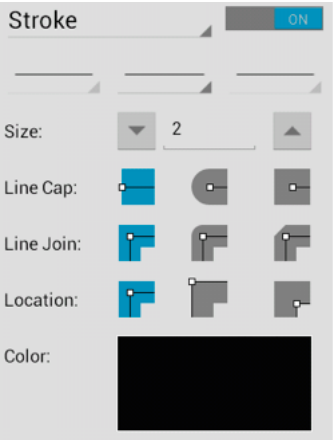


2

Press on the **Info Button**in Top Toolbar to open the Info Menu.

Then press on the **Stroke**option to open the **Stroke Panel**.

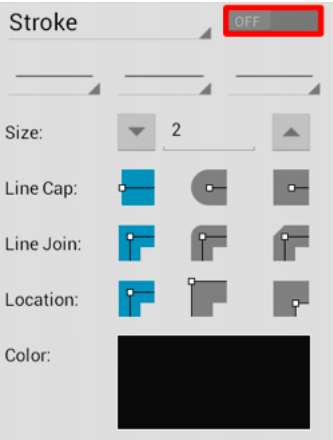


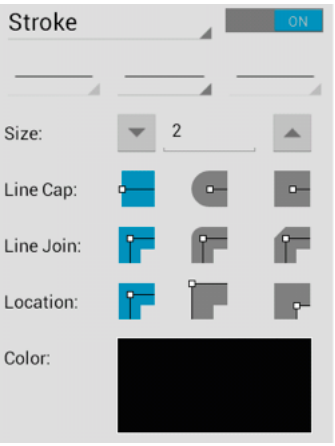


To alter the **Line (Stroke) Color**:

1

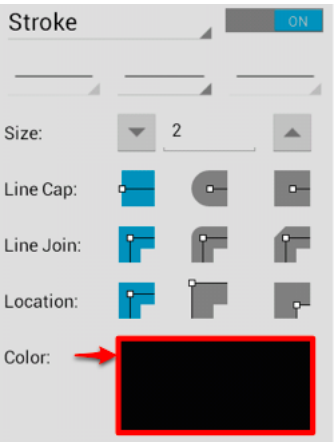
Enable the Stroke Visibility option (if disabled) by tapping on the **On/Off** toggle in the upper right corner of the **Stroke Panel**.





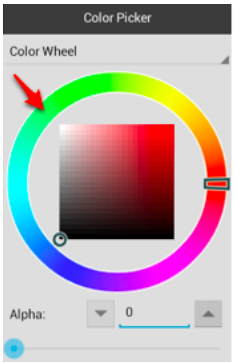
2

Press on the **Color Button** in the Stroke Panel to open the Color Picker and choose a hue.



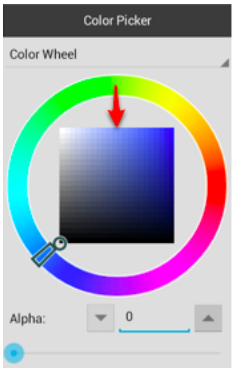
3

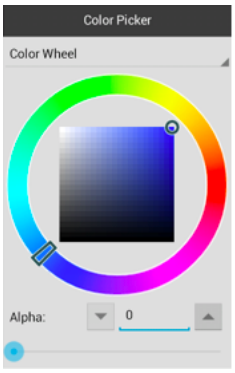
Tap on a color range within the outside of the wheel view.



4

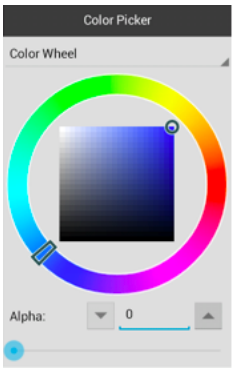
Choose the desired lightness or darkness of the selected color in the saturation square.





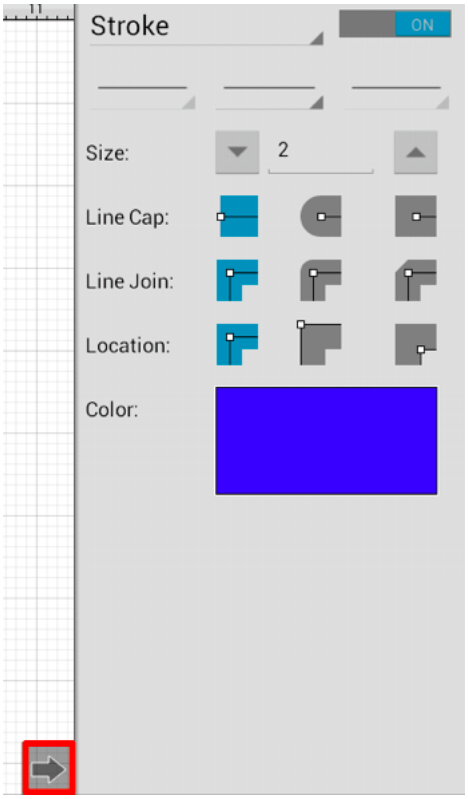
5

Perform a **Touch/Drag** gesture combination or **Press** on additional options within the **Color Picker** to make further attribute changes.



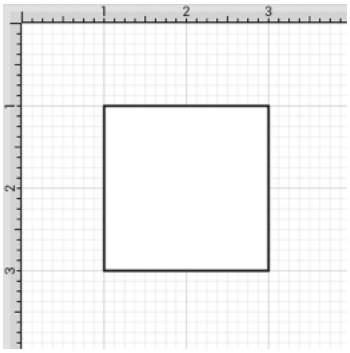
6

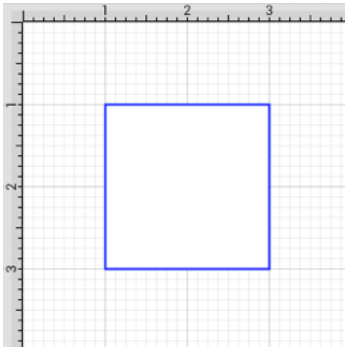
To close the **Stroke Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.



7

The following example shows a figure with a white fill, a stroke size of 2, and a line color that has been changed from black to blue.





Note: A color change will be seen instantaneously when a stroke figure is selected. If no figures have been selected, the color change will apply to all subsequently created stroke figures. For more information, please refer to the Handling Colors section of the documentation.

5.6. Handling Text

TouchDraw provides multiple options for changing the text attributes of figures that are capable of displaying text. The Text Tool can be used to add a text box anywhere on the Drawing Canvas. Text may also be added as part of these shapes:

- Rectangles
- Rounded Rectangles
- Ovals
- Circles
- Polygons
- Closed Paths (Custom Shapes)

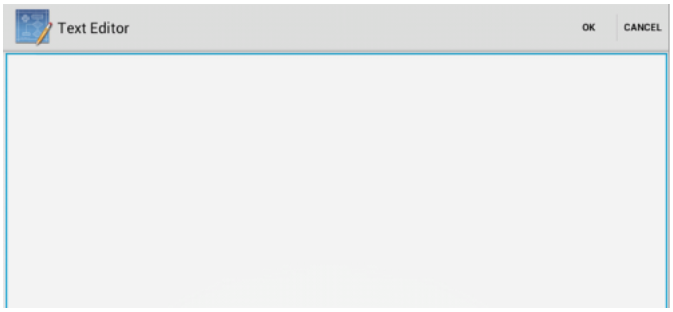
The attributes for entered text can be changed to meet specific preferences and incude:

- Font Family
- Font Size
- Font Style
- Font Color
- Text Alignment
- Text Margin

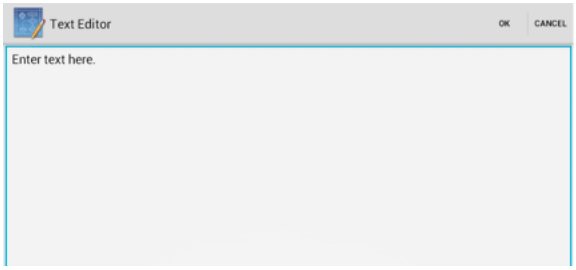
Variables may also be used to input a certain pre-formatted value as part of the displayed text within a figure.

5.6.1. Editing Text

The **Text Editor** must be opened to edit the text content of a selected figure. To open the text editor, perform a **Double Tap** on the desired figure for editing. After double tapping, the **Text Editor** will appear as shown below.

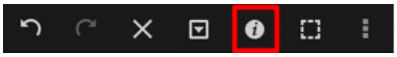


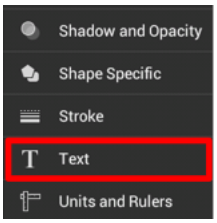
Use the keyboard to enter the desired text.



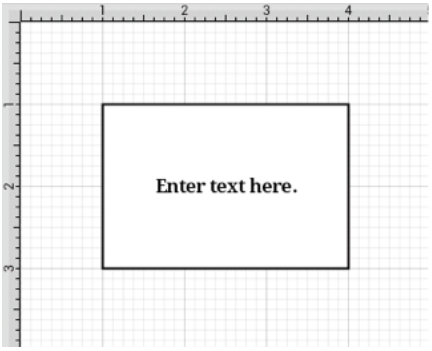
Then tap on **OK** to exit the **Text Editor**.

Press on the **Info Button** in the Top Toolbar and select **Text** to alter the font style, size, color, etc. of the added text.





Entered text will be reflected within the drawing view after the editor has been dismissed, as shown below.



5.6.2. Font Family

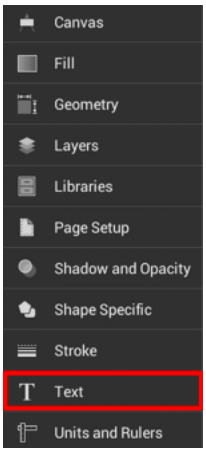
A figure must be selected to alter the **Font Family** of entered text. To access the text attributes for a selected figure(s):

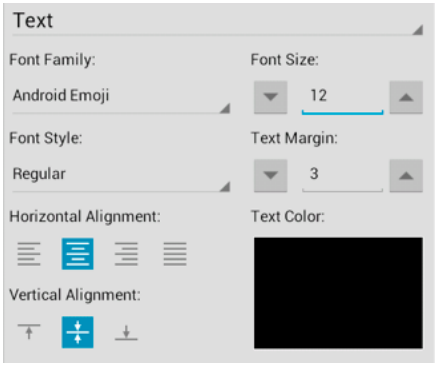
1

Press on the **Info Button** in the Top Toolbar to open the Info Menu.

2

Press on the **Text** option to open the **Text Panel**.

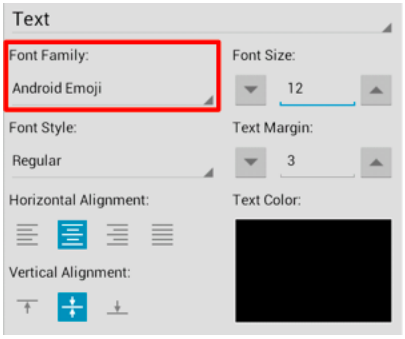




To alter the **Font Family**:

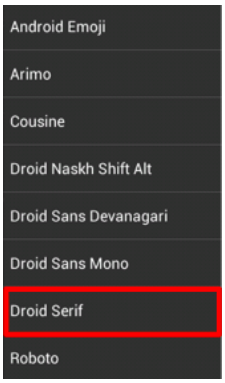
1

Tap on the **Font Family Button** to open the Font Family Selection Menu.



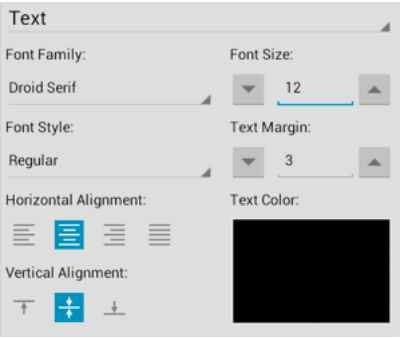
2

Press on the desired **Font Family** option.



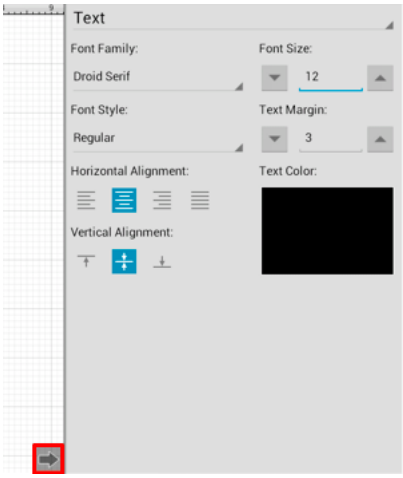
3

The selection will appear in the **Text Panel** under the **Font Family** option and changes appear automatically within a selected figure.



4

To close the **Text Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.



5.6.3. Font Size

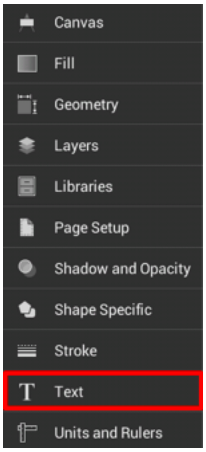
A figure must be selected to alter the **Font Size** of entered text. To access the text attributes for a selected figure(s):

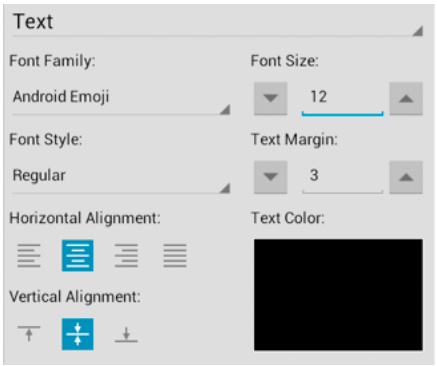
1

Press on the **Info Button** in the Top Toolbar to open the Info Menu.

2

Press on the **Text** option to open the **Text Panel**.

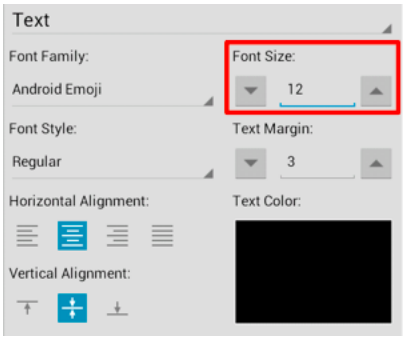




To alter the **Font Size**:

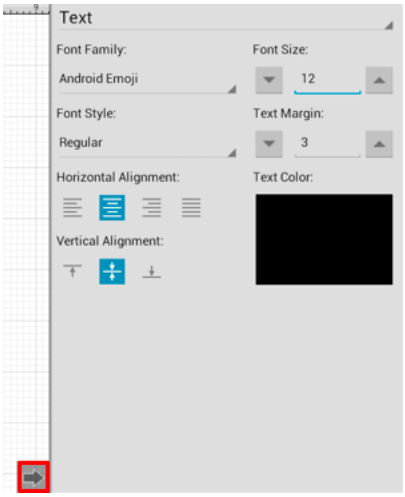
1

Tap on the "Up" or "Down" arrow buttons in the **Text Panel** underneath the **Font Size** heading to increase/decrease the size by increments of 1 or press on the number field to enter a new size with the text editor.



2

To close the **Text Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.



5.6.4. Font Style

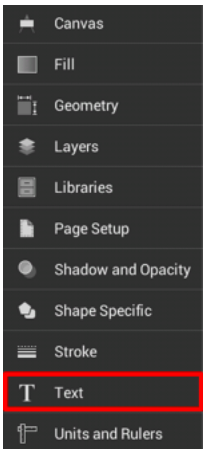
A figure must be selected to alter the **Font Style** of entered text. To access the Text attributes for a selected figure(s):

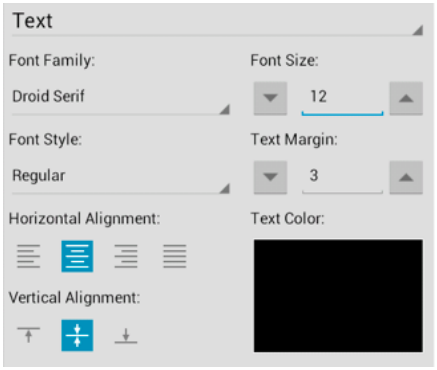
1

Press on the **Info Button** in the Top Toolbar to open the Info Menu.

2

Press on the **Text** option to open the **Text Panel**.

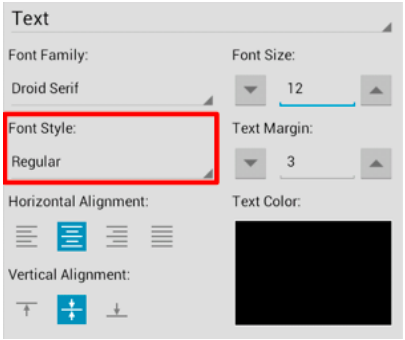




To alter the **Font Style**:

1

Tap on the **Font Style Button** to open the **Font Style Selection Menu**.

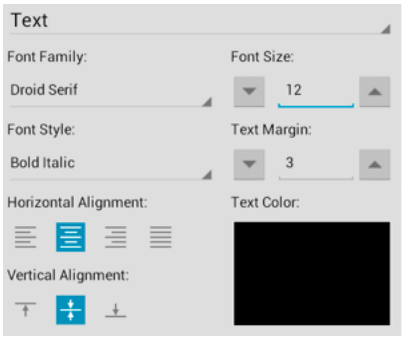


2

Press on the desired **Font Style** option.

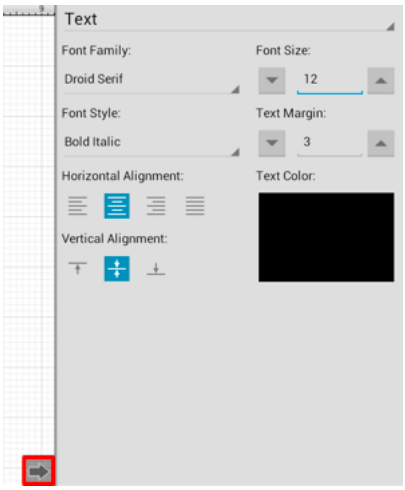
3

The selection will appear in the **Text Panel** under the **Font Style** option and changes appear automatically within a selected figure.



4

To close the **Text Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.



5.6.5. Font Color

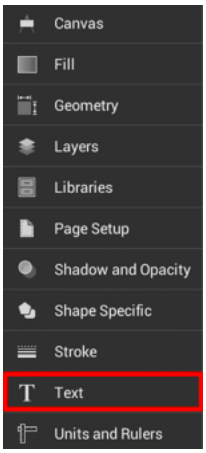
The **Font Color** of a selected figure can be changed to meet a desired preference. It can be altered for a selected figure(s) or in instances where no figures have been selected. If a figure has not been selected, the color change applies to any figure added after the change. To change the font color:

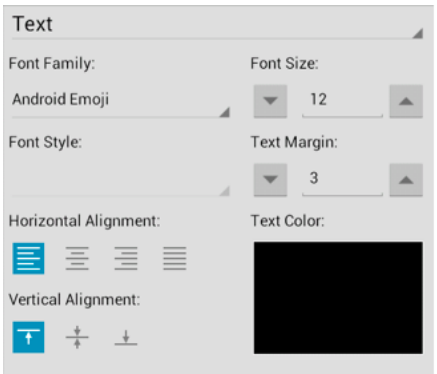
1

Press on the **Info Button** in the Top Toolbar to open the Info Menu.

2

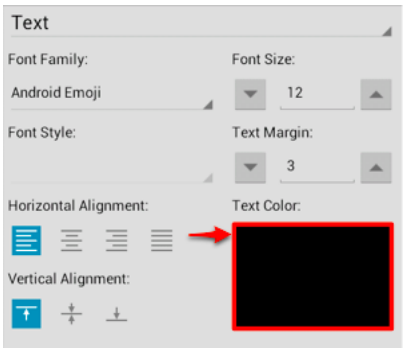
Press on the **Text** option to open the **Text Panel**.

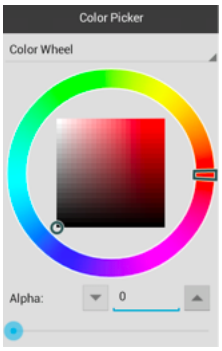




3

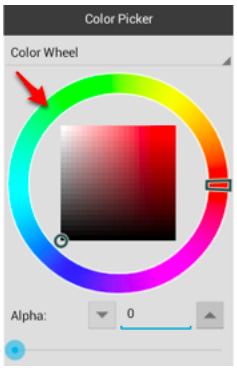
Press on the **Text Color Button** to open the Color Picker and choose a hue.

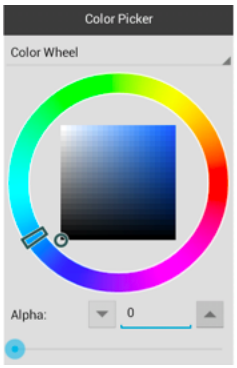




4

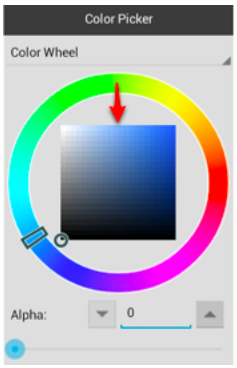
Tap on a color range within the outside of the wheel view.

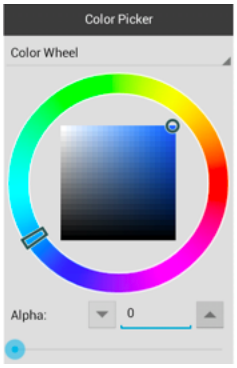




5

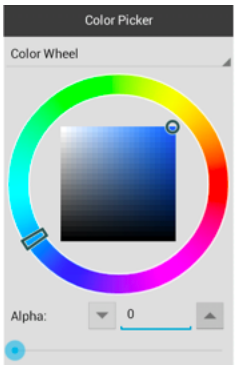
Choose the desired lightness or darkness of the selected color in the saturation square.





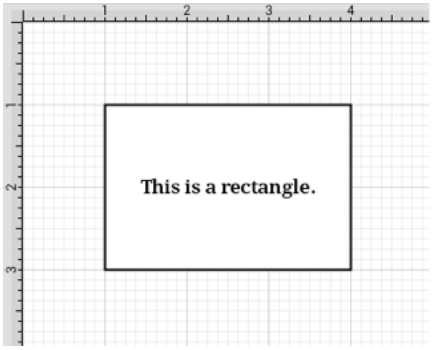
6

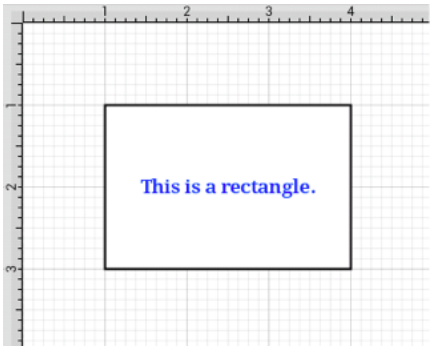
Perform a **Touch/Drag** gesture combination or **Press** on additional options to further alter the selected hue.



7

Then tap anywhere in the Drawing Editor to close the **Color Picker**. In the following example, the font color has been changed from black to blue.





Note: A color change will be seen instantaneously when text is selected. If text has not been selected, the color change will apply to all subsequent text entries.

5.6.6. Text Alignment

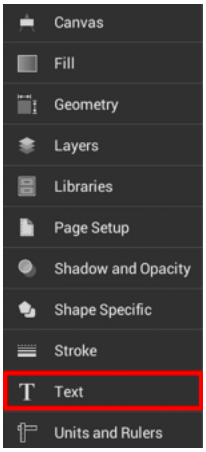
The **Text Alignment** option alters the vertical and horizontal positioning of text within it's bounding box. A figure must be selected to alter the alignmentpositionof entered text. To access the text attributes for a selected figure(s):

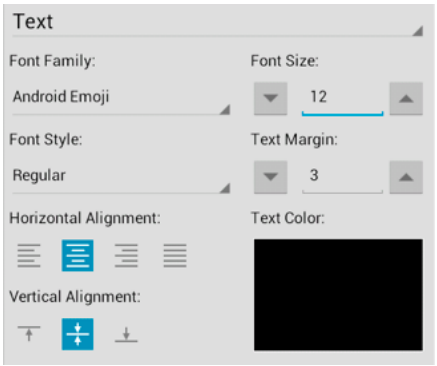
1

Press on the **Info Button** in the Top Toolbar to open the Info Menu.

2

Press on the **Text** option to open the **Text Panel**.

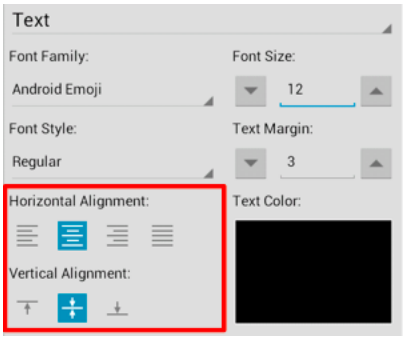




To alter the **Text Alignment**:

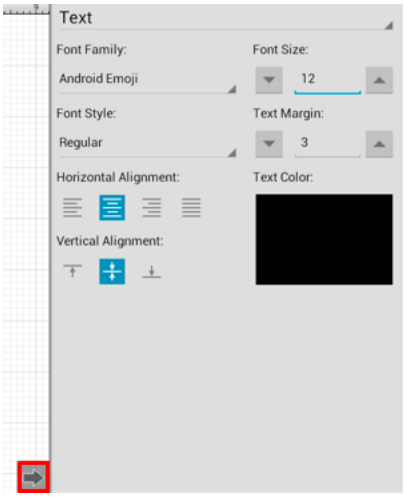
1

Tap on the desired **Horizontal or Vertical Alignment** options to make a selection.

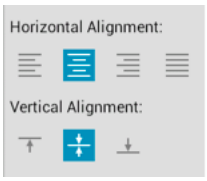


2

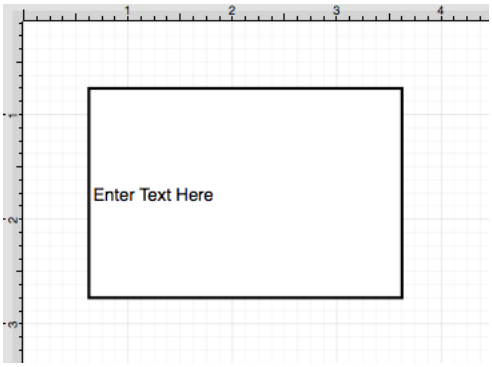
To close the **Text Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.

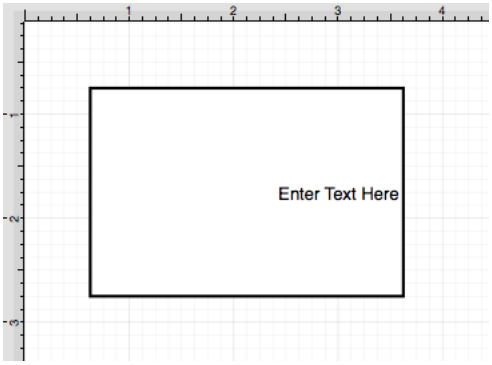


The currently selected horizontal and vertical alignment choices will appear highlighted in blue, as shown below.



The following example shows the alteration of text within a figure from a left horizontal alignment to a right horizontal alignment.





5.6.7. Text Margin

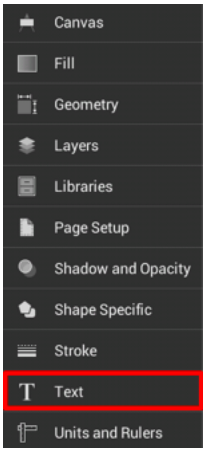
A figure must be selected to alter the **Text Margin**of entered text. To access the text attributes for a selected figure(s):

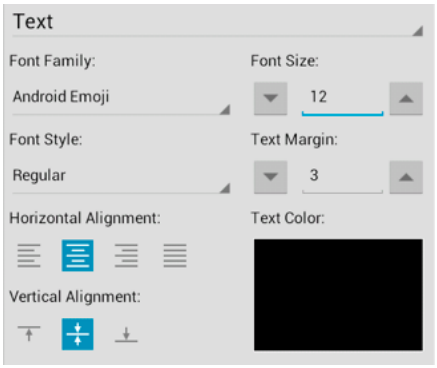
1

Press on the **Info Button** in the Top Toolbar to open the Info Menu.

2

Press on the **Text** option to open the **Text Panel**.

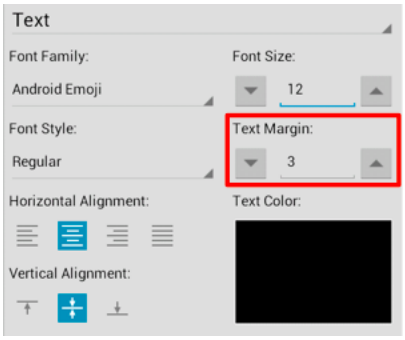




To alter the **Text Margin**:

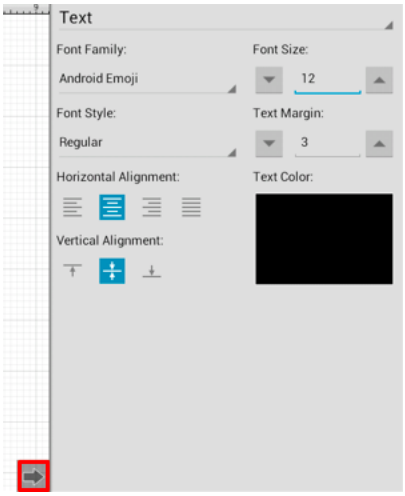
1

Tap on the "Up" or "Down" arrow buttons in the **Text Panel** underneath the **Text Margin** heading to increase/decrease the margin by increments of 1 or press on the number field to enter a new value with the text editor.



2

To close the **Text Panel**, tap on the **Hide Sidebar Button** located at the bottom of the sidebar panel.



5.6.8. Adding Variables to Text

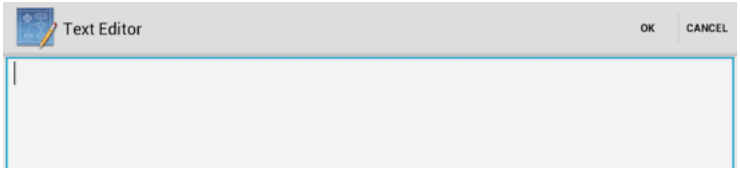
A **Variable** can be added to text within a figure through the **Text Editor** by hand keying the desired variable as part of the text.

On a subsequent page, there is a list of available variables.

In the following example, the **Area** variable is included as part of the selected rectangle's text.

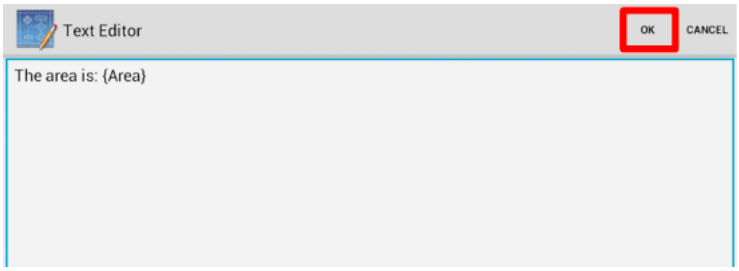
1

Double Tap on a desired figure to open the **Text Editor**.



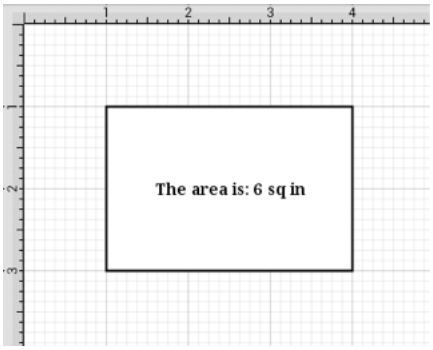
2

Enter the appropriate text with the keypad and then tap on **OK** in the upper right hand corner to close the editor.



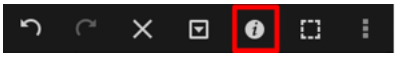
3

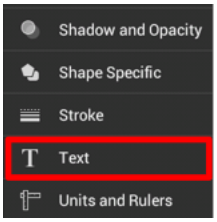
The selected variable will appear within the selected figure once the editor has been dismissed.



4

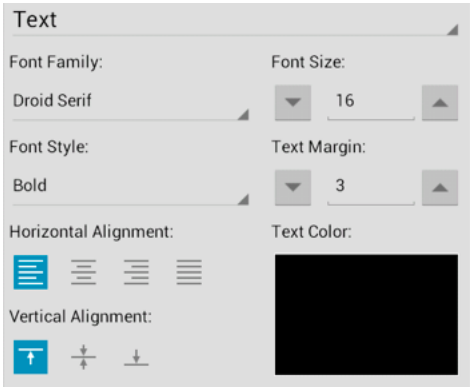
Press on the **Info Button** in the Top Toolbar and select **Text** to alter the font style, size, location, color, etc. of the added text.





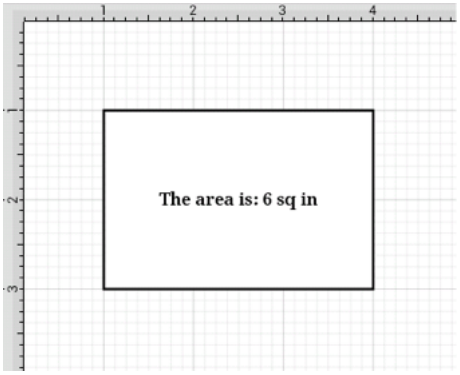
5

In this example, the horizontal alignment is changed to left and the vertical alignment is changed to top. The font size has been increased to 16.



6

Changes to entered text appear in real time as they are made within the drawing, as shown below.



Note: The first letter of the entered variable must be capitalized for the value to appear in the selected figure.

5.6.8.1. Available Variables

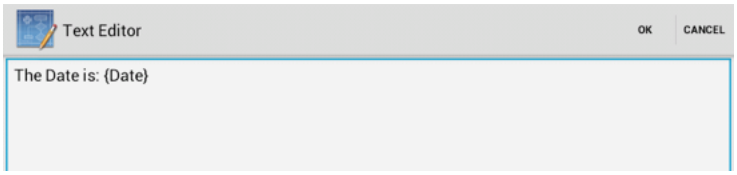
TouchDraw supports inserting **Variables** into a text area. Entered variables are replaced with the actual value when the drawing is rendered. The table below provides a list of currently supported **Text Variables**:

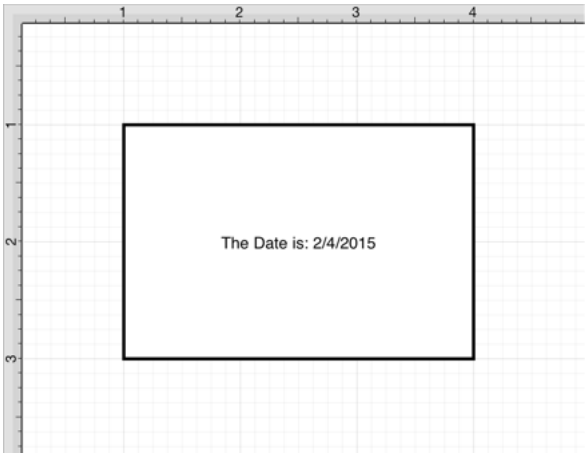
Variable Name	Variable Type	Description
	Pre-formatted	The minimum X-axis position of the figure bounds + the units abbreviation.
	Pre-formatted	The maximum X-axis position of the figure bounds + the units abbreviation.

Variable Name	Variable Type	Description
	Pre-formatted	The minimum Y-axis position of the figure bounds + the units abbreviation.
	Pre-formatted	The maximum Y-axis position of the figure bounds + the units abbreviation.
	Pre-formatted	The length of the line (if the text is added to a line or line connection) + the units abbreviation.
	Pre-formatted	The width of the figure bounds + the units abbreviation.
	Pre-formatted	The height of the figure bounds + the units abbreviation.
	Pre-formatted	The area of the figure + the units abbreviation.
	Decimal	The decimal representation (to 4 decimal points) of one of the 7 variables above where xxxx is the name of the variable. For example, `{DLength}` would return the decimal value of a line length.
	Fractional	The fractional representation of one of the 7 variables above where xxxx is the name of the variable. For example, `{FLength}` would return the fractional value of a line length.
	Pre-formatted	The name of the current drawing.
	Pre-formatted	The abbreviation of the unit of measure specified for the drawing.
	Pre-formatted	The full name of the unit of measure specified for the drawing.
	Pre-formatted	The name of the layer that the figure is currently in.
	Date	The current date.

5.6.8.2. Formatting Date Variables

By default, the `{Date}` variable will expand into a date formatted in the `mm/dd/yyyy` (or `dd/mm/yyyy` for non-US locales) format as shown in the screenshot below:





The first letter of the entered variable must be capitalized for the value to appear in the selected figure.

TouchDraw allows the exact formatting style to be specified in scenarios where the date must be formatted differently than the default setting. Use one of the following `{Date:format}` options to insert a desired format. Refer to the sample table below:

Variable	Description	Examples
`{Date:d}`	**Default** - Short Date Formatting	6/15/2009 (US) 15/06/2009 (France) 2009/06/15 (Japan)
`{Date:D}`	Long Date Formatting	Monday, June 15, 2009 (US) 15 2009 . (Russia) Montag, 15. Juni 2009 (Germany)
`{Date:f}`	Full Date/Time (short time) Formatting	Monday, June 15, 2009 1:45 PM (US) den 15 juni 2009 13:45 (Sweden) , 15 2009 1:45 (Greece)
`{Date:F}`	Full Date/Time (long time) Formatting	Monday, June 15, 2009 1:45:30 PM (US) den 15 juni 2009 13:45:30 (Sweden) , 15 2009 1:45:30 (Greece)

Variable	Description	Examples
{Date:g}	General Date/Time (short time) Formatting	6/15/2009 1:45 PM (US) 15/06/2009 13:45 (Spain) 2009/6/15 13:45 (China)
{Date:G}	General Date/Time (long time) Formatting	6/15/2009 1:45:30 PM (US) 15/06/2009 13:45:30 (Spain) 2009/6/15 13:45:30 (China)
{Date:m}	General Month/Day Formatting	June 15 (US) juni 15 (Denmark) Juni 15 (Indonesia)
{Date:M}	General Month/Day Formatting	June 15 (US) juni 15 (Denmark) Juni 15 (Indonesia)
{Date:o}	Round-Trip Date/Time Formatting	06-15T13:45:30.0900000
{Date:O}	Round-Trip Date/Time Formatting	06-15T13:45:30.0900000
{Date:r}	RFC1123 Formatting	15 Jun 2009 20:45:30 GMT
{Date:R}	RFC1123 Formatting	15 Jun 2009 20:45:30 GMT
{Date:s}	Sortable Date/Time Formatting	2009-06-15T13:45:30
{Date:t}	Short Time Formatting	1:45 PM (US) 13:45 (Croatia - Hrvatska) 01:45 (Egypt)
{Date:T}	Long Time Formatting	01:45:30 PM (US) 13:45:30 (Croatia - Hrvatska) 01:45:30 (Egypt)
{Date:u}	Universal Sortable	2009-06-15 20:45:30Z

Variable	Description	Examples
	Date/Time Formatting	
{Date:U}	Universal Full Date/Time Formatting	Monday, June 15, 2009 8:45:30 PM (US) den 15 juni 2009 20:45:30 (Sweden) , 15 2009 8:45:30 (Greece)
{Date:y}	Year Month Formatting	June, 2009 (US) juni 2009 (Denmark) Juni 2009 (Indonesia)
{Date:Y}	Year Month Formatting	June, 2009 (US) juni 2009 (Denmark) Juni 2009 (Indonesia)

In addition to the formatting variables above, you can also use the variable below to create your own custom date formats. For example, we could do something like the following

```
{Date:MM/dd/yy H:mm:ss}
```

which would create something like:

```
06/10/12 15:24:16
```

Variable	Description	Examples
{Date:d}	The day of the month, from 1 through 31.	6/1/2009 1:45:30 PM -> 1 6/15/2009 1:45:30 PM -> 15
{Date:dd}	The day of the month, from 01 through 31.	6/1/2009 1:45:30 PM -> 01 6/15/2009 1:45:30 PM -> 15
{Date:ddd}	The abbreviated name of the day of the week.	6/15/2009 1:45:30 PM -> Mon (US) 6/15/2009 1:45:30 PM -> (Russia) 6/15/2009 1:45:30 PM -> lun. (France)
{Date:dddd}	The full name of the day of the week.	6/15/2009 1:45:30 PM -> Monday (US) 6/15/2009 1:45:30 PM -> (Russia) 6/15/2009 1:45:30 PM -> lundi (France)
{Date:f}	The tenths of a second in a	6/15/2009 13:45:30.617 -> 6 6/15/2009

Variable	Description	Examples
	date and time value.	13:45:30.050 -> 0
{Date:ff}	The hundredths of a second in a date and time value.	6/15/2009 13:45:30.617 -> 61 6/15/2009 13:45:30.005 -> 00
{Date:fff}	The milliseconds in a date and time value.	6/15/2009 13:45:30.617 -> 617 6/15/2009 13:45:30.0005 -> 000
{Date:ffff}	The ten thousandths of a second in a date and time value.	6/15/2009 13:45:30.6175 -> 6175 6/15/2009 13:45:30.00005 -> 0000
{Date:fffff}	The hundred thousandths of a second in a date and time value.	6/15/2009 13:45:30.61754 -> 61754 6/15/2009 13:45:30.000005 -> 00000
{Date:ffffff}	The millionths of a second in a date and time value.	6/15/2009 13:45:30.617542 -> 617542 6/15/2009 13:45:30.0000005 -> 000000
{Date:fffffff}	The ten millionths of a second in a date and time value.	6/15/2009 13:45:30.6175425 -> 6175425 6/15/2009 13:45:30.0001150 -> 0001150
{Date:F}	If non-zero, the tenths of a second in a date and time value.	6/15/2009 13:45:30.617 -> 6 6/15/2009 13:45:30.050 -> (no output)
{Date:FF}	If non-zero, the hundredths of a second in a date and time value.	6/15/2009 13:45:30.617 -> 61 6/15/2009 13:45:30.005 -> (no output)
{Date:FFF}	If non-zero, the milliseconds in a date and time value.	6/15/2009 13:45:30.617 -> 617 6/15/2009 13:45:30.0005 -> (no output)
{Date:FFFF}	If non-zero, the ten thousandths of a second in a date and time value.	6/1/2009 13:45:30.5275 -> 5275 6/15/2009 13:45:30.00005 -> (no output)
{Date:FFFFF}	If non-zero, the hundred thousandths of a second in a date and time value.	6/15/2009 13:45:30.61754 -> 61754 6/15/2009 13:45:30.000005 -> (no output)

Variable	Description	Examples
{Date:FFFFFF}	If non-zero, the millionths of a second in a date and time value.	6/15/2009 13:45:30.617542 -> 617542 6/15/2009 13:45:30.0000005 -> (no output)
{Date:FFFFFFF}	If non-zero, the ten millionths of a second in a date and time value.	6/15/2009 13:45:30.6175425 -> 6175425 6/15/2009 13:45:30.0001150 -> 000115
{Date:g}, {Date:gg}	The period or era.	6/15/2009 1:45:30 PM -> A.D.
{Date:h}	The hour, using a 12-hour clock from 1 to 12.	6/15/2009 1:45:30 AM -> 1 6/15/2009 1:45:30 PM -> 1
{Date:hh}	The hour, using a 12-hour clock from 01 to 12.	6/15/2009 1:45:30 AM -> 01 6/15/2009 1:45:30 PM -> 01
{Date:H}	The hour, using a 24-hour clock from 0 to 23.	6/15/2009 1:45:30 AM -> 1 6/15/2009 1:45:30 PM -> 13
{Date:HH}	The hour, using a 24-hour clock from 00 to 23.	6/15/2009 1:45:30 AM -> 01 6/15/2009 1:45:30 PM -> 13
{Date:m}	The minute, from 0 through 59.	6/15/2009 1:09:30 AM -> 9 6/15/2009 1:09:30 PM -> 9
{Date:mm}	The minute, from 00 through 59.	6/15/2009 1:09:30 AM -> 09 6/15/2009 1:09:30 PM -> 09
{Date:M}	The month, from 1 through 12.	6/15/2009 1:45:30 PM -> 6
{Date:MM}	The month, from 01 through 12.	6/15/2009 1:45:30 PM -> 06
{Date:MMM}	The abbreviated name of the month.	6/15/2009 1:45:30 PM -> Jun (US) 6/15/2009 1:45:30 PM -> juin (France) 6/15/2009 1:45:30 PM -> Jun (South Africa)
{Date:MMMM}	The full name of the month.	6/15/2009 1:45:30 PM -> June (US) 6/15/2009 1:45:30 PM -> juni (Denmark) 6/15/2009 1:45:30

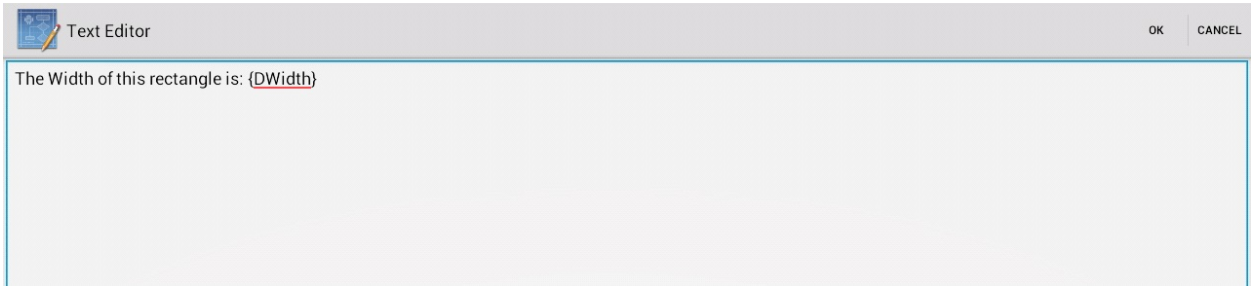
Variable	Description	Examples
		PM -> uJuni (South Africa)
{Date:s}	The second, from 0 through 59.	6/15/2009 1:45:09 PM -> 9
{Date:ss}	The second, from 00 through 59.	6/15/2009 1:45:09 PM -> 09
{Date:t}	The first character of the AM/PM designator.	6/15/2009 1:45:30 PM -> P (US) 6/15/2009 1:45:30 PM -> (Japan) 6/15/2009 1:45:30 PM -> (France)
{Date:tt}	The AM/PM designator.	6/15/2009 1:45:30 PM -> PM (US) 6/15/2009 1:45:30 PM -> (Japan) 6/15/2009 1:45:30 PM -> (France)
{Date:y}	The year, from 0 to 99.	1/1/0001 12:00:00 AM -> 1 1/1/0900 12:00:00 AM -> 0 1/1/1900 12:00:00 AM -> 0 6/15/2009 1:45:30 PM -> 9
{Date:yy}	The year, from 00 to 99.	1/1/0001 12:00:00 AM -> 01 1/1/0900 12:00:00 AM -> 00 1/1/1900 12:00:00 AM -> 00 6/15/2009 1:45:30 PM -> 09
{Date:yyy}	The year, with a minimum of three digits.	1/1/0001 12:00:00 AM -> 001 1/1/0900 12:00:00 AM -> 900 1/1/1900 12:00:00 AM -> 1900 6/15/2009 1:45:30 PM -> 2009
{Date:yyyy}	The year as a four-digit number.	1/1/0001 12:00:00 AM -> 0001 1/1/0900 12:00:00 AM -> 0900 1/1/1900 12:00:00 AM -> 1900 6/15/2009 1:45:30 PM -> 2009
{Date:yyyyy}	The year as a five-digit number.	1/1/0001 12:00:00 AM -> 00001 6/15/2009 1:45:30 PM -> 02009
{Date:z}	Hours offset from UTC, with no leading zeros.	6/15/2009 1:45:30 PM -07:00 -> -7
{Date:zz}	Hours offset from UTC, with a leading zero for a single-digit value.	6/15/2009 1:45:30 PM -07:00 -> -07
{Date:zzz}	Hours and minutes offset	6/15/2009 1:45:30 PM -07:00 -> -07:00

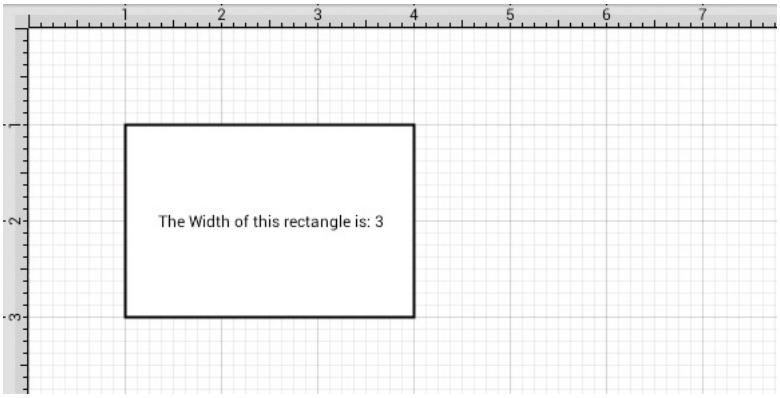
Variable	Description	Examples
	from UTC.	
{Date::}	The time separator.	6/15/2009 1:45:30 PM -> : (US) 6/15/2009 1:45:30 PM -> . (Italy) 6/15/2009 1:45:30 PM -> : (Japan)
{Date:/}	The date separator.	6/15/2009 1:45:30 PM -> / (US) 6/15/2009 1:45:30 PM -> - (Algeria)

5.6.8.3. Formatting Decimal Variables

The **Decimal Variable** can be inserted as part of entered text to show the value of another variable in decimal form within the text of a figure. Refer to the Text Variable Table for a list of all supported variables.

Any of the listed pre-formatted numerical variables can have a "D" placed in front of it (as long as they correspond with the type of selected figure) to insert the value as a decimal. The following screenshot shows an example of this:





Both the D and first letter of the entered variable must be capitalized for the value to appear in the selected figure.

By default, the decimal value will be presented with at most 4 digits after the decimal point. An alternative formatting style can be specified by using the `{Dxxxx:format}` pattern. The table below outlines the options for formatting the decimal value.

Format Specifier	Name	Description	Examples
0	Zero Placeholder	Replaces the zero with the corresponding digit if one is present, otherwise zero appears in the result.	Width = 1234.5678 Variable = Result = 01234 Width = 0.45678 Variable = Result = 0.46
#	Digit Placeholder	Replaces the pound sign with the corresponding digit if one is present; otherwise, no digit appears in the result string.	Width = 1234.5678 Variable = {DWidth:#####} Result = 1234 Width = 0.45678 Variable = {DWidth:#.##} Result = .46
.	Decimal Point	Determines the location of the decimal separator in the result string.	Width = 0.45678 Variable = Result (US) = 0.46 Width = 0.45678 Variable = Result (Germany) = 0,46
,	Group Separator	Inserts a group separator character between each group.	2147483647 ("# #,#") =

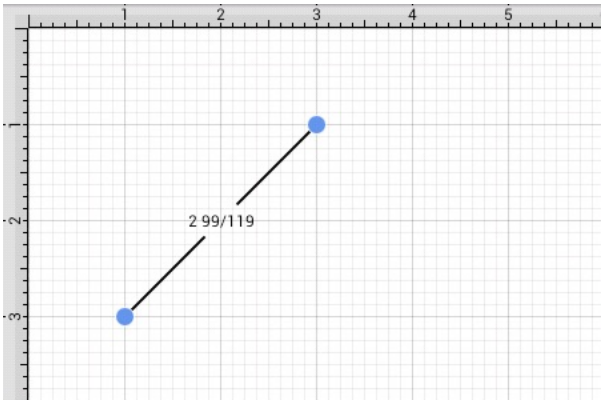
Format Specifier	Name	Description	Examples
			2,147,483,647 (US) 2147483647 ("# #,#") = 2.147.483.647 (Estonia)
,	Number Scaling	Divides a number by 1000 for specified commas.	2147483647 ("#,#,,") = 2,147 (US) 2147483647 ("#,#,,") = 2.147 (Estonia)
%	Percent Placeholder	Multiplies a number by 100 and inserts a localized percentage symbol in the result string.	0.03697 ("%,#0.00") = %36.97 (US) 0.03697 ("%,#0.00") = %36,97 (Greece) 0.03697 ("# #.0%") = 37.0% (US) 0.03697 ("# #.0%") = 37,0% (Greece)
‰	Per Mille Placeholder	Multiplies a number by 1000 and inserts a localized per mille symbol in the result string.	0.03697 ("# 0.00‰") = 36.97‰ (US) 0.03697 ("# 0.00‰") = 36,97‰ (Russia)
EO, E+0, E-0, e0, e+0, e-0	Exponential Notation	*Zero* - Formats in exponential notation. *E/e* - Indicates case of the exponent symbol in the resulting string. *Plus Sign* - Indicates that the sign character precedes the exponent. *Minus Sign* -	987654 ("# 0.0e0") = 98.8e4 1503.92311 ("0.0 # # e +00") = 1.504e+03

Format Specifier	Name	Description	Examples
		Indicates that a sign character precedes only negative exponents. The number of zeros following the E/e symbol determines the minimum number of digits in the exponent (Must have at least one zero).	18901385E-16 ("0.0e +00") = 1.9e-16
'string', "string"	Literal String Delimiter	Indicates that the enclosed characters should be copied to the result string without changes.	68 ("# ' degrees"') = 68 degrees 68 ("# ' degrees"') = 68 degrees
;	Section Separator	Defines sections using separate format strings for positive, negative, and zero numbers.	12.345 ("# 0.0#; (#0.0#); -\0-") = 12.35 0 ("# 0.0#; (#0.0#); -\0-") = -0- -12.345 ("# 0.0#; (#0.0#); -\0-") = (12.35) 12.345 ("# 0.0#; (#0.0#)") = 12.35 0 ("# 0.0#; (#0.0#)") = 0.0 -12.345 ("# 0.0#; (#0.0#)") = (12.35)
Other	All Other Characters	The character is copied to the result string unchanged.	68 (" # °") = 68 °

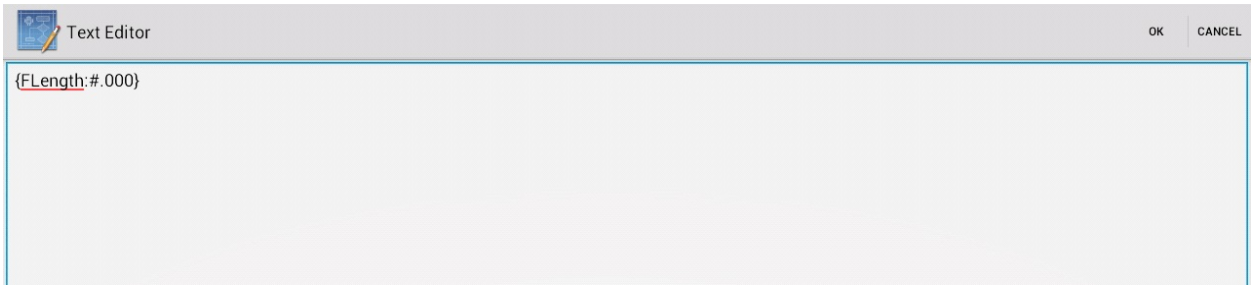
5.6.8.4. Formatting Fractional Variables

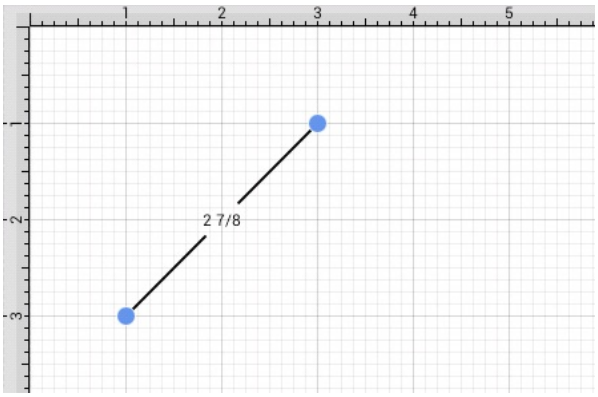
The **Fractional****Variable** can be inserted as part of entered text to show the value of another variable in fractional form within the text of a figure. Refer to the Text Variable Table for a list of all supported variables.

Any of the listed pre-formatted numerical variables can have an "F" placed in front of it (as long as they correspond with the type of selected figure) to insert the value as a fraction. The following screenshot shows an example of this:



Additional format specifiers may be added at the end of the variable to alter the number of shown placeholders of a fractional value or to round the supplied value. Rounding is accomplished by placing a **semi-colon (:)** after the variable followed by either **#.###** or **#.000**. The screenshots below are two examples of ways to round a fractional value in the Text Editor.





Both the F and first letter of the entered variable must be capitalized for the value to appear in the selected figure.

By default, the numerator and denominator making up the fractional value will be presented with at most three digits. An alternative formatting style can be specified by using the `{Fxxxx:format}` pattern. The table below outlines the options for formatting the fractional value.

Format Specifier	Name	Description	Examples
0	Zero Placeholder	Replaces the zero with the corresponding digit if one is present, otherwise zero appears in the result.	Length = 4 148/249 Variable = Result = 5 Length = 4 148/249 Variable = Result = 4 63/100
#	Digit Placeholder	Replaces the pound sign with the corresponding digit if one is present; otherwise, no digit appears in the result string.	Length = 4 148/249 Variable = {FLength:#####} Result = 5 Length = 4 148/249 Variable = {FLength:#.##} Result = 4 63/100
.	Decimal Point	Determines the location of the fractional separator in the result string.	Length = 4 148/249 Variable = Result (US) = 4 63/100
Other	All Other Characters	The character is copied to the result string unchanged.	68 (" # °") = 68 °

5.7. Handling Paths

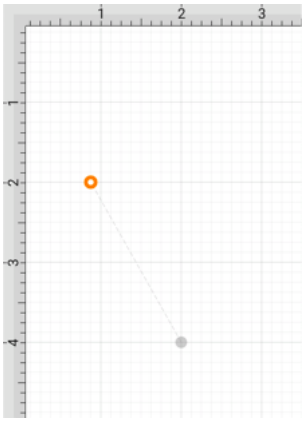
TouchDraw supplies multiple actions for altering handles or segments within a created path. A handle may be inserted or deleted at any point within the path and a figure can be split at a selected handle. Segments may be removed from a figure or converted to a line, quadratic curve, or cubic curve segment by adding or deleting corresponding control points. These additional actions are available for altering an existing figure:

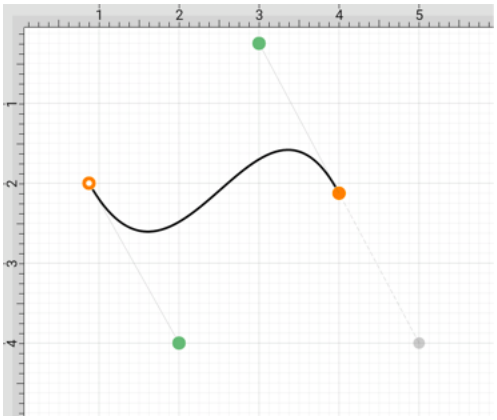
- Opening a Path
- Closing a Path
- Joining Lines and Paths
- Trimming Lines and Paths
- Splitting Segments
- Creating and Separating Compound Paths
- Conversion of Shape Figure(s) to Paths

A control point is displayed in gray when it has not been used and is referred to as a "phantom" control point. This characteristic provides a hint to the TouchDraw application that it should function as a control point in scenarios where the next drawn segment is a curve. A few basic actions can be used to alter the "phantom" control point position as a path is edited. Refer to the sections below to learn more about each available action.

Touch/Drag

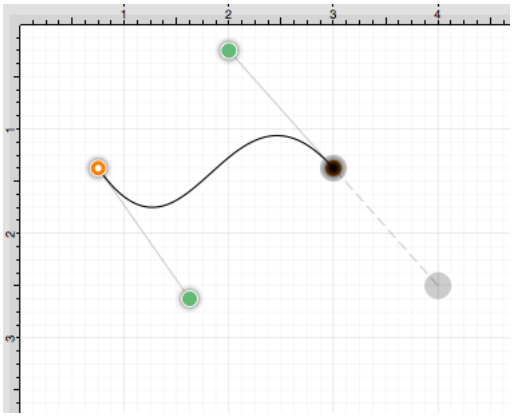
A **Touch/Drag** gesture combination on any position in the drawing canvas creates the end handle of a curve segment in relevance to the current "phantom" control point position. The "phantom" control point is re-positioned in accordance to the newly created end handle while this action occurs.

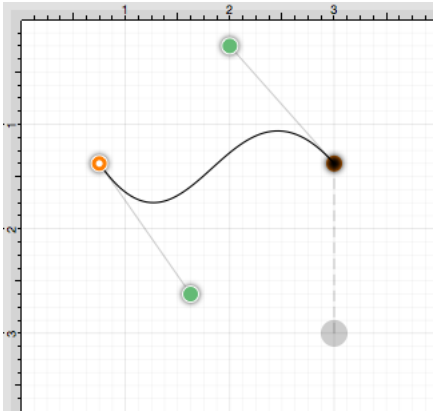




Option Key Feature/Tap

An **Option/Tap** combination allows the "phantom" control point position to be set to a desired location on the drawing canvas after a curve segment has been created.





Option Key Feature/Touch/Drag

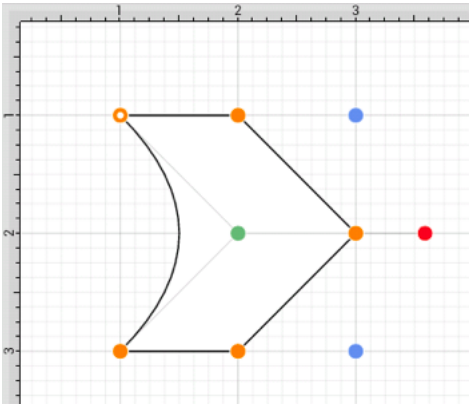
An **Option/Touch/Drag** combination allows the "phantom" control point to be dragged to any point on the drawing canvas and changes a corner point back to a smooth curve after a curve segment has been created.

5.7.1. Opening a Path

TouchDraw supplies options for opening and closing an existing path. A path can be opened to make individual alterations such as segment additions. Follow the steps below to open a currently closed path:

1

Select the path to be opened.

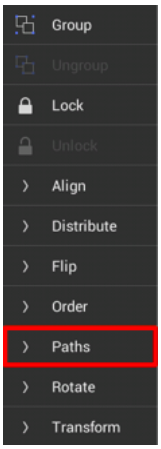


2

Press on the **Selection Button** to open the Selection Menu.

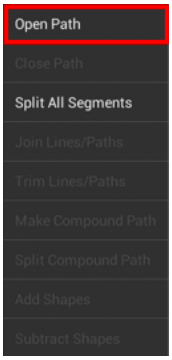
3

Press on the **Paths Submenu**.



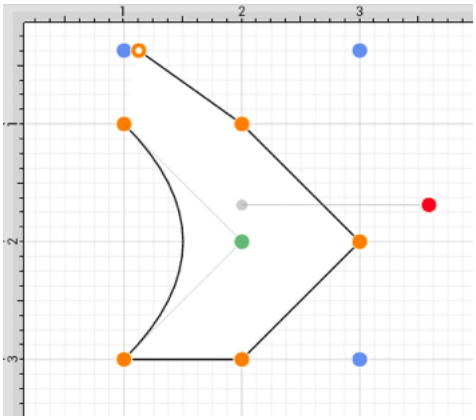
4

Press on the **Open Path** option.



5

The end/start handle of the closed path is separated into two individual handles. Once a path has been opened, the connecting segments are treated as individual path segments. They can be moved or expanded to any point on the drawing canvas, have handles added, be converted to a quadratic or curve segment, and be combined with additional paths.

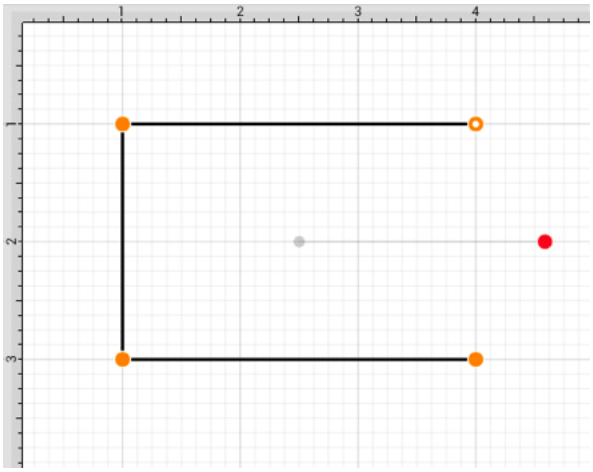


5.7.2. Closing a Path

The **Close Path** option draws a straight line segment from the last segment end handle to the path start handle to close an open path. Follow the steps below to close a currently open path:

1

Select the path to be closed.

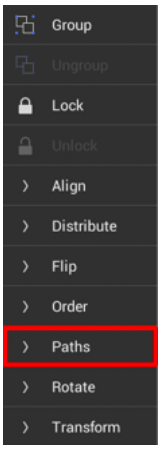


2

Press on the **Selection Button** to open the Selection Menu.

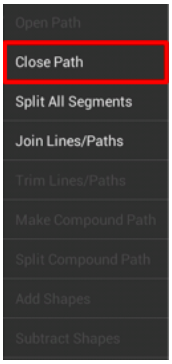
3

Press on the **Paths Submenu**.



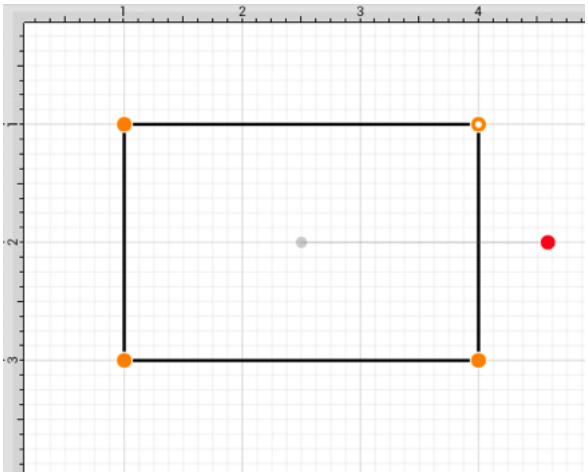
4

Press on the **Close Path** option.



5

A straight line segment will be drawn from the last segment end point to the start handle of the chosen path.



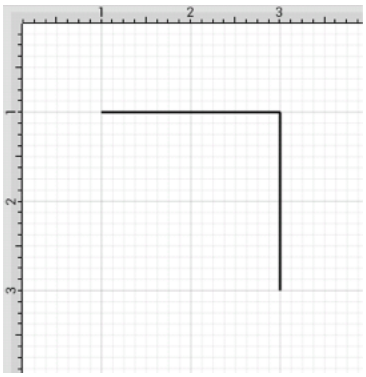
Note: A straight line segment can be converted to a quadratic or cubic curve segment by using the contextual menu.

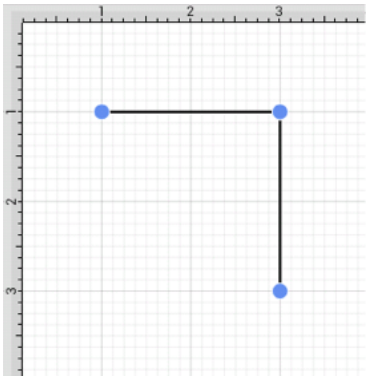
5.7.3. Joining Lines and Paths

The **Join Lines/Paths** option allows the intersecting end points of two or more selected lines or paths to be joined to form a single path. A minimum of two intersecting lines or paths must be selected for a join to occur. Follow the steps below to join two line end points:

1

Create two lines on the drawing canvas using the Line Tool and then select both line figures by using the Function Key Feature.



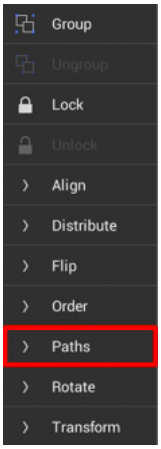


2

Press on the **Selection Button** to open the Selection Menu.

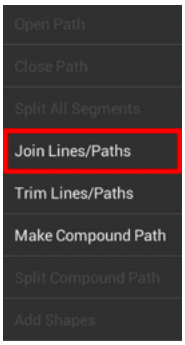
3

Press on the **Paths Submenu**.



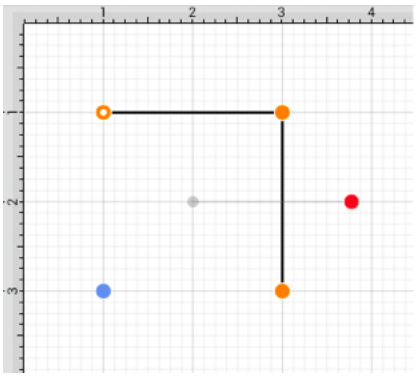
4

Press on the **Join Lines/Paths** option.



5

The line end points are joined to create two path segments with corresponding end points (orange), a start handle (orange circle with white center), and a rotation handle (red). To learn more about the types of handles used within TouchDraw, refer to the Handles Reference Table.

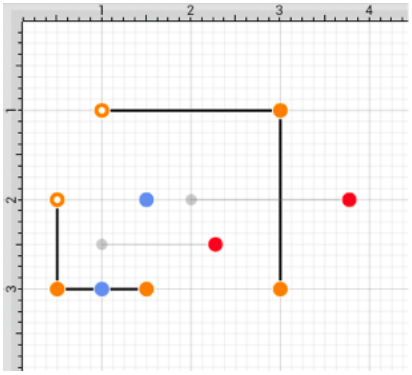


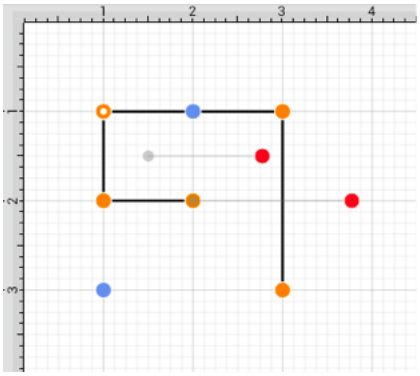
Additional lines can be included as part of the join by adding another line object and repeating the above steps.

Two or more path end points may also be combined with the **Join Lines/Paths** menu option. Follow the steps below to join two path end points:

1

Create two paths with at least one shared segment end point on the drawing canvas using the Path Tool and then select both paths by using the Function Key Feature.



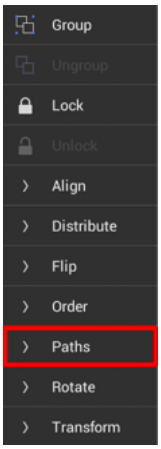


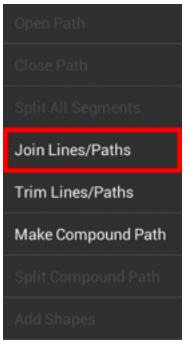
2

Press on the **Selection Button** to open the Selection Menu.

3

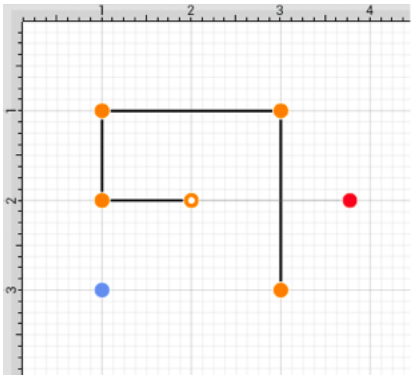
Press on the **Paths Submenu** and then press on the **Join Lines/Paths** option. Tap anywhere within the Drawing Editor to close the menu after a selection has been made.





4

As shown below, the intersecting end points are joined to form a single segment end point (orange) and a new start point handle (orange with white dot) is added to the beginning of the first selected path to visually indicate the formation of a single path. To learn more about the types of handles used within TouchDraw, refer to the Handles Reference Table.



Note: Intersecting path and line end points can be joined in the same manner as shown above.

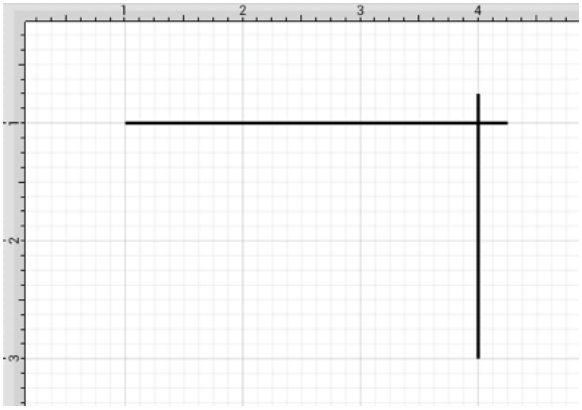
5.7.4. Trimming Lines and Paths

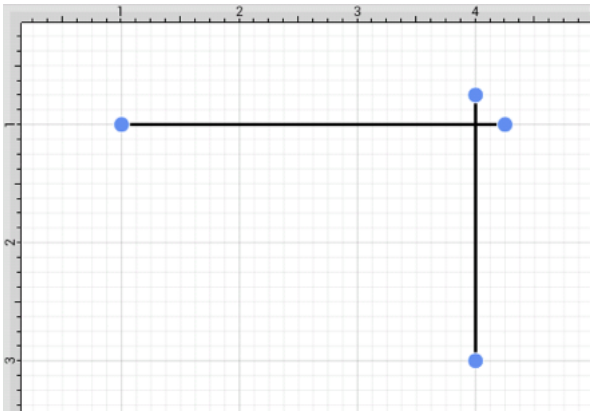
The **Trim Lines/Paths** option trims a line or path when it intersects near it's end with another shape or line. TouchDraw considers "near" to be when an intersection is within the first or last eighth (1/8th) of the line. If the intersection is within the middle 6/8ths, then the line is not trimmed.

Follow the steps below to trim the ends of intersecting lines or paths:

1

Select the items to be trimmed.



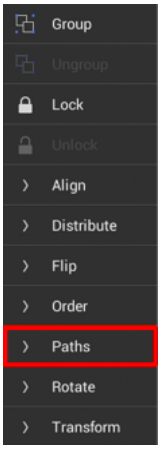


2

Press on the **Selection Button** to open the Selection Menu.

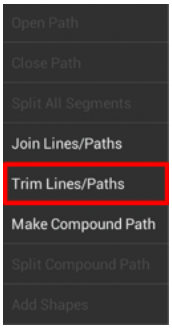
3

Press on the **Paths Submenu**.



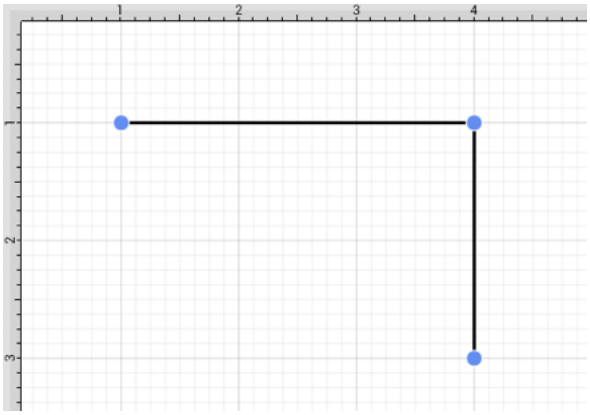
4

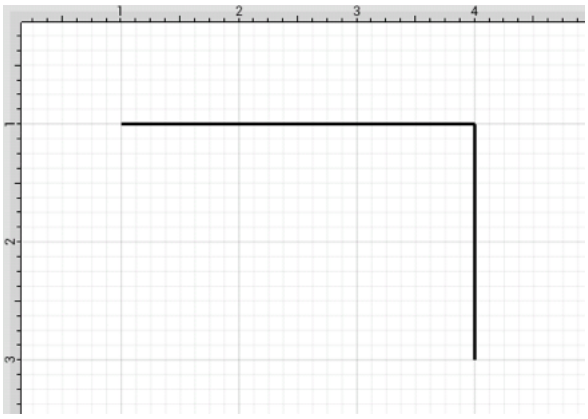
Press on the **Trim Lines/Paths** option.



5

All lines or paths intersecting within the last 1/8th are trimmed. In this example, the additional portions of the path extending past the straight line are trimmed.



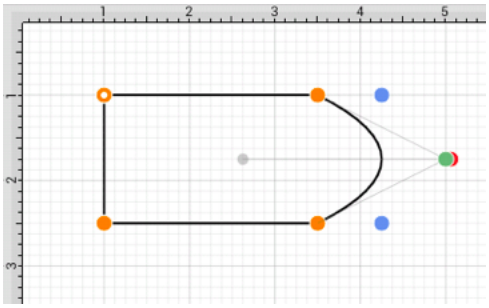


5.7.5. Splitting Segments

The segments of a path can be split into individual segments. Follow the steps below to **Split All Segments** within a selected path(s):

1

Select the path to be split.

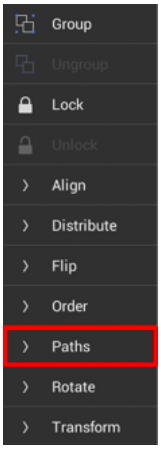


2

Press on the **Selection Button** to open the Selection Menu.

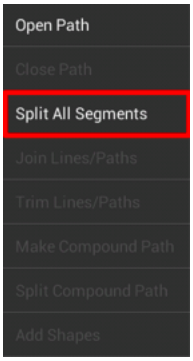
3

Press on the **Paths Submenu.**



4

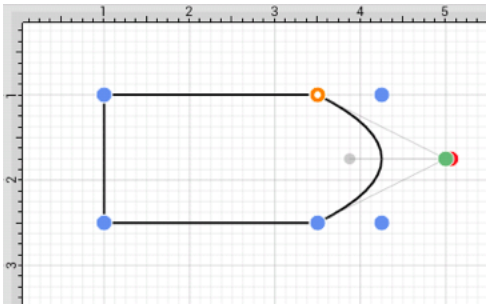
Press on the **Split All Segments** option.



5

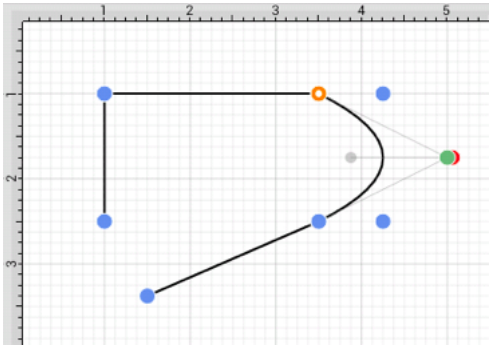
As shown below, specific visual indicators are changed to show that all segments have been separated within a path and are able to be moved or altered as individual objects. Segment end point handles (orange) are changed to a bounds handle (blue) The start handle (orange with white center) remains at one end of each split segment since they are still considered by the application to be a path and the control points (green) are left untouched to

allow for alterations to existing quadratic or cubic curve segments. To learn more about handles, refer to the Handles Reference Table .



6

Touch and Drag on a bounds handle (blue) to move or resize a segment. Attribute alterations are made just as with any other created figure on the drawing canvas.



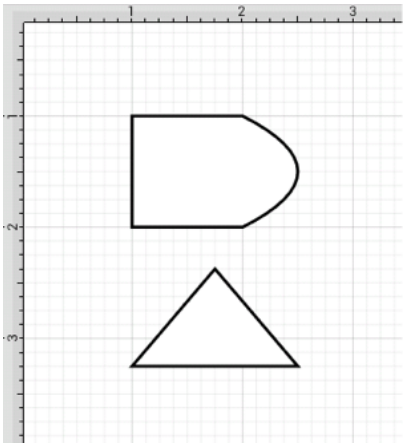
Note: The Join Paths option can be used to connect segments after changes have been made.

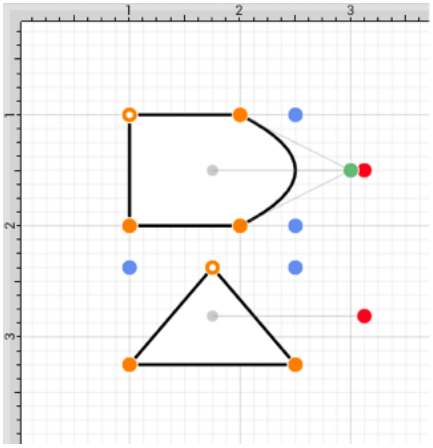
5.7.6. Creating a Compound Path

The **Make Compound Path** option can be used to combine two or more paths into one figure (compound path) that shares the same attributes and is treated as one object. At least two paths must be selected for this option to be available. Follow the steps below to create a compound path:

1

Select the paths to be combined.



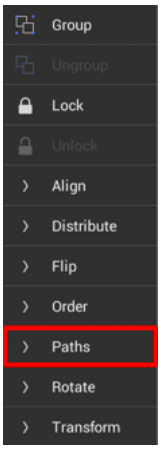


2

Press on the **Selection Button** to open the Selection Menu.

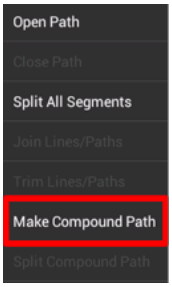
3

Press on the **Paths Submenu.**



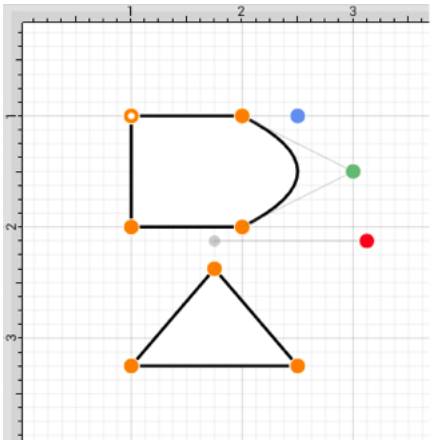
4

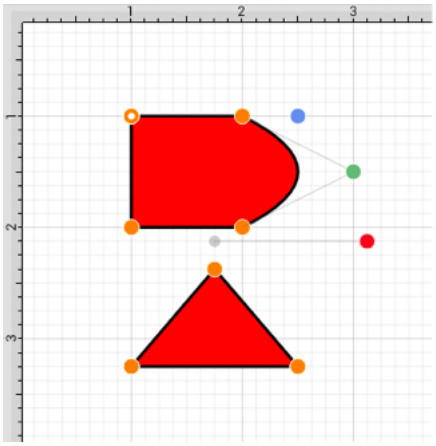
Press on the **Make Compound Path** option.



5

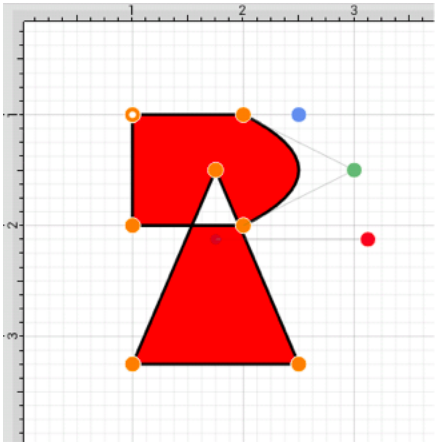
The two paths are combined to form a compound path with shared bounds handles (blue) and a shared rotation handle (red). Attribute changes now affect both paths as if they were a single path. For example, if the Fill Color is changed to red, all paths included in the compound path are altered to have this attribute. Refer to the images below:





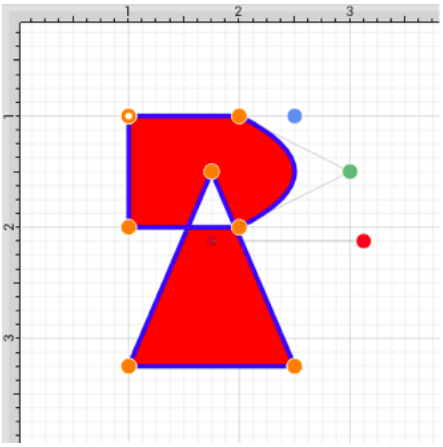
6

If the top right handle of the bottom rectangle is dragged into the top rectangle, it will appear as shown below.



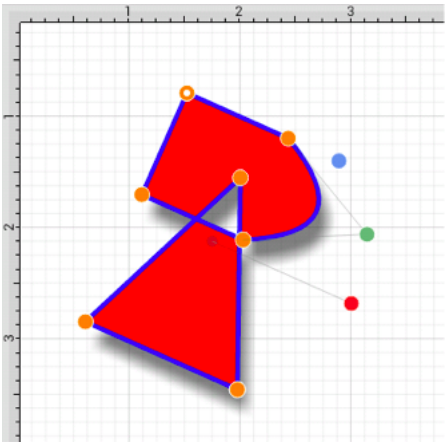
7

An attribute change of stroke color to blue with a stroke size increase alters the attribute for every segment in the compound path.



8

The addition of a shadow with a rotation angle of twenty degrees would result in the image below.

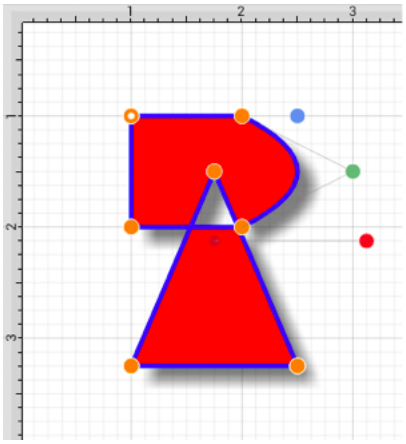


5.7.7. Separating a Compound Path

The **Separate Compound Path** option separates a compound path into it's individual paths. Follow the steps below to separate a compound path:

1

Select the compound path.

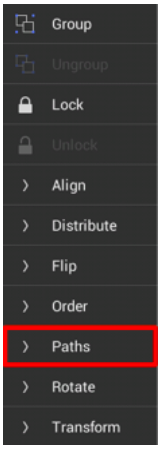


2

Press on the **Selection Button** to open the Selection Menu.

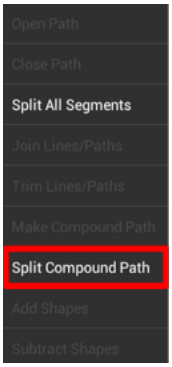
3

Press on the **Paths Submenu**.



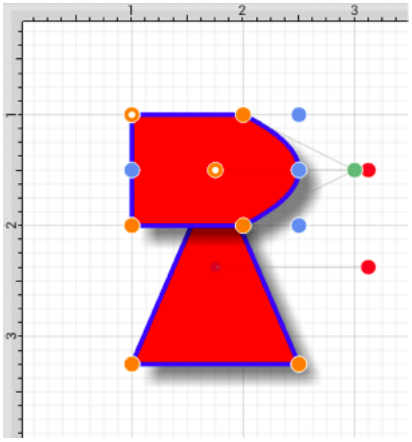
4

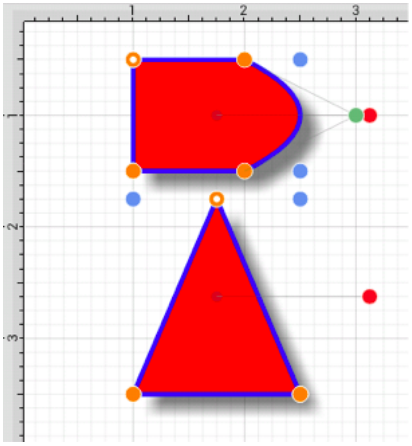
Press on the **Split Compound Path** option.



5

The previously combined paths are now two individual paths with their own rotation and bounds handles that can be altered separately.

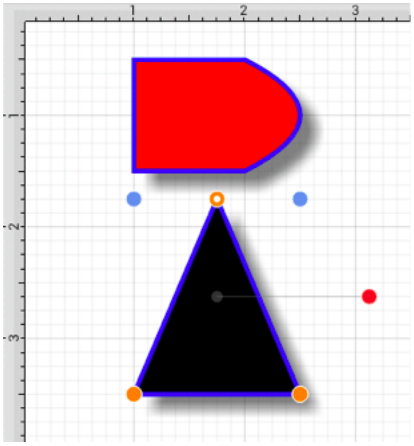




6

Attribute changes will be applied to the selected path only rather than both paths. For example, if the Fill Color

of the bottom path is changed to black, the upper path remains red. Refer to the image below:

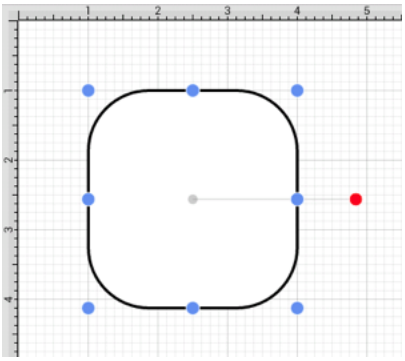


5.7.8. Converting Shapes to Paths

The **Convert to Path** option allows a selected shape(s) on the drawing canvas to be converted into a path figure. Follow the steps below to convert a shape to a path:

1

Select the shape to be converted.

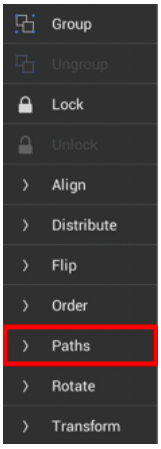


2

Press on the **Selection Button** to open the Selection Menu.

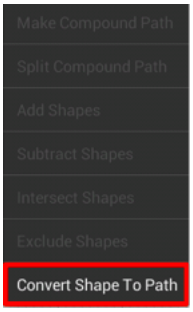
3

Press on the **Paths Submenu**.



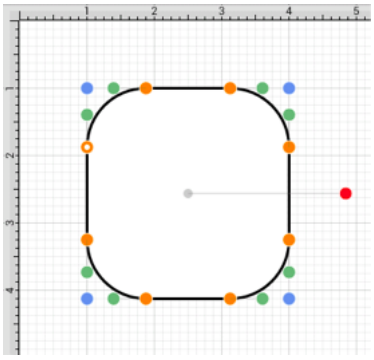
4

Press on the **Convert Shape To Path** option.



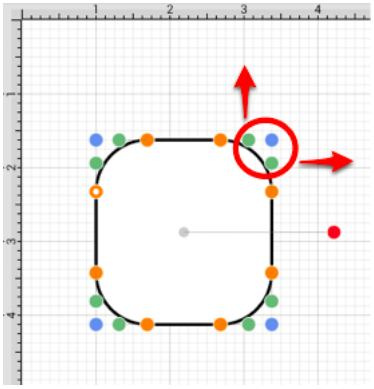
5

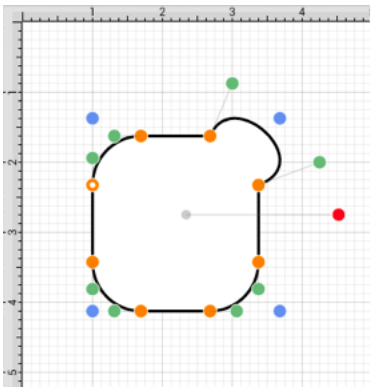
Each individual segment used to create the shape will be converted into a path segment with corresponding segment end point handles (orange). A start handle (orange with white dot) shows the initial starting point of the path. New bounds handles (blue) are assigned in relation to the created path and control point handles (green) are added to each curved segment.



6

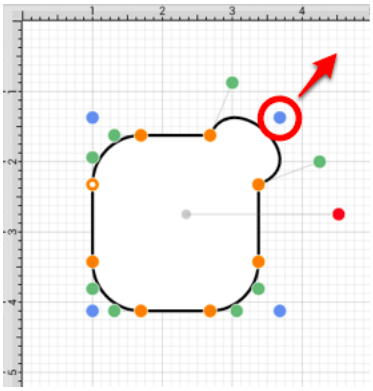
Any attribute changes available for a path can be performed on the converted object. For example, the upper right curve of the rounded rectangle can be dragged to another location to alter its size or shape. In the image below, one control point is moved upward and the other is moved to the right to alter the path figure.

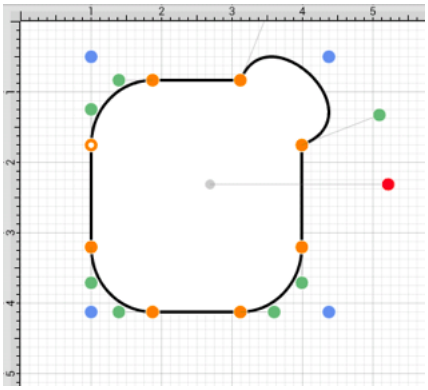




7

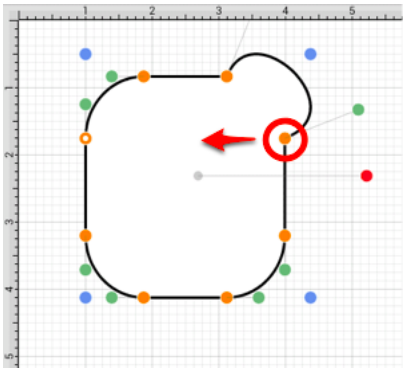
Perform a **Touch/Drag** gesture combination on one of the bounds handles (blue) to alter the size of the path.

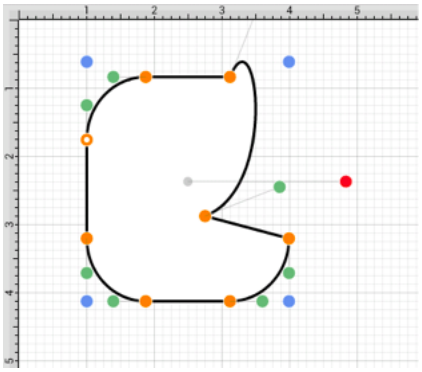




8

Perform a **Touch/Drag** gesture combination on a segment end point handle (orange) to alter the size of individual path segments. In the image below the circled segment end point handle is dragged to the left within the path object to create the shown change.





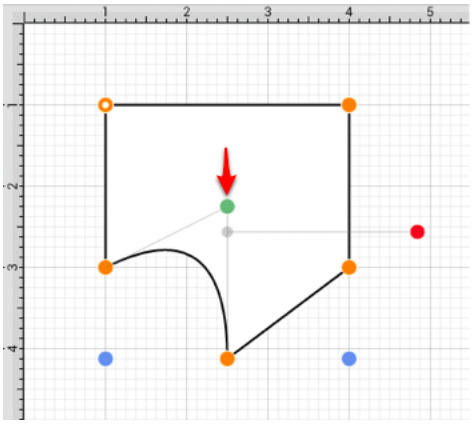
Note: Refer to the Handles Reference Table to learn more about individual handles used within TouchDraw. Additional information about altering paths can be found in the Handling Paths section of this documentation.

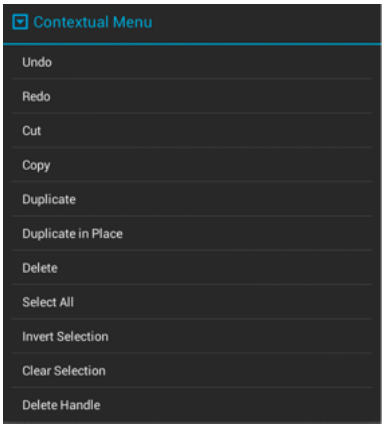
5.7.9. Delete Handle

TouchDraw supports the insertion and deletion of handles or segments from an existing path. A different behavior is received depending on the type of handle chosen for deletion:

- **Cubic Curve Control Point Handle** - Segment is converted to a quadratic curve segment upon deletion.
- **Quadratic Curve Control Point Handle** - Segment is converted to a line segment upon deletion.
- **Segment End Point** - The entire segment is removed including the control points (cubic or quadratic curves).

Depending on the desired operation, **Touch and Hold** on a path handle or a path segment to bring up the Contextual Menu, as shown below:



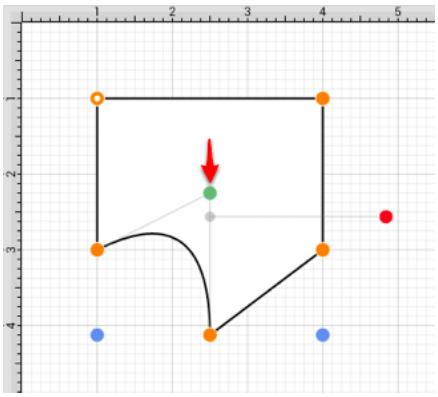


Available contextual menu options change depending on the type of selected segment or handle.

Follow the steps below to delete a **Path Handle**:

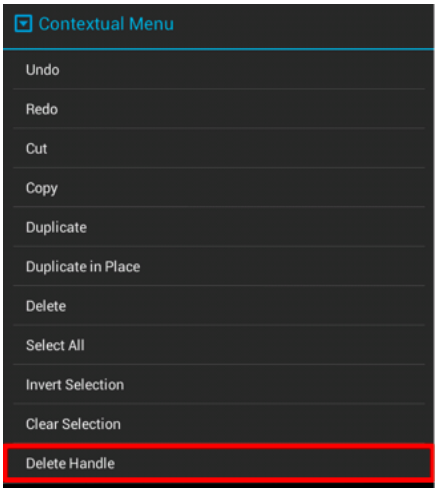
1

Touch and Hold on the desired handle to select it and open the Contextual Menu. In this example, the **Quadratic Curve Control Point Handle** (indicated by the color green) is being removed from the path.



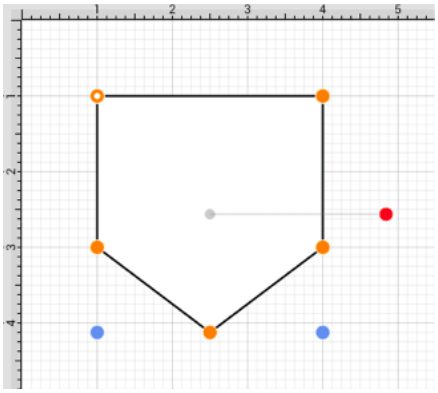
2

Press on the **Delete Handle**option.



3

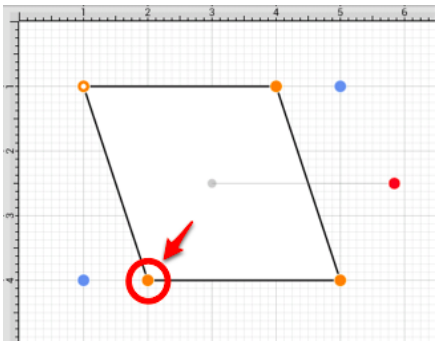
The selected **Quadratic****Curve Control Point Handle **is removed and the segment is converted into a** Line Segment**.



Follow the steps below to delete a **Path Segment Handle**:

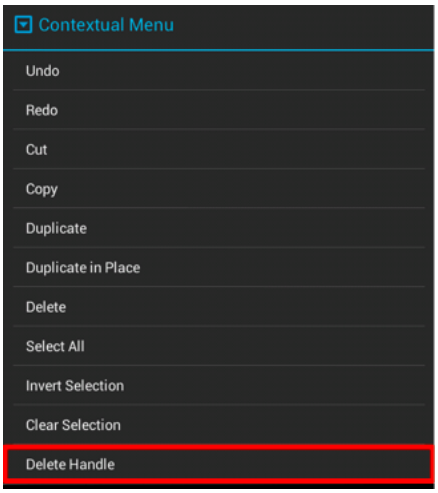
1

Touch and Hold on the desired **Segment End Point** to open the Contextual Menu. In this example, the bottom left **Segment End Point** is chosen for deletion.



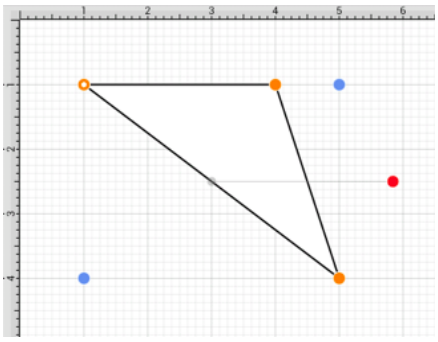
2

Press on the **Delete Handle**option.



3

The selected handle and segment are removed, as shown below.



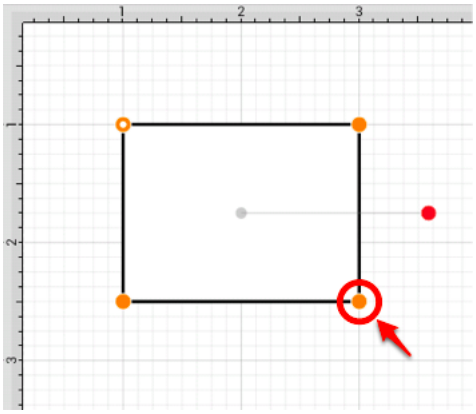
Note: Refer to the Handles Reference section of this documentation to learn more about each handle.

5.7.10. Split at Handle

The **Split at Handle** action divides a path into two separate sections at the chosen handle and allows each section to be altered as an individual figure. In the following example, the **End Point Handle** located at the bottom right of the path is chosen.

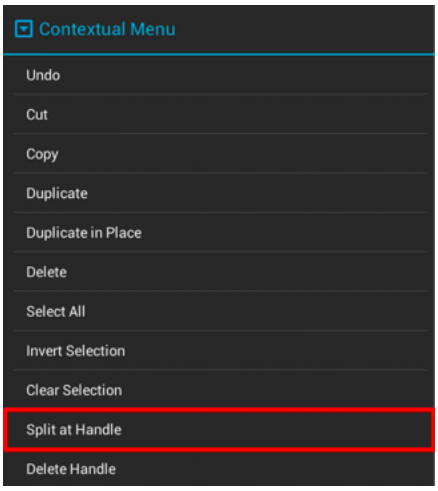
1

Touch and Hold on the desired **End Point Handle** to select it and open the Contextual Menu.



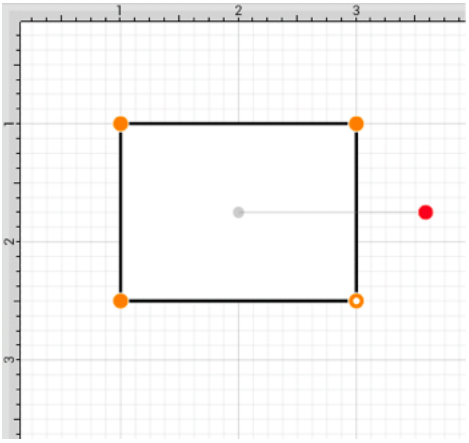
2

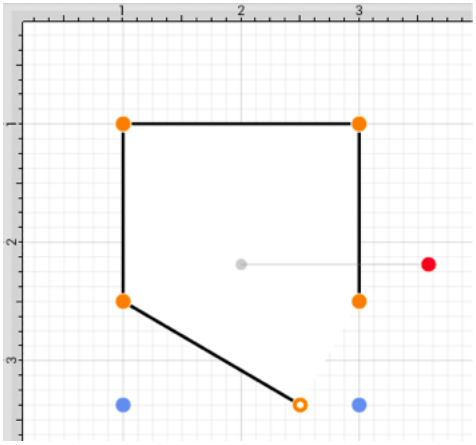
Press on the **Split at Handle** option.



3

The path is now separated at the chosen **End Point Handle**, as shown below.





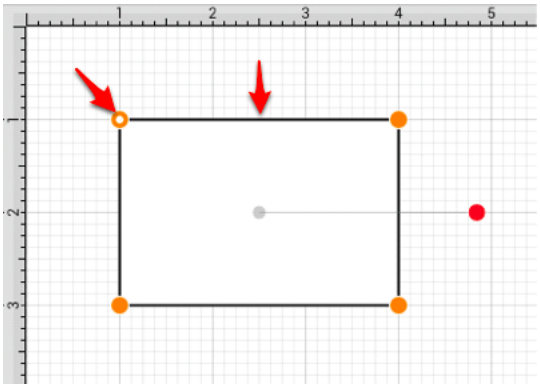
Note: Refer to the Handles Reference section of this documentation to learn more about each handle.

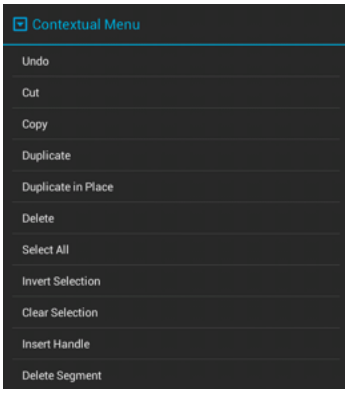
5.7.11. Insert Handle

TouchDraw supports the insertion and deletion of handles or segments from an existing path. A different behavior is received depending on the type of segment chosen for handle insertion:

- **Line Segment** - The inserted handle splits the line segment into two connected lines.
- **Quadratic Curve Segment** - The inserted handle splits the quadratic curve into two quadratic curves and the shape of the original curve is maintained.
- **Cubic Curve Segment** - The inserted handle splits the cubic curve into two cubic curves and the shape of the original curve is maintained.

Depending on the desired operation, **Touch and Hold** on a path handle or a path segment to bring up the Contextual Menu, as shown below:



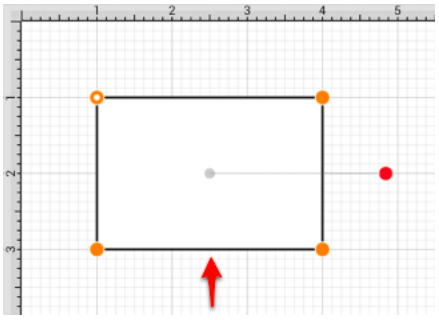


Available contextual menu options change depending on the type of selected segment or handle.

A new handle can be inserted into a segment or at the same location as an existing handle. In the provided example, the bottom line segment is chosen for a handle addition. Follow the steps below to insert a handle or segment into a path:

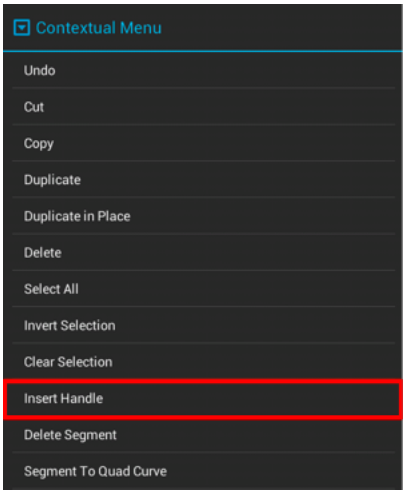
1

Touch and Hold on the desired handle or segment to select it and open the Contextual Menu.



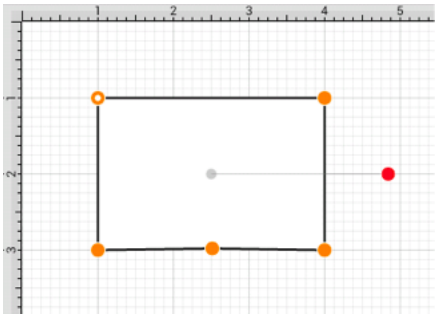
2

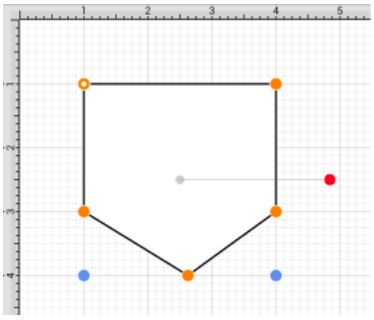
Press on the **Insert Handle**option.



3

A new **Segment End Point Handle** appears in the center of the selected line segment and can be used to alter the path.





Note: Refer to the Handles Reference section of this documentation to learn more about each handle.

5.7.12. Delete Segment

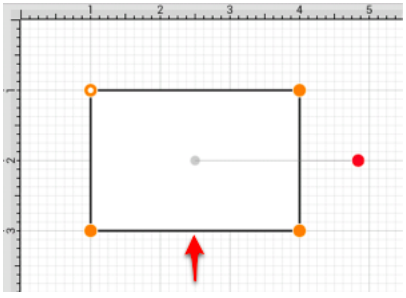
The **Delete Segment** action removes a selected segment from an existing path. A different behavior is received depending on the type of segment chosen for handle insertion:

- **Line Segment** - The entire segment is removed.
- **Quadratic Curve Segment** - The entire segment and corresponding quadratic control point are removed.
- **Cubic Curve Segment** - The entire segment and all cubic curve control points are removed.

In the provided example, the bottom **Line Segment** of the figure is chosen. Follow the steps below to delete a segment:

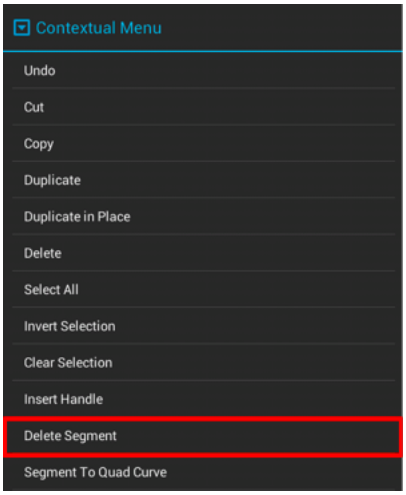
1

Touch and Hold on the desired segment to select it and open the Contextual Menu.



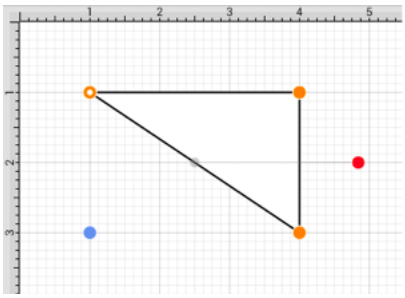
2

Press on the **Delete Segment** option.

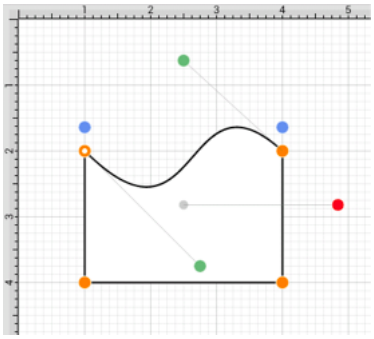


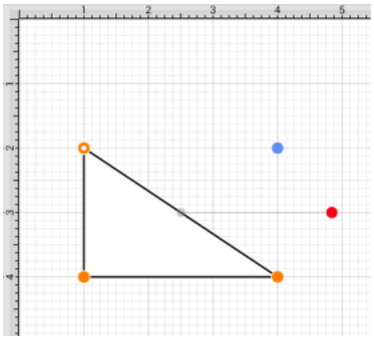
3

The **Line Segment** and corresponding end point (orange) are removed. The remaining segment end points are joined.



The following screenshots show the resulting control point and segment changes when a **Cubic Curve Segment** is deleted from a figure. In this example, the top cubic curve is chosen for deletion. The selected segment and both control points are removed.





Note: Refer to the Handles Reference section of this documentation to learn more about each handle.

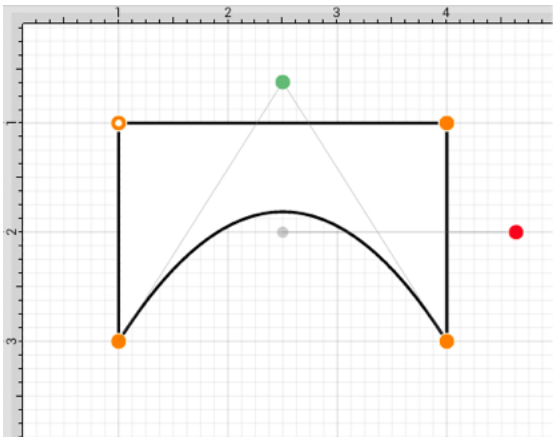
5.7.13. Segment to Line

The **Segment To Line** action will convert either a quadratic or a cubic curve segment into a straight line segment. Essentially, it discards the control points of the curve.

In the provided example, a **Quadratic Curve Segment** is changed to a **Line Segment**. Follow the steps below:

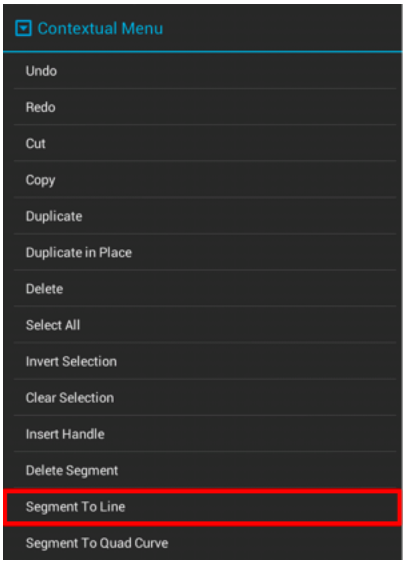
1

Touch and Hold on the desired segment to select it and open the Contextual Menu.



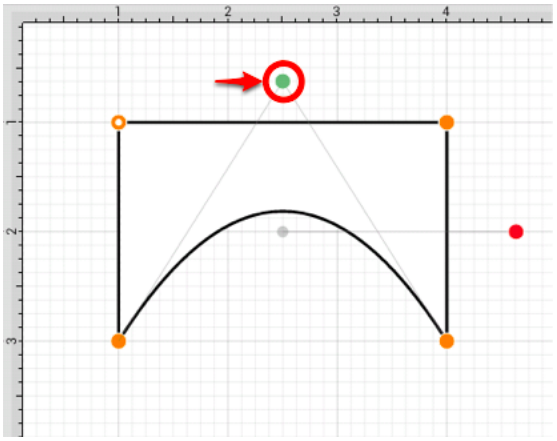
2

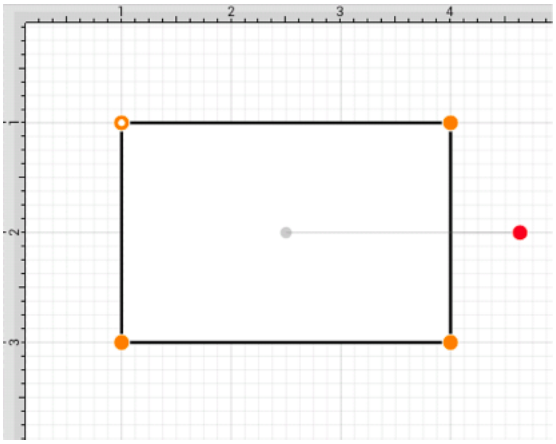
Press on the **Segment To Line** option.



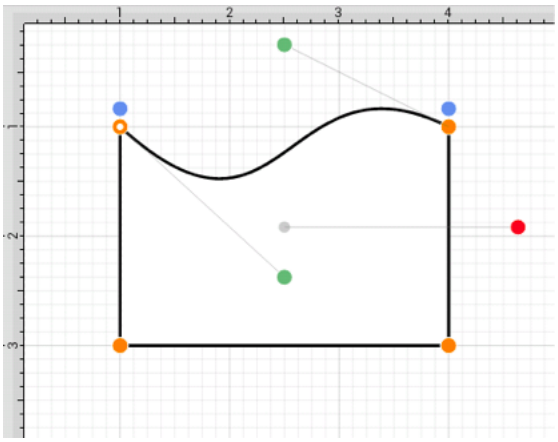
3

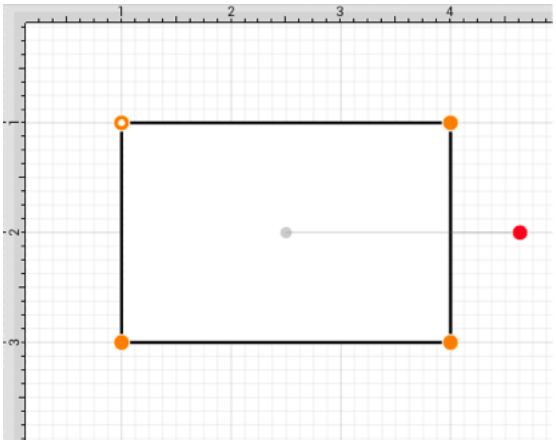
The control point (green) of the **Quadratic Curve Segment** is removed and the segment is changed to a **Line Segment** to create a rectangle, as shown below.





The following screenshots show the resulting line when the **Segment to Line** action is performed on a **Cubic Curve Segment**.





Note: Refer to the Handles Reference section of this documentation to learn more about each handle.

5.7.14. Segment to Quad

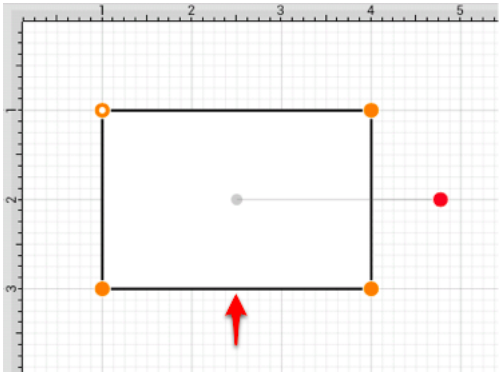
The **Segment to Quad** action will convert either a line segment or cubic curve to a quadratic curve segment. A different behavior is received when the handle is inserted depending on the chosen segment type:

- **Line Segment** - A curve control point will be inserted at the center point of the line and can be used to create the exact desired quadratic.
- **Cubic Curve Segment** - The two control points of the cubic curve segment will be averaged to create a new control point for the quadratic curve, which is replacing the cubic curve.

In the provided example, the **Line Segment** located on the right side of the figure is converted into a **Quadratic Curve Segment**. Follow the steps below:

1

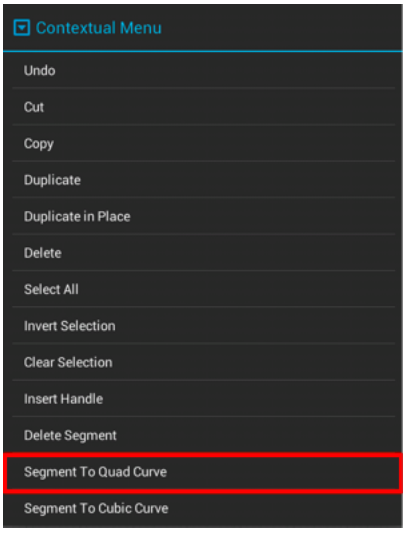
Touch and Hold on the desired segment to select it and open the Contextual Menu.



The Segment to Quad option will only appear in the Contextual Menu if a **Line Segment** or **Cubic Curve Segment** has been selected.

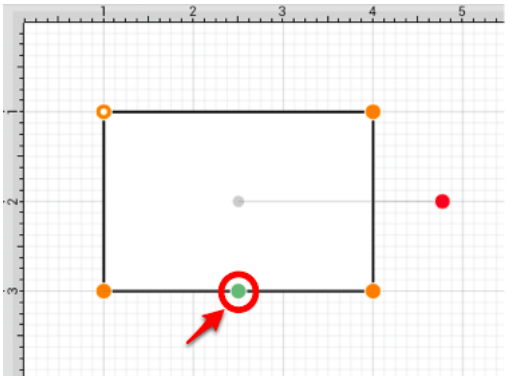
2

Press on the **Segment To Quad Curve** option.



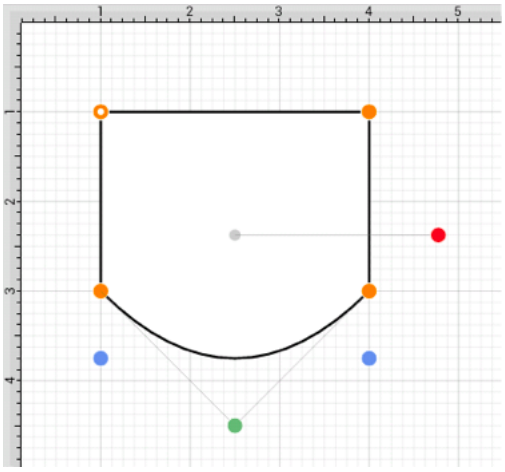
3

A **Quadratic Curve Control Point** (green) is added to the center of the selected segment.

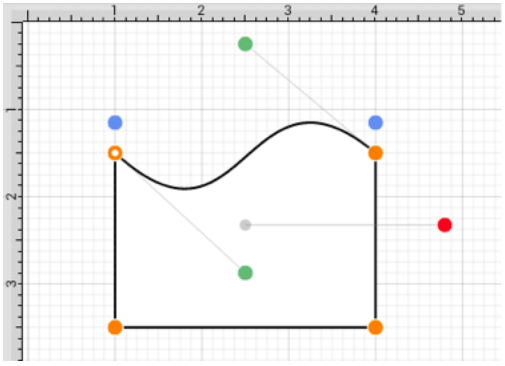


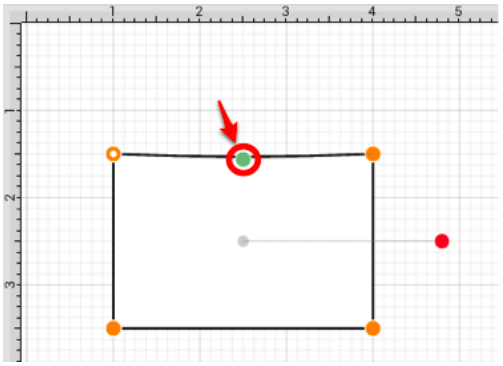
4

Perform a **Touch/Drag** gesture combination on the **Quadratic Curve Control Point** to create the desired curve segment. In this example, the control point is dragged to the bottom.

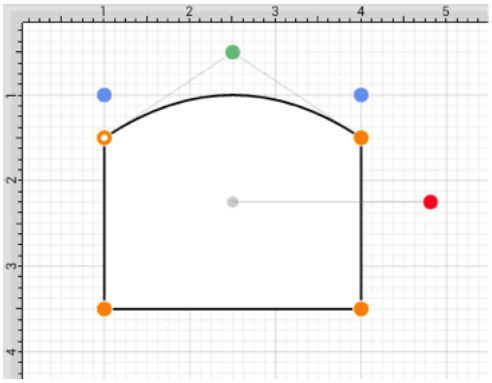


The following screenshots show the resulting control point and line changes when a **Cubic Curve Segment** is converted to a **Quadratic Curve Segment**. In this example, the top cubic curve is chosen for conversion. The two existing **Cubic Curve Control Points** (green) are averaged to generate a single **Quadratic Curve Control Point**.





The provided **Quadratic Curve Control Point** can be moved in any direction by performing a **Touch/Drag** gesture combination. In this example, the new control point is dragged upward.



Note: Refer to the Handles Reference section of this documentation to learn more about each handle.

5.7.15. Segment to Cubic

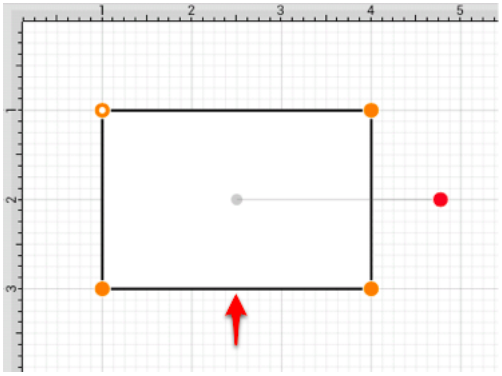
The **Segment to Cubic** action will convert either a line or quadratic curve into a cubic curve segment. A different behavior is received depending on the type of segment chosen for handle insertion:

- **Line Segment**- Two curve control points will be inserted at the 40% and 60% locations along the line and can be used to create the exact desired cubic curve.
- **Quadratic Curve Segment** - The shape of the quadratic curve will be approximated with a new cubic curve segment.

In the provided example, the **Line Segment** located on the bottom of the figure is converted into a **Cubic Curve Segment**. Follow the steps below:

1

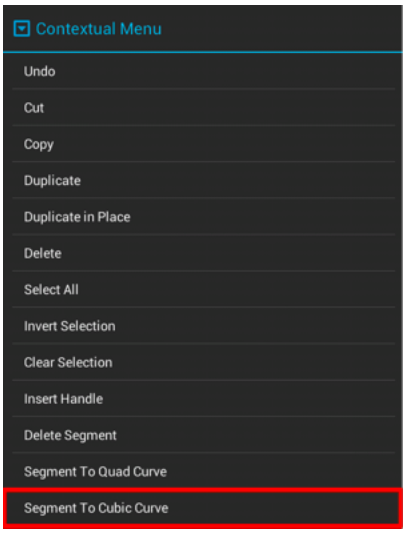
Touch and Hold on the desired segment to select it and open the Contextual Menu.



The Segment to Cubic option will only appear in the Contextual Menu if a **Line Segment** or **Quadratic Curve Segment** has been selected.

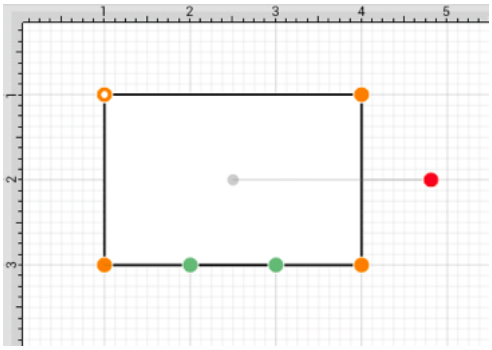
2

Press on the **Segment To Cubic Curve** option.



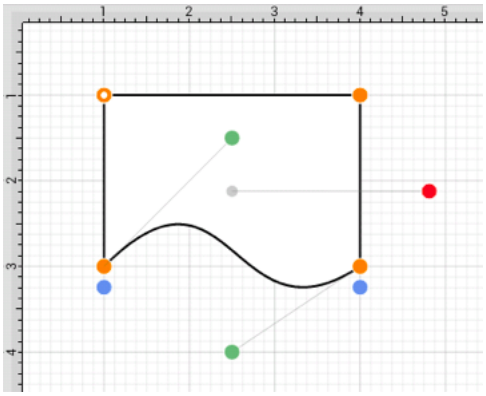
3

Two **Cubic Curve Control Points** (green) are inserted at the 40% and 60% locations on the chosen **Line Segment**.

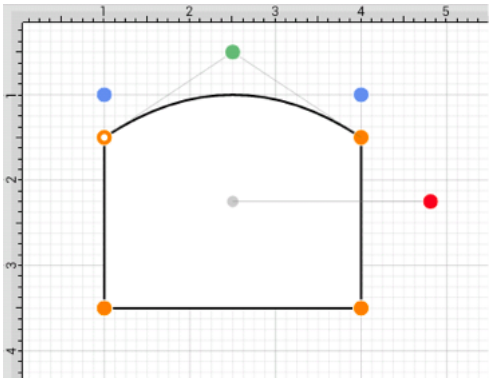


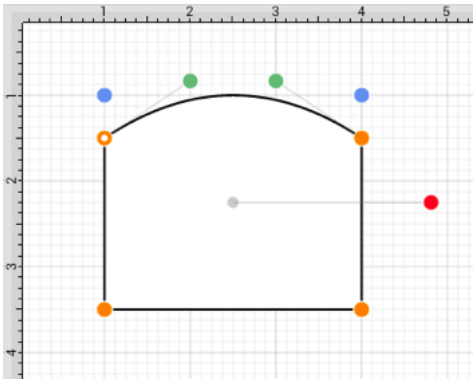
4

Perform a **Touch/Drag** gesture combination to move either **Cubic Curve Control Point** in any direction. In this example, the left control point is dragged upward and the right control point is dragged downward. Refer to the images below:

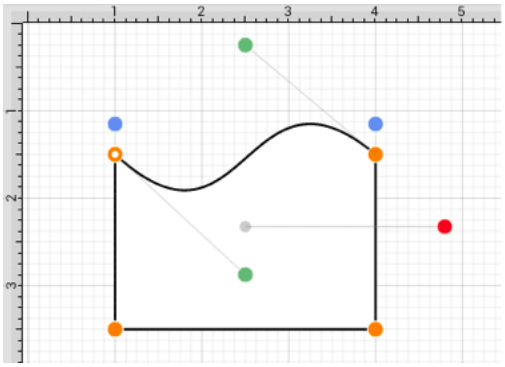


The following screenshots show the resulting control point and line changes when a **Quadratic Curve Segment** is converted to a **Cubic Curve Segment**. In this example, the top cubic curve is chosen for conversion. The **Quadratic Curve Control Point** (green) is approximated to create two **Cubic Curve Control Points** and the associated segment.





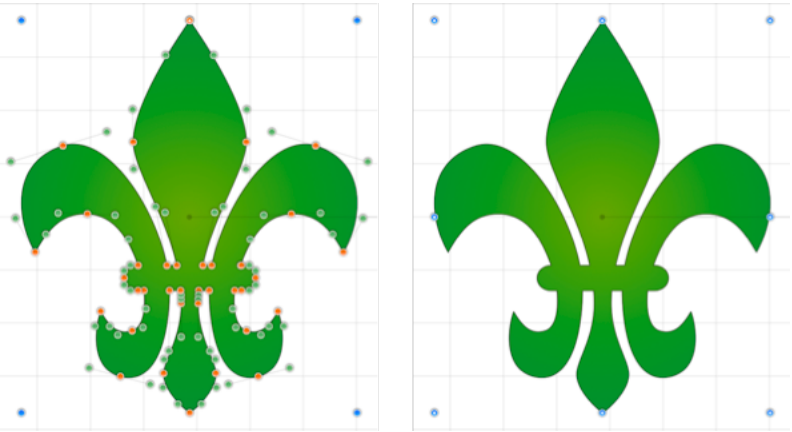
The provided **Cubic Curve Control Points** can be moved in any direction by performing a **Touch/Drag** gesture combination. In this example, the left control point is dragged downward and to the right. The right control point is dragged upward and to the left to create the desired **Cubic Curve**.



Note: Refer to the Handles Reference section of this documentation to learn more about each handle.

5.7.16. Grouping a Path

Once a complex path has been created and all control points are in their appropriate place, it is recommended to group the path using the Group function available under the Selection Menu. This will allow the path or path figure to be stretched, resized and moved without having to worry about changing the points. The following screenshots show a before and after for the Fleur de Lis example drawing included with TouchDraw.



The path figure is the only figure that is allowed to be grouped by itself. Normally, one or more figures must be selected before a group can be created.

5.8. Handling Libraries

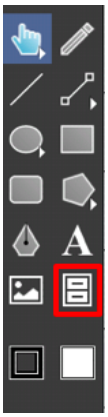
Libraries are used to add and manage stencils stored within the application and for adding these objects to a drawing. They are managed and controlled through the **Libraries Button** located in the Drawing Toolbar or by pressing on the **Info Button** in the Top Toolbar. The sidebar panel appears as shown below.

5.8.1. Adding a Library

A **Library** is added by selecting a desired library and then choosing the **Add Library** option in the Libraries Settings Menu. Follow the steps below to add a library:

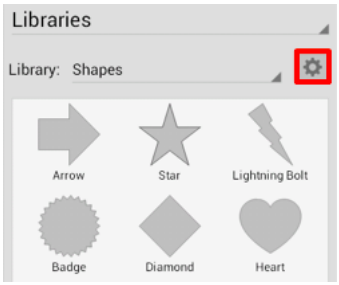
1

Press on the **Libraries Tool** in the Drawing Toolbar.



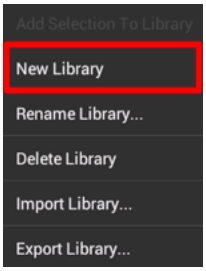
2

Press on the **Libraries Settings Menu**.



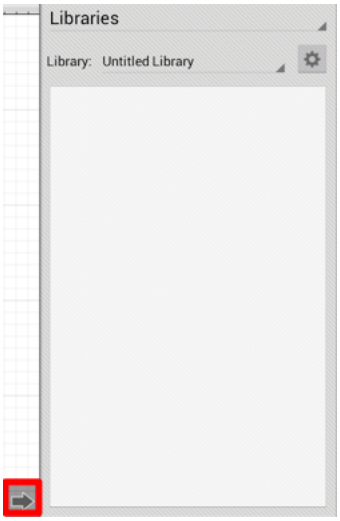
3

Press on the **New Library** option.



4

An **Untitled Library** is added to TouchDraw and opened in the **Libraries Panel**. Press on the **Libraries Settings Menu** to make additional changes or press on the **Hide Sidebar Button** located in the bottom of the sidebar panel to close it.



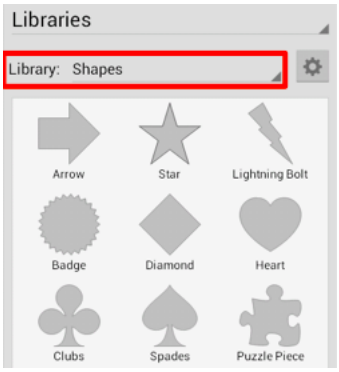
Note: Refer to the Renaming a Library section of the documentation to learn how to change the name of an **Untitled Library**.

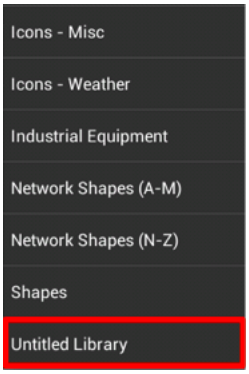
5.8.2. Renaming a Library

A **Library** is renamed by selecting a desired library and then choosing the **Rename Library...** option in the Libraries Settings Menu. Follow the steps below to rename a library:

1

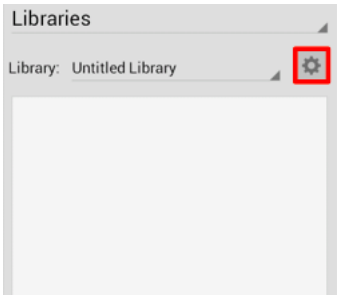
Use the **Library Selection Menu** to select the library to be renamed.

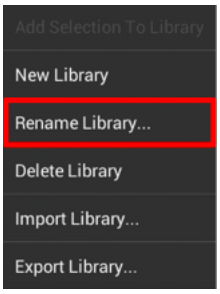




2

Press on the **Libraries Settings Menu** and choose **Rename Library...**



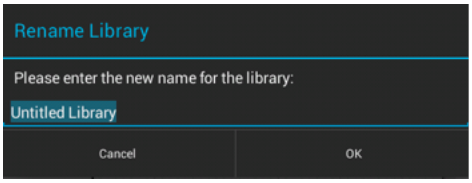


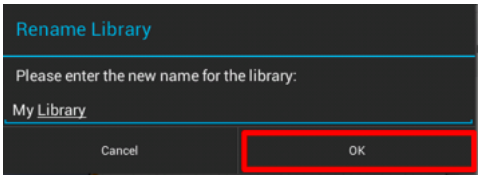
*

*

3

Enter a new name in the **Rename Library** prompt and press on the **OK Button**.



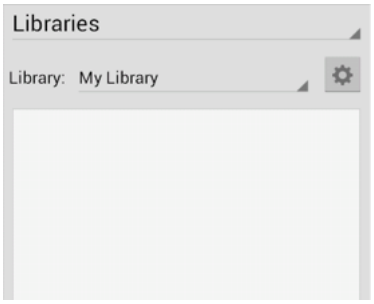


*

*

4

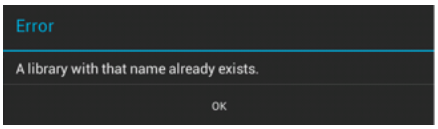
The entered name will appear in the**Library Selection Menu.

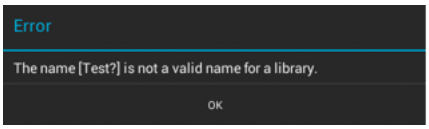


*

*

If the entered name is already taken or invalid, TouchDraw will provide visual feedback by showing a message stating that the entered text is an invalid library name.



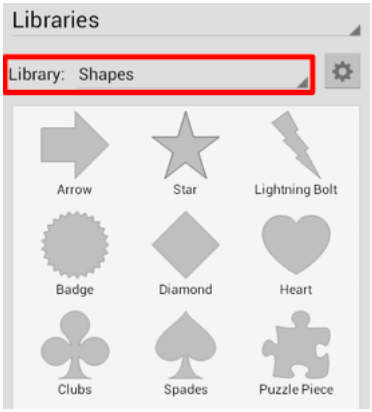


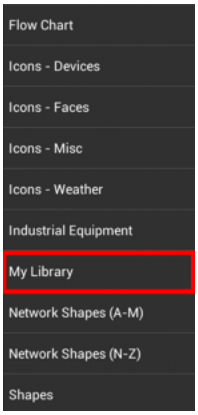
5.8.3. Deleting a Library

A **Library** is deleted by selecting a desired library and then choosing the **Delete Library** option in the Libraries Settings Menu. Follow the steps below to delete a library:

1

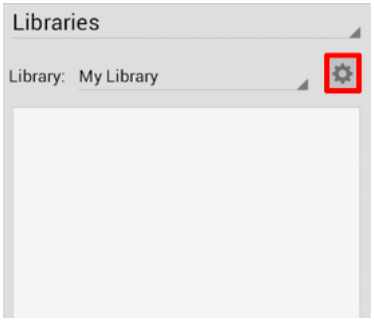
Press on the Library Selection Menu and then tap on the desired library name to select it for deletion. In this example, **My Library** is being deleted.

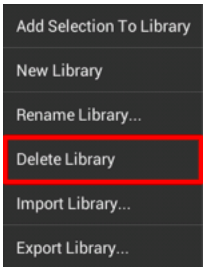




2

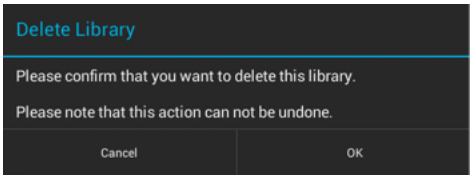
Press on the Libraries Settings Menu and choose the **Delete Library** option.





3

A confirmation prompt will appear. Choose **OK** to delete the library or **Cancel** to back out of this process.

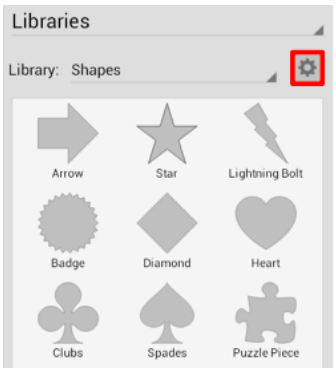


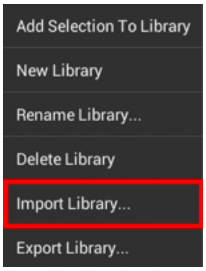
5.8.4. Importing a Library

A library can be imported into TouchDraw for use during drawing creation and manipulation. Follow the steps below to **Import a Library**:

1

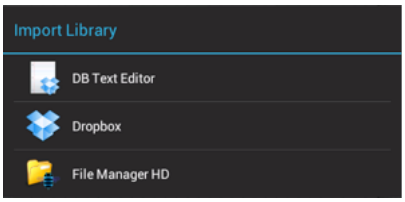
Press on the Library Settings Menu and choose **Import Library...** option.





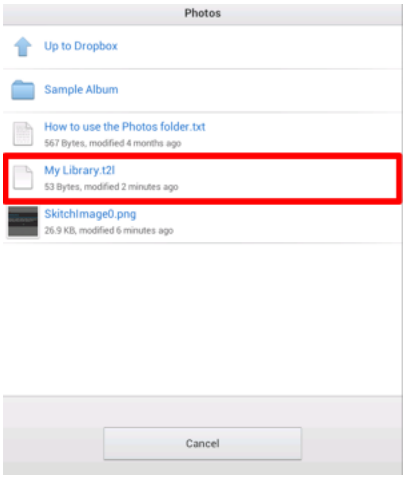
2

Tap on the appropriate file source. File sources are dynamic meaning they are presented based on the type of device and installed applications.

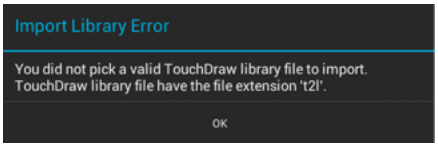


3

Choose the file to be imported by performing a single tap on the file name. In this example, the Dropbox source is chosen for file selection and My Library.t2l is imported into TouchDraw.



Imported libraries must be have a "t2l" file extension to be valid. An error message will appear if the selected file does not match the required format in TouchDraw.

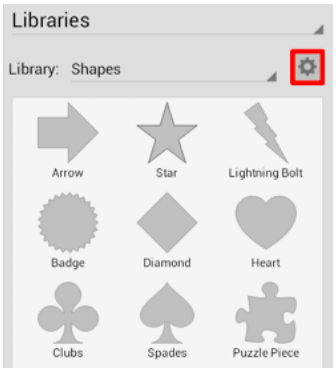


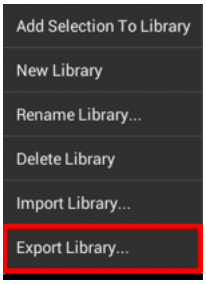
5.8.5. Exporting a Library

An existing library can be exported as a .t2l file for use within another application or to be imported for a later drawing. Follow the steps below to **Export a Library**:

1

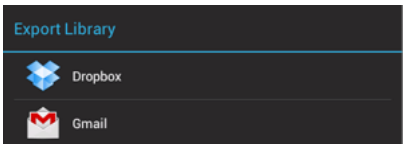
Press on the Library Settings Menu and choose the **Export Library...** option.





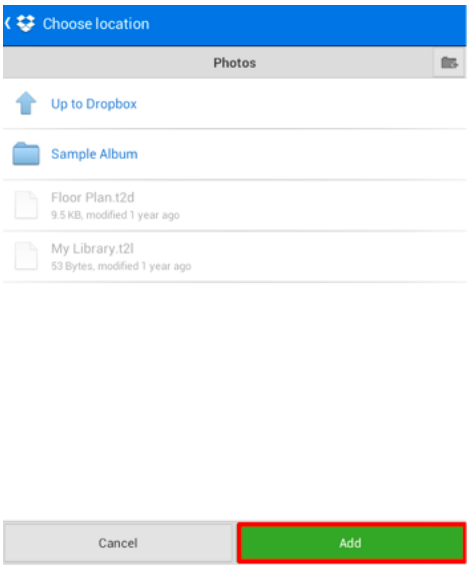
2

Tap on the appropriate file source. File Sources are dynamic meaning they are presented based on the type of device and installed applications.



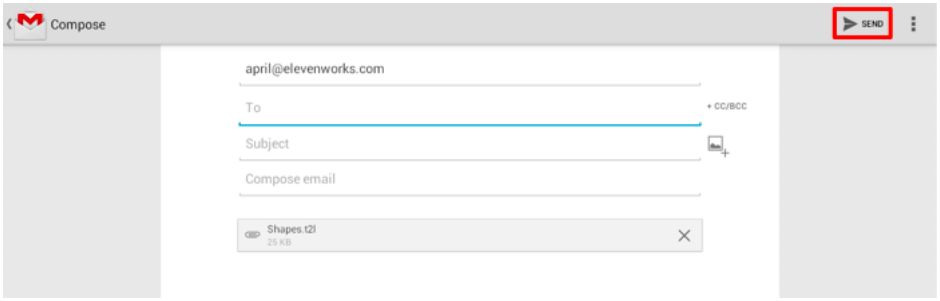
3

If **DropBox** is chosen, browse to the desired export location by tapping on the file directory and then tap on the **Upload Button**.



4

If **Gmail** is chosen, enter all necessary email information and then tap on the Send Button located in the upper right hand corner of the window.

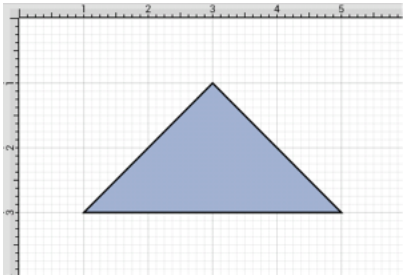


5.8.6. Adding a Stencil

A **Stencil** is added by choosing the **Add Selection To Library** option in the Libraries Settings Menu. To add a new stencil into a library:

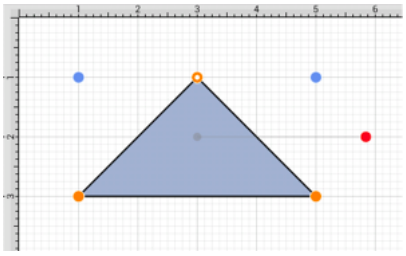
1

First, draw the figure within the drawing editor.



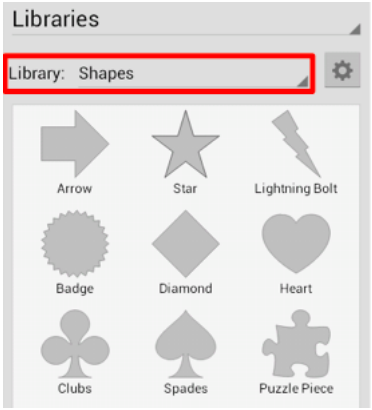
2

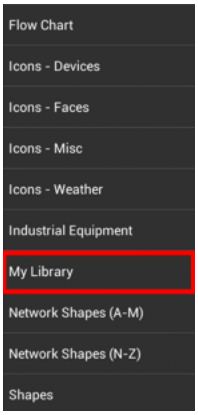
Select the figure (or figures) being made into a stencil.



3

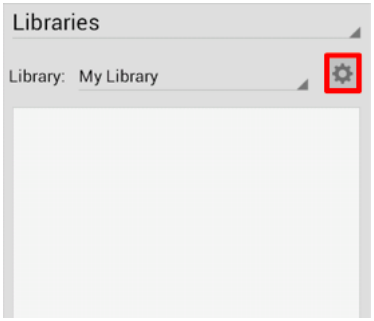
Open the Library Selection Menu and navigate to the desired insertion library.

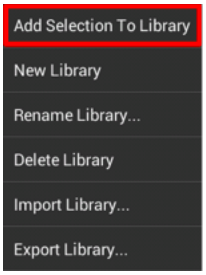




4

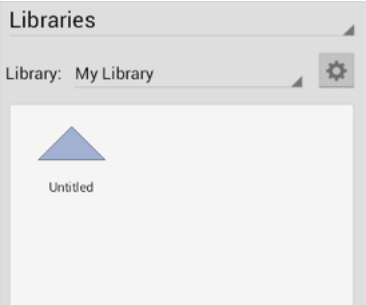
Select the Libraries Settings Menu and press on the **Add Selection To Library** option.





5

The stencil will appear in the selected library as shown below and can renamed after the addition is complete.



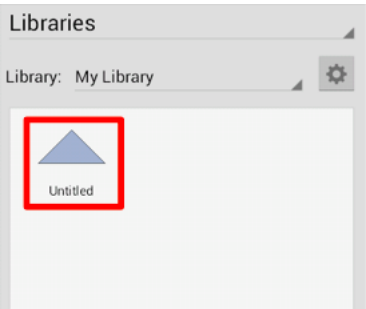
Note: To learn how to change the name of an added stencil, refer to the Renaming a Stencil section of the documentation.

5.8.7. Renaming a Stencil

To **Rename a Stencil**, the appropriate library must be selected and be put into **Edit Mode**.

1

Perform an **Extended Press** on the desired stencil to select it for editing.



2

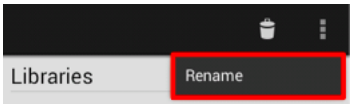
The Top Toolbar will appear as shown below as a visual indicator of entering edit mode.

3

Press on the **Overflow Button** to open the **Overflow Menu**.

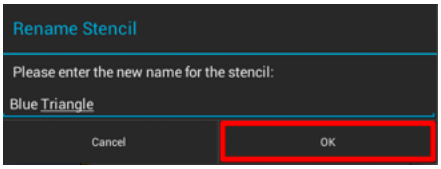
4

Press on the **Rename** option.



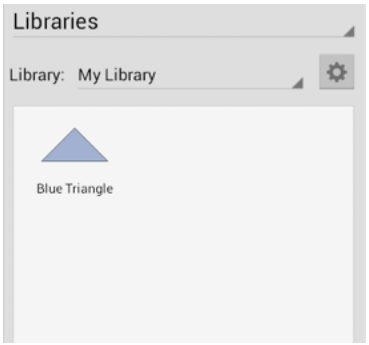
5

Type in a name for the selected stencil and then press on the **OK Button**. Any desired name can be entered for a stencil.



6

The renamed stencil will appear as shown below.

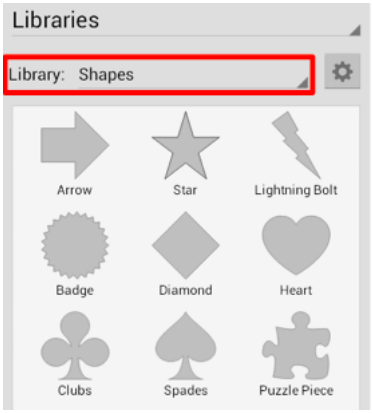


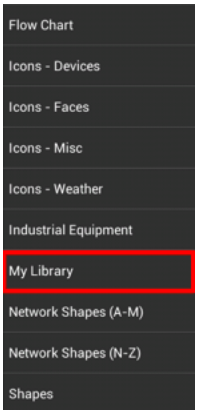
5.8.8. Re-ordering Stencils

The appropriate library must be selected and be put into **Edit Mode** to change the order of stencils within a library.

1

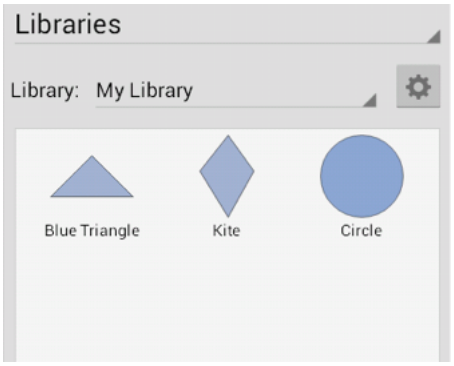
Select the corresponding library in the Library Selection Menu.

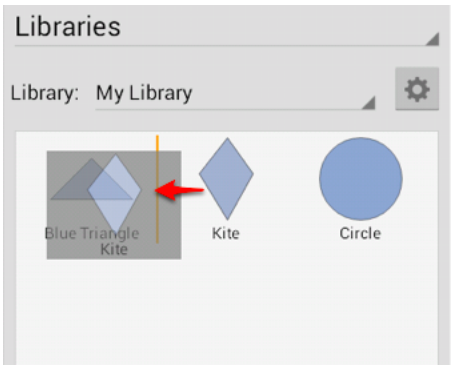


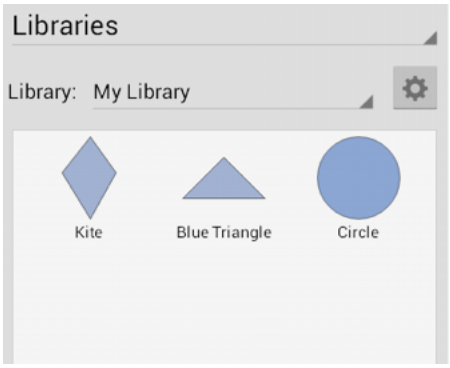


2

Once the library has been selected, **Touch and Hold** on the desired stencil and then **Drag** it to the desired location. In this example, the Kite stencil is moved to the left of the Blue Triangle stencil.







3

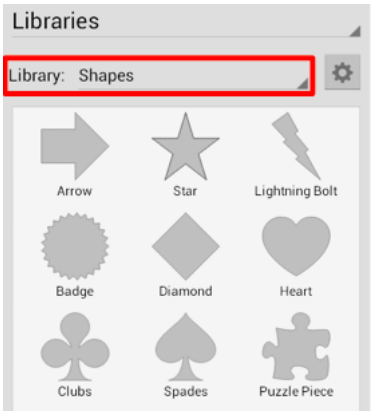
The Top Toolbar enters edit mode when a stencil is renamed, deleted, or moved. Press on the **Done Button** located in the upper left hand corner to exit edit mode.

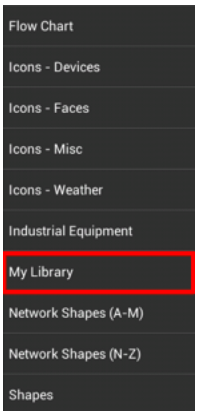
5.8.9. Deleting a Stencil

To **Delete a Stencil**, the appropriate library must be selected and be put into **Edit Mode**. A **Stencil** is deleted from a library by selecting the desired stencil and then pressing on the **Delete Button** in the Top Toolbar while in **Edit Mode**. Follow the steps below to delete a stencil:

1

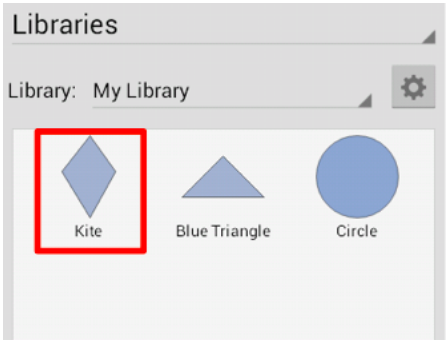
Use the Library Selection Menu to select the library where the stencil is saved.





2

Perform an **Extended Press** on the stencil to enter **Edit Mode**. In this example, the *Kite Stencil* will be removed from the library.



3

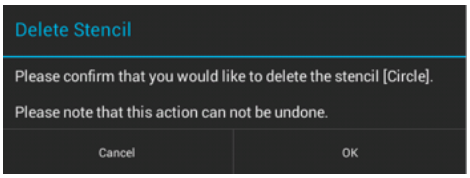
The top toolbar will appear as shown below:

4

Press on the **Delete Button** in the top toolbar to remove the stencil.

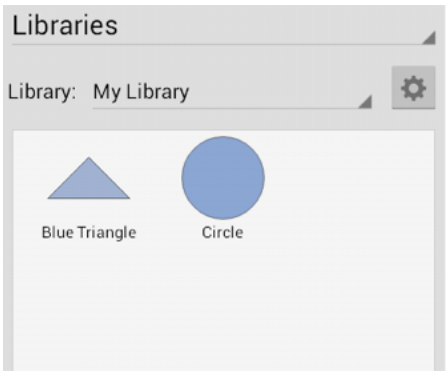
5

A confirmation prompt will appear. Press on the **OK Button** to delete the stencil or press on the **Cancel Button** to exit the prompt without completing this action.



6

The Library will appear as shown below once the *Kite Stencil* has been removed.

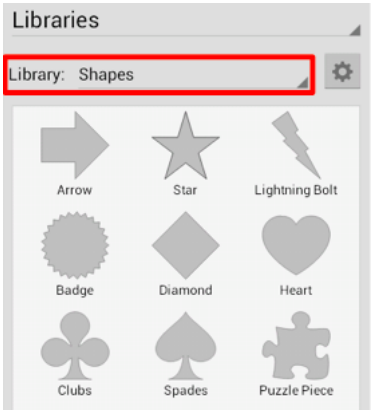


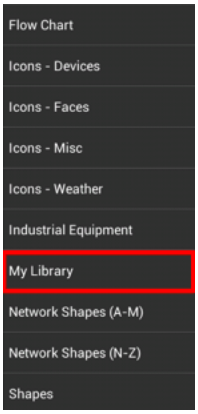
5.8.10. Inserting a Stencil Into a Drawing

To insert a stencil into a drawing:

1

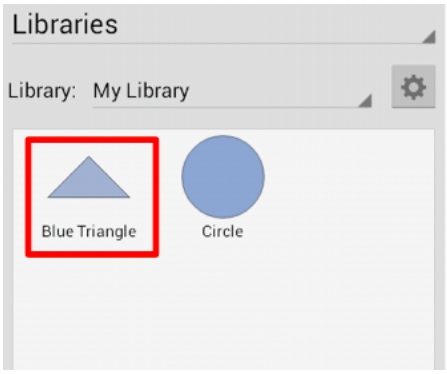
Select the appropriate library in the Library Selection Menu.

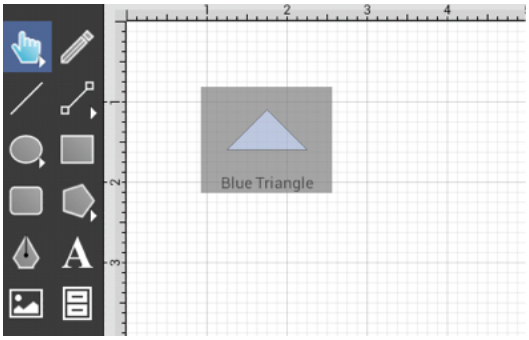




2

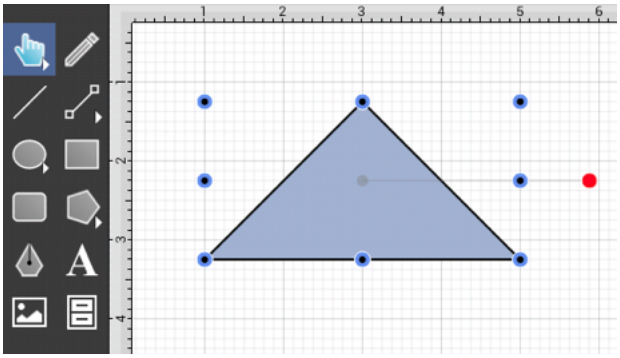
Perform a **Touch/Drag**gesture combination from a selected stencil to the drawing canvas.





3

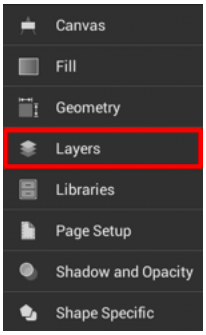
The stencil will appear within the Drawing Canvas once the **Touch/Drag** guesture has been completed, as shown below:



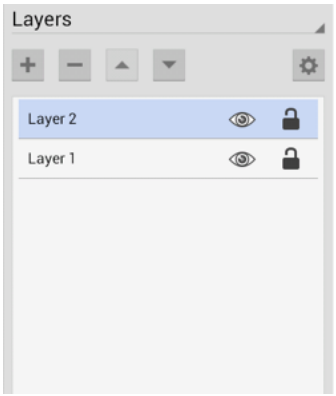
5.9. Handling Layers

Layers provide the capability to incorporate more than one level of objects into a drawing. Each added layer builds on top of the previous created layer to create a multidimensional drawing. They are managed and controlled through the Layers Panel, which can be accessed by clicking on the **Info Button** located in the Top Toolbar of the Drawing Editor.

Then choose **Layers** from the provided menu, as shown below:



Layers can be added, renamed, merged, duplicated, deleted, locked, and hidden within the TouchDraw application. The Layers Panel will appear as shown below after pressing on the **Info Button** and choosing the **Layers** option.

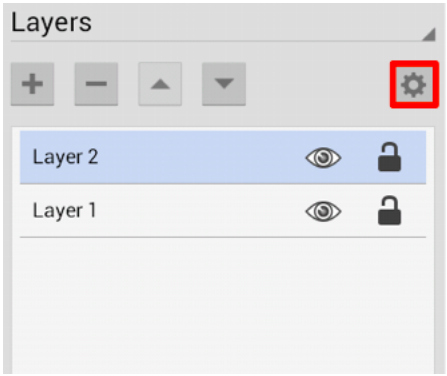


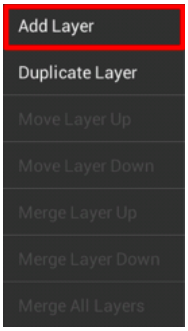
5.9.1. Adding a Layer

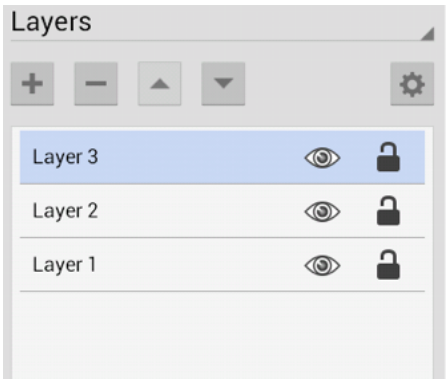
A **Layer** can be added in one of two ways:

1

Press on the Layers Settings Menu menu to choose the **Add Layer** option.

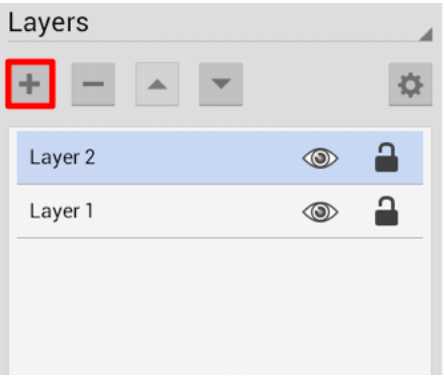


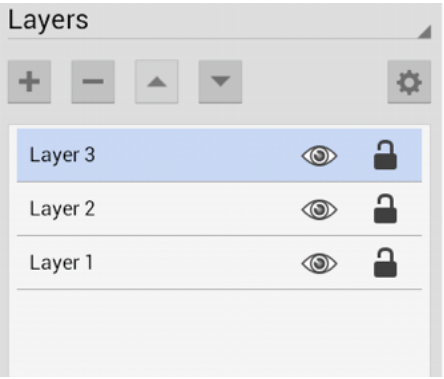




2

Tap on the **Add Button** located at the top left of the **Layers Window**.



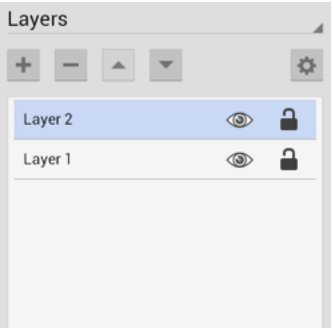


5.9.2. Renaming a Layer

A **Layer** must be selected to enter **Edit Mode** for renaming. To rename a layer:

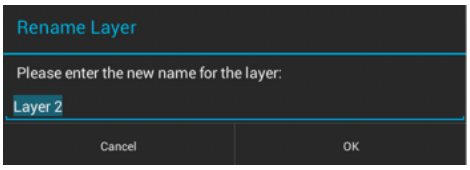
1

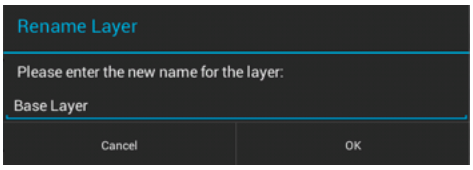
Perform a **Triple Tap** on the desired layer.



2

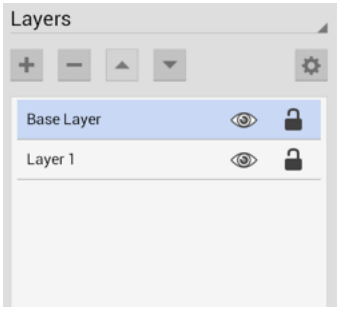
Enter the desired name for the selected layer and then press on the **OK Button**. Press on the **Cancel Button** to exit without renaming.





3

The renamed layer will appear in the Layers List as shown below:

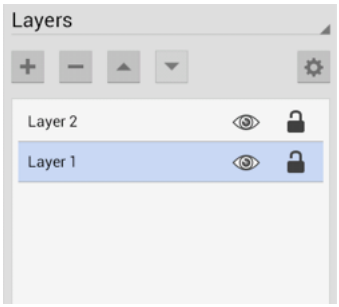


5.9.3. Duplicating a Layer

A **Layer** can be duplicated to create another layer with the same objects and properties. Follow the steps below to duplicate a selected layer:

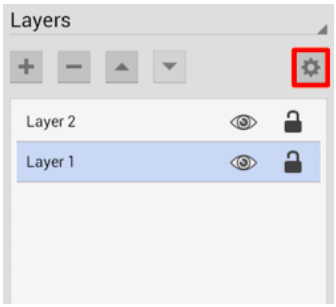
1

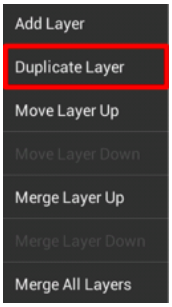
Tap on the desired layer to select it within the Layers Panel.



2

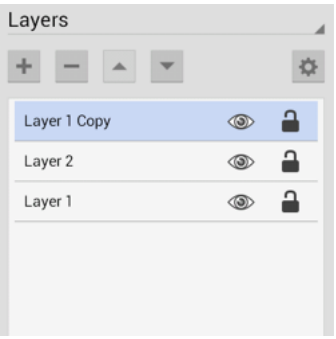
Press on the Layers Settings Menu menu and then press on the **Duplicate Layer** option.





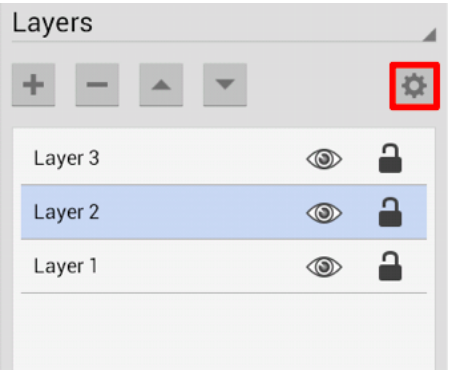
3

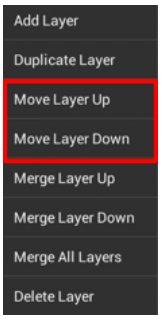
The duplicated layer will appear above the original and can be renamed, re-ordered, merged, or deleted.



5.9.4. Re-ordering Layers

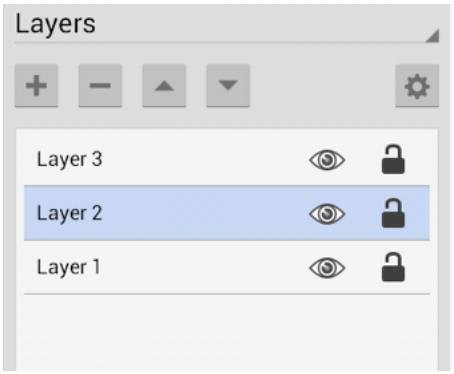
Tap on the desired layer to select it and then tap on the Layers Settings Menu menu to choose from available re-ordering functions. The **Layers Settings Menu** will appear as shown below.

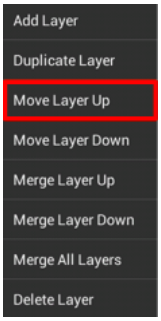


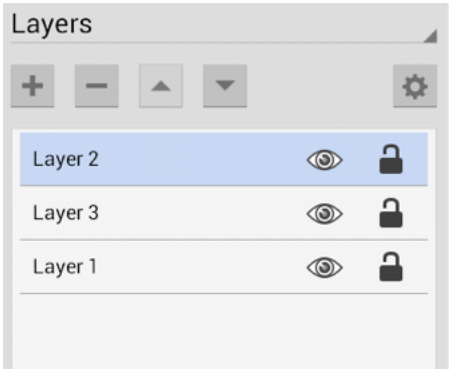


A **Layer** can be moved up or down in the Layers List and this action will alter the layering positions in the drawing canvas. Layers can be re-ordered by **Touching and Holding** on the desired layer and then **Dragging** to another location or by using one of the methods shown below.

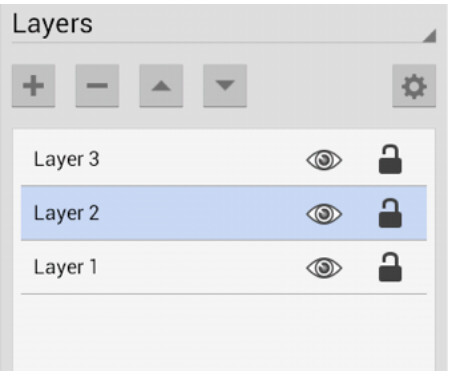
Use the **Move Layer Up** menu option to move the selected layer up by one in the Layers List. In this example, Layer 2 is moved up one layer above Layer 3.

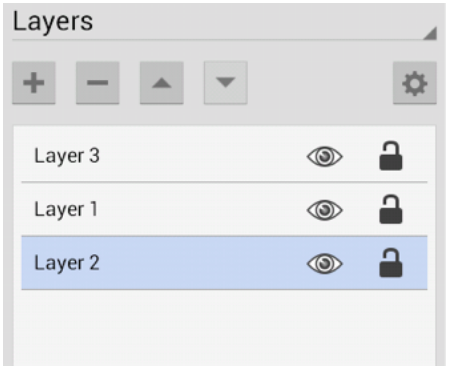




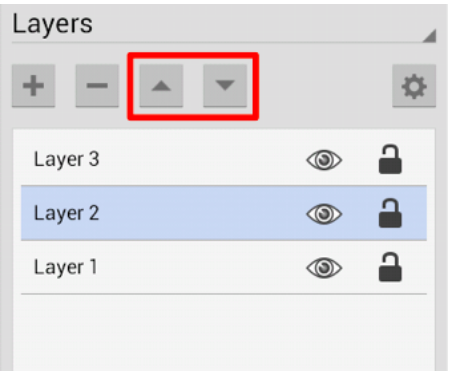


Use the **Move Layer Down** option to move the selected layer down by one in the Layers List. In this example, Layer 2 is moved down one layer below Layer 1.





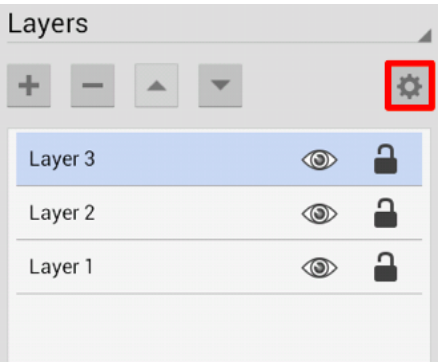
Layers can also be re-ordered by selecting the desired layer and then using the "Up" and "Down" arrow buttons located in the top portion of the **Layers Panel**.

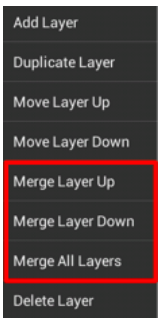


Note: The **Move Layer Up** option will only be enabled when a layer resides above the selected one in the Layers Panel. The **Move Layer Down** menu option will only be enabled when a layer resides below the selected one in the Layers Panel.

5.9.5. Merging Layers

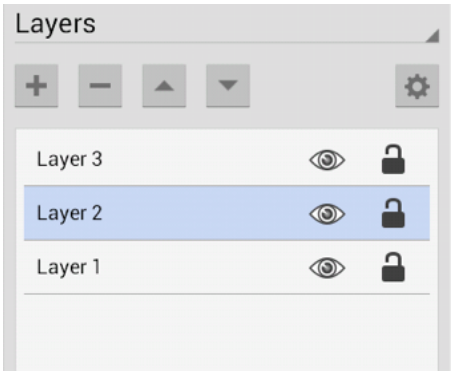
Tap on the desired layer to select it and then **press** on the Layers Settings Menu menu to choose from available merging functions. The **Layers Settings Menu** will appear as shown below.

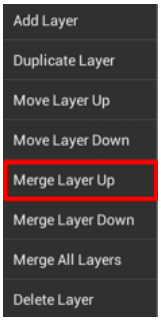


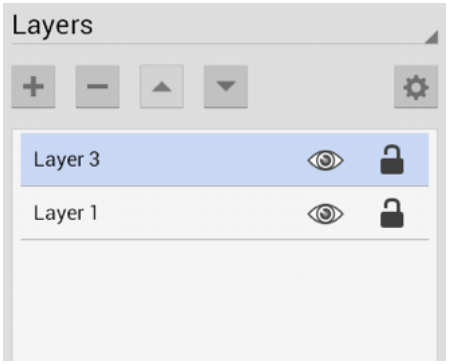


A selected **Layer** can be merged up or down in the Layers List and this action will combine the drawing canvas contents and properties of the selected layer with the one above or below it depending on the made selection. An additional option is available for merging all layers in a drawing.

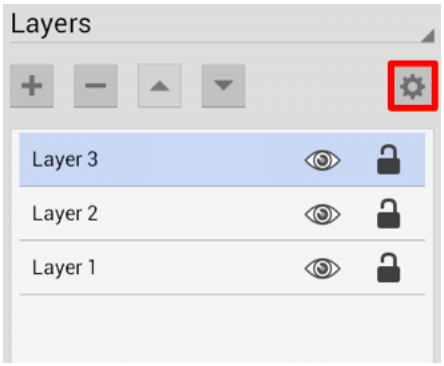
Use the **Merge Layer Up** option to merge the selected layer with the one residing above it in the Layers List. In this example, Layer 2 is merged with Layer 3.

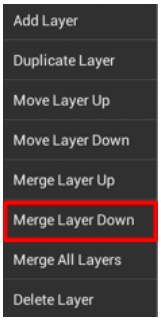


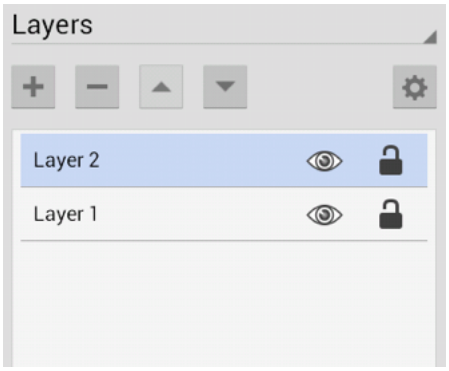




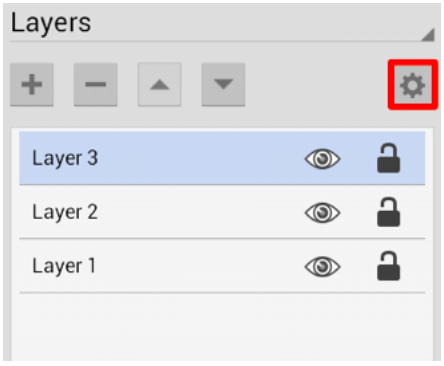
Use the **Merge Layer Down** option to merge the selected layer with the one residing below it in the Layers List. In this example, Layer 3 is merged with Layer 2.

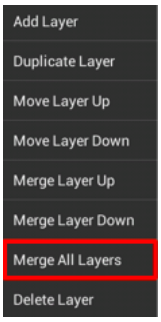


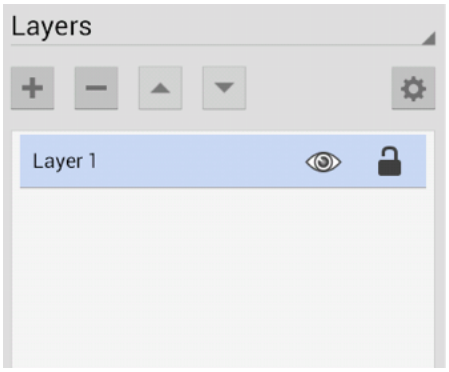




The **Merge All Layers** option combines every layer of a drawing showing in the **Layers Panel**.







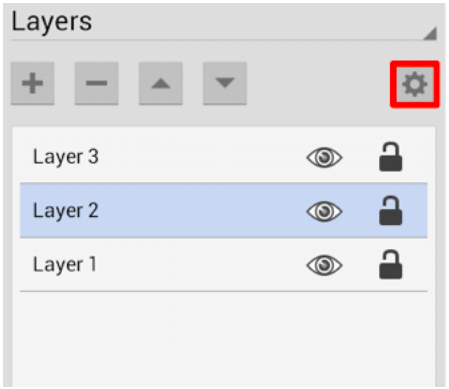
The **Merge Layer Up** and **Merge Layer Down** options are only enabled when a layer resides above or below the selected one. More than one layer must be present in the Layers Panel for the **Merge All Layers** menu choice to be enabled.

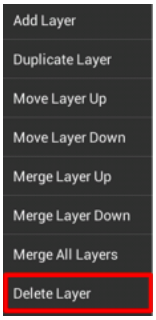
5.9.6. Deleting a Layer

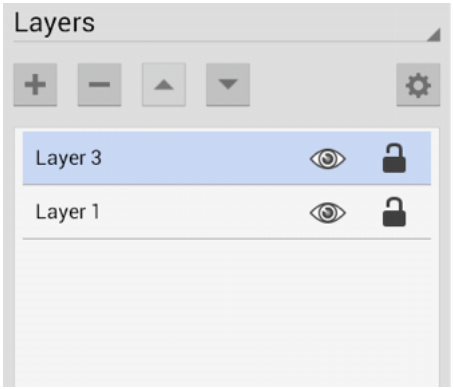
A **Layer** can be deleted in two ways:

1

Tap on the desired layer to select it and then press on the Layers Settings Menu menu to choose the **Delete Layer** option. In this example, Layer 2 is deleted.

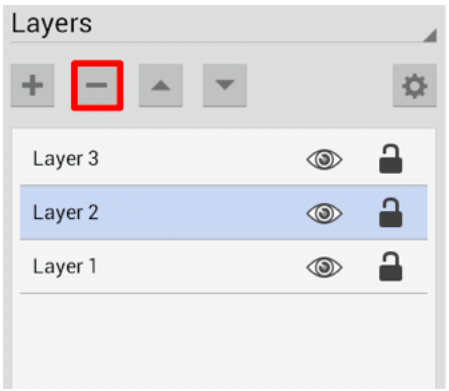


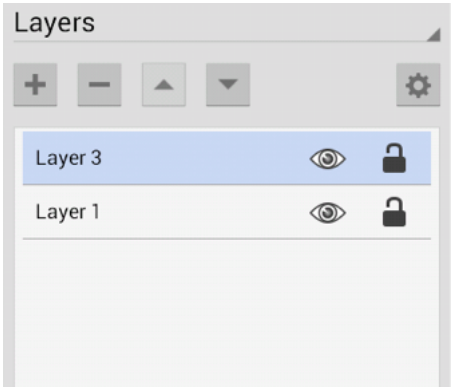




2

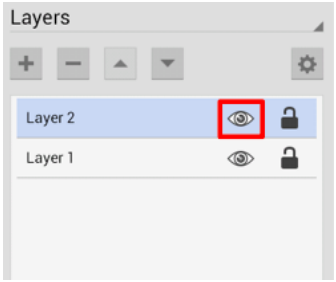
Tap on the desired layer to select it and then press on the **Delete Button** located at the top left of the **Layers Panel**.

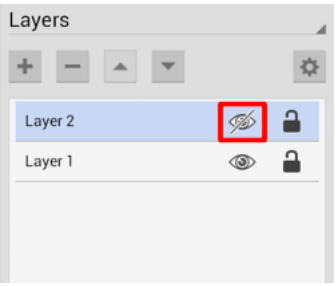




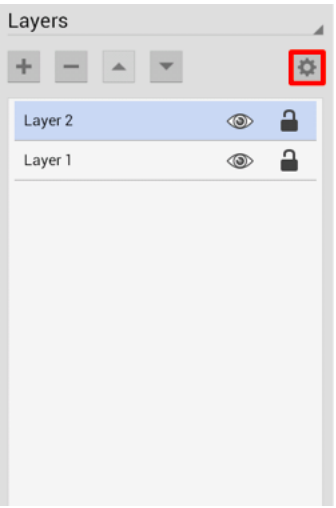
5.9.7. Layer Visibility

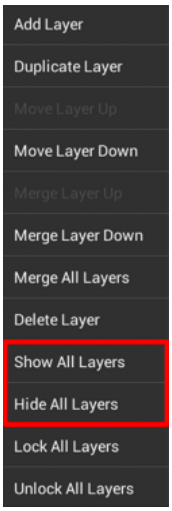
The **Visibility** option is an "On/Off" toggle button for setting the visibility of each created layer. It appears to the right of each layer name in the list as an "eye" icon and indicates the visibility of the layer. To hide (or show) a layer, simply **Tap** on the eye icon of the layer to be toggled. An eye icon with a line through it indicates that a particular layer is not visible, whereas an eye with no line indicates a layer is visible.





The Layers Settings Menu provides additional options for changing the visibility of all layers residing within a drawing. To access these options, click on the **Layers Settings Menu** in the Sidebar and then choose **Show All Layers** or **Hide All Layers** from the provided drop down menu.



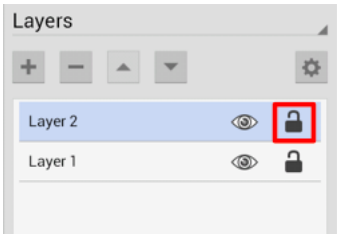


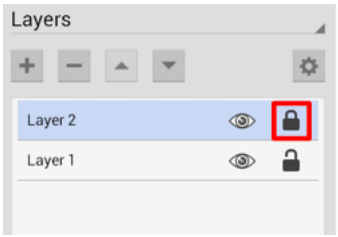
All layers will be made visibile or hidden within the currently open drawing depending on the chosen option.

The "eye" icon serves as a visual indicator and will appear differently after a selection has been made as shown in the screenshots below.

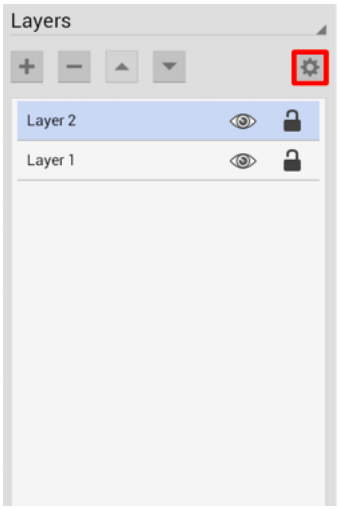
5.9.8. Locking Layers

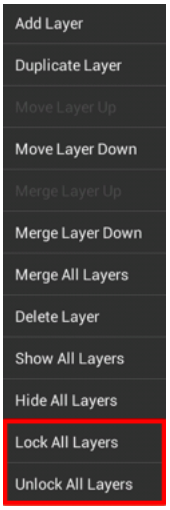
The **Lock** option is an "On/Off" toggle button for locking or unlocking a layer. It is located to the right of the visibility icon and indicates whether or not a layer is locked. To lock (or unlock) a layer, simply **Tap** on the lock icon of the layer to be toggled. A closed lock icon indicates that the layer is locked and an open lock icon indicates a layer is unlocked.





The Layers Settings Menu provides additional options for locking or unlocking all layers residing within a drawing. To access these options, click on the **Layers Settings Menu** in the Sidebar and then choose **Lock All Layers** or **Unlock All Layers** from the provided drop down menu.





All layers will be locked or unlocked within the currently open drawing depending on the chosen option. The "lock" icon serves as a visual indicator and will appear differently after a selection has been made as shown in

the screenshots below.

5.10. Calculations

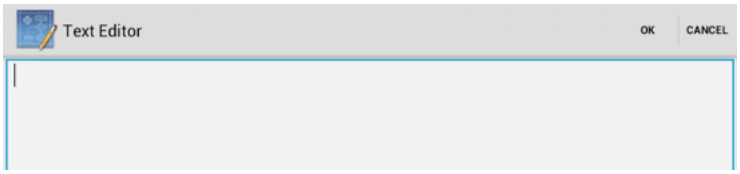
TouchDraw provides an easy method for calculating the area and dimensions of a selected figure(s) by entering variables within the Text Editor. Refer to the Available Variables table to find out more about what can be obtained as part of the text of a figure.

5.10.1. Calculating Area

TouchDraw supplies the ability to enter variables into the text editor for a figure(s). The calculated area of a figure can be obtained and included within the figure's text by:

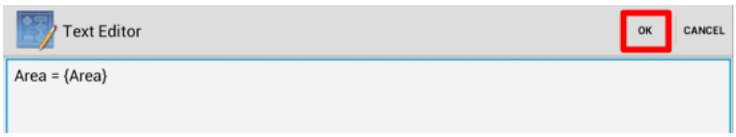
1

Double Tap on a figure to open the Text Editor.



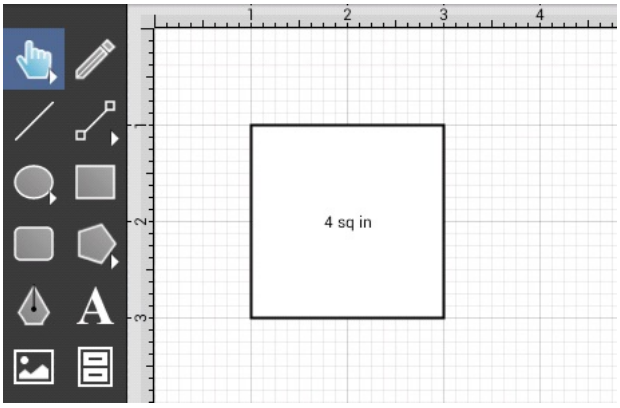
2

Entering `{Area}` as part of the text within the **Text Editor** and then tap on **OK** in the upper right corner of the editor to dismiss it.



3

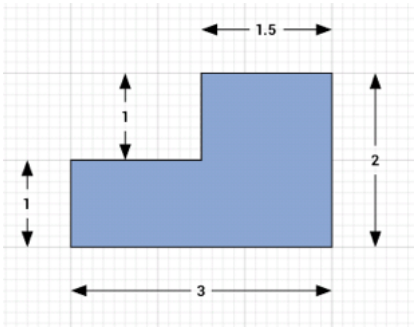
The value will appear within the selected figure after the editor has been dismissed, as shown below.



Note: The first letter of an entered variable must be capitalized for the value to appear in the selected figure.

5.10.2. Dimensioning

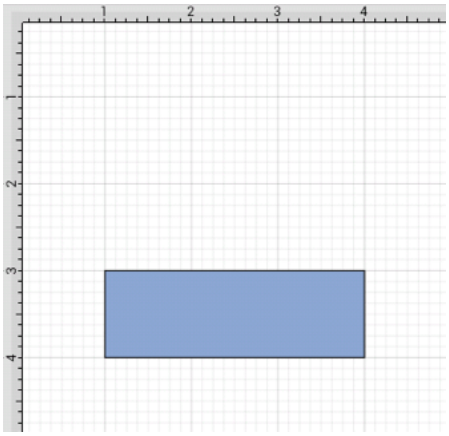
TouchDraw provides variables for determining the dimensions of a selected figure(s) The MinX, MaxX, MinY, MaxY, Length, Width, and Height can be entered as part of the displayed text within a figure. Refer to the available variables table to learn more about what variables can be inserted. These values can be applied to show the dimensions of a drawn object, as shown below:



Follow the steps below to create the images shown above:

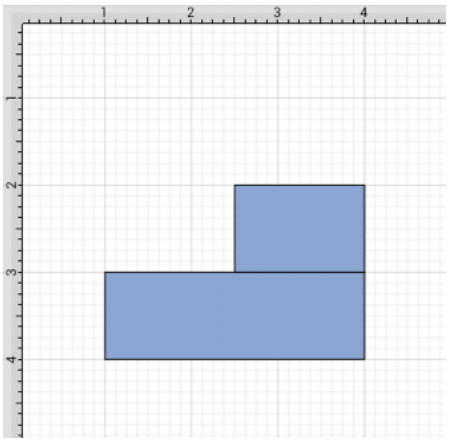
1

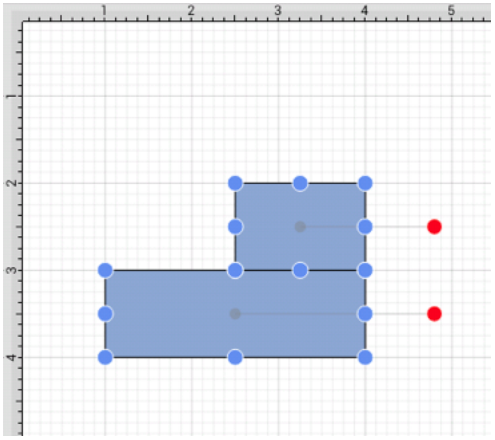
Select the Rectangle Tool and draw a rectangle.



2

Select the **Rectangle Tool** again and draw a square on top of the right half of the rectangle. Use the Function Key Feature to select both figures.



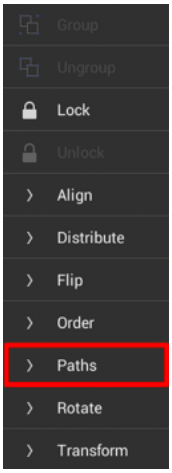


3

Press on the **Selection Button** to open the SelectionMenu.

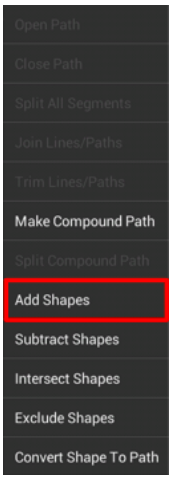
4

Press on the **Paths Submenu**.



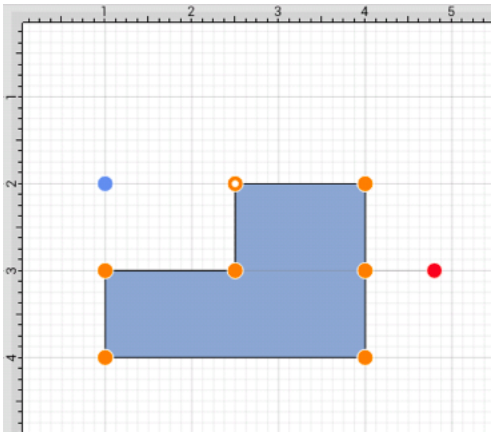
5

Press on the **Add Shapes** option to combine the two shapes.



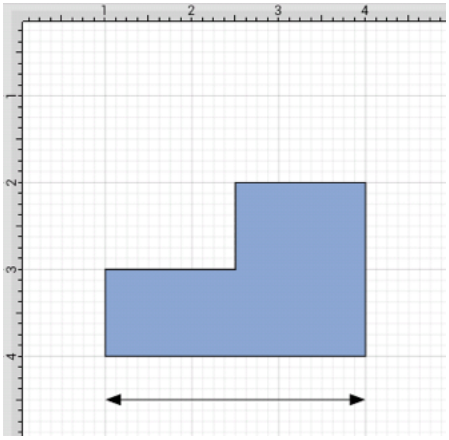
6

The previously blue boundary handles will turn orange to indicate that the two shapes have been combined, as shown below.



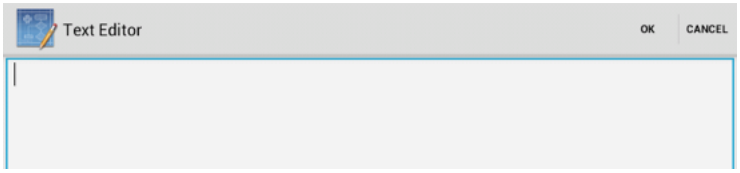
7

Select the Line Tool and create a line with two black arrow end points along the bottom of the rectangle.



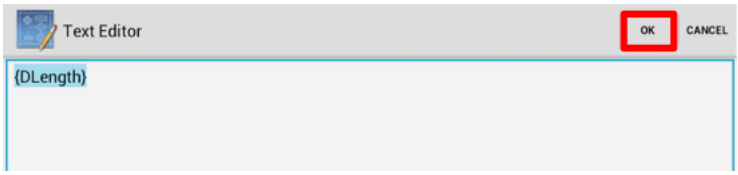
8

Double Tap on the **Line** figure to open the Text Editor.



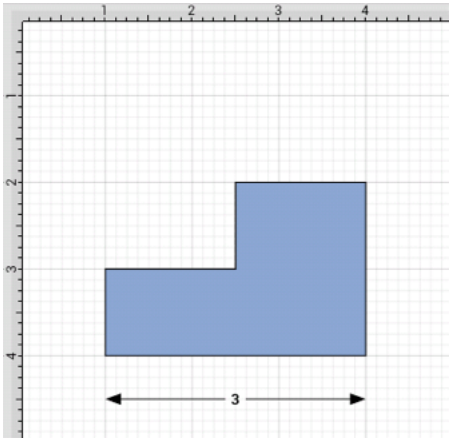
9

Enter the variable into the **Text Editor** and then tap on **OK** in the upper right corner of the editor to dismiss it.



10

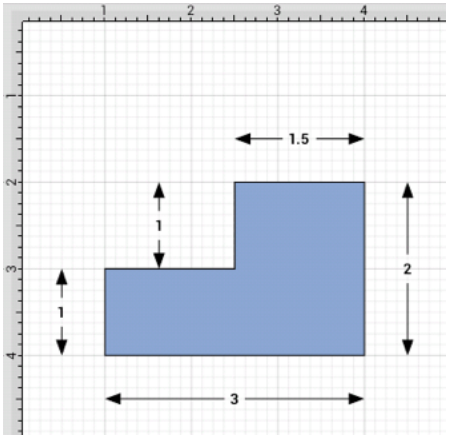
The variable will appear on the selected **Line** after the editor has been dismissed.



The D and first letter of the entered variable must be capitalized for the value to appear in the selected figure.

11

Follow steps 6 through 8 to create a dimension line for each side of the drawing by entering the corresponding variable in the **Text Editor** for each side (Width and Height). The figure below shows the completed dimensions for the drawn shape.



6. Tips and Techniques

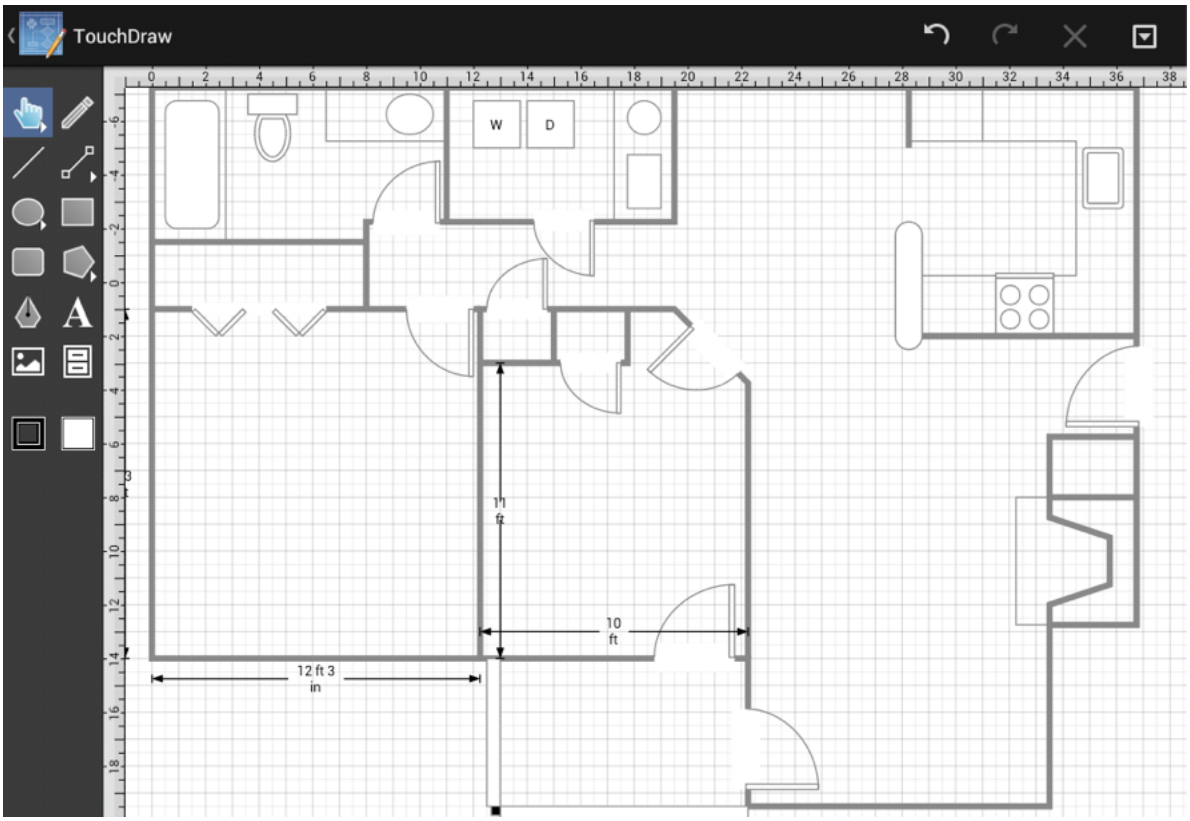
This section provides information on how to perform specific actions within TouchDraw and can be used to master the basic features of the application. Listed below are links to several quick tips designed to help you become more familiar with TouchDraw.

- Selecting Multiple Figures in a Drawing
- Resizing a Figure Proportionally with Handles
- Creating Proportional Shapes
- Using the Selection Rectangle

6.1. Selecting Multiple Figures in a Drawing

By default, a previously selected shape will be deselected when another is selected; however, TouchDraw for Android does support **Multiple Selection**.

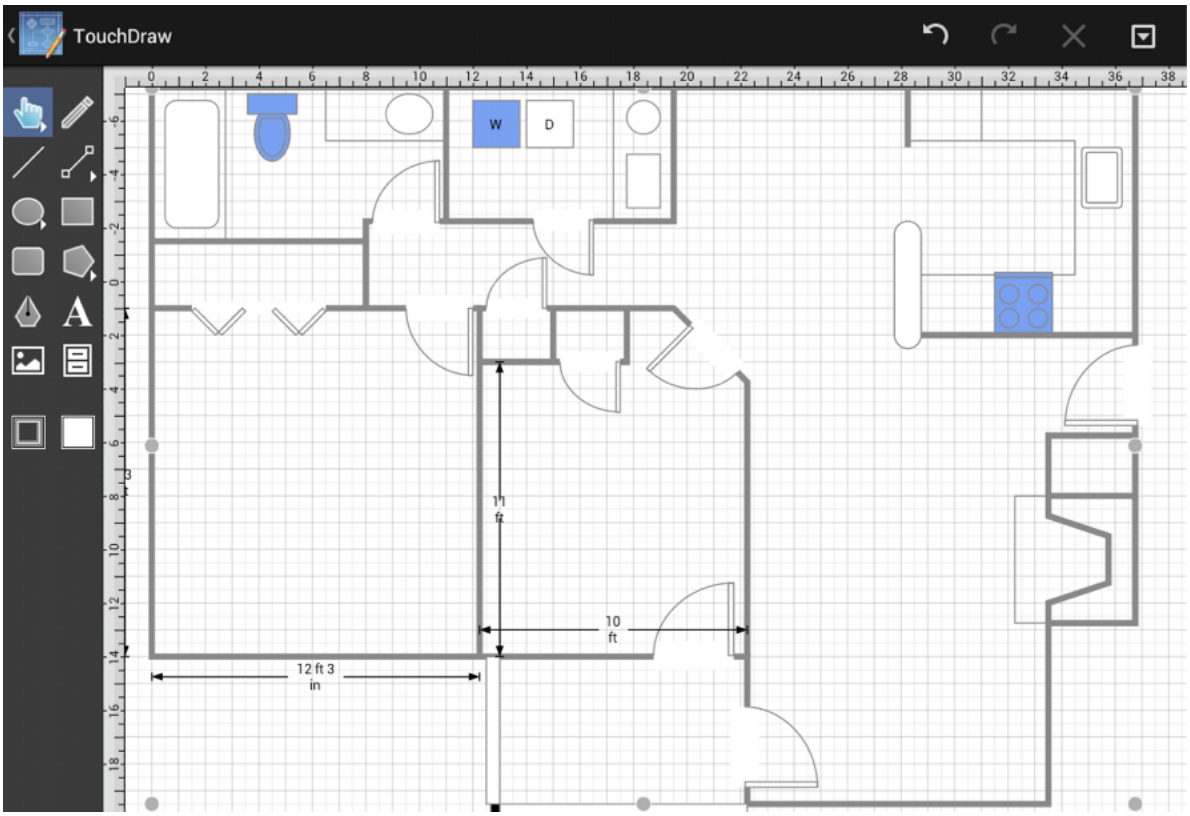
Multiple Selection in TouchDraw for Android is accomplished by using the **Function Key Feature** in combination with the normal selection gestures. The bundled floor plan sample will be used to show how this feature can be used to select multiple shapes in a defined area, as shown below.



To enable the Function Key Feature, press and hold on the empty portion of the Drawing Toolbar for ~1 second until it turns red and continue to hold a finger on the toolbar while using the other hand to tap on additional figures. It will remain enabled as long as the utilized finger/thumb remains held on the toolbar. While enabled, selection gestures can be used to add or remove figures from the multiple selection.

With the **Function Key Feature** enabled, tap on each figure in the drawing to select it and then release the utilized finger when finished to disable this feature. The same action can be performed to remove a selection in a drawing. The **Function Key Feature** is disabled as soon as the used finger is released from the Drawing Toolbar.

In the example below, we will be using the **Function Key Feature** to select the Toilet, Stove, and Washing Machine in the above shown Floor Plan and then change the selected figures Fill Color to a solid, light blue. The Floor Plan will appear as shown below once all steps have been completed.



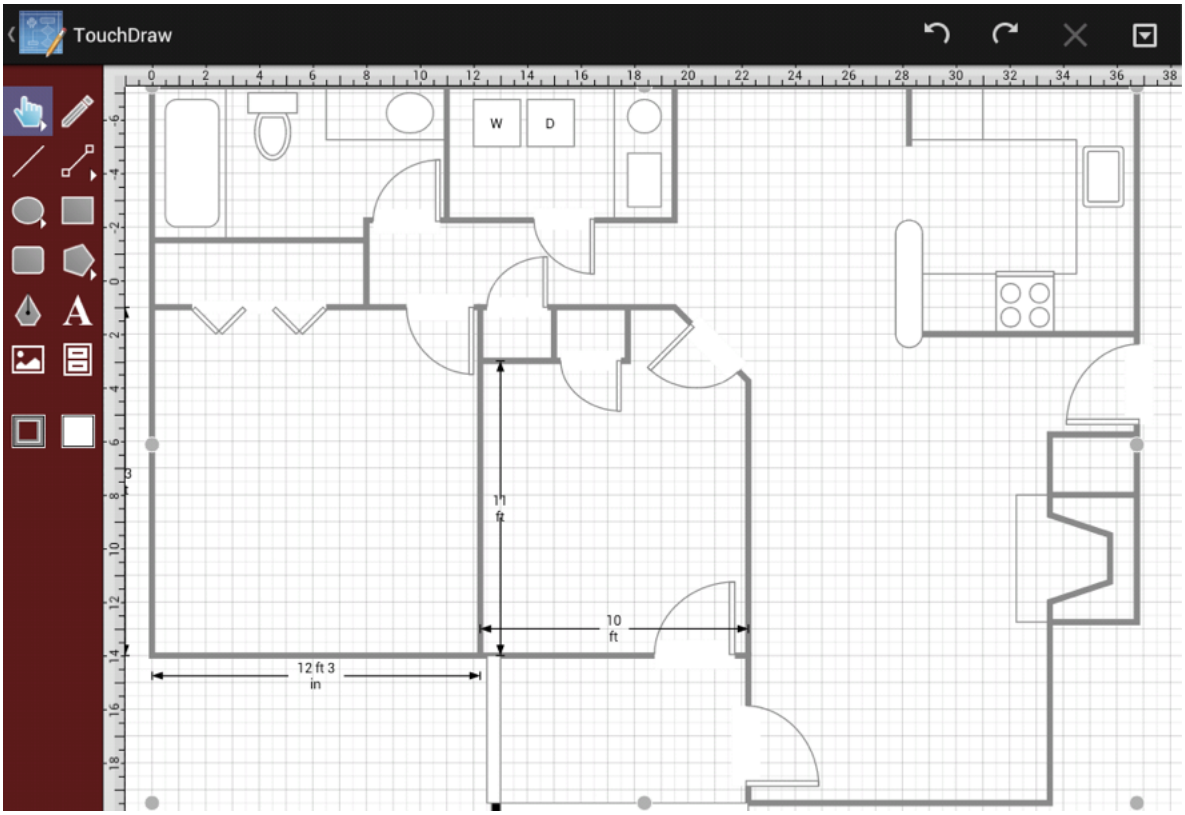
See it in Action!

Follow the steps below to learn how to select multiple figures within a drawing and then change the fill color for the selected figures.

1

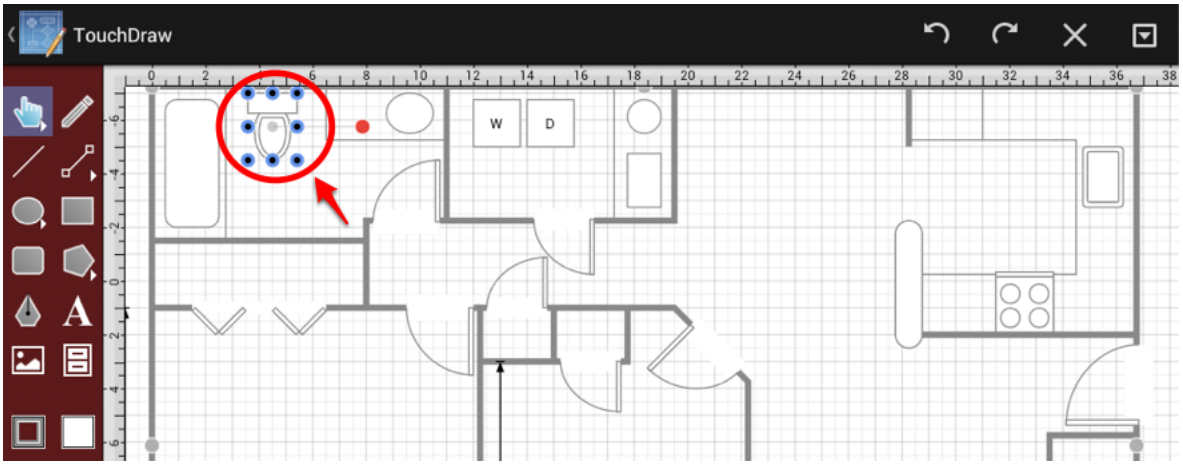
First, enable the **Function Key Feature** by pressing and holding on the empty portion of the Drawing Toolbar for approximately 1 second until it turns red. Do not remove the utilized finger from the toolbar until all

selections have been made.



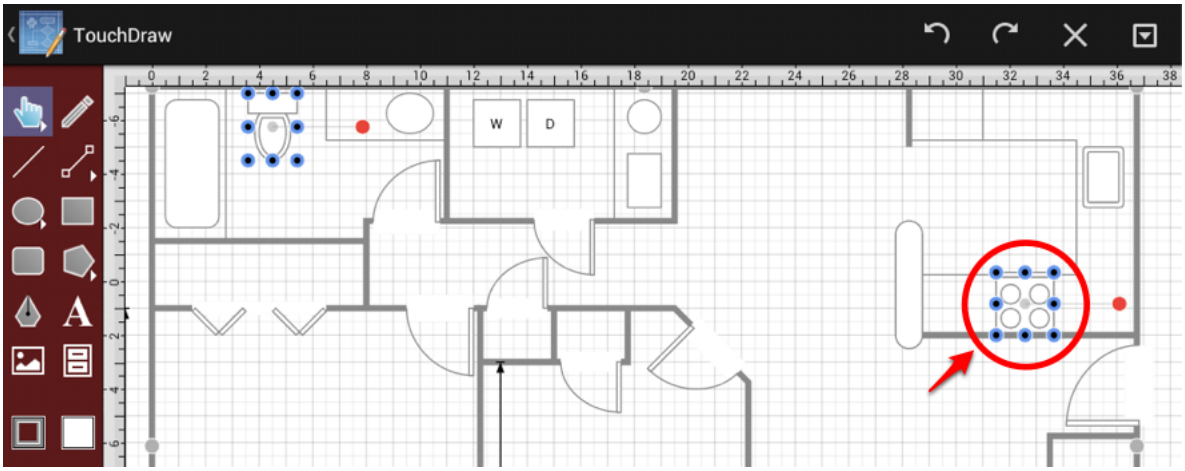
2

Second, we will select the Toilet in the Bathroom Area by performing a **Tap** on the figure. Remember to keep the utilized finger on the Drawing Toolbar to make additional selections.



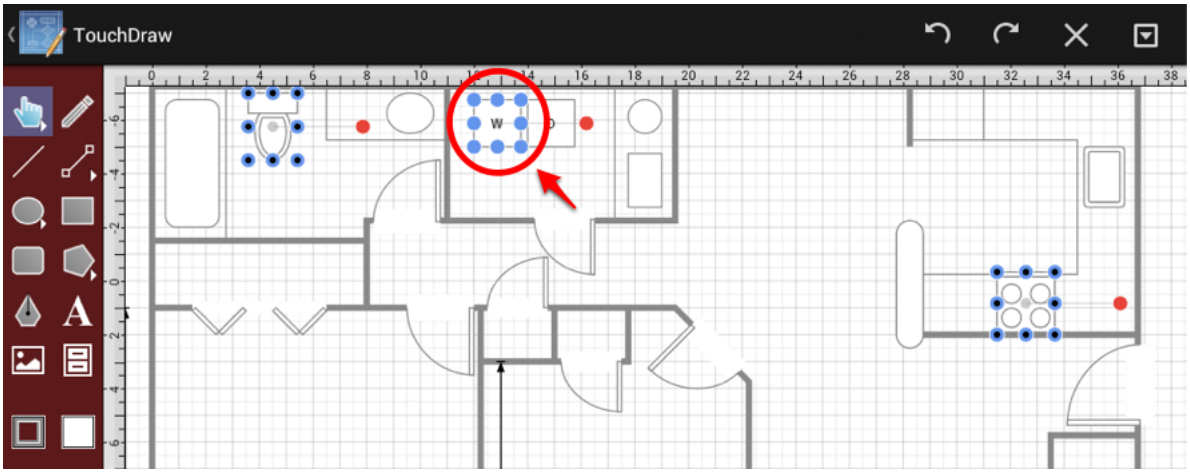
3

Third, we will **Tap** on the Stove in the Kitchen Area to make a second selection. Remember to keep the utilized finger on the Drawing Toolbar to make additional selections.



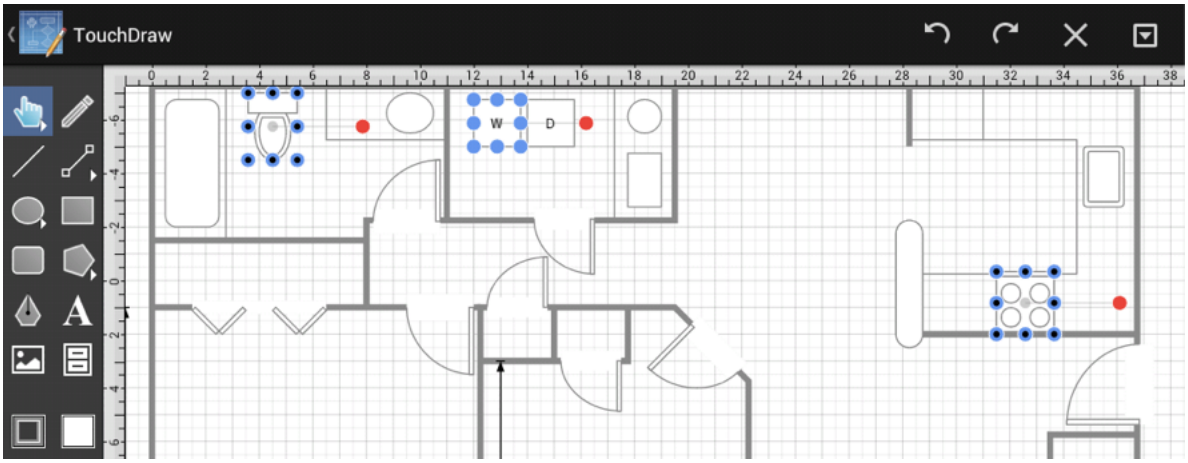
4

Next, we will **Tap** on the Washer in the Utility Area to make the final figure selection. Remove the utilized finger from the Drawing Toolbar once this step has been completed.



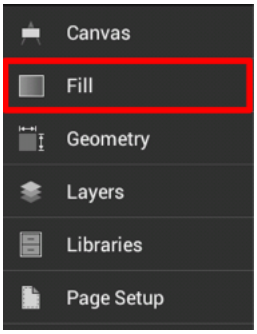
5

Below you will see the **Floor Plan** with all three selected figures and the Function Key Feature disabled.



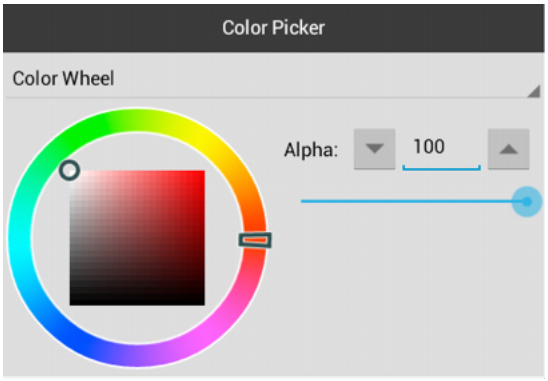
6

Next, we will change the Fill Color of all three selected figures within the Floor Plan. Press on the **Info Button** in the Top Toolbar and then **Tap** on **Fill** to make changes to the Fill Color of the selected figures.



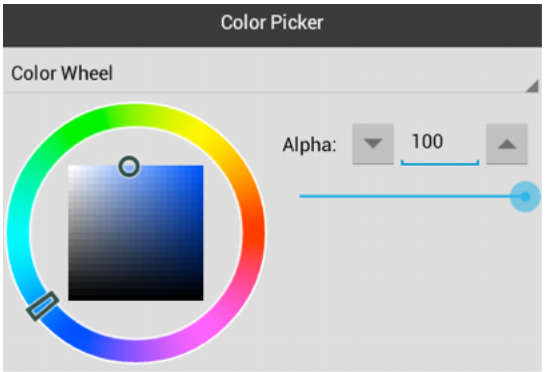
7

To change the **Fill Color**, make certain the toggle is set to **On** and select a fill type (solid or gradient). Then **Tap** on the **Color Selection Box** to choose a color and saturation value for the selected figures.



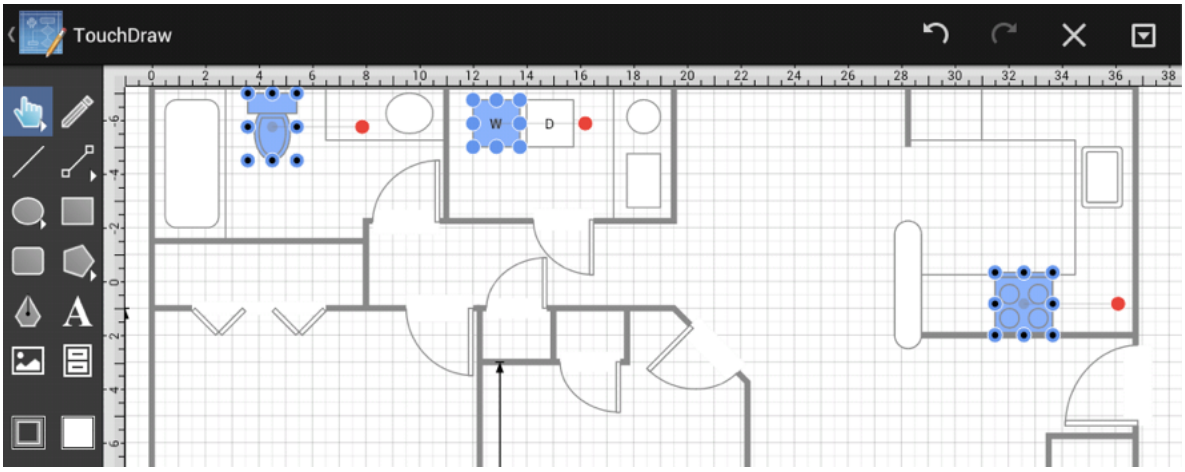
8

In the Color Picker, select a shade from the **Color Wheel** as shown below or use the **List** to make a selection. Click on the **Hide Sidebar Button** in the lower left corner to close the sidebar. In this example, a **Solid** light blue is selected.



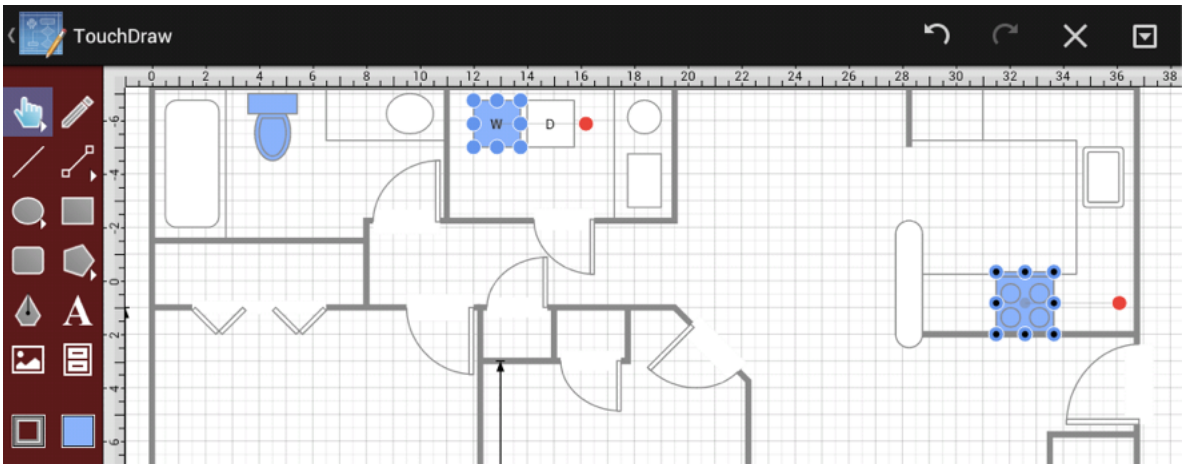
9

The Floor Plan will appear as shown below once the Fill Color has been changed.



10

To remove a selection and continue making changes to the other selected figures, simply enable the Function Key Feature again and **Tap** on the desired figure. For this example, we will remove the Toilet in the Bathroom Area from the selected figures. Remove the utilized finger from the Drawing Toolbar when finished selecting or de-selecting figures in a drawing to disable the **Function Key Feature**.

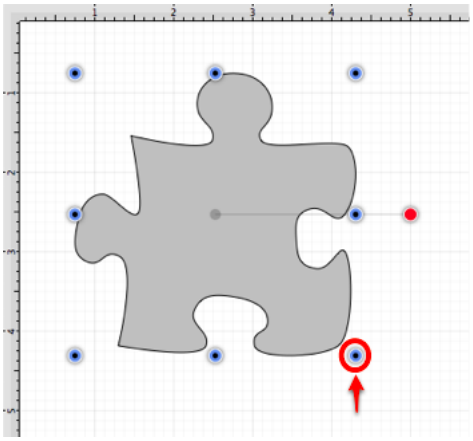


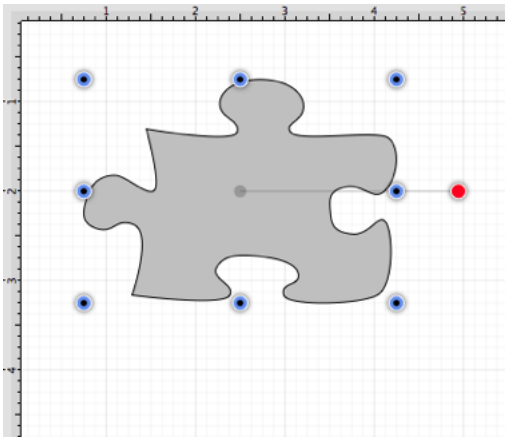
For more information about the methods made available for selecting figures within TouchDraw, please refer to the Selecting a Figure page in this documentation.

6.2. Resizing a Figure Proportionally with Handles

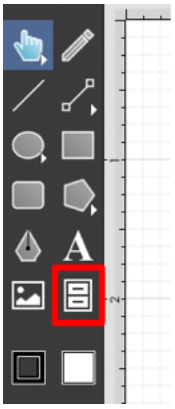
TouchDraw provides several features for resizing shapes when you are working with figures in a drawing. If a bounds handle is dragged to a location within the Drawing Canvas without using application features for constraining proportions, the shape is resized to that specific location. The Function Key Feature allows you to constrain proportions as you drag to ensure the original shape is maintained.

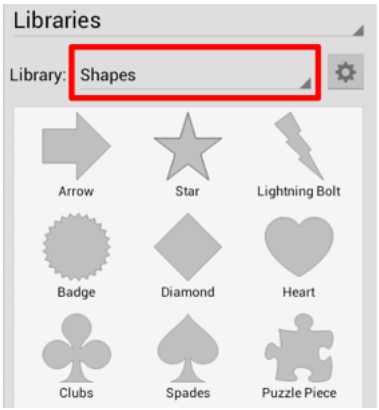
For example, a simple drag of the bounds handle without this feature enabled can result in a perfect square becoming a rectangle or a circle becoming an oval, but by using this feature, the shape will remain as a square or circle and only change in size, not proportions. The example below shows what the puzzle piece from the Stencil Library would look like if the bottom right bounds handle is moved upward without enabling the Function Key Feature.



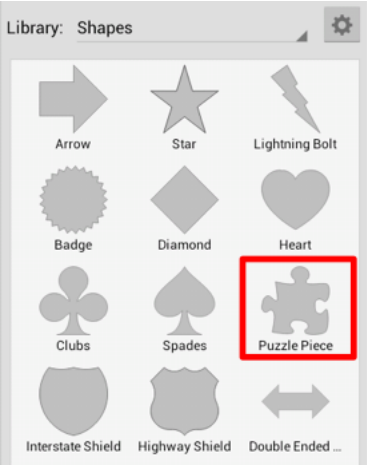


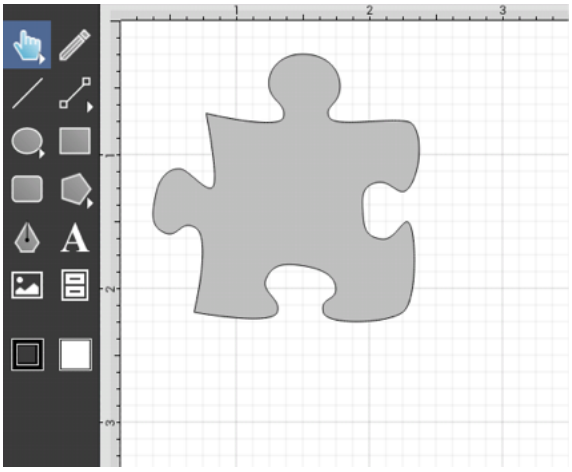
This tutorial will show you how to use the Function Key Feature to select a figure and alter its size while constraining proportions to maintain its original shape. We will be using the **Puzzle Piece** (as in the above example) from the Stencil Library to demonstrate how this feature can be used to easily constrain proportions when resizing shapes in a drawing. To locate this stencil, click on the Library Tool and select the **Shapes** category in the library menu.





You will see the puzzle piece as an available selection. It will appear as shown below once it has been inserted into a drawing.

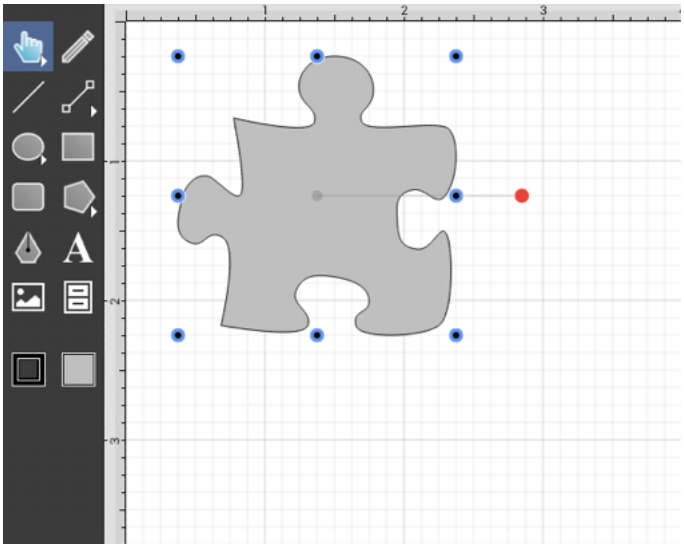




Proportions are not constrained for a resized shape when the Function Key Feature is disabled. When this feature is enabled, TouchDraw makes certain that the proportions are constrained during shape resizing to maintain the original shape. For example, the puzzle piece will remain as a puzzle piece as a bounds handle is dragged and only change in size. This feature can be used for any of a shapes bounds handles. Follow the steps below to learn how to use the Function Key Feature to constrain proportions while resizing a shape.

1

Select the shape in your drawing by tapping on the figure. Bounds handles will appear around the chosen figure once it has been selected.

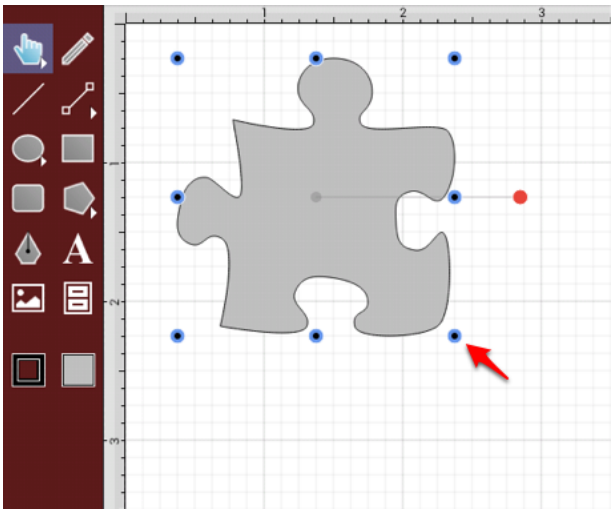


2

Next, you will need to enable the Function Key Feature to constrain proportions during shape resizing. To enable this functionality, hold and press on the lower half of the Drawing Toolbar where no tools are present. After approximately 1 second, the toolbar will turn red as an indication of the Function Key Feature being enabled. It will remain enabled as long as the utilized finger/thumb remains held on the toolbar.

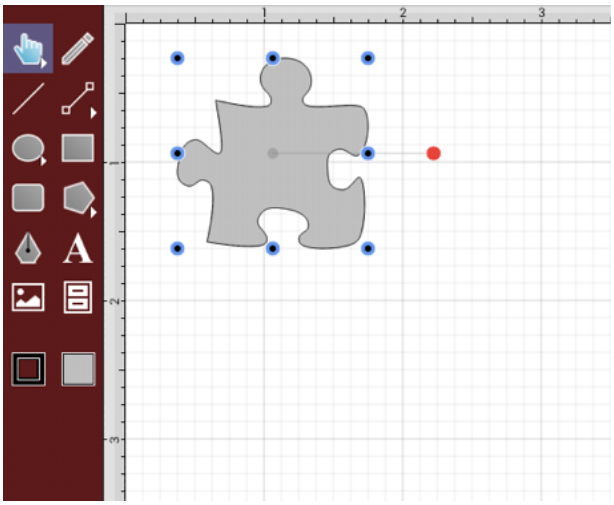
3

Touch and Drag on a bounds handle to begin resizing the shape. In this example, the bottom right bounds handle is selected and drug inward toward the shape.



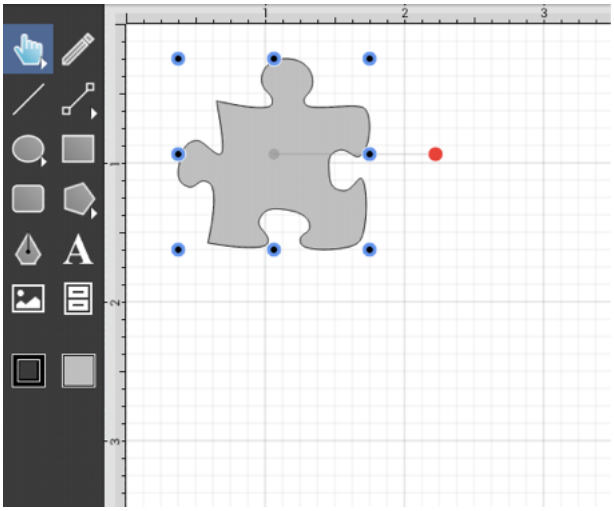
4

The puzzle piece becomes smaller in size, but retains its shape as its proportions are constrained.



5

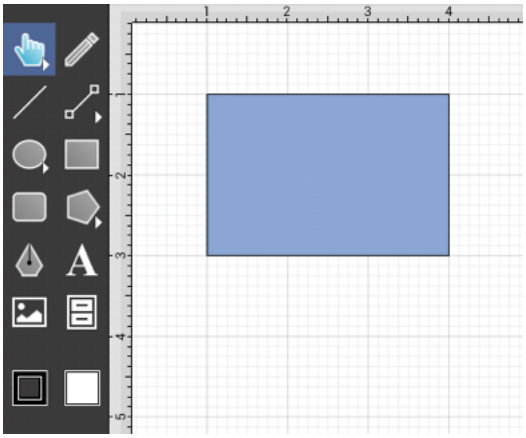
Remove your finger from the empty portion of the Drawing Toolbar once resizing is completed to disable the Function Key Feature.

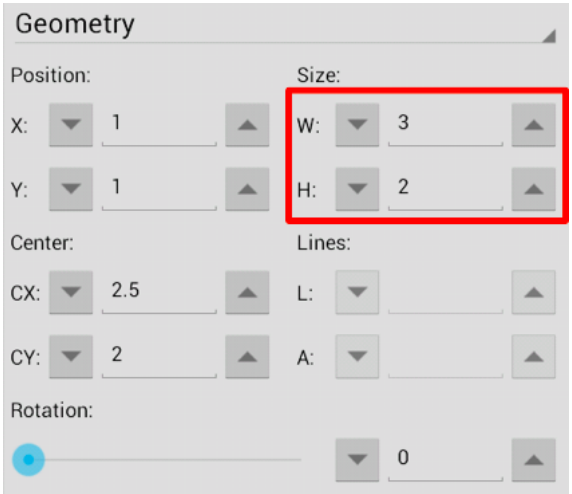


6.3. Creating Proportional Shapes

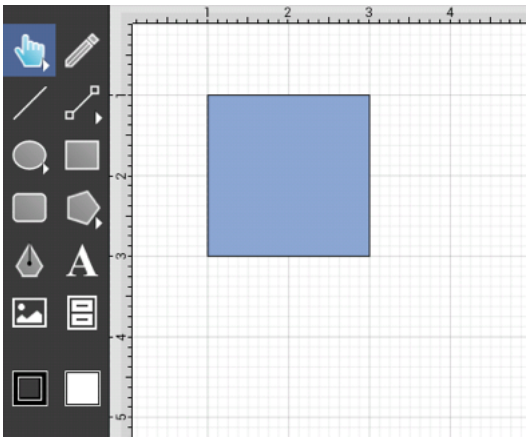
TouchDraw offers a great amount of flexibility when creating shapes or figures in a drawing. A touch and drag action in combination with a selected drawing tool results in the addition of rectangles, squares, circles, ovals, and additional shapes of any size and/or proportion to a drawing. The Function Key Feature can be used when adding a shape such as a circle or square to your drawing to make certain it retains its proportions and only changes in size. This prevents the shape from becoming a rectangle or oval.

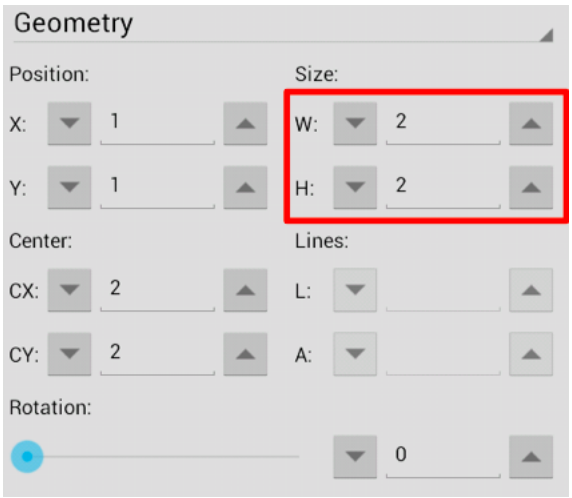
For example, if you select the Rectangle Tool and insert the shape into your drawing, it can either be a square or rectangle depending on where you touch and drag on the Drawing Canvas. Dragging toward the bottom right results in a rectangle with non-proportional **Width** and **Height** measurements, as shown below.





By enabling the Function Key Feature, you can create a proportional shape. In the example above, a perfect square would be created when this feature is enabled and the same touch/drag action is performed. As shown in the Geometry Sidebar, the **Width** and **Height** of the square are proportionally the same.



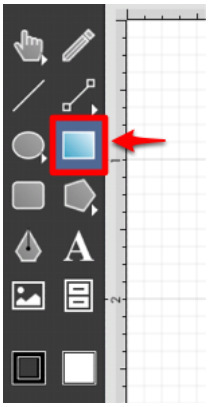


TouchDraw constrains the **Width** and **Height** to generate a proportional shape when the Function Key Feature is enabled. This tutorial will show you how this feature can be used to create a proportional shape.

We will be using the Rectangle Tool for this demonstration. Follow the steps below to learn how to use the Function Key Feature to create a proportional shape in your drawing.

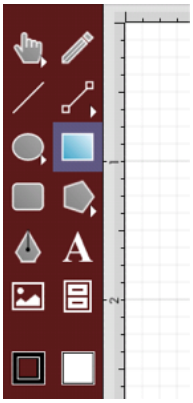
1

Select the Rectangle Tool in the Drawing Toolbar.



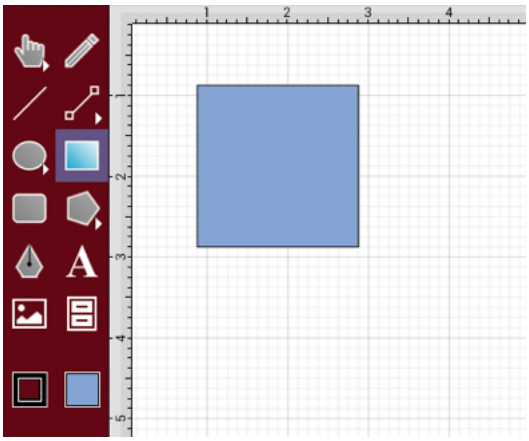
2

Next, you will need to enable the Function Key Feature. To enable this functionality, hold and press on the lower half of the Drawing Toolbar where no tools are present. After approximately 1 second, the toolbar will turn red as an indication of the Function Key Feature being enabled. It will remain enabled as long as the utilized finger/thumb remains held on the toolbar.



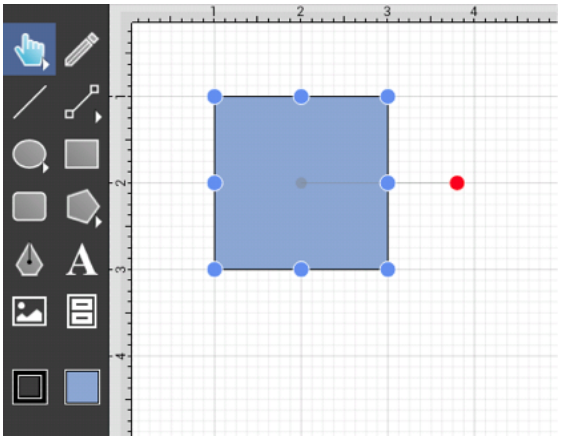
3

Touch in a desired location on the Drawing Canvas and then **Drag** downward or in another direction without lifting the utilized finger.



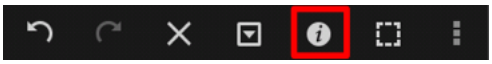
4

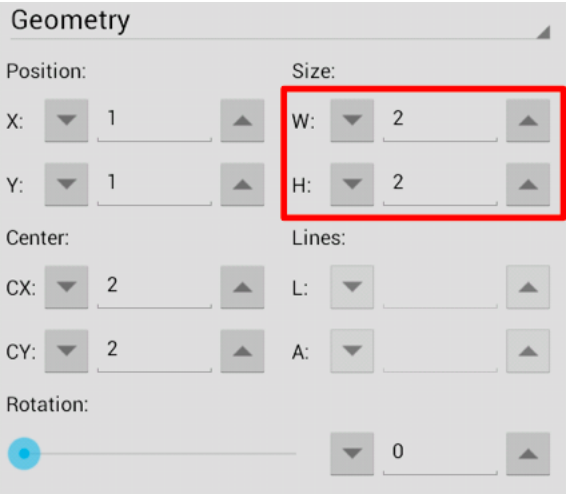
Release your finger once the shape is completed to disable this feature. You will have a perfectly shaped square when finished.



5

To view the **Width** and **Height** of your shape, tap on the **Info Button** to open the Info Menu, and then select **Geometry**. The dimensions of the shape will appear under the **Size** section of the Geometry Sidebar.

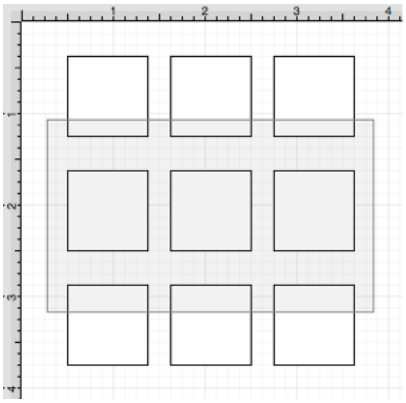


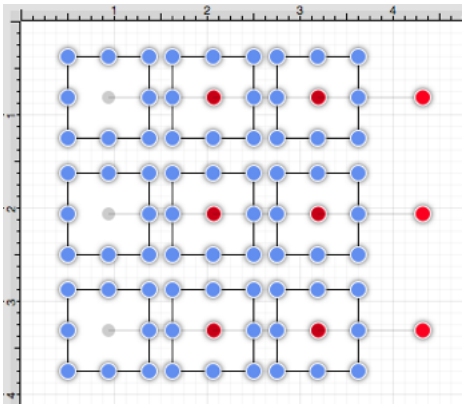

Geometry
Position:
Size:
X:
1
W:
2
Y:
1
H:
2
Center:
Lines:
CX:
2
L:
CY:
2
A:
Rotation:
0

6.4. Using the Selection Rectangle

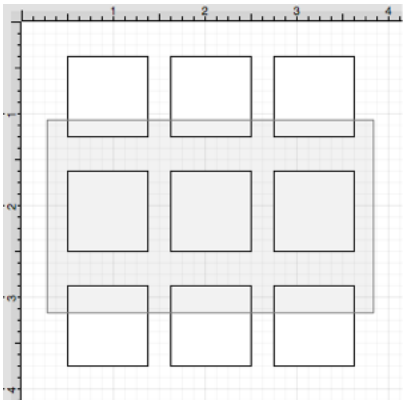
The **Selection Rectangle** provides an easy method for selecting multiple figures within a drawing. Touch and drag from left to right or right to left on any point in the Drawing Canvas and then lift your finger once the **Selection Rectangle** resides over the desired area. Figure selection will vary depending on the direction used for dragging your finger.

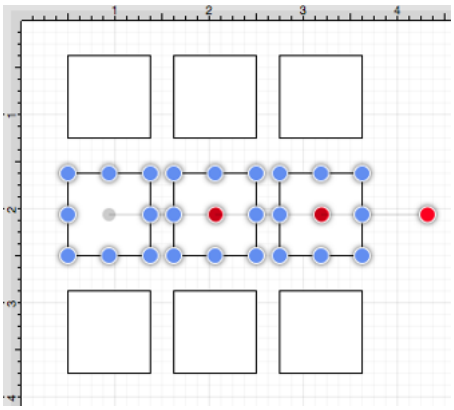
If you drag the **Selection Rectangle** from left to right, it will select all figures within its bounds as well as any figures it intersects.





While this approach is a great choice for making a quick selection in a defined area, it does not offer the amount of control that is sometimes needed during figure selection. You can drag the **Selection Rectangle** from right to left to select figures residing in its bounds without selecting intersecting figures. This provides finer control for using the **Selection Rectangle** to select multiple figures in a specified area of the Drawing Canvas.





Note: For more information about selecting figures within a drawing, please refer to the Selecting a Figure page of the documentation.

7. Miscellaneous

TouchDraw supports specific file formats for importing or exporting and provides options. The following documentation sections supply information regarding:

- File Format Support
- Handle Types
- Zooming Gestures

7.1. File Format Support

Images or drawings from outside applications can be imported for editing within TouchDraw. A created drawing in TouchDraw can also be exported into an alternative file format. See the Importers and Exporters tables for additional information about supported file formats. Known issues during exporting or importing of specific formats are noted in the the following documentation pages.

7.1.1. Importers

Importer Type	Supported Import Methods
Image Importer	TouchDraw supports inserting or pasting bitmap images into a drawing.
SVG Importer NotesSVG (Scalable Vector Graphics)	TouchDraw supports importing SVG files into a drawing.
VDX (Visio XML Drawing Format)	TouchDraw supports importing VDX files into a drawing.
EMF (Enhanced Metafile)	TouchDraw supports importing EMF files into a drawing.
WMF (Windows Metafile)	TouchDraw supports importing WMF files into a drawing.

7.1.1.1. Image Importer Notes

TouchDraw for Android supports importing the following bitmap image formats.

- PNG
- JPEG

Limitations

- None Known

Known Issues

- None Known

7.1.1.2. SVG Importer Notes

TouchDraw supports importing Scalable Vector Graphics (SVG) files. This page documents the known issues and limitations of the importer.

Limitations

Not every SVG feature is supported by the importer. When an SVG feature has no equal within TouchDraw, the original SVG command is ignored. As SVG is large and complex specification, the following is a non-exhaustive list of limitations we are aware of:

- Elliptical gradients cannot be imported.
- Clipping regions are not imported.

Known Issues

- None Known

7.1.1.3. VDX Importer Notes

TouchDraw supports importing Microsoft Visio XML Drawing (VDX) files. This page documents the known issues and limitations of the importer.

Limitations

Not every Visio feature is supported by the importer as TouchDraw does not have every feature that Visio does, nor does Visio have every feature TouchDraw does. When a feature has no equal within TouchDraw, the original command and/or data is ignored. As the Visio file format is very extensive, the following is a non-exhaustive list of limitations we are aware of:

- Only visual information (the look/layout of the drawing) is imported. Any semantic information (associated metadata) stored in the Visio file will be lost.

Known Issues

- None Known

7.1.1.4. EMF Importer Notes

TouchDraw supports importing Enhanced Metafile (EMF) files mainly for the purpose of importing embedded stencil file in Visio documents. This page documents the known issues and limitations of the importer.

Limitations

- None known

Known Issues

- None Known

7.1.1.5. WMF Importer Notes

TouchDraw supports importing Windows Metafile (WMF) files mainly for the purpose of importing embedded stencil file in Visio documents. This page documents the known issues and limitations of the importer.

Limitations

- None known

Known Issues

- None Known

7.1.2. Exporters

File Formats	Options
Image Exporter	TouchDraw supports the exporting of a drawing in the form of a bitmap image (PNG/JPEG). Refer to the Sharing a Drawing or section of the documentation.
Scalable Vector Graphics (SVG)	TouchDraw supports the exporting of a drawing as a Scalable Vector Graphics (SVG). No additional options are associated with this choice. Refer to the SVG Exporter Notes section of the documentation to learn more about this exporting option.

File Formats	Options
Microsoft Visio (VDX)	TouchDraw supports exporting a drawing as a Microsoft Visio (VDX) file. No additional options are associated with this choice. Refer to the VDX Exporter Notes section of the documentation to learn more about this exporting option.

7.1.2.1. Image Exporter Notes

TouchDraw for Android supports exporting drawings the following bitmap image formats:

- PNG
- JPEG

Limitations

- None Known

Known Issues

- None Known

7.1.2.2. SVG Exporter Notes

TouchDraw supports exporting drawing files to the Scalable Vector Graphics (SVG) file format. The following page outlines the known issues and limitations of the exporter.

Limitations

- Only the visual information will be exported as SVG does not support some TouchDraw features such as connections.

Known Issues

- None known

Notes

- Many SVG viewers and/or editors do not support all of the features of SVG that TouchDraw may possibly use to export your drawing. Specifically, many SVG views do not correctly render shadows. The Elevenworks team recommends using the Google Chrome web browser to view and validate that your

drawing was exported as expected. In our testing, Chrome has been found to have the most full feature (freely available) SVG rendering support.

7.1.2.3. VDX Exporter Notes

TouchDraw supports exporting drawing files to the Microsoft Visio XML Drawing (VDX) file format. The following page outlines the known issues and limitations of the exporter.

Limitations

- Font, font color and font size are the only font (text) attributes currently exported.
- Exporting of the drawing background color is not supported.

Known Issues

- None

7.2. Handles Reference

TouchDraw uses the color and decoration to differentiate the different functions of the handles so that you can quickly identify what they do. The following is a table of the different handles and their function.

Image	Handle	Description
	Bounds Handle	The **Bounds Handle** is used to change the width and height of a shape.
	Group Bounds Handle	The **Group Bounds Handle** is used to change the width and height of a group. The center dot in the handle is provided to let you know you have selected a group of figures, as opposed to a single figure.
	Path Start Handle	The **Path Start Handle** indicates which point or a path is the starting point.
	Path End Point Handle	The **Path End Point Handle** indicates which point is an end (or start, depending on how you look at it) point of a line or curve segment within a path.
	Path Control Point Handle	The **Path Control Point Handle** indicates which points of a path are control points.
	Phantom Path Control Handle	The **Phantom Path Control Handle** is a control handle displayed in gray to indicate that it has not been used. This characteristic provides a hint to the TouchDraw application that the handle should function as a control handle in scenarios where the next drawn segment is a curve.
	Rotation Handle	The **Rotation Handle** is displayed on shapes (or groups) which can be rotated around their center point. You can use the "function key feature" in conjunction with the rotation handle to rotate figures in increments of 15 degrees.
	Center of Rotation Handle	The **Center of Rotation Handle** indicates where the current center of rotation point lies in a selected shape(s) or group of shapes.

Image	Handle	Description
	Lock Handle	The **Lock Handle** indications that the selected figure (or group) is currently locked, which means it cannot be resized or moved.
	Connection Handle	The **Connection Handle** indications that the selected line can be used to connect to figures.
	Gradient Location Handle	The **Gradient Location Handle** indicates the current center location of a gradient fill within a figure(s) or group of figures.

7.3. Zooming

TouchDraw uses the standard Android gestures to zoom a drawing. Refer to the following table to learn more about available zoom gestures:

Icon	Action	Description
	Zoom In	To zoom in on an area (make it larger), first make sure the Move, Zoom and Selection Tool is active. Place two fingers on the drawing canvas and slowly spread them apart. The drawing will zoom in on the area between the two fingers as they are spread.
	Zoom Out	To zoom out of a drawing (make it smaller), place two fingers on the drawing canvas (as above); however, in this case the two fingers are pinched by slowly bringing them together. The drawing will zoom out based on how far the two fingers come together as the pinching action occurs.
	Zoom To Fit	If the Move, Zoom and Selection Tool is active and a triple tap is performed anywhere in the drawing canvas, the drawing will be zoomed to fit into the drawing view.
	Zoom To Origin	If the Move, Zoom and Selection Tool is active and a quadruple tap is performed anywhere in the drawing canvas, the zoom level will be reset to 100% and the origin of the drawing will be repositioned so that 0,0 is in the upper left hand corner.
	Panning	If the Move, Zoom and Selection Tool is active, place two fingers on the drawing canvas and them drag them around to pan around a drawing.

Note: The panning and zooming gestures can be combined into one fluid gesture to quickly zoom and move to the target portion of a drawing.

7.4. Managing Low Memory

There are some cases when TouchDraw will not be able to load embedded bitmap images in a drawing due to low memory on the user's device. When this occurs, TouchDraw will display a salmon colored placeholder where the image should be located for the current editing session. The embedded bitmap image will still be saved with the drawing, so there will be no data loss; however it will simply not be shown.

7.5. Installing a Custom TrueType Font

TouchDraw for Android looks for fonts in four different locations (directories) on the device:

- /system/fonts
- /system/font
- /data/fonts
- Android/data/com.elevenworks.touchdraw/files/Fonts (SDCARD)

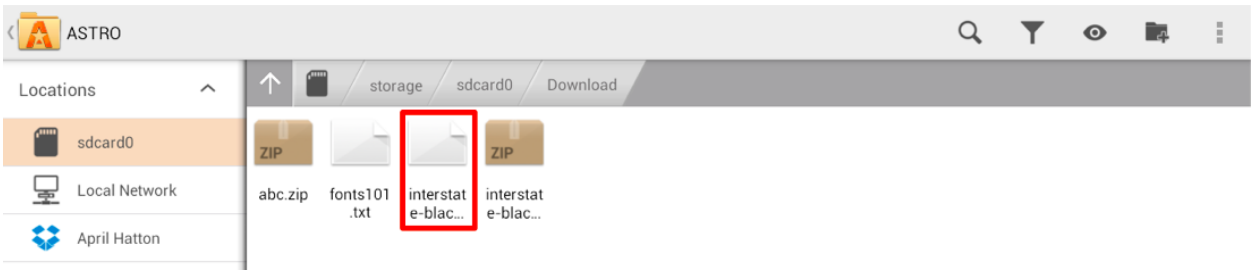
The preferred way to install fonts is to copy them to the **Android/data/com.elevenworks.touchdraw/files/Fonts** directory on the SDCARD.

The following steps and screenshots show how to perform this process with the Astro File Manager App on an Android device. The process is essentially the same with any file manager; however, differences between user interfaces (UI's) could result in slight variations regarding how files are moved between directories.

Follow the steps below to install a **Custom TrueType Font**:

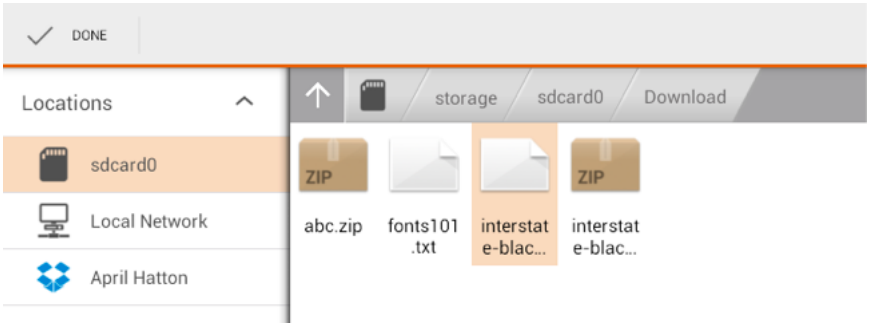
1

Browse to the directory where the **TrueType Font** is currently stored.



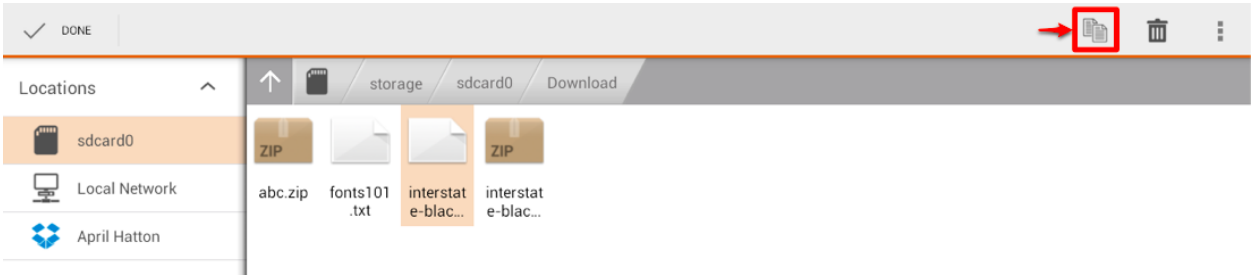
2

Press down on the file name for approximately one second.



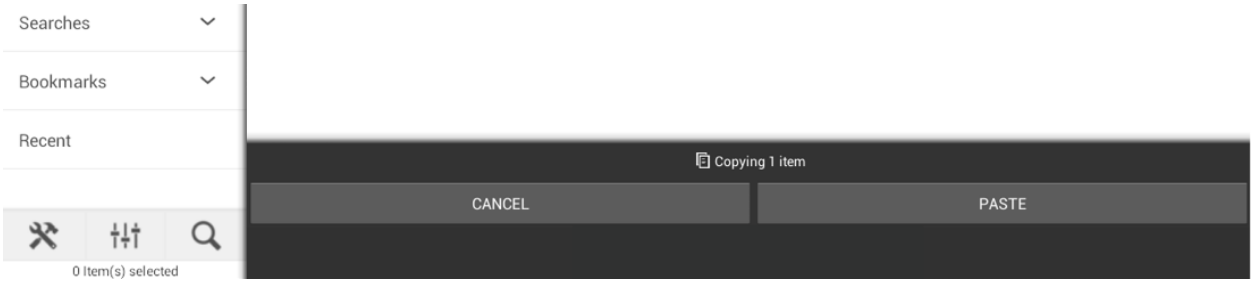
3

Tap on the **Copy Button** in the upper right hand corner of the screen.



4

The option to **Paste** the selected file will appear at the bottom of this screen.



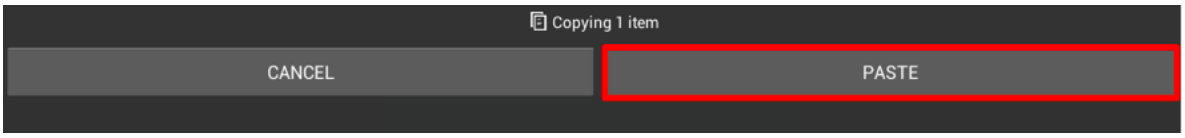
Please note that if you tap on paste before changing the directory, the file will be copied into the same location.

5

Browse to the **Android/data/com.elevenworks.touchdraw/files/Fonts** directory on the SDCARD.

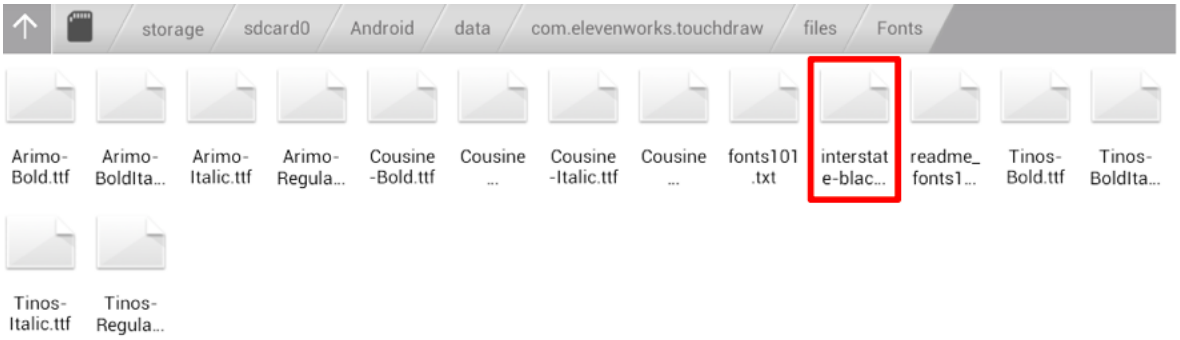
6

Tap on **Paste** at the bottom of the screen to paste the file into this directory.



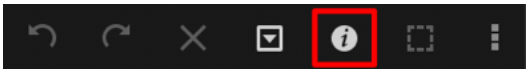
7

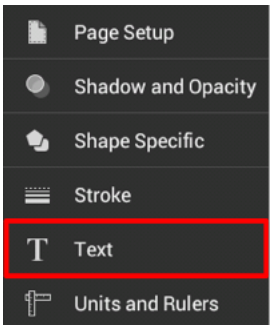
The file will appear in the directory as shown below:



The added font will not appear in the list of fonts for text selection until TouchDraw has been closed and opened again on the device.

To access the list of fonts within TouchDraw for Android, tap on the **Info Menu Button** in the Top Toolbar and then select **Text**.





The installed **Custom TrueType Font** will appear in the Text Sidebar, as shown below.