# QuiltCAD™

QuiltCAD will be used to create an entire quilt layout. It can be used for single patterns, pantographs, borders, or sashings. There are some options that only QuiltCAD can do when compared to other portions of the software. These options will be covered in this section, as well as all the tools and options that can be used to create a masterpiece!

Contents

Design and Create: New Quilt with QuiltCAD™

Now, let's take a look at the quilt features. As you take the tour, we hope you appreciate the simplicity we've designed into the software. First you'll find all of the tools are ALWAYS in the same place.
We have none of those annoying tear away tool bars that re-size themselves, are most of the time hidden, and hide other things! We also do not have hundreds of microscopic icons to decipher. Our tools are clearly labeled, always there, and easy to use.
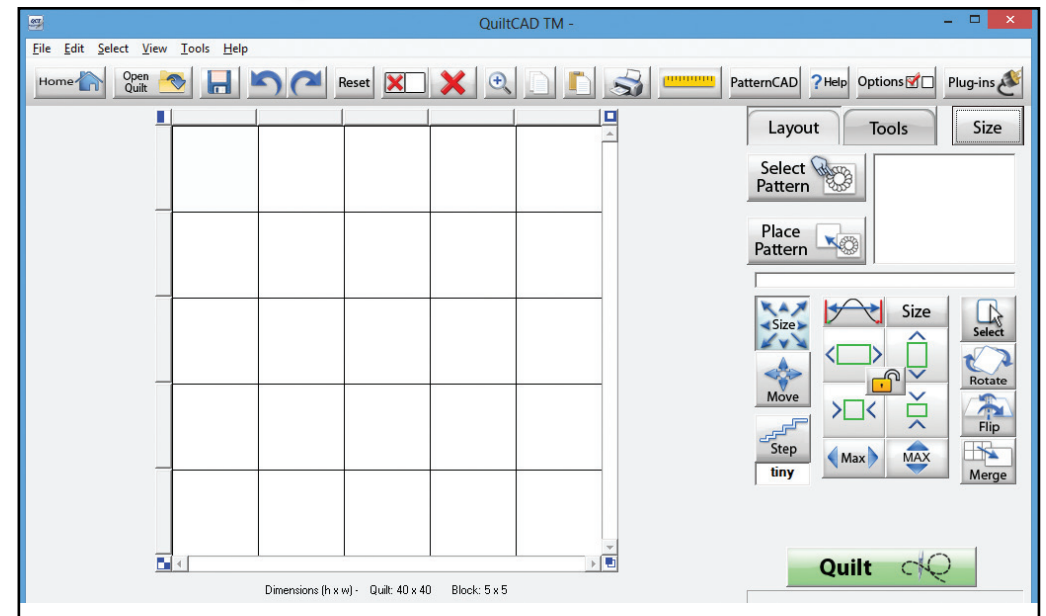
File Menu

- **New** — Restores the quilt to its default settings. Prompts you to save the quilt you currently have open.
- **Open Quilt** — Opens a quilt that has been previously saved.
- **Save Quilt** — Opens the screen to save your Quilt.
- **Read Pattern** — Opens pattern selection window.
- **Print** — Lets you print selected patterns, or the whole quilt, to a printer.
- **Copyright Information** — Displays any copyright information of a selected pattern.
- **Quit** — Closes the software.

Many of these commands can be quickly found on the tool bar just below the Menu bar.
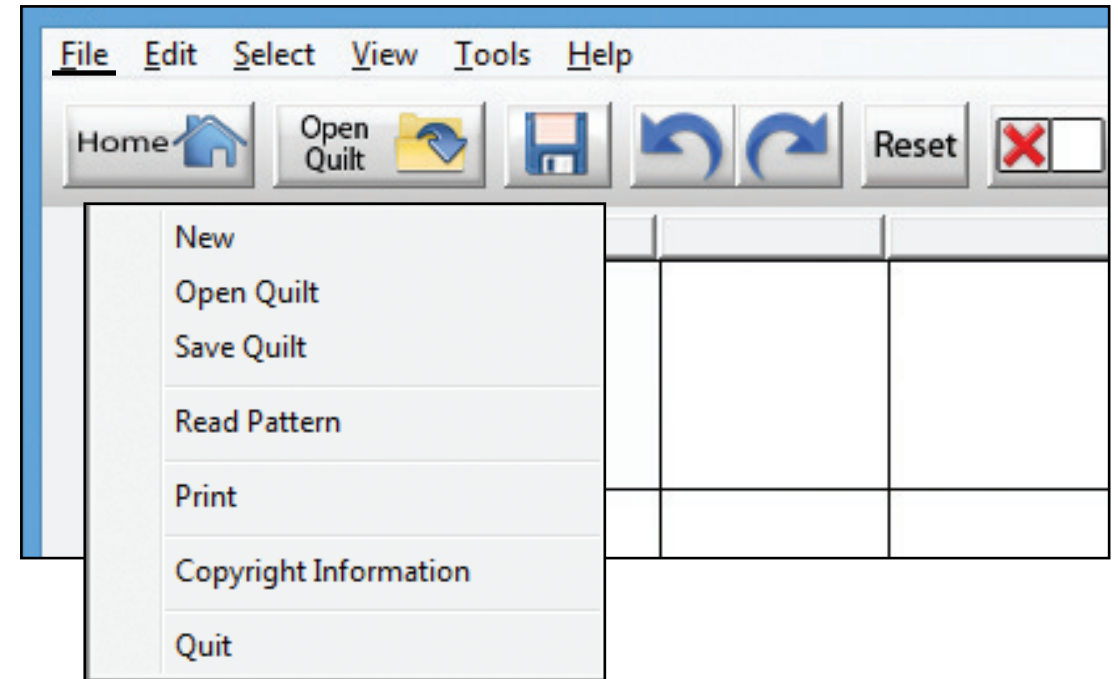
Edit Menu

- **Undo** — Undoes last action performed.
- **Re-do** — Restores last action if undone.
- **Copy** — Copies the pattern and block format of the selected block(s).
- **Paste** — Places the pattern and block format of the copied block(s).
- **Delete** — Clears the pattern and block format of the selected block(s).
- **Place** — Places the current pattern displayed in the "Pattern Selection" window into the selected block(s).
- **Flip Horizontal** — Will flip the selected pattern(s) horizontally.
- **Flip Vertical** — Will flip the selected pattern(s) vertically.
- **Rotate CW** — Will rotate the selected pattern(s) 45° in a clock-wise direction.
- **Rotate CCW** — Will rotate the selected pattern(s) 45° in a counter-clock-wise direction.
- **Clear All** — Will remove all patterns and formatting from all blocks on the quilt.
- **Preferences** — Opens the preference menu which allows you change the look of the QuiltCAD screen.
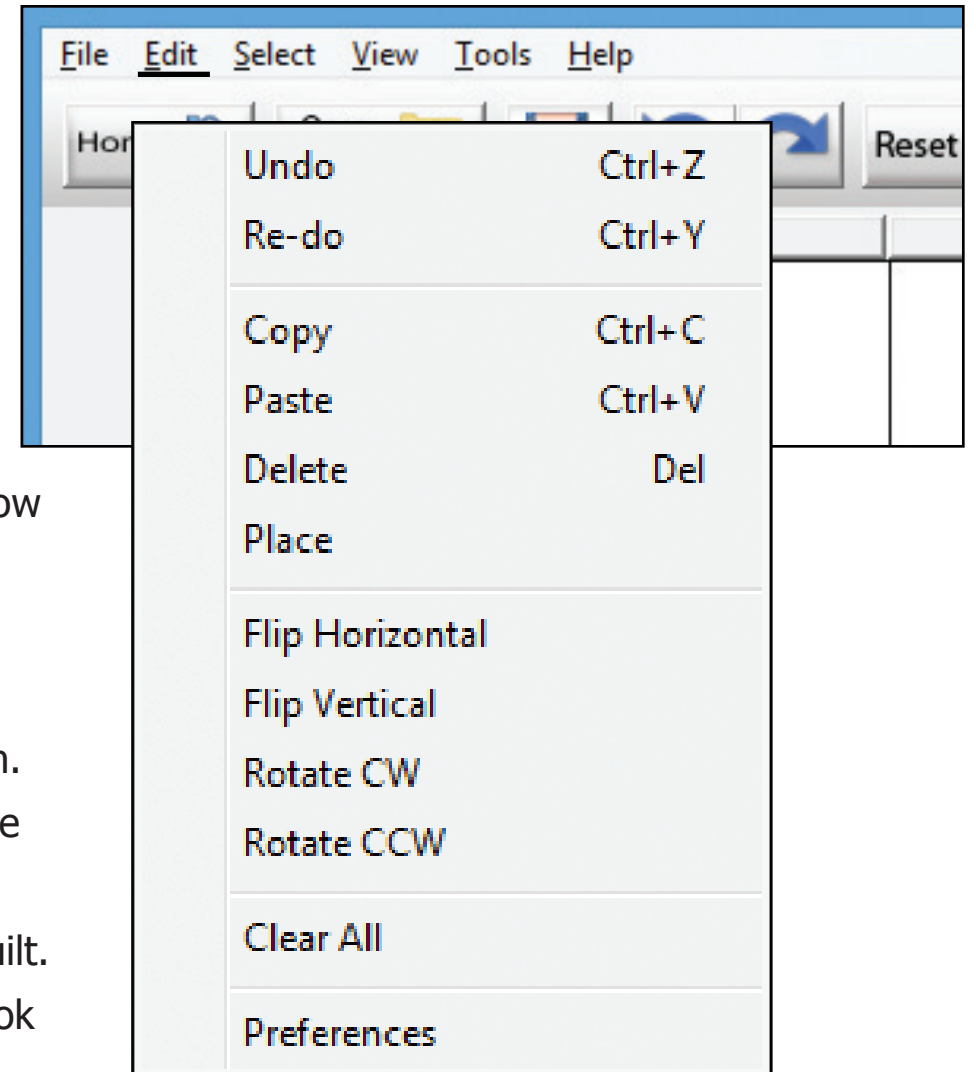
Select Menu

- **Select All** —Selects all blocks of the quilt.
- **Unselect All** — Unselects all blocks of the quilt.
- **Checker Board** — Selects every other block in a checkerboard pattern on the quilt.
- **Alternating Rows** — Selects every other row.
- **Alternating Columns** — Selects every other column.
- **Odd Blocks on Odd Rows** — Selects blocks 1,3,5... in row 1,3,5...
- **Even Blocks on Odd Row**s — Selects blocks 2,4,6... in row 1,3,5...
- **Odd blocks on Even Rows** — Selects blocks 1,3,5... in row 2,4,6...
- **Even Blocks on Even Rows** — Selects blocks 2,4,6... in row 2,4,6...
- **Borders** — Selects all outside blocks of the quilt.
- **Corners** — Selects the four corner blocks of the quilt.
- **Borders No Corners** — Selects the outside blocks except the corners.
- **Opposite** — Selects the unselected blocks and deselects all selected blocks.
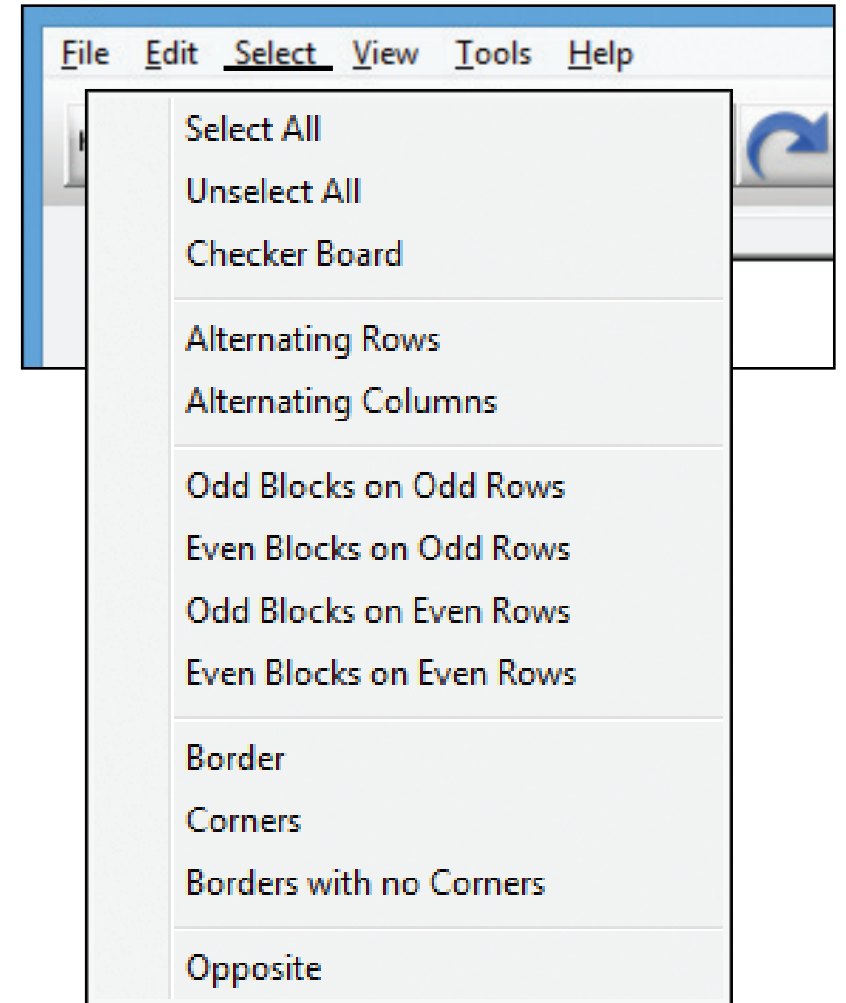
View

Zoom — Will enlarge the view of the selected blocks.
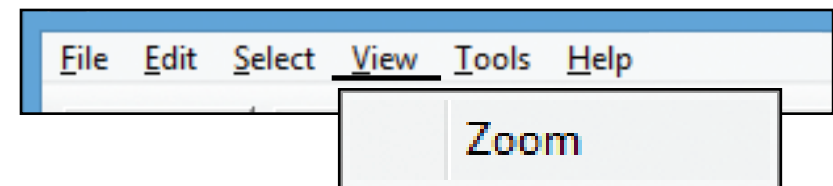
Tools Menu

- **PatternCAD** — Opens PatternCAD.
- **None** — Does what it says
- **Row Rippling** — Gives you choices to ripple a pattern or a row.
- **Repeat Pattern** — Lets you place two or more of the same pattern into one block.
- **Triangle Blocks** — Gives you tools for placing triangles into a block.
- **CW Border** — Will auto arrange and size the patterns in the border to a clockwise orientation.
- **CCW Borde**r — Will auto arrange the patterns and size in the border to a counter-clockwise orientation.
- **Quick Pantograph** — Reduces the quilt view down to a single row.
- **Quick Border** — Auto arranges the patterns in the border to a continuous border.
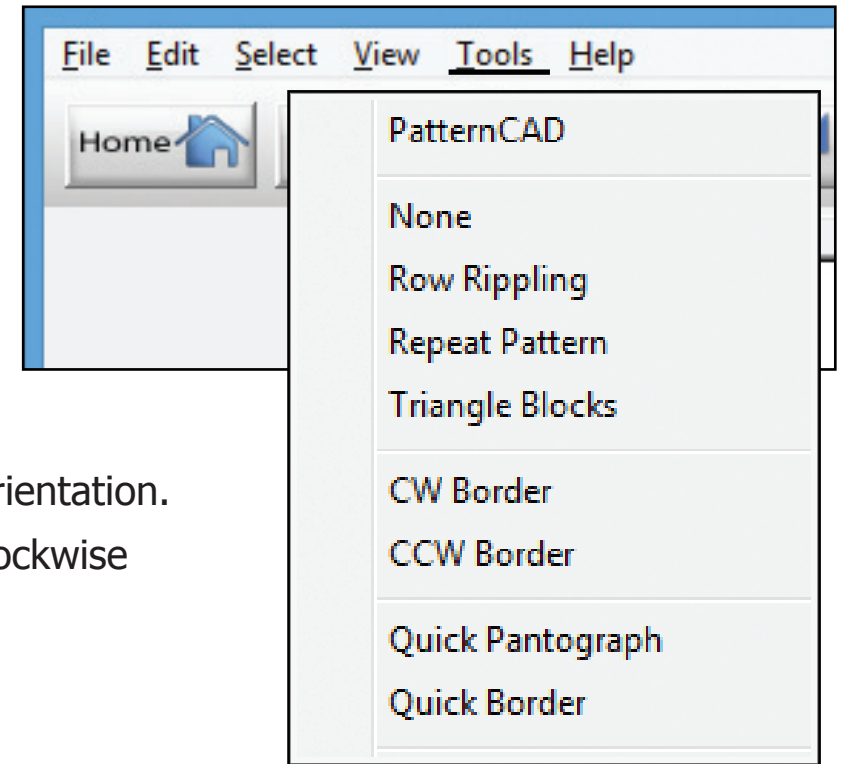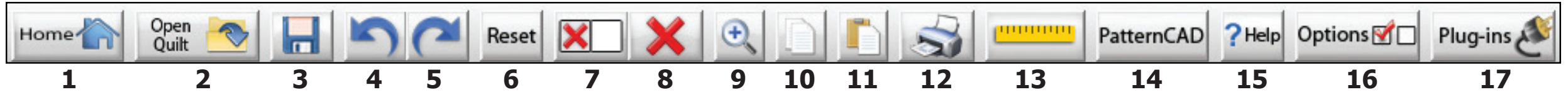
Help

- **About** — Displays the current version of the software that you are using, as well as the firmware version.
- **Help Topics Menu** — Access to this help guide and more.
- **License Agreement** — Displays the EULA for the software.
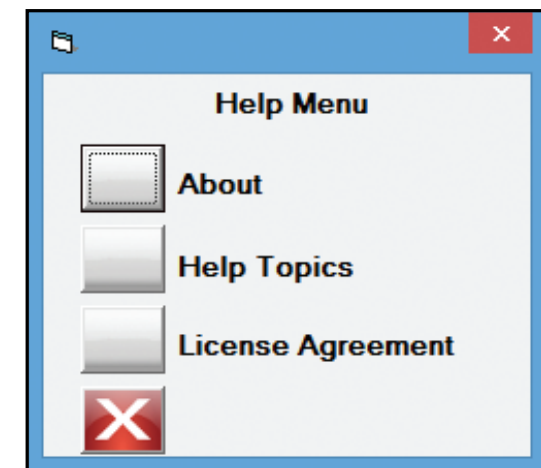
Menu Bar

1. **Home** — Will take you back to main screen, exit.
2. **Open Quilt** — Opens menu to use a previously saved Quilt.
3. **Save Quilt** — Saves the Quilt you are currently working on.
4. **Undo** — One step back to undo an unwanted operation.
5. **Re-do** — Replaces the actions removed by Undo.
6. **Reset** — This will reset the selected block size to what it was set at when the quilt was created. Use this to un-merge blocks.
7. **Delete Selected Blocks** — Clears all patterns in the blocks you have selected.
8. **Delete All** — Clears all blocks, selected and unselected.
9. **Zoom** — Zooms in on selected Blocks. Tap once to zoom in, tap again to zoom out.
10. **Copy Pattern** — Copy's selected pattern to clipboard.
11. **Paste Pattern** — Pastes the pattern copied by Copy Pattern.
12. **Print** — Opens the print menu to print the selected blocks.
13. **Ruler** — Connects to the robotics and used to measure your Quilt or Blocks.
14. **PatternCAD** — Launches PatternCAD.
15. **Help** — Access Help Menu.
16. **Options** — Opens the Preferences Menu.
17. **Plug-ins** — Import/Export Module.

Quilt Selection Area

Here is the heart of QuiltCAD, the layout of your quilt.

'The Quilt' is a graphical spreadsheet that permits you to precisely plan and view your continuous line art stitch designs.

The squares represent the blocks of your quilt, the number and size of the blocks can be easily set to the dimensions or your choice. The buttons surrounding the squares provide powerful block selection tools. From simple pictures to astonishingly intricate patterns, you will truly enjoy the ease that you can design and implement your continuous line art into your quilts.
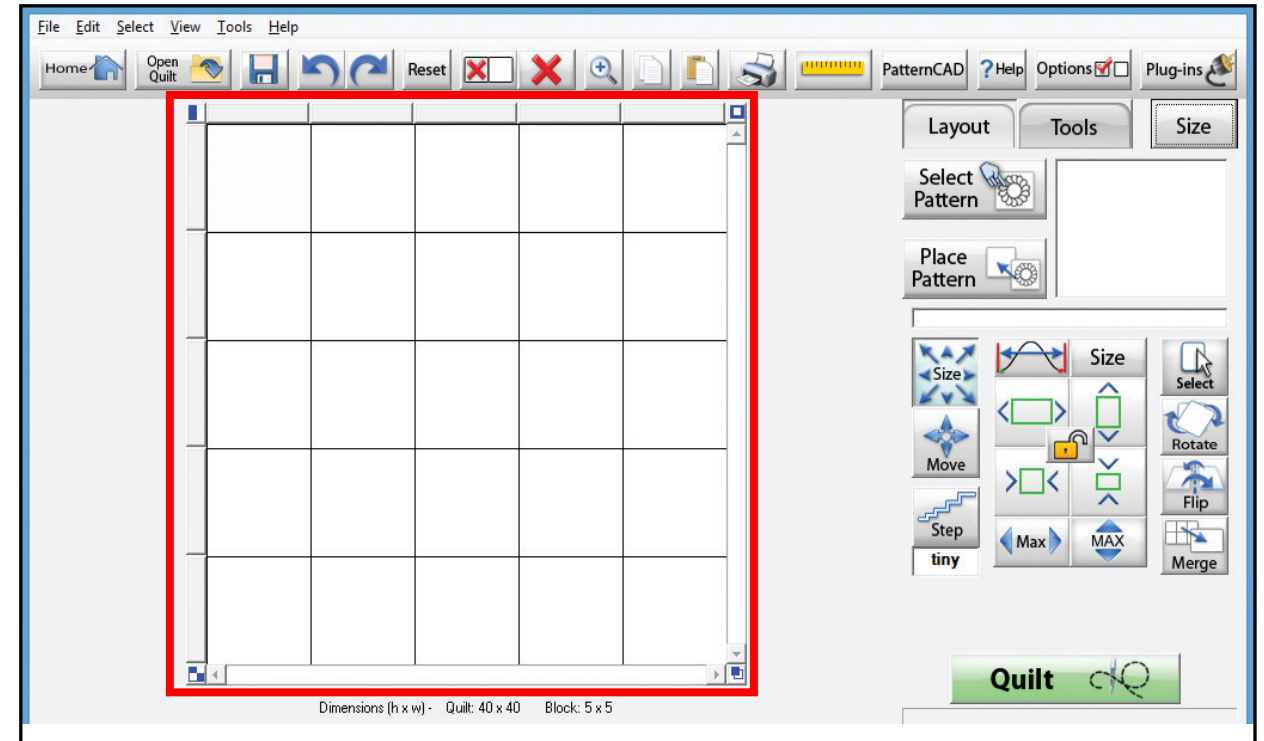
Quilt Layout

When you open a new quilt the default setting is a quilt layout. The quilt size is 40" x 40" and the block size is 8" x 8", but can be changed by tapping Size.

Now you can see the Quilt Setup dialog box, which allows you to change the number of rows and/or columns, the quilt size, and the block size. When you change any one of the options at least one other option will change to keep the ratio the same. Once you have everything set up the way you want, you can tap OK.
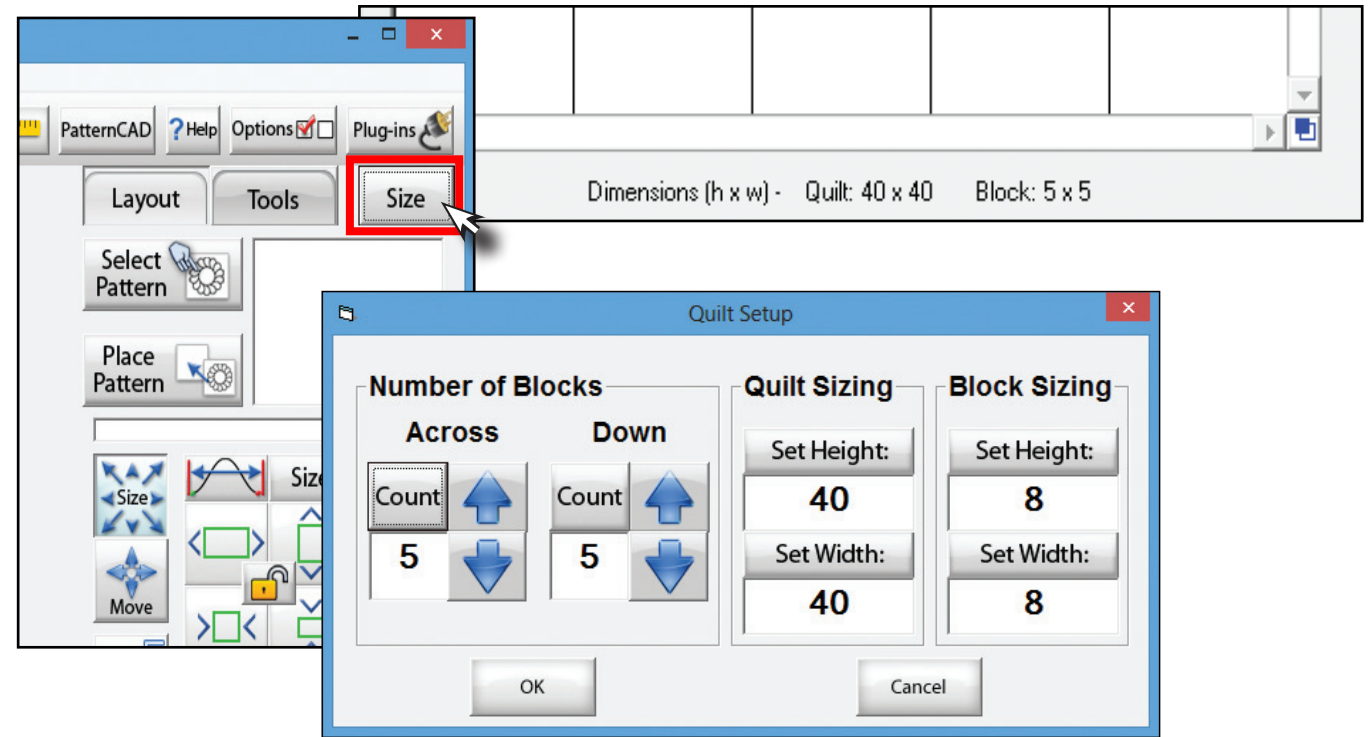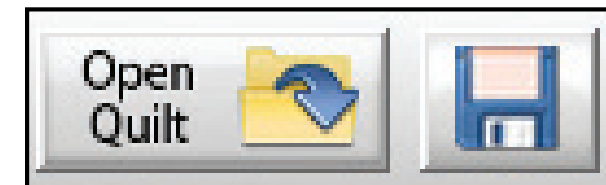
Open and Save

Open Quilt —

Opens a quilt previously saved so it can be sewn or modified.

Save Quilt —

This option will save the current quilt you are working on so it can be opened at a later time.

Pattern Tools

1. Select Pattern — Will open the Pattern directory.

2. Place Pattern — Places selected patterns.

∗ By tapping here you can also use the pattern preview window to place the selected pattern.

This area is used to change the pattern size and orientation of the patterns within the block. We can also merge blocks here. We will briefly cover the layout options then each one in depth. Please note the menu area will change depending on the pattern option you have selected.

1. Size — Used to change the size of the pattern.

2. Move — Moves the location of the pattern; up, down, left, right.

3. Step — Changes the step size; tiny, small, Medium , BIG and JUMBO.

4. Select — Selection options for the quilt and borders.

5. Rotate — Rotates the pattern.

6. Flip — Flips the pattern vertically and/or horizontally.

7. Merge — Merges selected blocks.
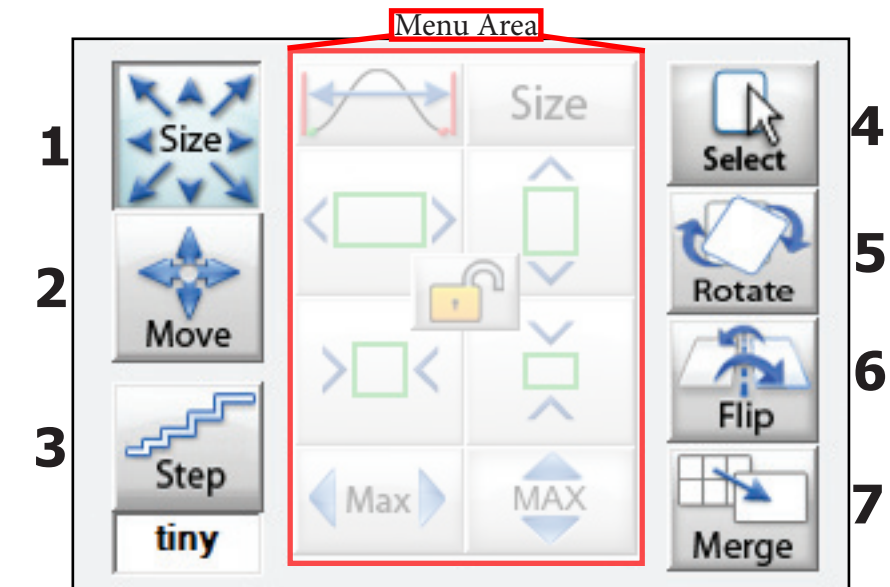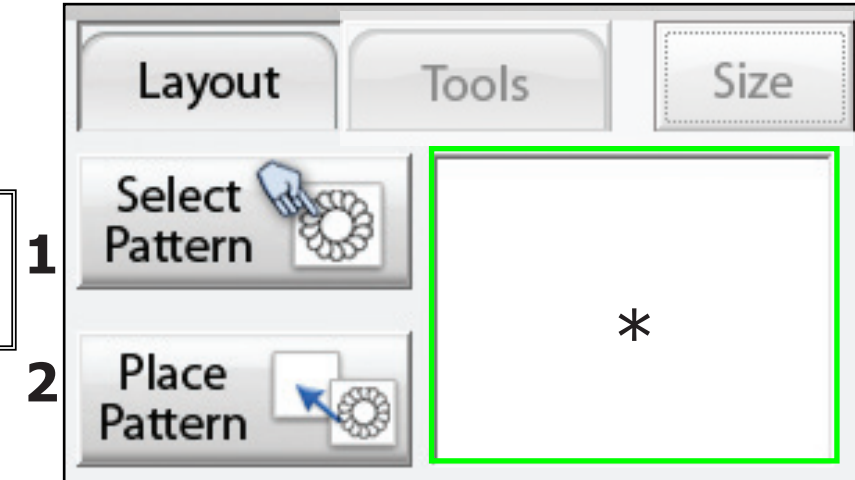
Pattern Tools - Size

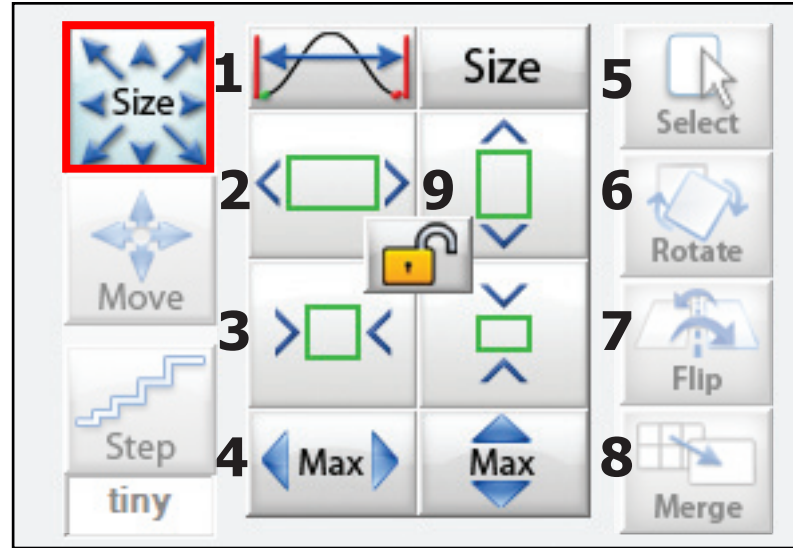This category is used to change the height and width of the pattern.

1. Max Width for pattern start and end points — This will stretch the pattern until the sides reach the block border. Please note that this will make the pattern go beyond the block it was placed in.

2. Increase width — Increases the width of the pattern by 1 step*.

3. Decrease width — Decrease the width of the pattern by 1 step*

4. Max block width — This will stretch the pattern until the sides of the pattern reach the block border. Please note that this may make the pattern go beyond the block it was placed in, and will change the aspect ratio.

5. **Reset pattern size** — Resets the pattern to the default size and orientation in the block.

6. **Increase height** — Increases the height of the pattern by 1 step*.

7. **Decrease height** — Decreases the height of the pattern by 1 step*.

8. **Max block height** — This will stretch the pattern until the top and bottom of the pattern reach the block border. Please note that this may make the pattern go beyond the block it was placed in, and will change the aspect ratio.

9. Aspect Ratio lock — When the lock is open the aspect ratio will not be kept for the pattern. This means if you make it wider, the height will not change at all. When the lock is closed the aspect ratio will be kept. So if you change the width of the pattern the height will change at the same step size and retain the aspect ratio.

Pattern Tools - Move

This option is used to change the position of a pattern within a block.

1. Move Right — Moves the pattern one step* to the right.

2. Move Left — Moves the pattern one step* to the left.

3. Move up — Moves the pattern one step* up.

4. Move Down — Moves the pattern one step* down.

5. Reset Move — Resets the pattern to the original location in the block.

* — The increment of change will depend on your step size setting.
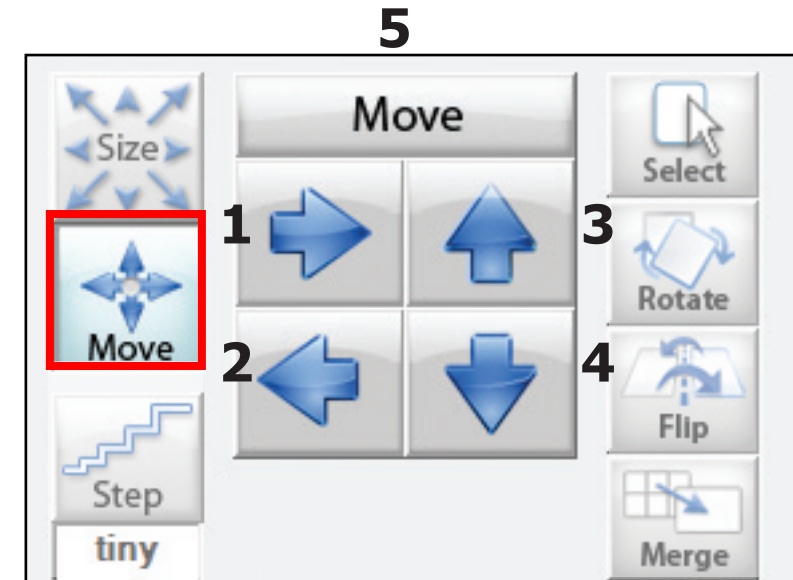
Pattern Tools - Step Size

This option is used to change the size of the steps that QuiltCAD makes when making changes to the pattern.

There is no numerical formula associated with the step size, they are simply increments in size according to the block or quilt size.

- **Tiny** — A small increment of movement.
- **Small** — A slightly bigger increment of movement than Tiny.
- **Medium** — A bigger increment than Small.
- **Big** — A large increment in movement as compared to Medium.
- **Jumbo** — The largest movement increment.

Each click on the Step icon will cycle through the different step size.
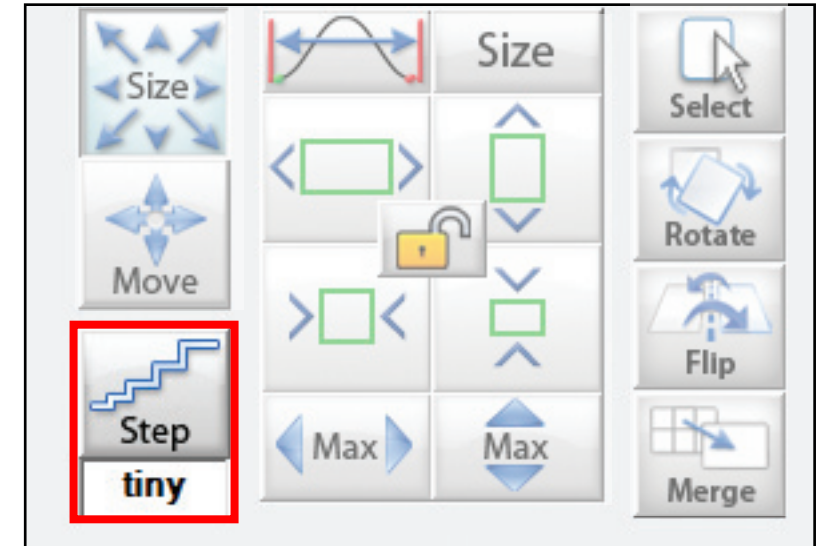
Step sizes are like the steps you take, a jumbo step is much larger than a small step.

Pattern Tools - Selection Tools

Selecting rows, columns and blocks

QuiltCAD provides you with powerful tools to create continuous line patterns as borders on your quilt. It all begins with selecting which blocks you want to put your patterns in. QuiltCAD block selections are 'persistent'. That is, once you select a block it stays selected until you do something else to deselect it. When a block is selected it will be grey (by default), when a block box is not selected it will be white. The light blue box represents the last block you made changes to.
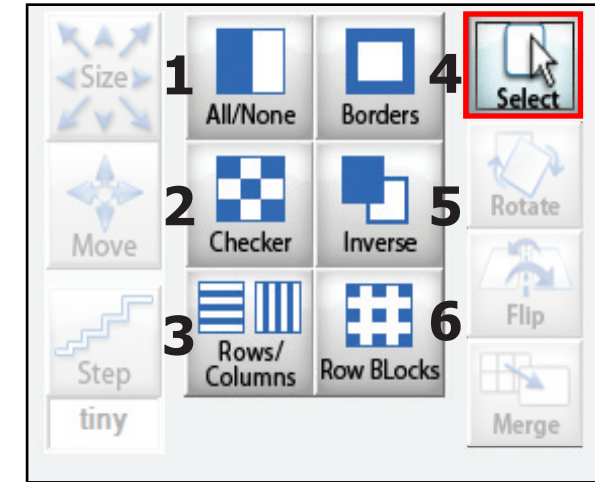
1. **All/None** — Tap once select all blocks. Tap twice and it deselects all blocks.

2. **Checker** — Selects every other block in a checker pattern. Tap it again to select the opposite blocks.

3. **Rows/Columns** — By tapping once it will select every other column. Tapping twice will select every other row.

4. **Borders** — One Tap selects the whole border. Two taps selects just the corners. Three taps highlights the border without corners.

5. **Inverse** — Selects the opposite of what is currently selected.

6. **Row Blocks** — This feature combines the Checker function with the Rows/Columns function. It selects every other row (then column) and selects the checkerboard blocks for those rows.

There are two ways to select rows, columns, borders, and alternating blocks. You can use the menu shown on this page, but you can also use the Selection tools around the outside of your quilt area as well.

Pattern Tools - Quick Select

1. **All or Nothing** — Tapping this button once will select all blocks on your quilt. Tapping it a second time will deselect all blocks.

2. **Columns** — By tapping this you can select all blocks in a column.

3. **Borders** — Please see the next section.

4. **Rows** — By tapping this you can select all blocks in a row.

5. **Checkers** — Tapping this option will select the blocks on the quilt in a checker pattern. Tapping it a second time will select the opposite blocks.

6. **Select Opposite** — Selects the opposite blocks that are currently selected, and deselects the blocks currently selected.
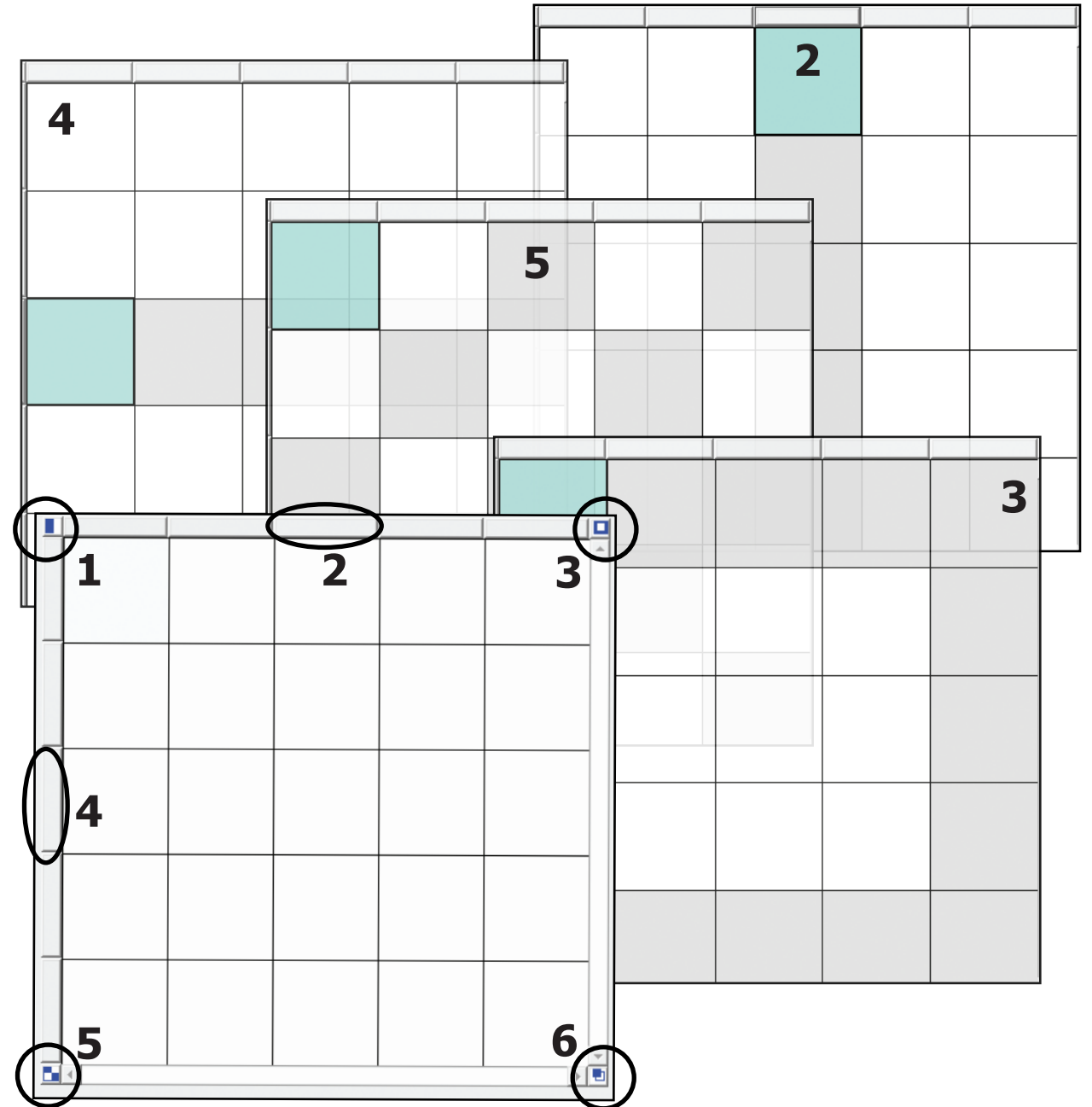
Pattern Tools - Quick Border Select

This tool is found on the top right of the Quilt Selection window.

- Tapping it once will select the corners first, so you can place the same pattern in all four corners.
- Tapping it again it will select the outside blocks minus the corners.
- The third time you tap it all the border blocks will be selected.

Once you place your patterns using these block selections tools you can easily go to the Tools menu and choose CW or CCW border to have QuiltCAD automatically size and align the border.

One Tap

Two Taps

Three Taps
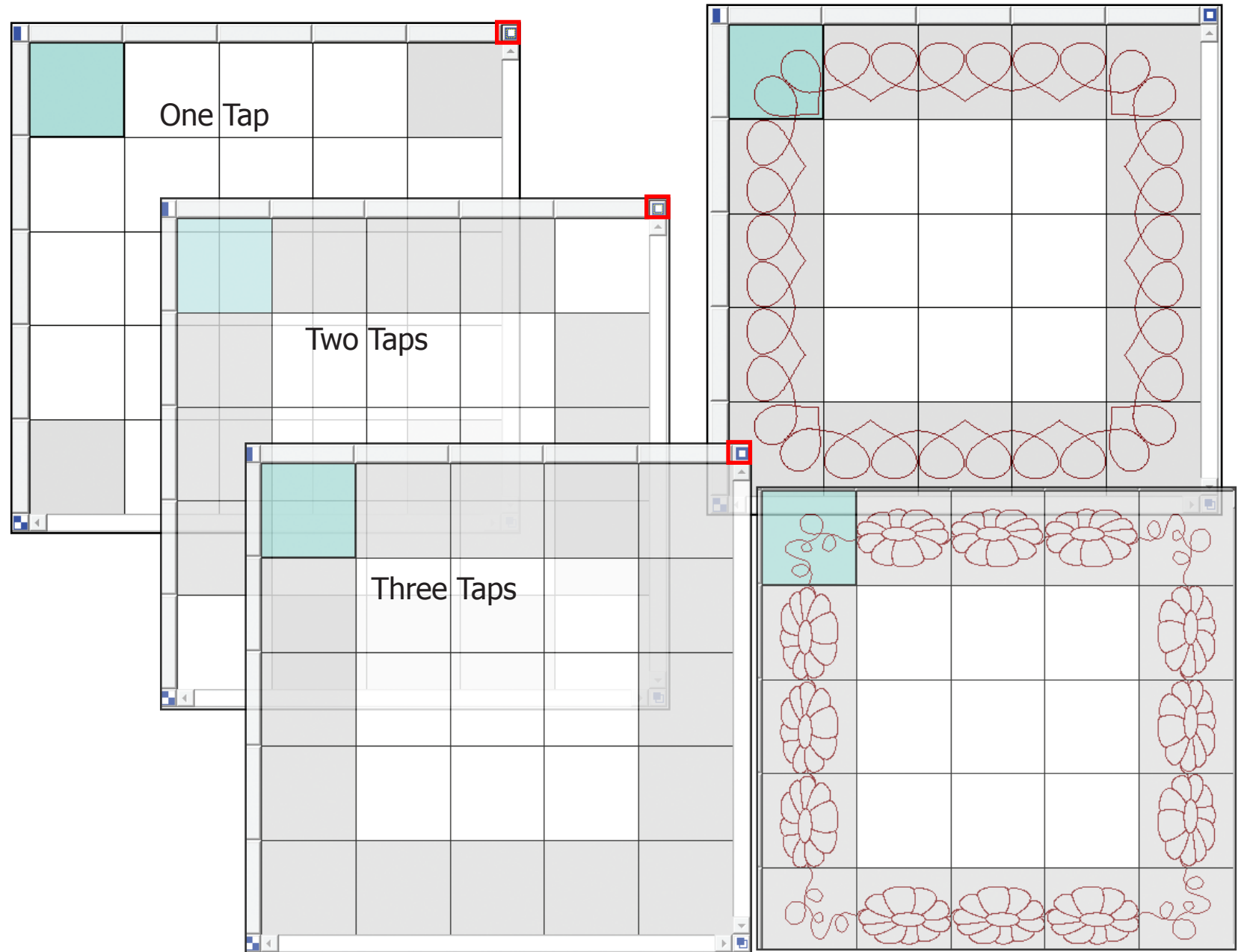
QuiltCAD: Rotate

You will use this option if you wanted to rotate the pattern within the block.

1. **Rotate 1º** — Rotates the pattern 1º

2. **Rotate 45º** — Rotates the pattern 45º

3. **Rotate 15º** — Rotates the pattern 15º

4. **Rotate 5º** — Rotates the pattern 5º

5. **Reverse** — Change the direction the pattern is rotating.

6. **0º** — Sets the pattern back to a centered position within the block.

7. **Current Pattern Rotation** — This area displays the current degree of rotation of the selected pattern.
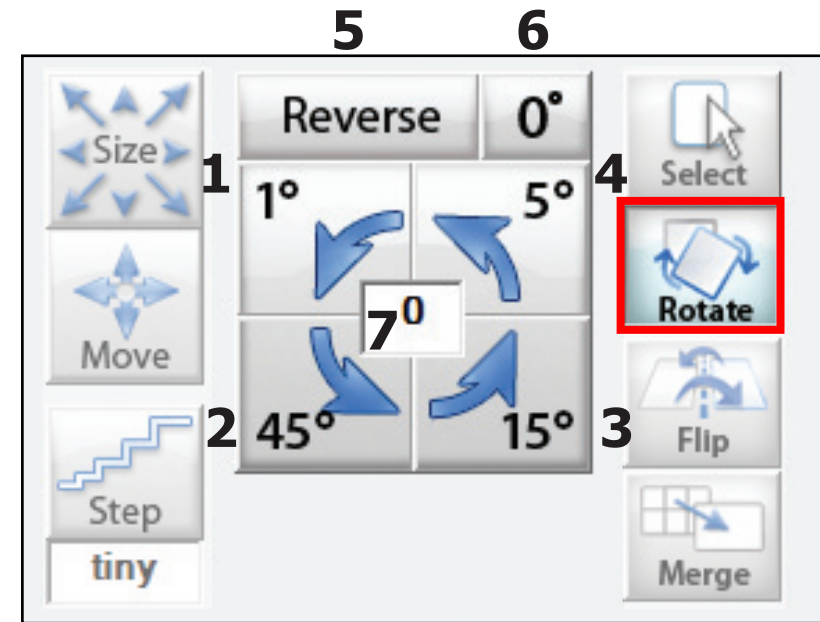
QuiltCAD: Flip

Used to change the orientation of the pattern in the block.

1. **Flip Vertically** — Flips the pattern Vertically.

2. **Flip Horizontally** — Flips the pattern Horizontally.

3. **No Flips** — Resets the pattern to the original position.
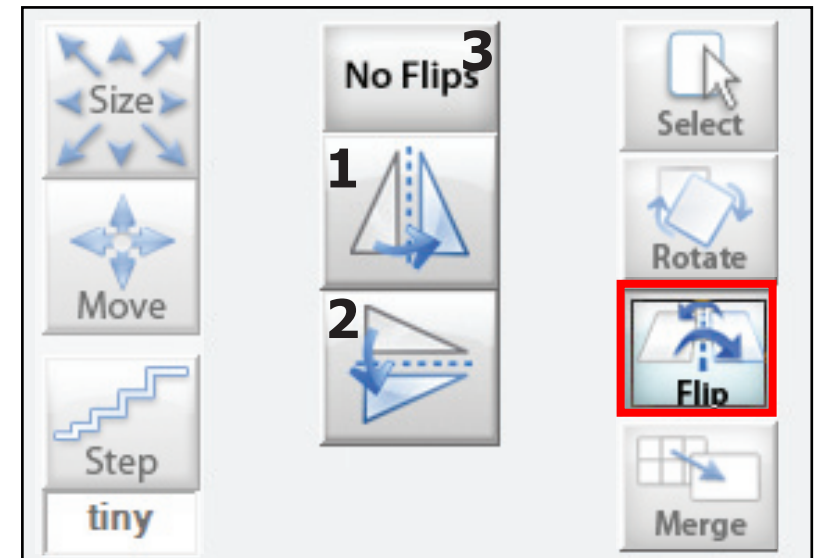
QuiltCAD: Merging Blocks

This option does not change the Menu area.

Merge : This option is used to make one block from two or more blocks. The blocks must be next to each other, you cannot merge a block from one side of a quilt to the other side. You could however merge the entire row or column.

To merge blocks click and drag over the blocks you want to merge and tap the Merge button. You cannot merge corners. The merged blocks must be square, horizontal, or vertical.

Random
Merged Blocks

Standard Quilt Merge
Large Middle

Advanced Merge
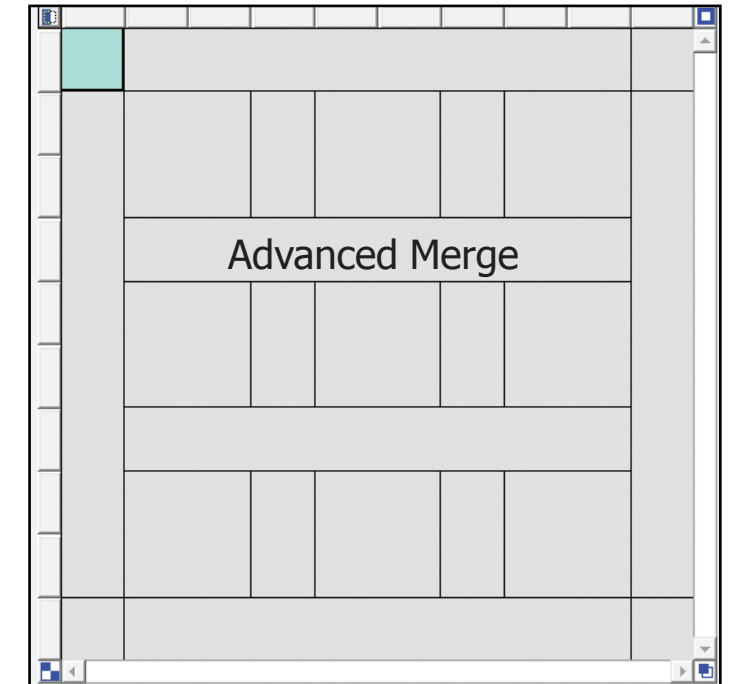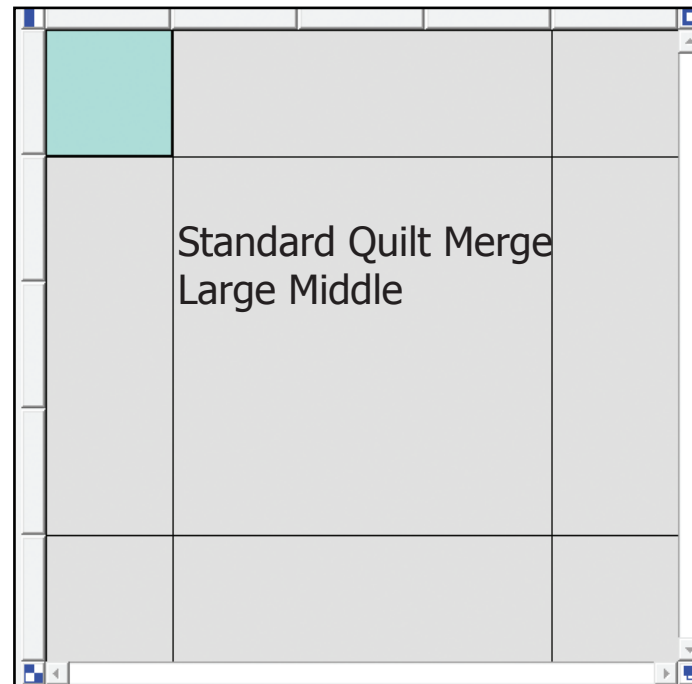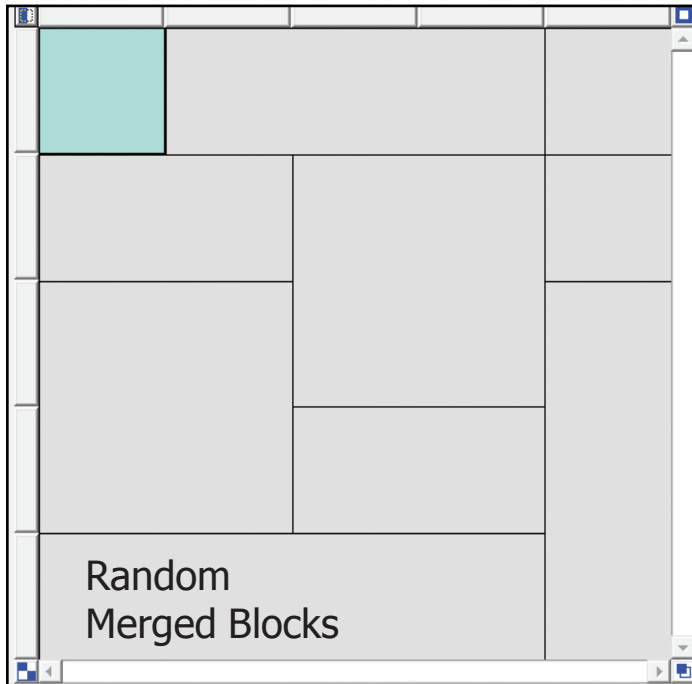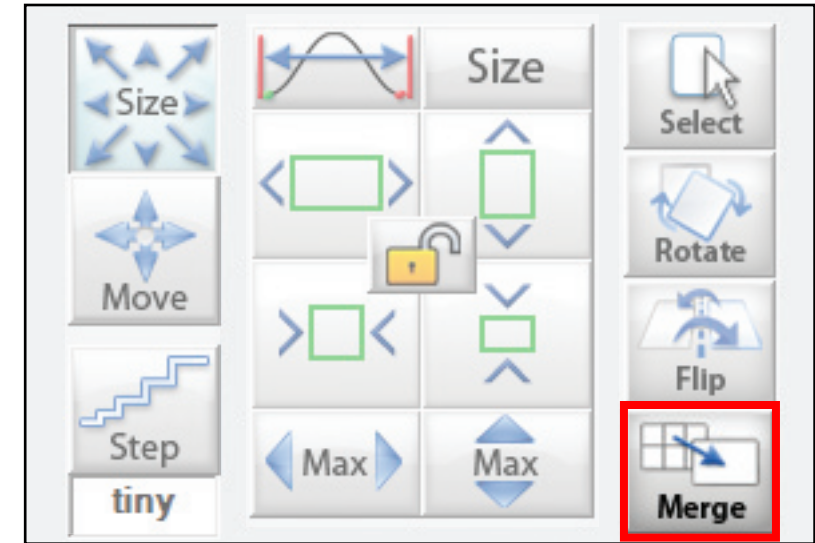
QuiltCAD: Advanced Tools Menu

Here are even more options to change your patterns. We will cover the Advanced Tools briefly then each one in depth.

- **Repeat Pattern** — This option allows you to add multiple patterns into one block, and change how they are spaced within the block.
- **Triangle Blocks** — This tool allows you to break the block down into two or four triangles to place patterns. This is great for corner or triangle patterns.
- **Row Rippling** — Here you can set some really cool effects to your row and patterns such as zigzags or arcs. These options go beyond the block and will effect entire rows that you select.
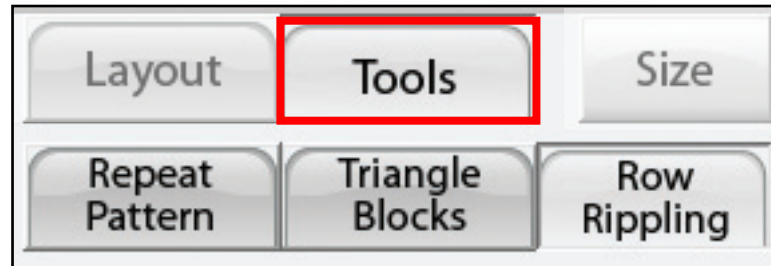
QuiltCAD: Repeat Pattern

This option is used when you want to place more than one pattern into a single block, or merged block. When you create a pantograph this would be a great way to duplicate the pattern all the way down the quilt. Much like a fill method, the repeat pattern option also allows you to specify how the patterns will sit in the block. To repeat a pattern, use the + and - buttons to adjust the number of patterns. In the example 3, patterns are being repeated.

1. **Pattern Count** — Use the + or - buttons to add or remove patterns from your selected block. You can also tap in the middle and set the number of patterns as well.

2. **Nested** — The patterns will stretch to connect within the block, and the pattern edges will line up to the next pattern. With this option, the pattern may lose its aspect ratio depending on how many patterns are in the block.

3. **By Ends** — This option is used when you want to make the repeating patterns connect by the start and end points, or by the maximum width of the pattern.

4. **Centered** — The pattern is evenly spaced and centered in the block.

5. **To Edges** — The patterns will be evenly spaced, but the outside patterns will touch the side of the block edges.
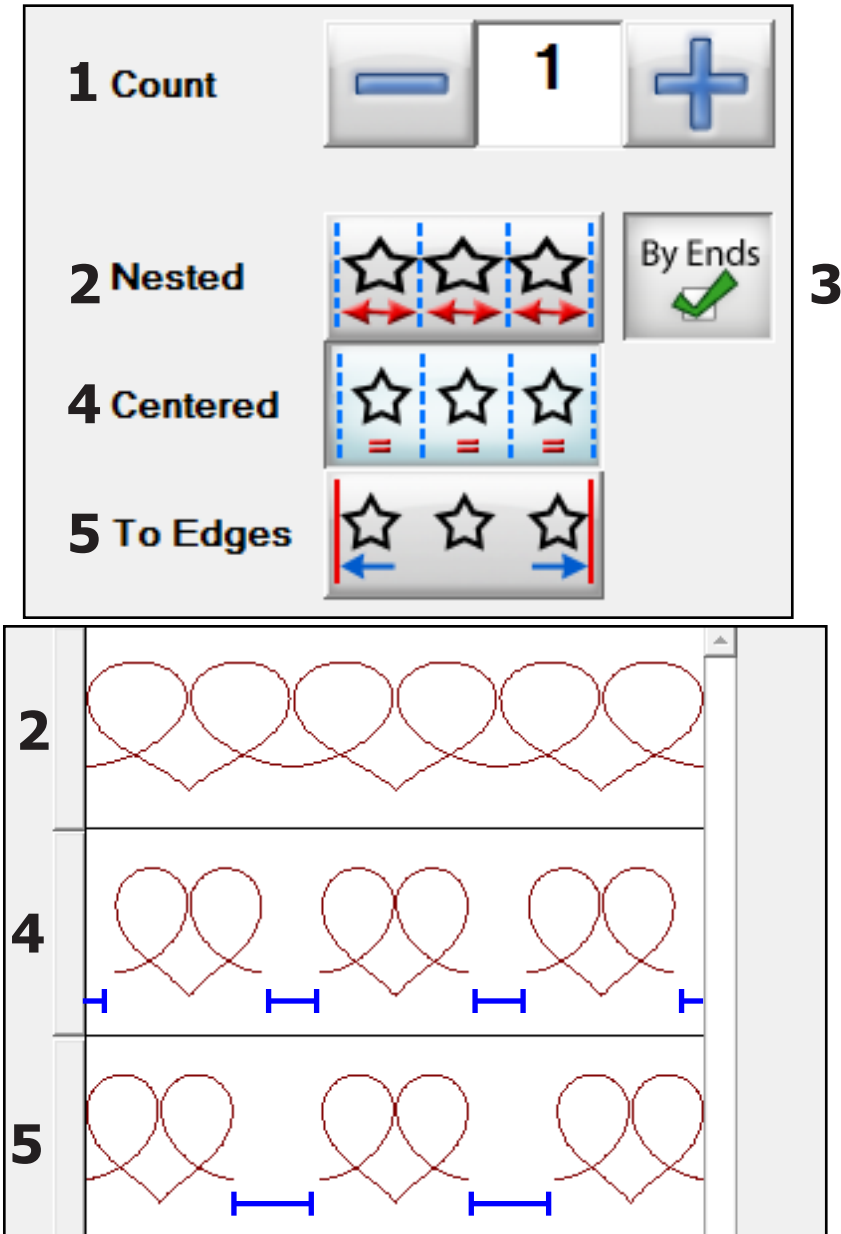
QuiltCAD: Triangle Blocks

This tool is designed so you can place a single or multiple patterns in a block either diagonally or crisscross. This tools works best with triangular patterns, or patterns that need to be placed in a corner of a quilt. There are three options for the Triangle Block tool.

1. **Diagonal (to the left)** — This will create two triangles in the block that will start from the bottom left corner and go to the top right. The bottom of the triangle will now be the dividing line in the block.

2. **Diagonal (to the right)** — This will create two triangles in the block that will start from the bottom left corner and go to the top right. The bottom of the triangle will now be the dividing line in the block.

3. **Crisscross** — This option will create four triangles in the selected block. Please be aware, that the bottom of the pattern will now be placed to the outside edge of the block.

You may have also noticed when you choose any of these options, a preview window appears. This window enables you to choose which portion of the triangle block you would like to have the pattern appear in. When you place a check mark into the selection area the pattern will be placed in the correspond area of the block. To remove it, remove the check.

Example Pattern: 4.gpf
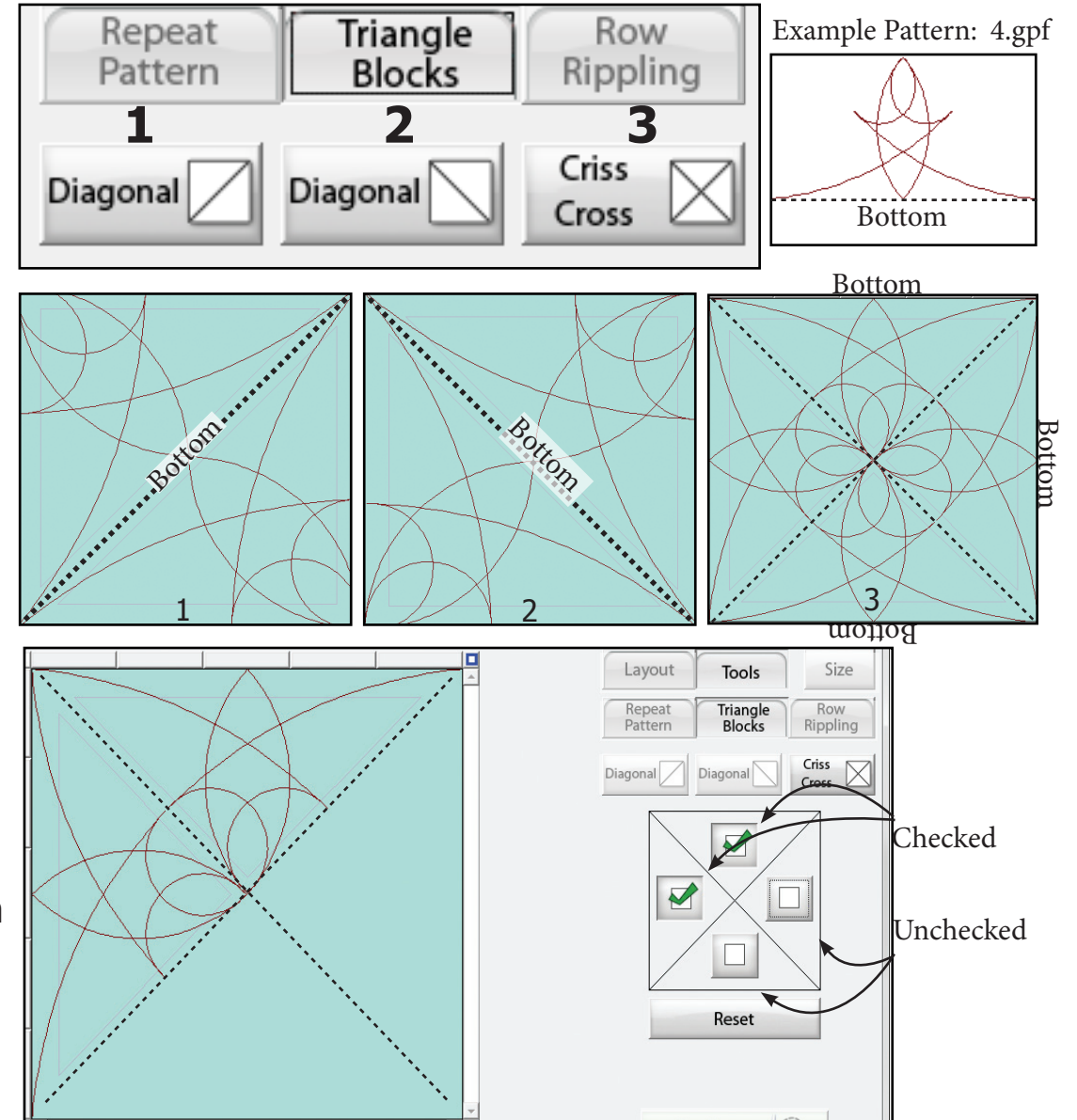
QuiltCAD: Row Rippling

Row Rippling allows you to add some rather astounding effects to your quilt's patterns. Out of all the other tools, this one gives you the most options to modify the entire row on the quilt. As you can see there is a Top and Bottom option. The reason for this is the Row Rippling tool will split the selected row down the middle allowing you to change the top part of the selected pattern and the bottom part separately. This can lead to some amazing creations on your quilt.

1. Normal - No change to the pattern.
2. Zig Zag - A sharp point that is added to the pattern.
3. Hills - A rolling type of ripple.
4. Valleys - Slightly more pointy than Hills.
5. Arches - Creates a smooth arched effect.
6. Invert - Inverts the ripple effect.
7. Ripple Count - The number of ripples for a selection.
8. Top&Bottom - When enabled the top and bottom ripple count will be the same. When disabled the Top and Bottom ripple can have their own settings.
9. Re-initalize - Resets all a rippling.

Sample Pattern: 5 blocks, feather long.gpf
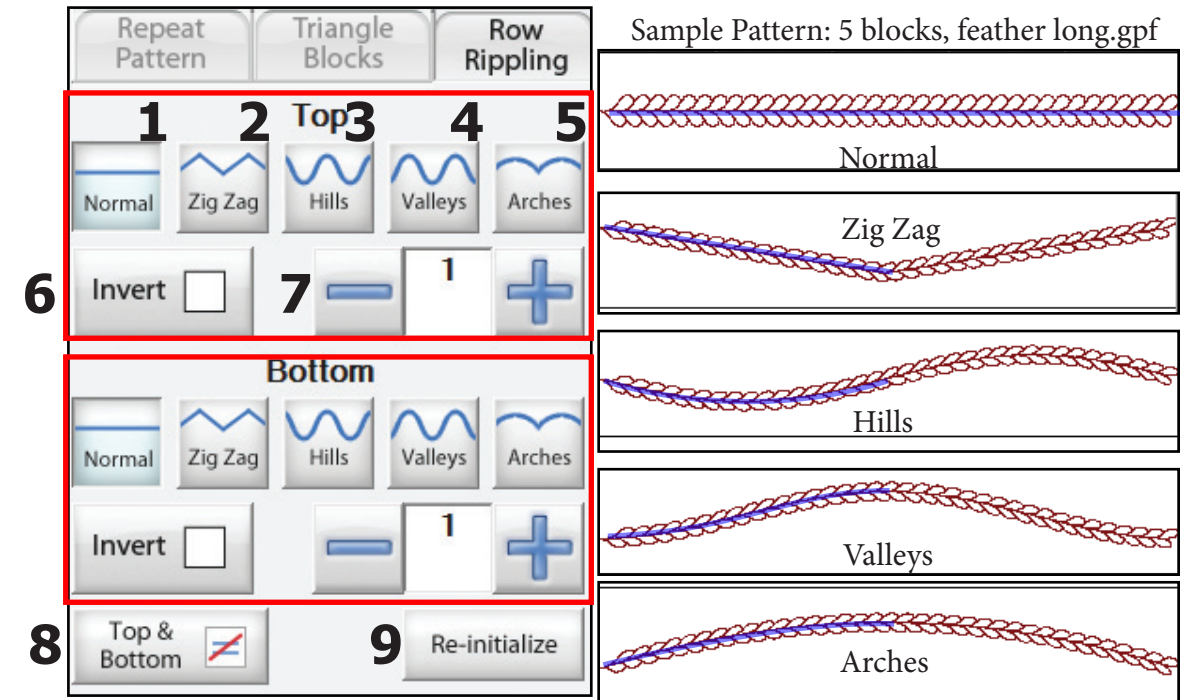
Select & Sew: Quilt

The Select & Sew: Quilt option gives you the ability to quickly access previously made quilts, or open a quilt file from another location or person.

Similar to all of the Select & Sew features, when you tap on the Quilt option, the Read Quilt window will open.

1. Double tap the Quilt file you wish to work with, or tap the Quilt file and tap "Open".

2. You will now see the QuiltCAD screen. Select the block, row, column you wish to quilt and tap the Quilt icon.