



ABM International

**NAVIGATOR
USER INTERFACE MANUAL**

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Introduction

ABM International would like to thank you for the purchase of a Navigator Computerized Robotics System for your Innova Quilting Machine. ABM is confident that this system will meet or exceed your expectations for cost, speed and durability.

If at any time you experience problems with any of your ABM products we ask that you contact your nearest Dealer or us directly- 24 hours a day by calling our service department at (888)99-Quilt. We can help you solve the problem quickly, and correctly. Your calls, questions, and comments will in turn help us to perfect the quality of our products and services in the future.

Once again, we thank you for your purchase.

ABM International, Inc.

Engineering Department

Safety

Safety Introduction

As with the operation of all machinery, safe operation of the Navigator system and Innova quilting machine is a major concern of ABM International, Inc. The purpose of this section is to inform the owner/operator further referred to as "User" of the safe and prudent operation of an Innova quilting machine when equipped with Navigator Robotics.

We have attempted to recommend the most effective methods and calculations to warn against actions that could result in personal injury, or make equipment unsafe. It is important to understand that ABM cannot anticipate, or list all conceivable safety methods and warn of all the possible hazards. In the interest of promoting safety, ABM advises that the user should always make sure that personal safety and the safe operation of the machine will not be adversely affected by their actions.

It is imperative that the User of the Innova with Navigator read and understand the information in this manual before operating the machine.

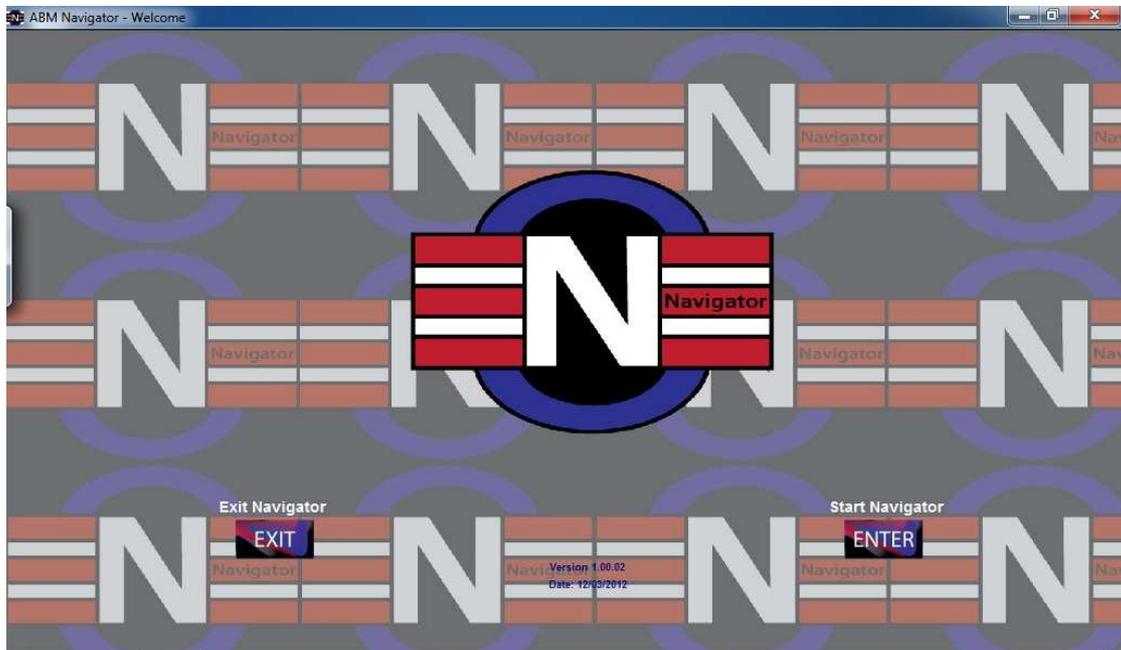
Safety Practices

These safety factors must be observed to ensure safe operation of a Navigator equipped Innova.

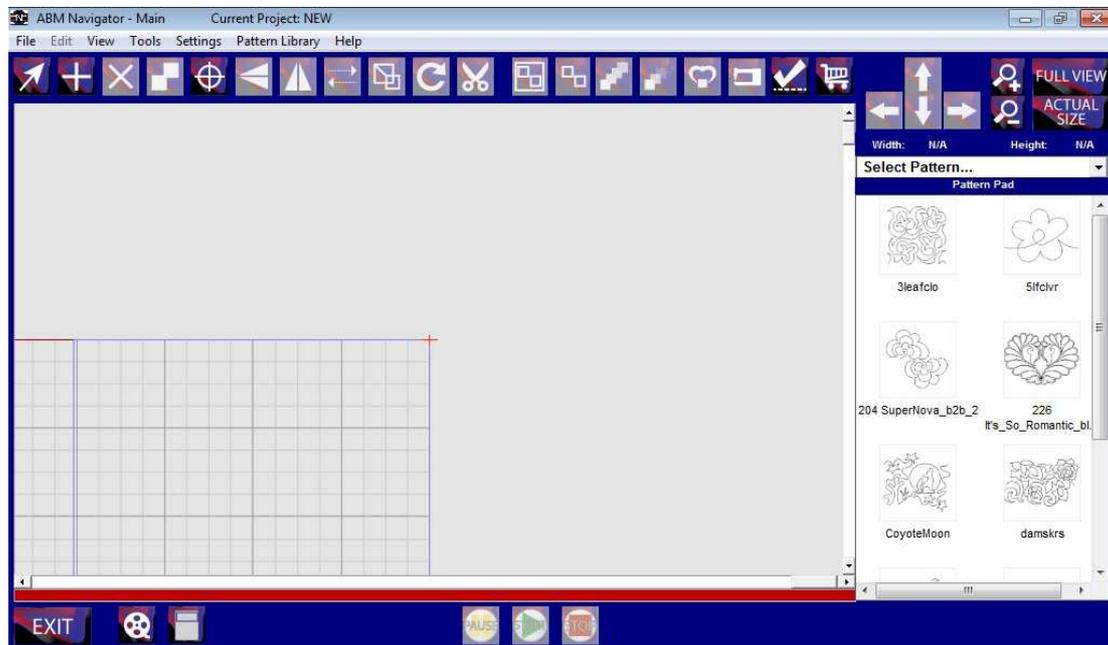
1. Read and understand the operating instructions of the Navigator and Innova before operating.
2. Use caution when working around the Navigator electrical controls.
3. Keep hands or other body parts away from the moving parts of the Navigator.
4. Stop the Navigator immediately at any sign of malfunction or danger.
5. Do not reach into the Innova sewing area at any time during the operation of the machine.
6. Do not climb, walk, or stand on the Innova at any time.
7. Do not tamper with installed motor guards and or safety devices.
8. Before starting the Innova or Navigator, ensure that no loose tools, needles, or parts are lying in or on any part of the machine.
9. Always disconnect the power when working on the machine.
10. Do not wear loose clothing or jewelry when operating the Innova or Navigator.
11. Always keep hair from coming in contact with moving parts.

The Startup Screen

The startup screen is the first screen that appears upon running the Navigator application. The user is given the option to Enter, or Exit the application.



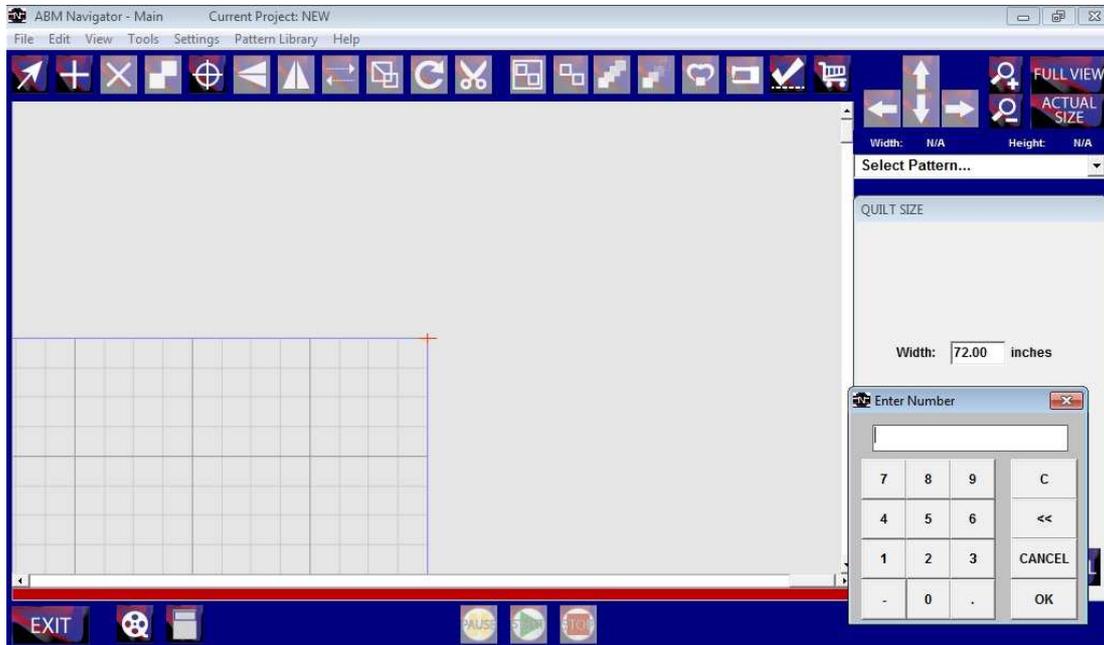
1. **Enter:** Opens the viewport screen.



2. **Exit:** Terminates the Navigator application and returns to Windows.

Setting Up

1. **Create Quilt Grid:** click on the “Settings” tab, click “Quilt Size”, enter and accept quilt dimensions.



2. **Create Sew Zone:** by clicking on “Create Sew Zone” icon  and move the sewing machine head to the upper right corner of quilt top, next click Done on the dialog box. Then move the sewing machine head to the lower left corner of the quilt top and click Done on the dialog box.

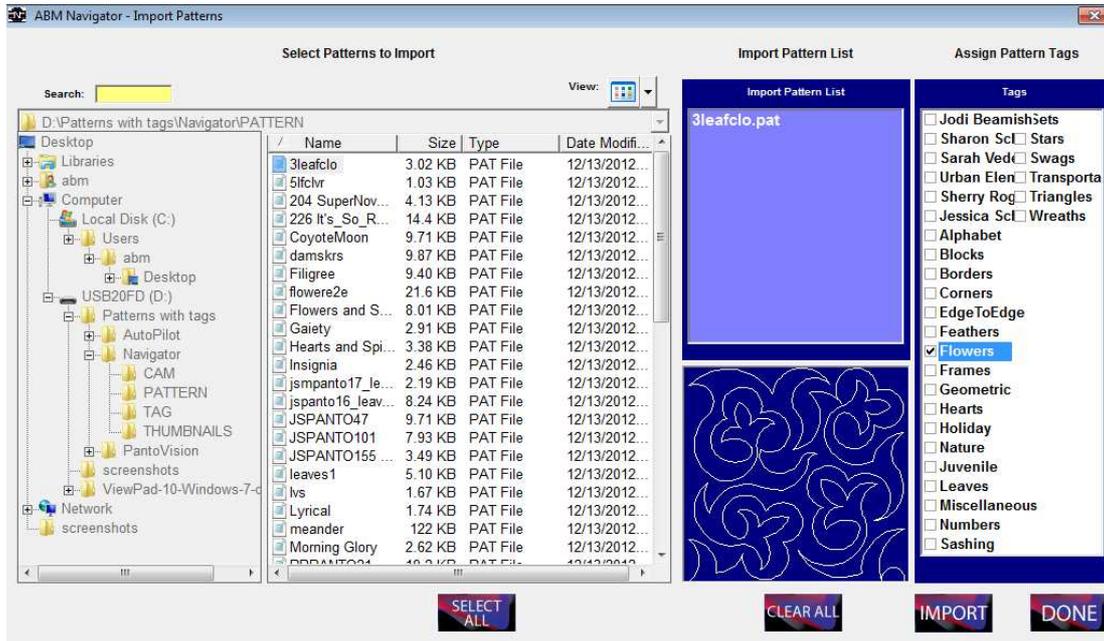


This will create the area that your machine will safely sew in.

Import Patterns

Patterns are represented by a unique ID as well as their name, displayed in brackets.

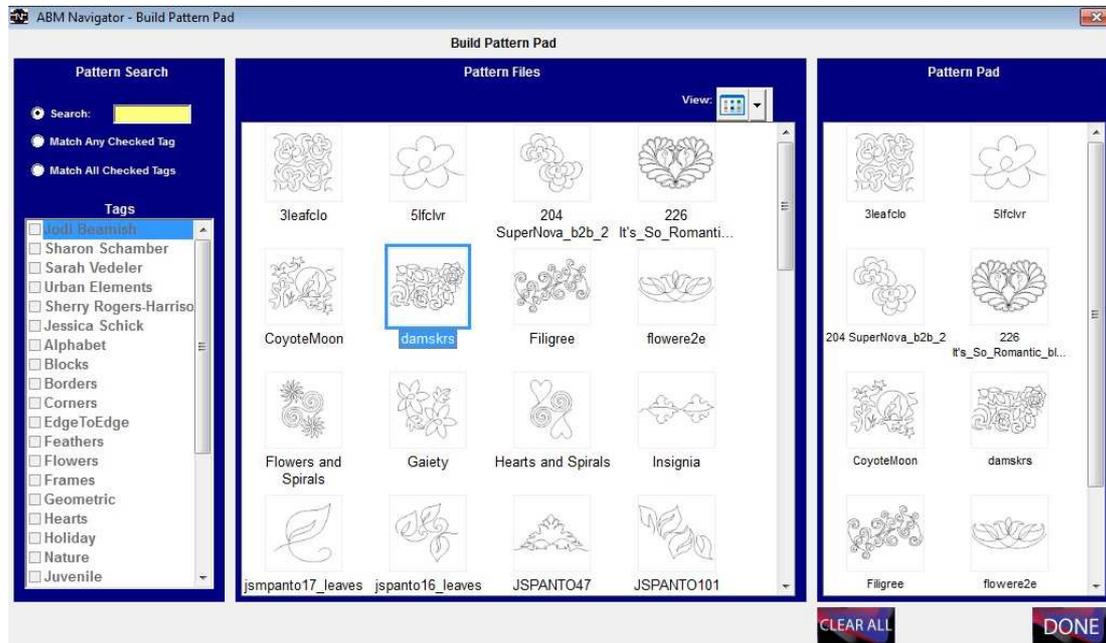
1. **To import included Navigator patterns:** insert ABM Navigator thumb drive into USB port.
2. **To import purchased patterns:** insert USB drive with downloaded files into USB port.
3. **Open Import Pattern Screen:** click on “Pattern Library” tab, click “Import Pattern”.



4. **Open Pattern File:** in the left hand window go to “Computer”, then “Removable Disk”, open Navigator Pattern file, or the file containing purchased downloaded pattern files.
5. **Choose Patterns to Import:** from the list of patterns in the second window choose the patterns to import by double clicking on the file. The file name will appear in the green box along with an image of the pattern in the black box. Choose as many patterns as desired to import.
6. **Tag Patterns:** choose tags for the patterns being imported in the right hand window. *Note: see Tagging Patterns pg. 16 for more tagging information.*
7. **Import:** by clicking on the “Import” icon. Then click “Done” to return to Navigator application.

Adding Patterns

1. **Open Build Pattern Pad:** by clicking on the “Add Pattern” icon 

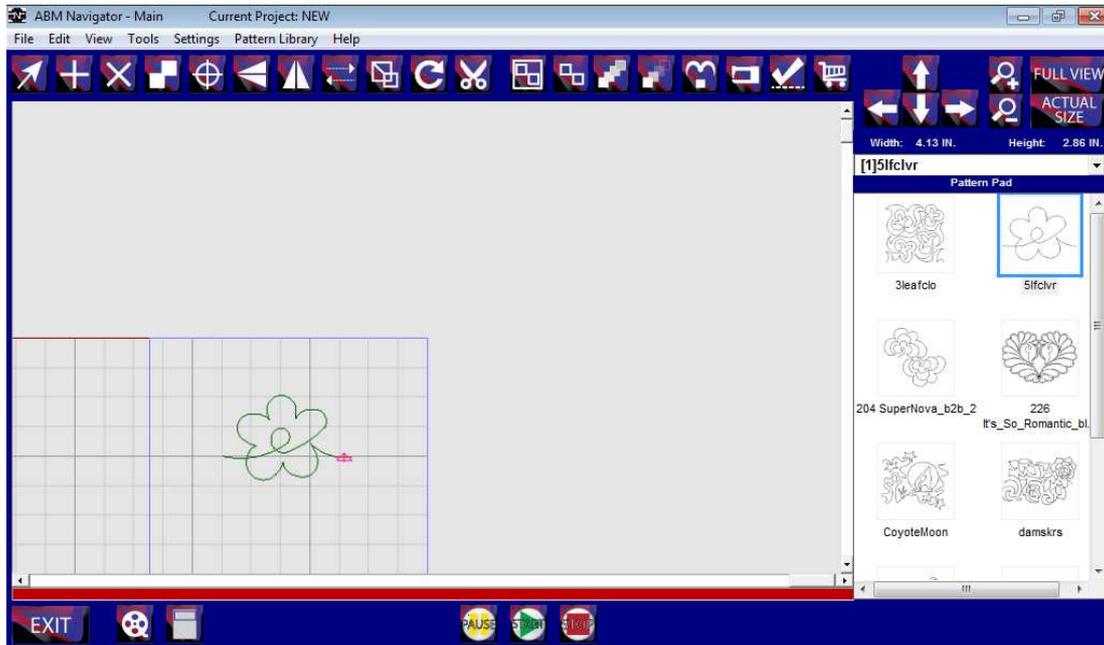


2. **Pattern Files:** stored in the Pattern Library will all display in the center window.
3. **Search:** narrow a search by selecting: “Search”, to search alphabetically by entering the first few letters of a pattern title; “Match Any Checked Tag”, for a broader search of many selected tags; “Match All Checked Tags”, for a very specific search of the selected tags.
4. **Select Patterns:** to add to the Pattern Pad for possible use on the current project by double clicking the pattern chosen. Then the pattern will show up in the right hand window. Choose as many patterns as desired. Click “Done” to return to the Viewport Screen.
5. **The Pattern Pad:** can be cleared by selecting the “Clear” button.

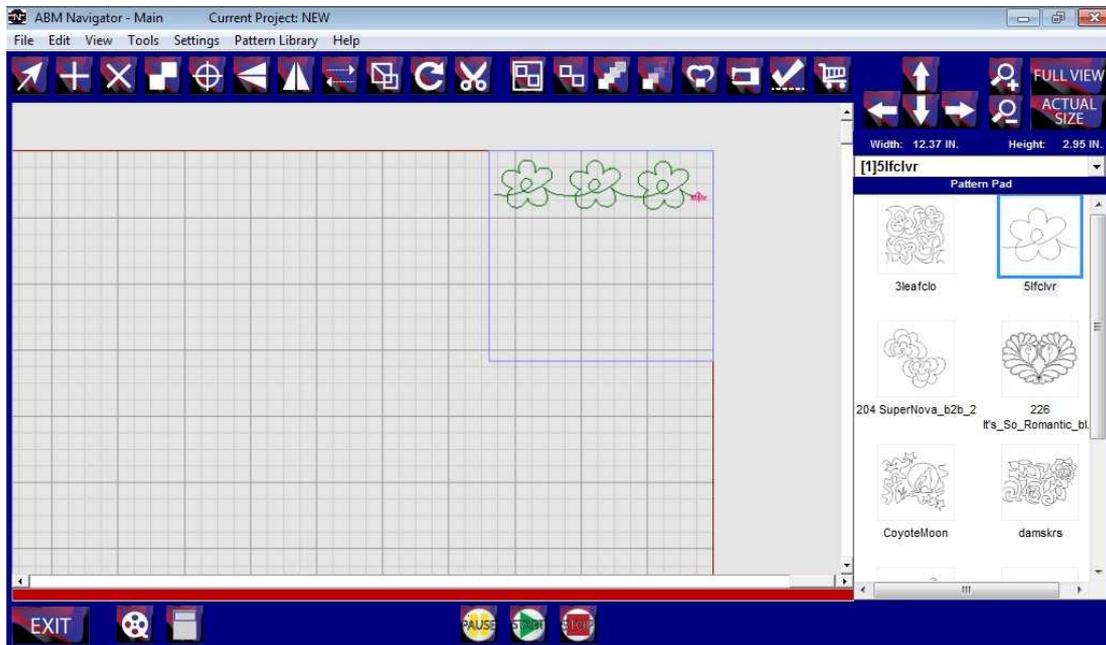
Create a Pantograph

1. **Place Pattern:** on the quilt grid by double clicking the (*double finger tap on screen*) chosen pattern on the Pattern Pad. The Pattern will be “attached” to the needle crosshair on the screen.

To drop the pattern, either double click the pattern or click the “Drop” icon. 



2. **To Delete:** a pattern from the quilt grid, select the pattern and click the “Delete” icon. 
3. **Make a Pantograph:** to fit across the width of your quilt grid by double clicking the pattern to select it; and then click the “More Repeats” icon  until the width is reached.

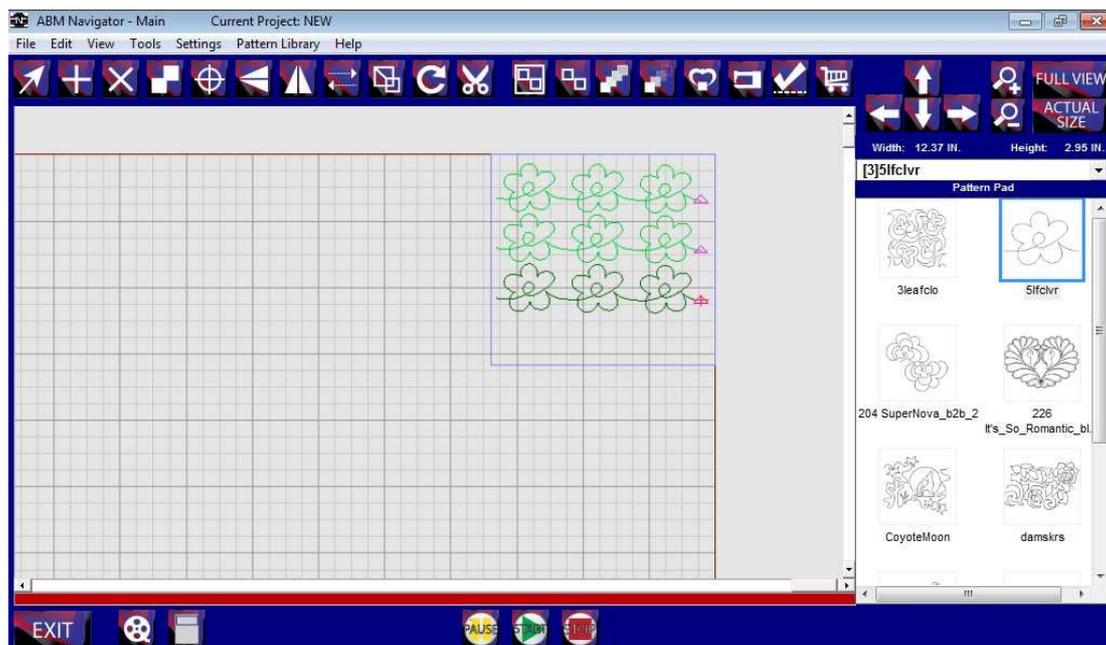


4. **Reposition the Pantograph:** by double clicking the pattern to highlight (dark green), then drag the pattern by dragging finger on touchpad or click the “Grab” icon  to move with the sew head.

5. **Make fine adjustments:** by pressing the “Nudge” arrows.



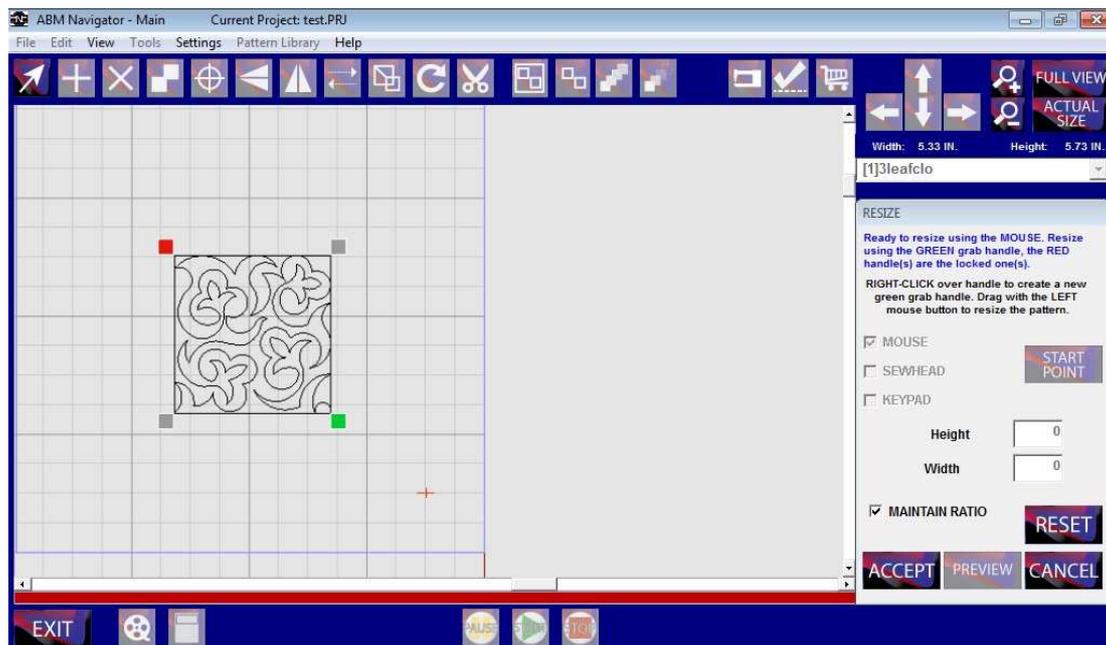
6. **Add More Rows:** using the “Copy”  function.



7. **Group:** rows together by using the “Group”  feature. After rows are grouped as one entity they may be moved in sets of positioned rows. You can adjust entire groups by grabbing them and moving or repositioning them at the same time.

Resize

To resize single patterns, pantograph rows, or groups of rows, select the pattern then click the “Resize” icon  to open the resize dialog.



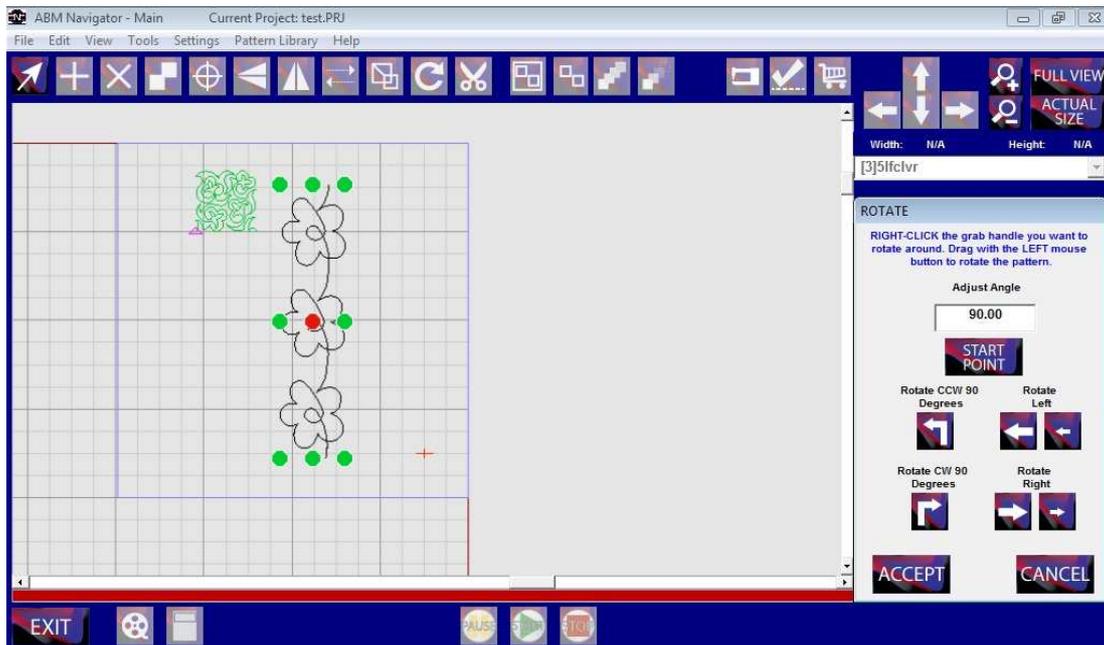
Choose the method you would like to use to resize your pattern.

1. **MOUSE:** will resize the pattern using touch by finger (or mouse) on the touch pad. Touch the desired start point and touch or drag your finger to the desired end point. Click “Preview” and then “Accept” or “Cancel”.
2. To choose a different method of resizing, click the “Reset” button. Then choose “Sewhead” or “Keypad”.
3. To resize using the **SEWHEAD:** move the sewhead to the desired location for the upper left corner of the pattern, click “Start Point”, then pull the sewhead down and to the right until the desired size is achieved. Click “Accept” or “Cancel”.
4. To resize using the **KEYPAD:** click on the “Height” or “Width” window and enter the preferred dimensions using the popped up keypad. Click “OK”, “Preview” then either “Accept” or “Cancel”.
5. Deselect the **MAINTAIN RATIO:** to resize without maintaining the ratio with any of the resize options.

Rotate

First select a pattern, row, or group, then click the “Rotate” icon  to open the Rotate Dialog.

Rotate: selected pattern using “90 degree” icons   or nudge to desired angle using the “Rotate Left” icons   or the “Rotate Right” icons  . Click and drag to rotate using the mouse. Click the “Start Point” icon  to rotate around the start point of the pattern. Right click on the colored anchors to select a different rotation point. Click “Accept” or “Cancel”.



Flip and Mirror

Use the “Flip” icon  or “Mirror” icon  to flip or mirror selected pattern.

Reverse Sew

The pink triangle marks the stitching start point of each pattern. Use the “Reverse Sew” icon  to reverse the sew direction of selected pattern.

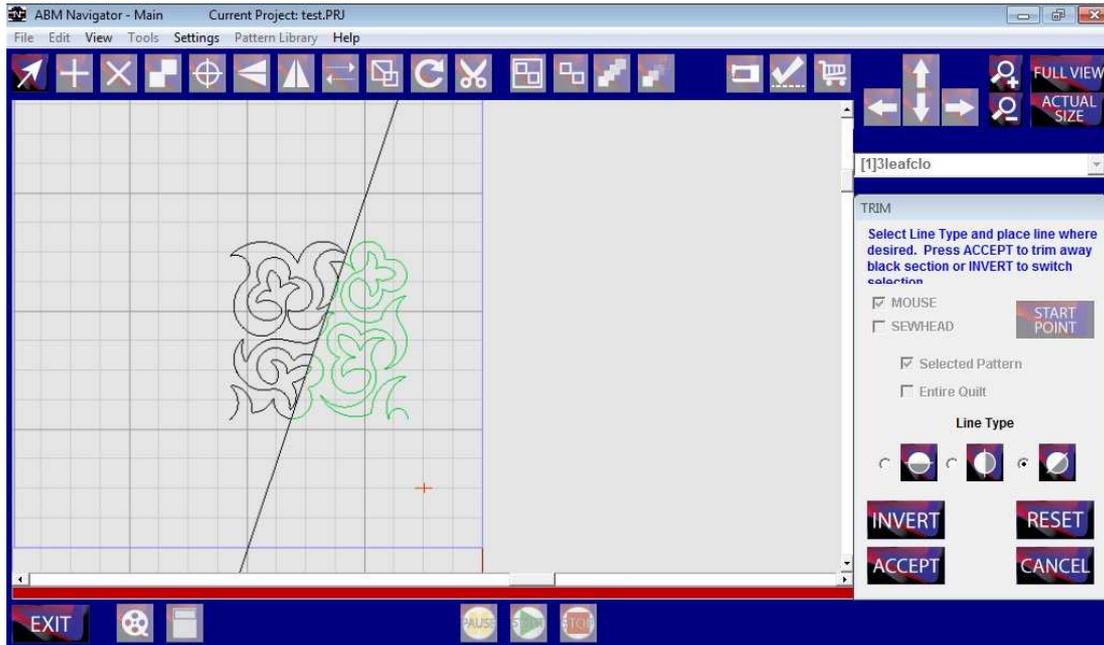
Group and Ungroup

Group patterns using the “Group” icon  Ungroup selected patterns using the ungroup icon 

Trim

First select a pattern, row, or group, then click the “Trim” icon  to open the Trim Dialog.

Trim: selected pattern or entire quilt by selecting either the horizontal, vertical, or diagonal icons   
 Click invert to switch the selection to be trimmed away, the black portion is the selection that will be trimmed away. Click “Reset” to clear all selected options. Click “Accept” or “Cancel”.



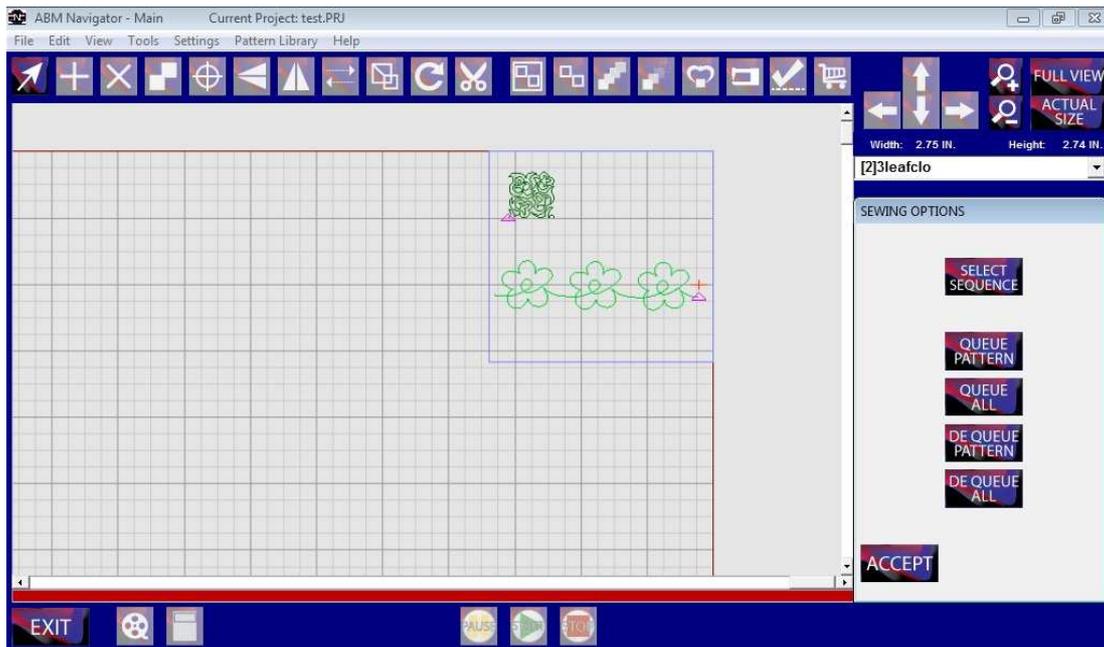
Record

Click on the “Record” icon  to record what you are stitching freehand. You can do this with the belts disengaged. Save as a new pattern and edit with the Navigator tools or export to a digitizing program to fine tune your creations.

Sewing Options

Click the “Sewing Options” icon  to open the Option Dialog.

The Navigator stitches out the patterns in the order placed into the sewing area by default. With this option you can select to order sew sequence of patterns, queue patterns individually or queue all patterns, dequeue individual patterns or dequeue all patterns. Patterns outside the Sew Zone will not stitch.



Sew

Start stitching by pressing the “Start” icon .

Pause by pressing the “Pause” icon . You may then restart by pressing the “Start” icon.

Stop stitching by pressing the “Stop” icon .

View

Adjust your View: using the “Zoom” icons, or click the “Full View” button to quickly view the entire quilt layout.

 Zoom in to the needle position.

 Zoom out from the needle position.

 Full View shows the full quilt grid on viewport screen. This is the preferred selection for laying out patterns. Zoom in or out as preferred. Use slider bars to adjust viewing position of grid on the screen.



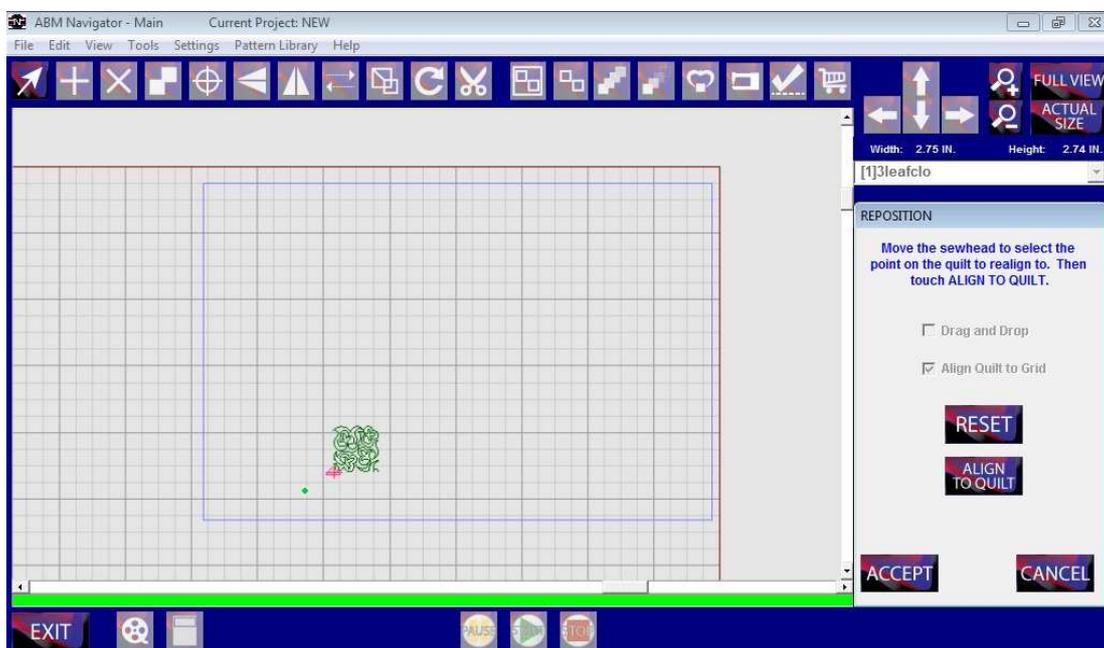
Actual Size shows the screen and patterns at approximate actual size.

Free View and Needle View

Under the “view” tab choose “Free View” to scroll or zoom to any position on the screen. Use “Needle View” to view the screen with the sewhead locked to the center position of the viewport screen.

Advancing and Repositioning

Reposition: by clicking the “Reposition” icon  and choosing the checkbox for drag and drop or align to quilt.



Tension Check

The Navigator software comes equipped with software to accommodate the use of a self mounted web camera. Use industrial strength Velcro to attach the camera to the lower sew arm pointing up at the bottom of the quilt. Plugging the camera into the tablet will allow you to view the underside of your quilt

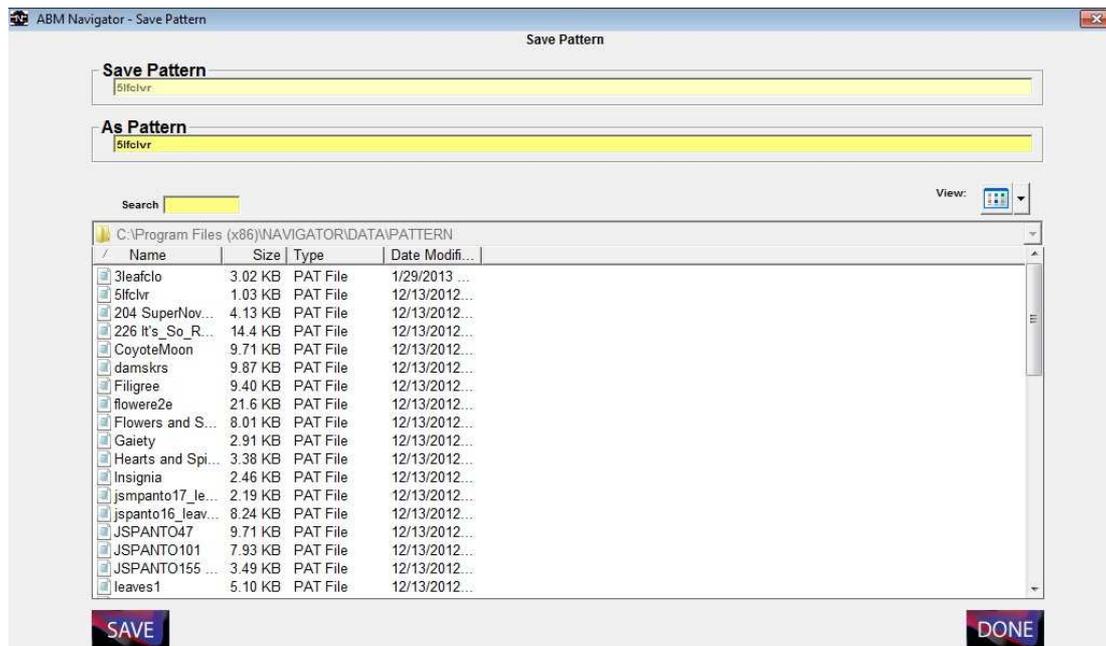
when you select the “Tension Check” icon. 

For best results use a web camera such as a Logitech or GigaWare with auto focus and a minimum of 2.0 megapixels.

Save Patterns

Save Patterns, rows, or groups as new patterns.

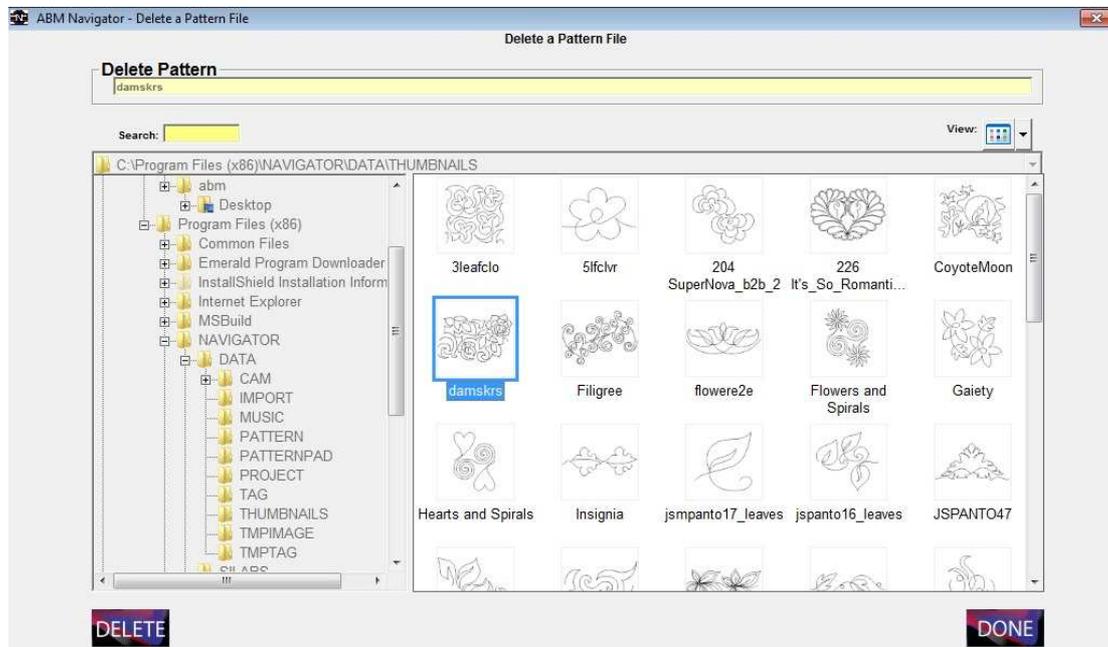
1. Select pattern, row or group desired. Under tabs click “File”, then “Save” and Save Pattern File to open Save Pattern screen.



Rename new pattern in As Pattern text box. Click “Save”. Viewport screen will reopen with prompt confirming pattern saved. Click “OK” and continue.

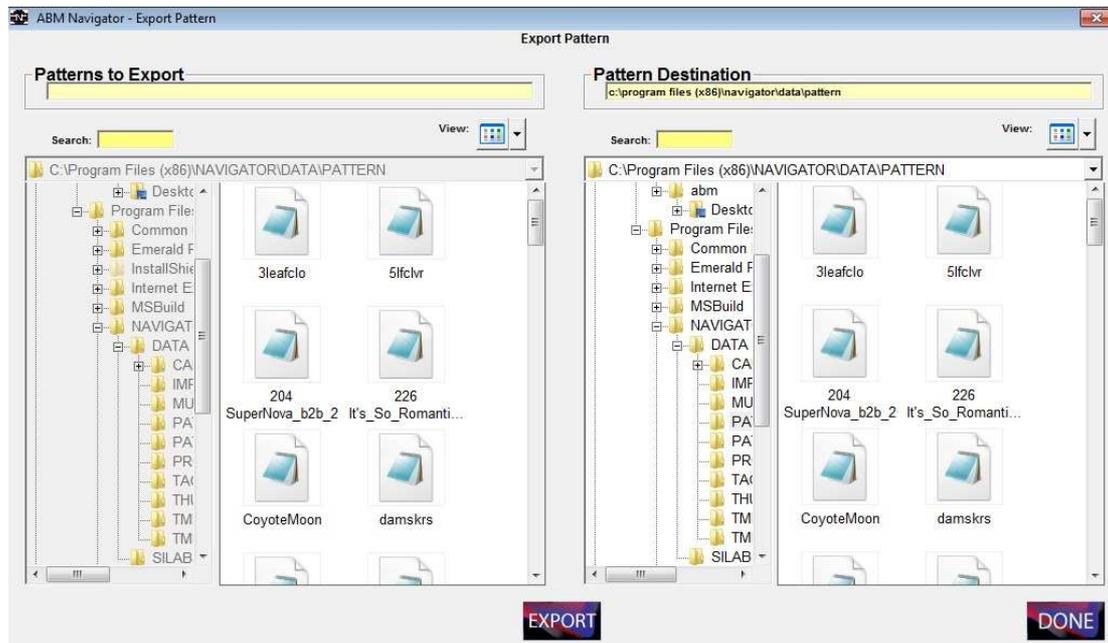
Delete Pattern Files

To Delete pattern files, under tabs click “File”, “Delete”, Delete Pattern Files to open Delete Files screen. Select pattern file you wish to delete then click “Delete” button. Then click “Done”.



Export Patterns

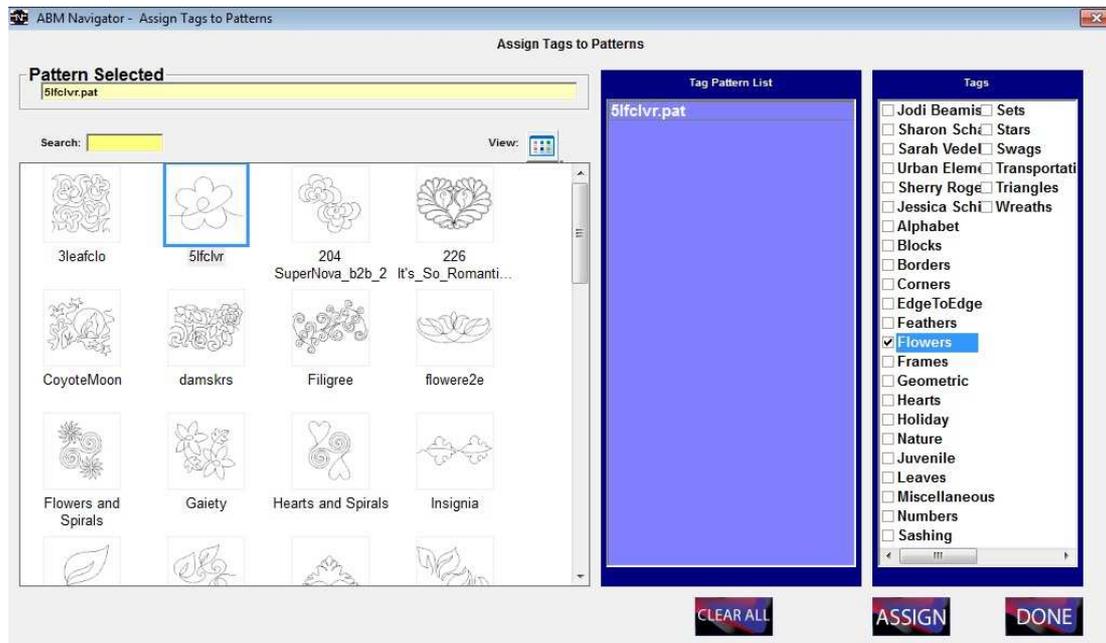
To export patterns, under tabs click “File”, “Export”, Export Pattern to open Export Pattern screen.



Select pattern and destination file. Click “Export” then “Done”.

Tag Patterns

To tag patterns, under tabs click “Pattern Library”, then Tag Patterns to open Assign Tags to Patterns screen.



1. To Select pattern, double click the pattern thumbnail. The pattern file name will then show in the green box.
2. Select Tags as desired and then click “Assign” then “Done”. If adding tags to a previously tagged pattern choose all tags desired for the selected pattern as new tagging procedure will overwrite any previous tags for that pattern.
3. Click “Clear” to remove patterns from the green box.

Master Tags

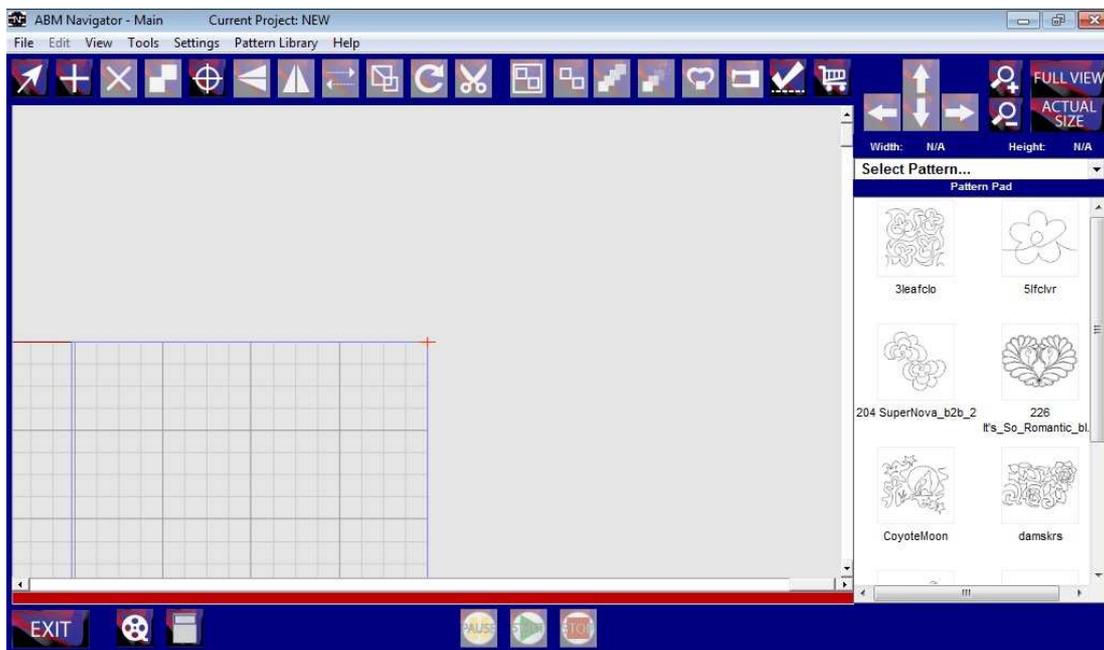
Edit your list of master tags by clicking "Pattern Library" tab, then "Master Tags".



1. Insert new tag by clicking "Insert" then typing new tag name in text box. Click "Accept" or "Cancel".
2. Change a tag by clicking on the tag name, then click "Change" and type the new name that the tag should be changed to, then click "Accept" or "Cancel".
3. Delete a tag by clicking on the tag name then click "Delete". Click "Accept" or "Cancel".

Viewport

The viewport window shows the arrangement of patterns in the active project on a virtual representation of the quilt layout as well as the machine's defined sewing area. It also features selection tabs, an icon toolbar, and a pattern pad.



Gridlines are visible to assist in positioning and sizing patterns. They are defined as follows:

Blue	4 inches
White	one inch
Dark Gray	one quarter inch (only visible at high magnification)
Red	outer edges of the sewing area

Tabs Bar: allows for function selections included on icon tool bar as well as more function selections that are used less frequently.

Pattern Pad: displays patterns selected for possible use on current project.

Icon Tool Bar: contains icon touch buttons for quick access to functions used frequently.

Icon Key



Select: activates selection function and deactivates active zoom selection.



Add Pattern: opens Build Pattern Pad screen to enable placement of patterns to the Pattern Pad.



Delete: deletes pattern, row, or group that is selected on screen.



Copy: places copy of selected pattern, row, or group on screen.



Reposition: reposition quilt top.



Flip: flips the selected pattern upside-down.



Mirror: creates a mirror of the selected pattern sideways.



Reverse Sew: reverses the sew direction of the selected pattern.



Resize: opens dialog box for resize options to resize selected pattern.



Rotate: opens dialog box for rotate options to rotate selected pattern.



Trim: opens dialog box for trim options to trim selected pattern.



Group: patterns to make them editable as one pattern.



Ungroup: patterns that have been grouped and this will cause the patterns to become unrelated and individually editable.



More Repeats: adds another pattern and attaches to selected pattern to create rows.



Less Repeats: removes patterns from row one at a time.



Grab: attaches the start point of the selected pattern to the sewhead needle.



Drop: releases the pattern from the sewhead needle.



Sewing Options: opens dialog box for selecting sew order, and queuing/dequeuing patterns.



Tension Check: uses add-on camera to view stitches under the quilt.



Shopping Cart: shop online at the Innova Longarm store.



Nudge Left: moves selected pattern to left in small increments.



Nudge Up: moves selected pattern upward in small increments.



Nudge Down: moves selected pattern downward in small increments.



Nudge Right: moves selected pattern to right in small increments.



Zoom Out: to see larger view of sew area.



Zoom In: to see more detailed view of sew area.



Full View: shows full view of quilt width in viewport window.



Actual Size: zooms to the actual size of the selected pattern.



Record: create patterns by moving the sewhead.



Sew Zone: creates quilt top on the grid.



Pause: pause sewing of patterns.



Start: start the sewing of patterns.



Stop: stop sewing of patterns.

Installation or update of Navigator.exe on a Windows based PC

Minimum System Requirements

- A Pentium Based Personnel Computer
- Microsoft Windows Operating System Version 7 or Newer
- 512MByte Ram

Step1: Run Install Navigator.EXE install file.

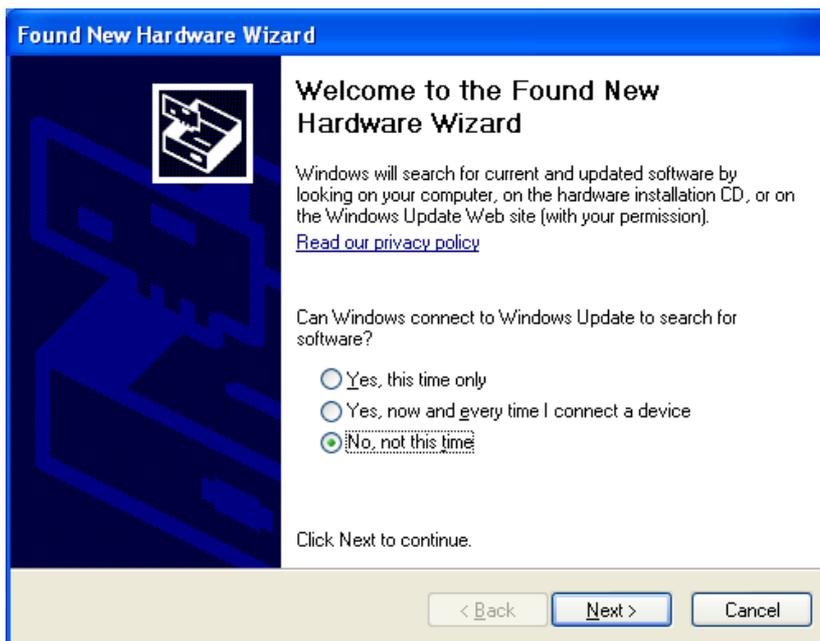
On the CD provided run the file Install Navigator.EXE. This will copy any necessary drivers and the Navigator application "C:\Program Files (x86)\NAVIGATOR".

Step2: Connect Navigator USB to a PC

Connect USB Cable provided between the Navigator box and the PC.

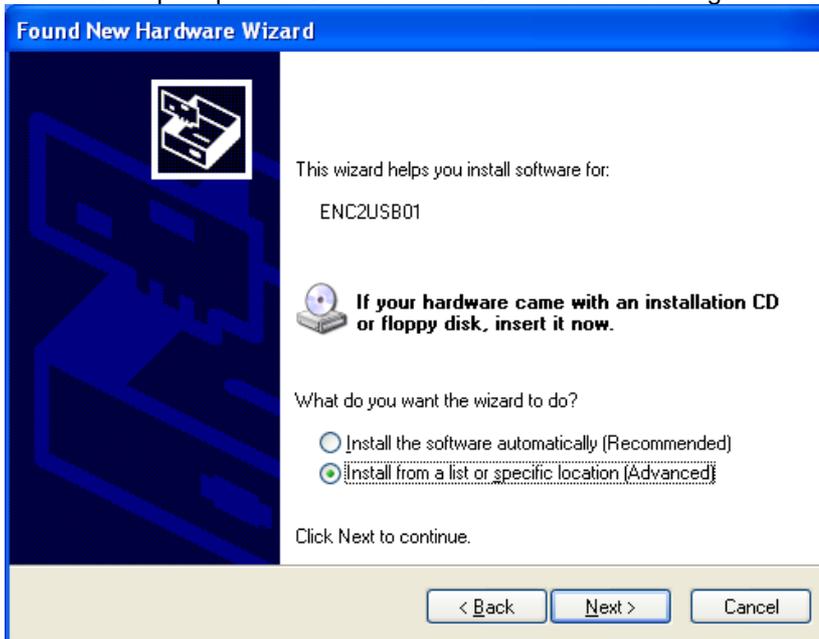
Step3: Installing the USB Driver

When the USB Cable is plugged into PC, windows will detect "New Hardware Found". A popup box similar to the following will be displayed. Select 'No, not at this time and press next.



Select 'No, not at this time and press next.

Windows will prompt and ask how to load software for the Navigator.



Select "Install from a list or specific location" and press next.

Windows will allow you to set search path.



Include the search path where you installed the application in step 1.

Notice:

For Technical assistance call ABM at 888-99Quilt.

ABM standard warranty terms and conditions apply to the ABM control system and hardware and can be found on our website at www.abminternational.com.

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Software Disclaimer:

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