

HQ *Pro-Stitcher*®

USER MANUAL



Designed by a Quilter, for Quilters.®

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Tutorials, Upgrades and What's New with HQ Pro-Stitcher

Congratulations on your HQ Pro-Stitcher Purchase!

Handi Quilter is proud to offer you user-friendly quilting machines and computer-guided machines with the latest technology and the best value for your money. In addition, we provide inspiration and education to help enhance your transition into computer-guided machine quilting.

Because the world of computer-guided quilting is constantly changing, we invite you to keep up with us by checking our website frequently for news, software updates, tutorials and other free stuff.

Go to www.HandiQuilter.com for:

1. Updates to HQ Pro-Stitcher (provided FREE as long as you own your machine)
2. A full-color version of this manual that can be downloaded and printed
3. Updates to this manual
4. Step-by-Step tutorials to help you learn how to use the HQ Pro-Stitcher
5. FREE design downloads
6. News about upgrades (which will be available to purchase)
7. Links to HQ Pro-Stitcher Retreat in Utah information
8. FREE STUFF!

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Sign up to join the Handi Quilter e-mail Newsletter list to receive notice of updates, upgrades, special offers, contests, new products and free stuff at www.HandiQuilter.com/newsletter/subscribe/.

Handi Quilter Contact Information

Handi Quilter, Inc.
445 N 700 W
North Salt Lake, Utah 84054

Toll-free phone: 1-877-697-8458
Local phone: 1-801-292-7988

Email Address: Sales@HandiQuilter.com

Website: www.HandiQuilter.com

HQ Pro-Stitcher Parts List for HQ¹⁸ Avanté (8-wheel carriage version) & HQ²⁴ Fusion

See page 15 for HQ Sixteen & HQ¹⁸ Avanté (4-wheel carriage version)



A



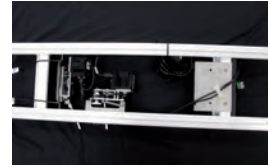
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C



D



E



F



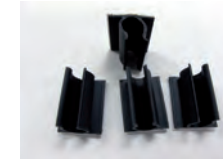
G



H



I



J



K



L



M



N



O

Item	Quantity
A. Blue X-axis Flexirack (12 feet)	1
B. X-axis Flexirack Clamps & Screws	4
C. 3/32" Drill Bit	1
D. Emergency Base Plate Repair Kit	1
E. Carriage Assembly	1
F. Computer Bracket	1
G. Y-Encoder Circuit Board	1
H. Y-axis Mounting Bracket Assembly	1
I. "Y" Power Cord (10 foot)	1
J. Adhesive Cable Mounting Clips	4
K. USB Flash Drive/Lanyard	1
L. Art & Stitch Software	1
M. Alignment Block	1
N. USB Cable	1
O. Computer Power Cord	1

Installation

HQ²⁴ Fusion

HQ¹⁸ Avanté (8-wheel Precision-Glide carriage version)

Tools Required

Power drill

4mm Allen wrench

5mm Allen wrench

Slotted screwdriver (one large and one small)

Phillips screwdriver (one large and one small)

Assembly

Handi Quilter recommends installation by an authorized HQ Pro-Stitcher Representative.

X-Rack Installation

1. Remove the blue 12-foot rack (Page 3, A) and the HQ Pro-Stitcher carriage (E) from the box. Cut the cable ties from the front of the carriage (see Figure 1).

2. Starting at one end of the table, begin mounting the blue rack to the table. Peel back just a few inches of the protective layer of the tape. Position the blue rack using the wooden alignment block (M) as a guide. The wood block should be laid flat on the black plastic table top, butted against the inside edge of the front aluminum track extrusion (see Figure 2). The blue rack then butts against the opposite side of the block so the blue rack is mounted 2" away from the front track. The block should be flat on the table and not on top of the blue rack or the aluminum extrusion. Press down on the blue rack to stick it firmly to the table. Pull the pink protective layer from the back side of the rack while shifting the block down the length of the table until about two feet of the rack have been mounted.

3. Place the HQ Pro-Stitcher carriage on the frame and verify that the front white gear is aligned with the blue rack that has just been mounted to the table top.

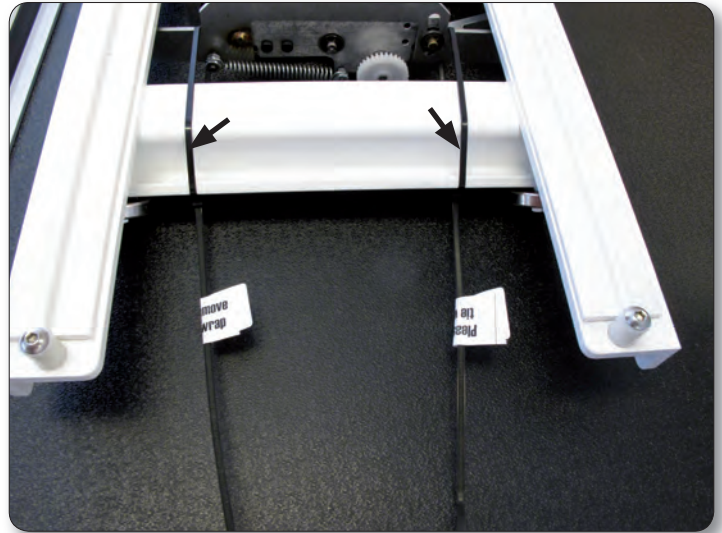


Figure 1



Figure 2

4. Make adjustments to the placement of the blue rack as necessary to align the blue rack with the front white gear on the HQ Pro-Stitcher carriage (see Figure 3).

5. If alignment using the wooden block is accurate, continue using the wooden block as a guide to mount the remainder of the blue rack to the table top. Otherwise, use the carriage as a guide and align the blue rack with the white gear along the length of the table, removing the pink protective layer and pressing downward on the blue rack while moving down the entire length of the table top.

6. Trim the rack to length using a knife or wire cutters if necessary (the blue rack does not necessarily need to extend the full width of the table and can actually be a couple of inches shorter on either end, if desired).

7. At the ends of the blue rack, use the four small metal clamps (Page 3, B) to hold the ends firmly in place (see Figure 4a). The clamps have a hole through the center and a lip on one end. The lip should be on the side opposite the blue rack. Drill pilot holes using the 3/32" drill bit and then attach the clamps as shown on either end of the blue rack using a Phillips screwdriver. Note: Do not use the larger drill bit included in the emergency repair kit...this is the wrong size for the X-rack clamps! As an alternative, choose to use one clamp at each end using the lip of the clamp to slide over the last gear of the blue rack. (Figure 4b)

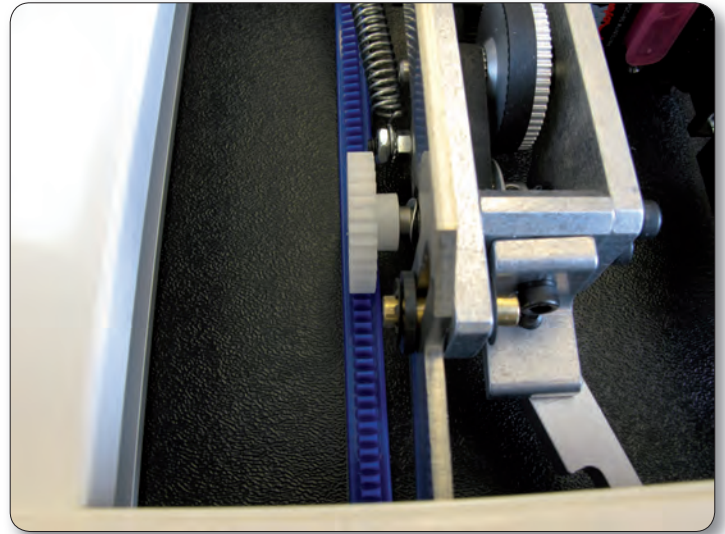


Figure 3

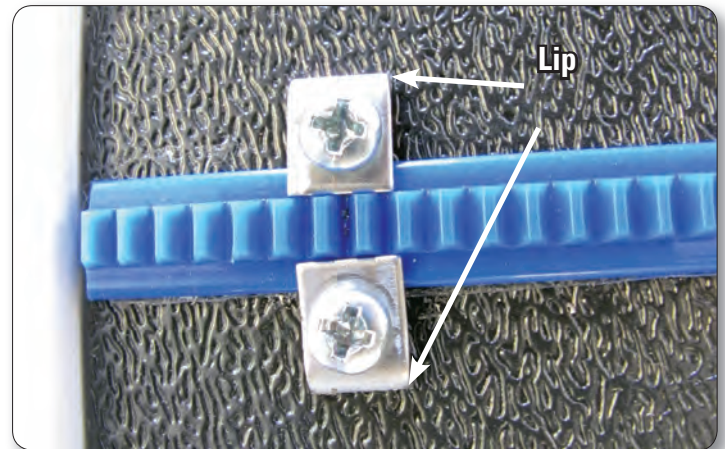


Figure 4 a

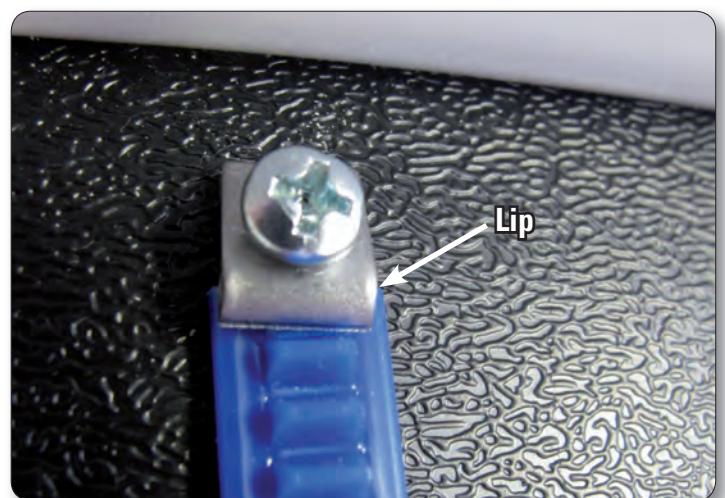


Figure 4 b

Y-Rack Installation

1. Carefully lay the quilting machine on its power pod side. Underneath the base plates, near the wheels on the C-Pod side of the machine (the side with the thread tensioner and guides) there will be either two screws or two holes. If the screws are there, use a large slotted (flat) screwdriver to remove the screws (see Figure 5).

2. Attach the Y-Rack as shown in Figure 6. The blue rack should be toward the middle of the machine while the bolt holes should be toward the outside. Use the screws that were removed from the front and rear base plates (or use the two smallest screws in the Base Plate Repair Kit (Page 3, D) if your machine had no screws here) to mount the Y-Rack to the bottom of the front and rear base plates. Be careful not to over-tighten the screws as the base plate holes will strip easily. In case of accidentally cross-threading or stripping one of the base plate holes, an emergency repair kit (D) has been provided.

3. If the screws in the base plates do not have slotted heads and a nut driver cannot be fitted over the screw head, please use one of the provided slotted screws as a replacement (D) and use a slotted screwdriver to tighten the screws in place.



Figure 5

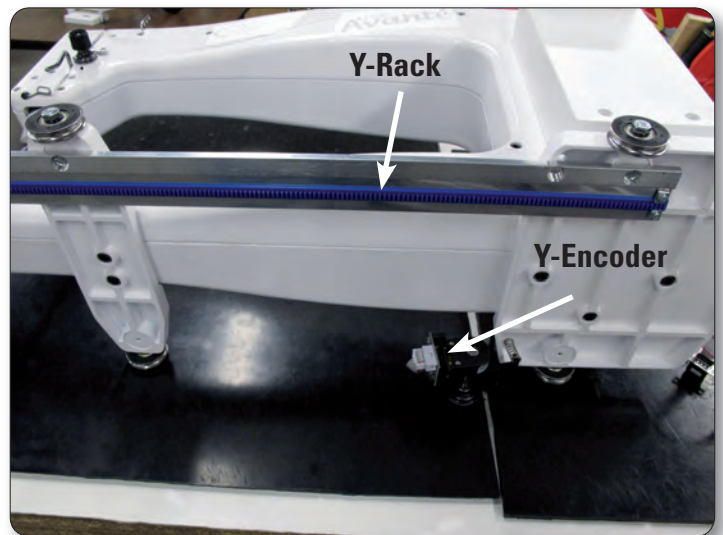


Figure 6

Y-Encoder Replacement (may not be required)

The stitch-regulator encoder circuit board mounted to the rear wheel of the machine will need to be replaced if the circuit board is blue and does not have a 3-pin connector attached and looks like Figure 7. The circuit board is held in place with one screw and five connecting pins. If the Y-encoder has a black circuit board that looks like Figure 8, skip ahead to the next section.

- 1.** Unplug the stitch regulator cable from the Y-encoder.
- 2.** Remove the Phillips screw that holds the circuit board in place with a small Phillips screwdriver (Figure 9).
- 3.** Gently pull the circuit board outward toward the front of the quilting machine (the same direction the screw came out).
- 4.** Align the new Y-Encoder circuit board (Page 3, C) so the five pins on the encoder fit into the 5-pin connector on the circuit board (Figure 10) and gently push into position. The screw hole on the circuit board should match up with the hole in the encoder housing.
- 5.** Replace the Phillips screw.
- 6.** Plug the stitch regulator cable back into the new Y-encoder circuit board.

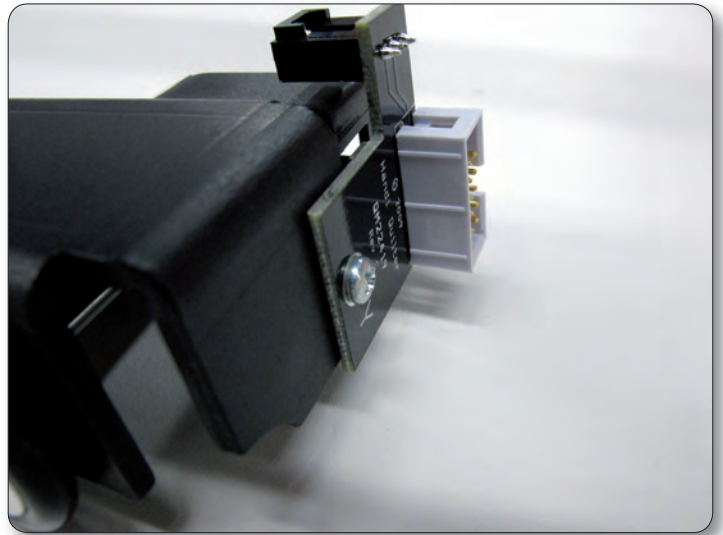


Figure 8

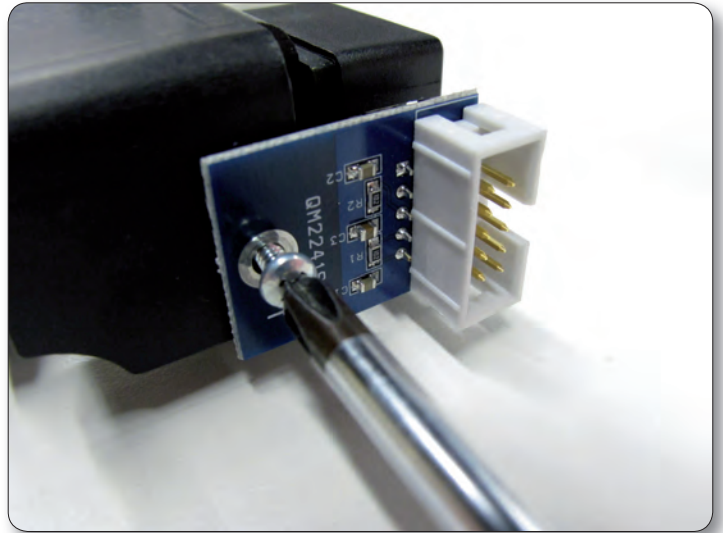


Figure 9



Figure 7

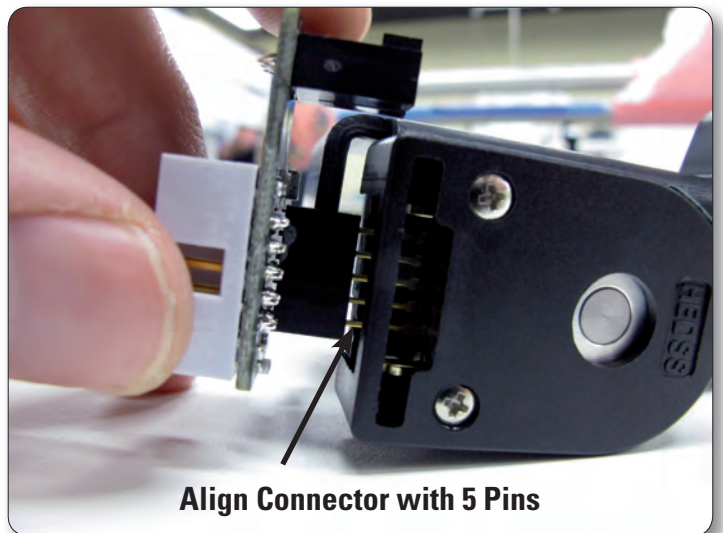


Figure 10

Setting up the New Carriage

1. With the HQ Pro-Stitcher carriage set properly on the frame system, untie the black twist ties that are binding the black cables in a loop. Drape the black cables over the back of the carriage as shown in Figure 11.

2. Plug one branch of the new “Y” power cord (Page 3, I) into the power supply located toward the rear of the carriage (Figure 12). Route the power cord as shown in Figure 11. It is also permissible to have the power cord extend directly out the side of the carriage rather than over the top of the carriage.

3. With the X-axis engagement lever shifted into the lowest position, verify that the white gear at the front of the carriage fully engages with the blue rack that was previously installed.

a. If the white gear fails to lower enough with the front disengagement lever in its lowest position, you will need to adjust the black X-axis lever bracket to allow the X-axis engagement lever to drop a little lower. To do this, loosen the two 4mm Allen bolts and pivot the bracket downward until the white gear is pressing firmly on the blue rack, then re-tighten the two bolts (Figure 13).

b. Move the carriage along the length of the table to double-check the placement of the blue rack. Make adjustments to the blue rack as necessary.

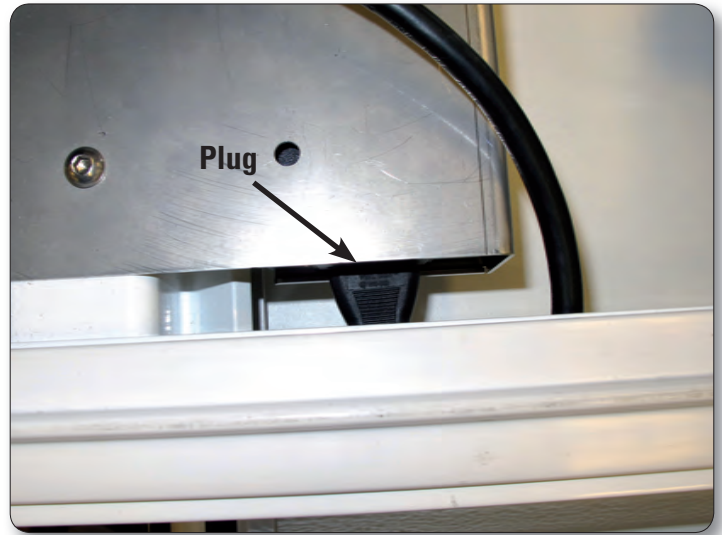


Figure 12

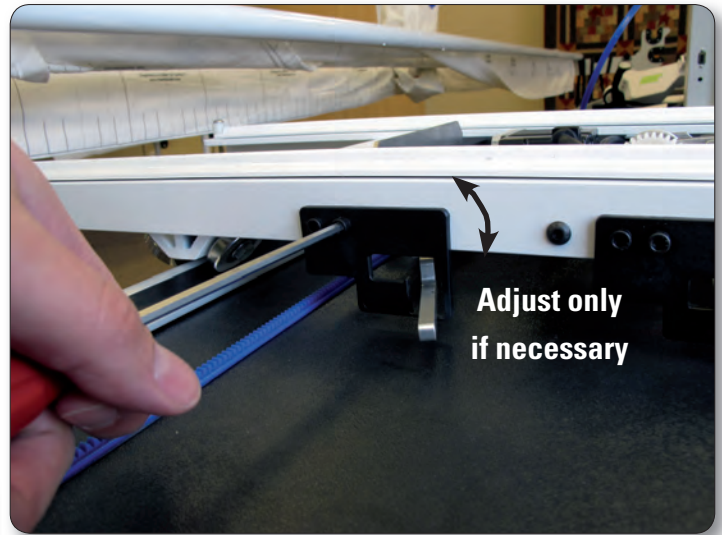


Figure 13



Figure 11

4. Carefully lift the quilting machine and place it on the carriage so the wheels engage the white carriage tracks, making sure not to set the wheels on top of the stitch regulator cable (this is easier to do with two people – one at each end of the quilting machine).

5. With one end of the stitch-regulator cable plugged into the machine's C-Pod and the middle connector plugged into the quilting machine's "Y" encoder, plug the other end of the cable into the carriage "X" encoder (Figure 14).

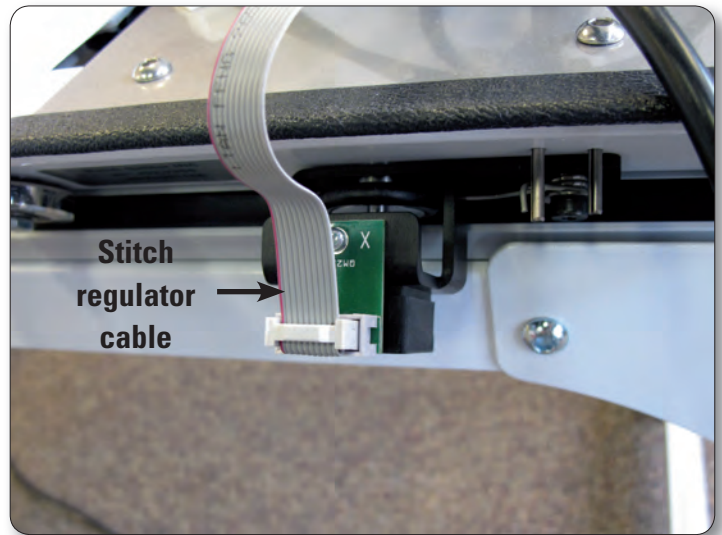


Figure 14

6. The black cables attached to the HQ Pro-Stitcher carriage should be routed up between the rear handles and the quilting machine, toward the right-hand side of the machine (looking at the machine from the back). Place the black cable clips (Page 3, J) as shown in Figures 15a, b and c, and route the cable accordingly.

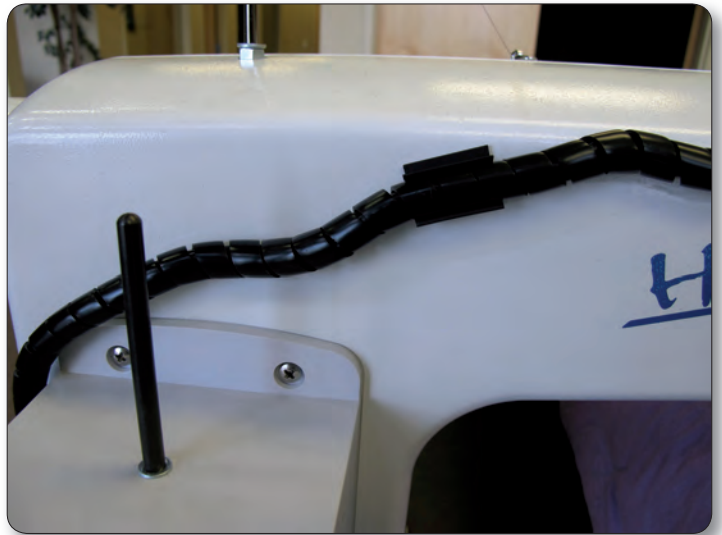


Figure 15 b



Figure 15 c



Figure 15 a

7. The small black cable with the black 3-connector clip should be routed underneath the P-Pod (Figure 16) and snapped into the quilting machine’s “Y” encoder (Figure 17).

The two black cables that run from the carriage up to the computer should be clipped into the cable clip under the rear handlebar as shown in Figure 16 to help prevent these cables from getting caught on the edges of the carriage.

8. Verify that the Y-axis gear engages the blue rack for the Y-axis.

a. To do this, look from the back of the machine, between the bottom of the quilting machine and the top of the carriage. If the white gear is not high enough to engage the blue rack above it (Page 3, H), adjust the lever on the side of the carriage closest to the back of the carriage (the Y-axis disengagement lever) into the lowest position (the teeth of the gear and the teeth of the rack should engage).

b. If horizontal adjustment is needed to ensure that at least half the white gear and blue rack are interlocking, loosen the two screws that mount the Y-axis bracket to the base plates and push the bracket in the direction necessary while re-tightening the screws.

9. With the power cable unplugged and both engagement levers in the down position, ensure that as the quilting machine is moved in both the X and the Y directions, the corresponding gears are rotating as well.

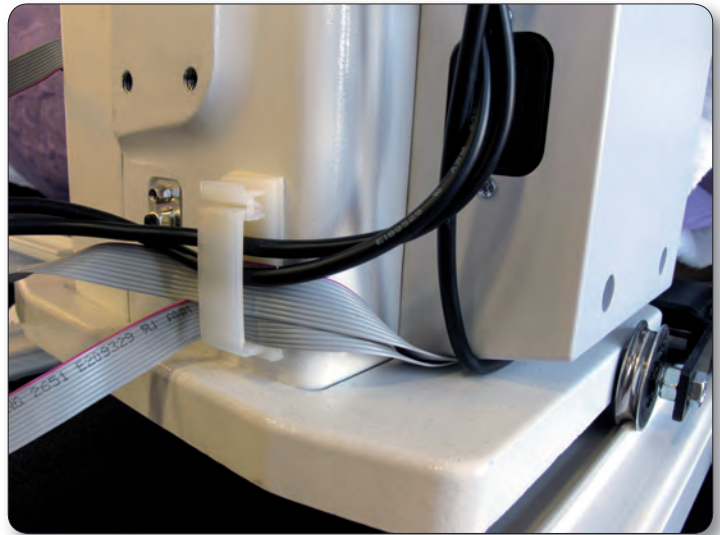


Figure 16

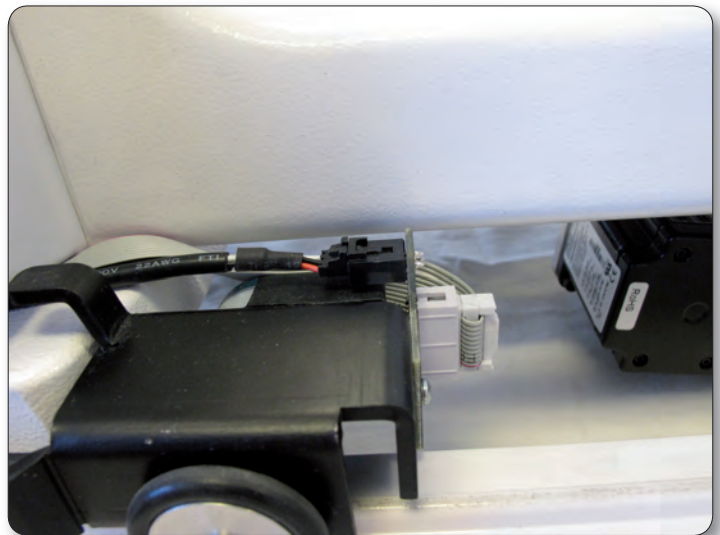


Figure 17

Computer/Touch Screen Monitor Assembly

1. Remove the front handlebar from the front of the HQ quilting machine, making sure to first disconnect the handlebar cable from the side of the head and then remove the three hex-head bolts with a 5mm Allen wrench.

If it is difficult to remove the cable on the HQ quilting machine, first remove two of the hex-head bolts and then loosen the third. Next, rotate the handlebar slightly to allow easier access to the handlebar cable.

2. Make sure the three handlebar bolts are in the front handlebar and protruding out the bottom of the handlebar (Figure 18).

3. Position the handlebar over the computer bracket such that the screws go through the three holes in the bracket (Figure 19)

4. Secure the handlebar and bracket in place on the machine head using the three handlebar bolts.



Figure 18



Figure 19

5. The black cable has three connections – two 9-pin serial connectors and one barrel connector for power (Figure 20). Insert the barrel connector into the center jack (B) located on the bottom edge of the black box that is mounted to the back of the computer bracket (Figure 21). Attach the two 9-pin serial cables to the appropriate ports on the back of the same box, making sure cable connectors are plugged into their corresponding ports on the black box.



Figure 20

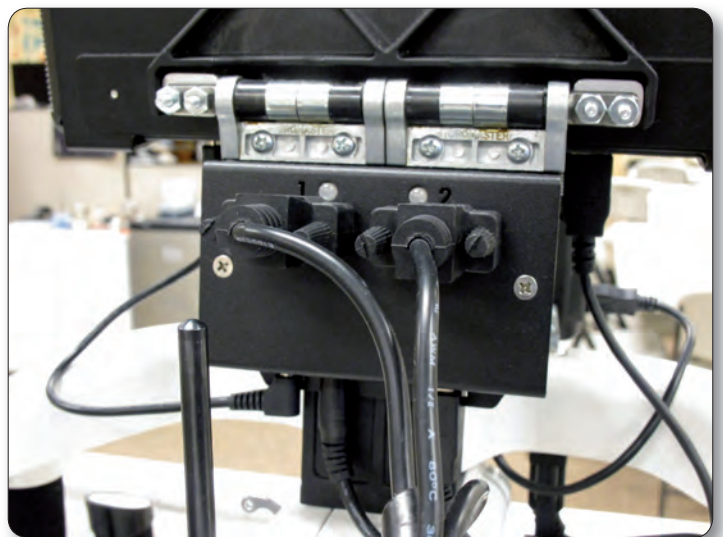


Figure 21

6. Remove the computer from its packaging. Lift open the screen and rotate the display clockwise so the display covers the keyboard. Install the computer battery into the back of the computer. Install the computer into the computer bracket by sliding it into the black bracket from the top downward (Figure 22). With the computer installed in the bracket, connect the USB cable (Page 3, N) between one of the bottom USB ports (Figure 23 position B) and the black box on the back of the bracket (Figure 24 position C). Also connect the computer power cord (Page 3, O) between the computer (Figure 23 position C) and the black box (Figure 24 position A). Either of the two open USB ports (Figure 23 position A or Figure 25) may be used to plug in the USB Flash drive for loading designs.



Figure 22

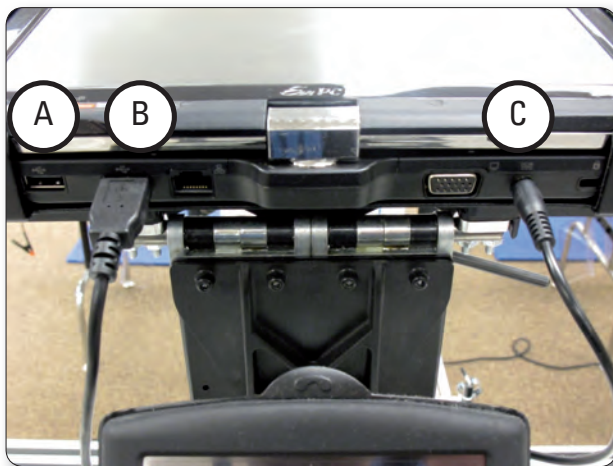


Figure 23

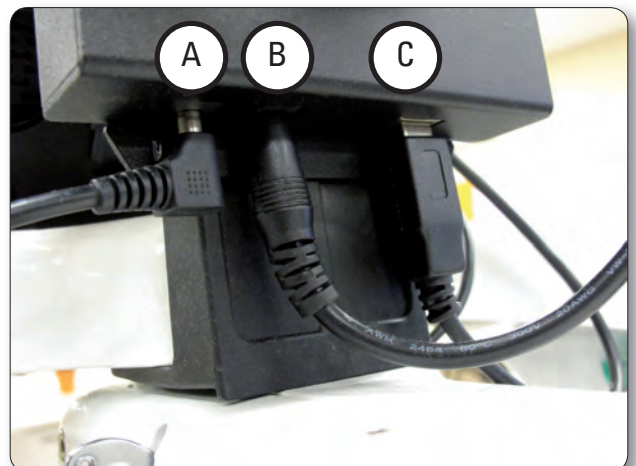


Figure 24



Figure 25

Powering Up and Shutting Down

1. Make sure power is reaching the computer by checking that the power cord is plugged into the power supply located at the back of the carriage. The barrel-shaped power connector should then be plugged into the bottom of the black box behind the computer, and the short power cord connects the black box to the computer. The computer will run on AC power as long as this connection is made. If the cable becomes unplugged, the computer will continue to run on battery power until the battery dies.

2. The tablet computer can be turned on by sliding the power switch at the bottom left-hand side of the screen to the right (Figure 26).

3. Shutting down the computer should be done using the “Shut Down” button on the main window of the Pro-Stitcher screen. If needed, the power switch can be slid to the right in order to begin a shut-down sequence. This should only be used if the “Shut Down” button cannot be accessed or does not work.

4. Leaving the HQ Pro-Stitcher computer powered on with the power cord unplugged will result in the battery discharging and the computer eventually shutting itself down.

5. If the HQ Pro-Stitcher computer is left on for a long period of time, the screen may turn black and enter a sleep mode. It can be revived by tapping on the screen.



Figure 26

Carriage Quick Release Levers

To move the HQ quilting machine around on the table after the program has loaded, press the “Engaged” button on the top right-hand side of the touch screen. This toggles the motors between being “engaged” and being “disengaged.” Use the mechanical disengagement levers on the right-hand side of the carriage to physically disengage the white carriage gears from the blue racks (Figures 27). This allows true “free motion” quilting with no added resistance from the HQ Pro-Stitcher. For both levers, the Down position is “Engaged” and the Up position is “Disengaged.”



Figure 27

Levers Up = Gear Disengaged / Free Motion

HQ Pro-Stitcher Parts List for HQ Sixteen & HQ¹⁸ Avanté (4-wheel carriage version)

See Page 3 for HQ¹⁸ Avanté (8-wheel carriage) and HQ²⁴ Fusion



A



B



C



D



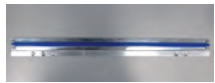
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K



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Q



R



S

Item	Quantity
A. Blue X-axis Flexirack (12 feet)	1
B. X-axis Flexirack Clamps & Screws	4
C. 3/32" Drill Bit	1
D. Emergency Base Plate Repair Kit	1
E. Carriage Assembly	1
F. Computer Bracket	1
G. Y-Encoder Circuit Board	1
H. Y-axis Mounting Bracket Assembly	1
I. "Y" Power Cord (10 foot)	1
J. Adhesive Cable Mounting Clips	1
K. USB Flash Drive/Lanyard	4
L. Art & Stitch Software	1
M. Alignment Block	1
N. 3M Command Adhesive Strips	6
O. HQ Sixteen "Y" Encoder (optional)	1
P. Power Cord Retaining Clamp	1
Q. Stitch Regulator Adapter Board	1
R. USB Cable	1
S. Computer Power Cord	1

Installation

HQ Sixteen

HQ¹⁸ Avanté (4-wheel carriage version)

Tools Required

Power drill
7/16" open end wrench
7/16" nut driver (or second wrench)
4mm Allen wrench
5mm Allen wrench
Slotted screwdriver (one large and one small)
Phillips screwdriver (one large and one small)
Knife and/or wire cutters

Assembly

Handi Quilter recommends installation by an authorized HQ Pro-Stitcher Representative.

Setting the Frame Height

Determine whether the quilting machine is placed on a Portable Professional Frame or an HQ Studio Frame and follow the appropriate instructions below.

Portable Professional Frame

1. The Portable Professional Frame (Pro-Frame) side arms have three sets of height-adjustment holes. The ideal setting for the HQ Pro-Stitcher is the middle set of holes (Figure 1). This should allow the quilting machine arm to pass freely under the idler bar while keeping the quilt as close as possible to the arm. Use the 7/16" wrench to adjust the height if necessary. The ideal height allows just the tip of a finger between the idler pole and the machine.

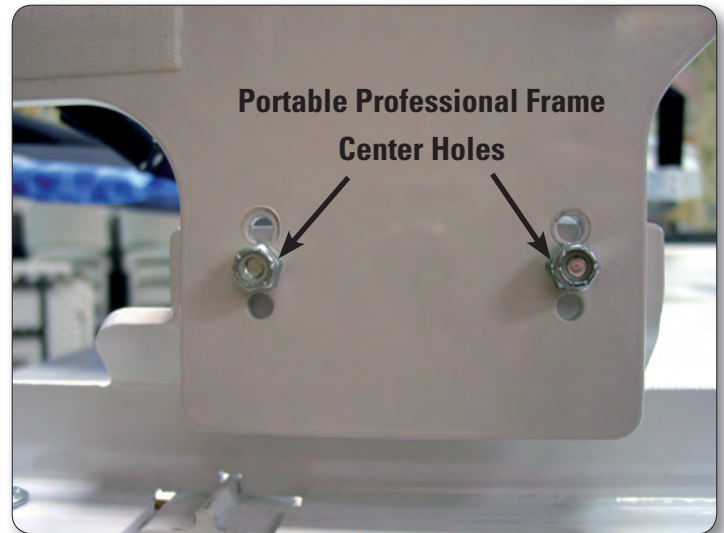


Figure 1

HQ Studio Frame

1. The HQ Studio Frame may already be adjusted to the ideal height for the HQ Pro-Stitcher carriage. After following the assembly instructions below, if the idler pole (the lower pole toward the back of the frame) rubs on the free arm of the quilting machine, then adjust the side arms to the next higher position check again and adjust if necessary. The ideal height allows just the tip of a finger between the idler pole and the machine.

X-Rack Installation

1. Make sure the front white track is mounted to the table with the 3M Command Strips (Page 16, N) that have been provided (unless the front track is already mounted to the table). Use the carriage as a guide to make sure there is no binding once the front track is mounted to the table.

2. Remove the blue 12-foot rack (A) and the HQ Pro-Stitcher carriage (E) from the box. Cut the cable ties from the front of the carriage (Figure 2).

3. Starting at one end of the table, begin mounting the blue rack to the table. Peel back just a few inches of the protective layer of the tape. Position the blue rack using the wooden alignment block (M) as a guide. The wood block should be laid flat on the table top, butted against the inside edge of the front white track (Figure 3). The blue rack then butts against the opposite side of the block so the blue rack is mounted 2" away from the front white track.

The block should be flat on the table and not on top of the blue rack or the white track. Press down on the blue rack to stick it firmly to the table. Pull the pink protective layer from the back side of the rack while shifting the block down the length of the table until about two feet of the rack have been mounted.

4. Place the HQ Pro-Stitcher carriage on the frame and verify that the front white gear is aligned with the blue rack mounted on the table top.

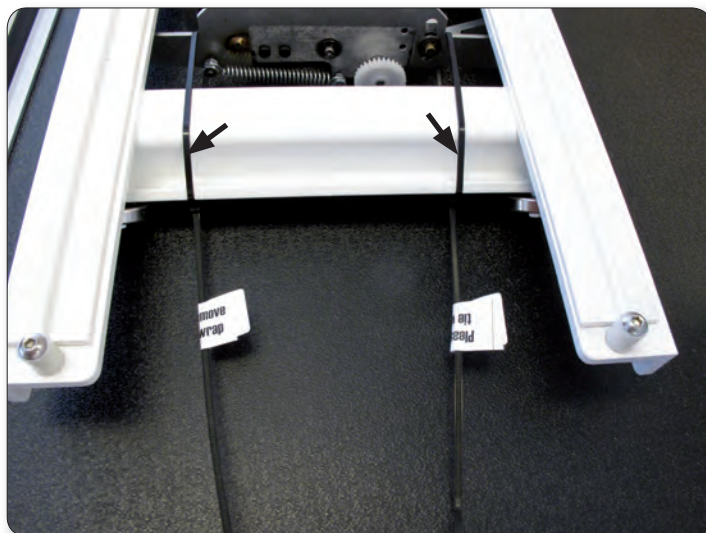


Figure 2

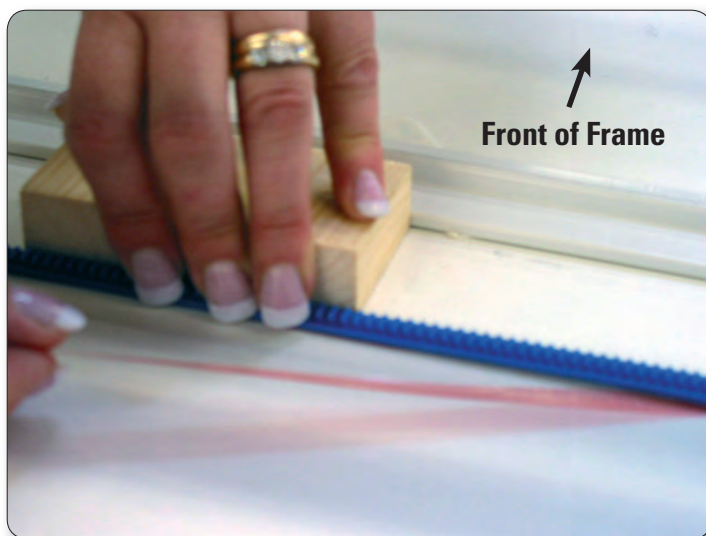


Figure 3

5. Make adjustments to the placement of the blue rack as necessary to align the blue rack with the front white gear on the HQ Pro-Stitcher carriage (Figure 4).

6. If alignment using the wooden block is accurate, continue using the wooden block as a guide to mount the remainder of the blue rack to the table top. Otherwise, use the carriage as a guide and align the blue rack with the white gear along the length of the table, removing the pink protective layer and pressing downward on the blue rack while moving down the entire length of the table top.

7. Trim the rack to length using a knife or wire cutters if necessary (the blue rack does not necessarily need to extend from Pro-frame arm to Pro-frame arm and can actually be a couple of inches shorter if desired).

8. At the ends of the blue rack, use the four small metal clamps (Page 16 , B) to hold the ends firmly in place (see Figure 5a). The clamps have a hole through the center and a lip on one end. The lip should be on the side opposite the blue rack. Drill pilot holes using the 3/32" drill bit and then attach the clamps as shown on either end of the blue rack using a Phillips screwdriver. Note: Do not use the larger drill bit included in the emergency repair kit...this is the wrong size for the X-rack clamps! As an alternative, choose to use one clamp at each end using the lip of the clamp to slide over the last gear of the blue rack (Figure 5b).

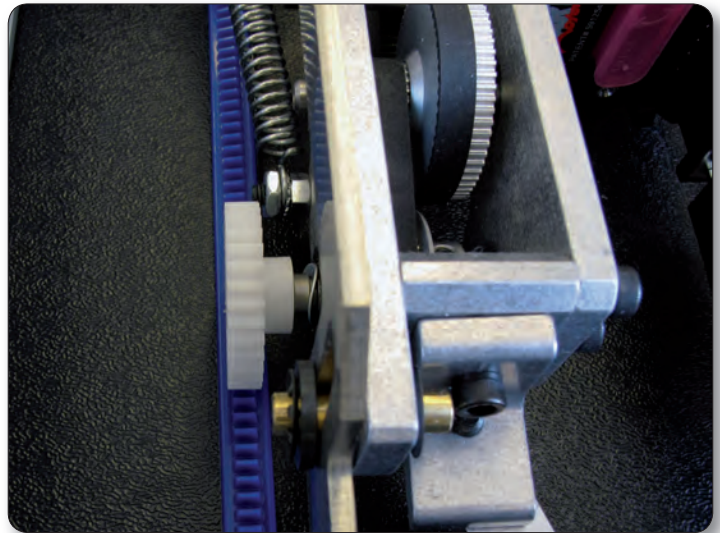


Figure 4

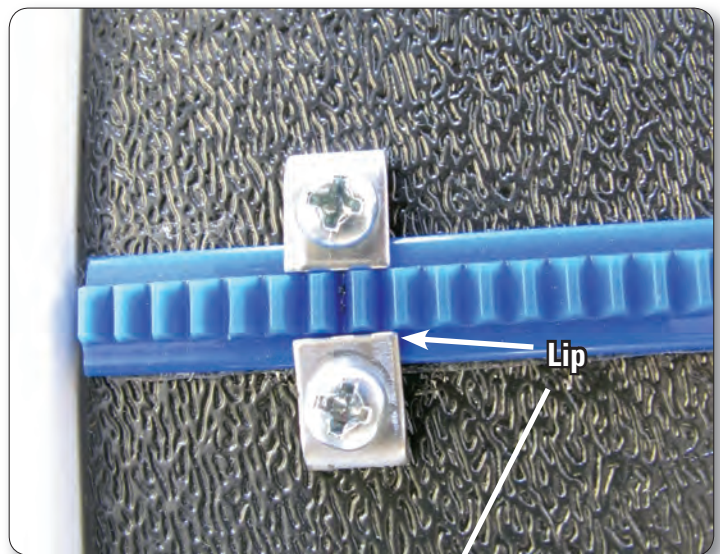


Figure 5 a



Figure 5 b

Y-Rack Installation

1. Carefully lay the quilting machine on its power pod side. Underneath the base plates, near the wheels on the C-Pod side of the machine (the side with the thread tensioner and guides) there will be either two screws or two holes. If the screws are there, use a large slotted (flat) screwdriver to remove the screws (see Figure 6).

2. Attach the Y-Rack as shown in Figure 7. The blue rack should be toward the middle of the machine while the bolt holes should be toward the outside. Use the screws that were removed from the front and rear base plates (or use the two smallest screws in the Base Plate Repair Kit (Page 16, D) if your machine had no screws here) to mount the Y-Rack to the bottom of the front and rear base plates. Be careful not to over-tighten the screws as the base plate holes will strip easily. In case of accidentally cross-threading or stripping one of the base plate holes, an emergency repair kit (D) has been provided.

3. If the screws in the base plates do not have slotted heads and you cannot fit a nut driver cannot be fitted over the screw head, please use one of the provided slotted screws as a replacement (D) and use a slotted screwdriver to tighten the screws in place.



Figure 6

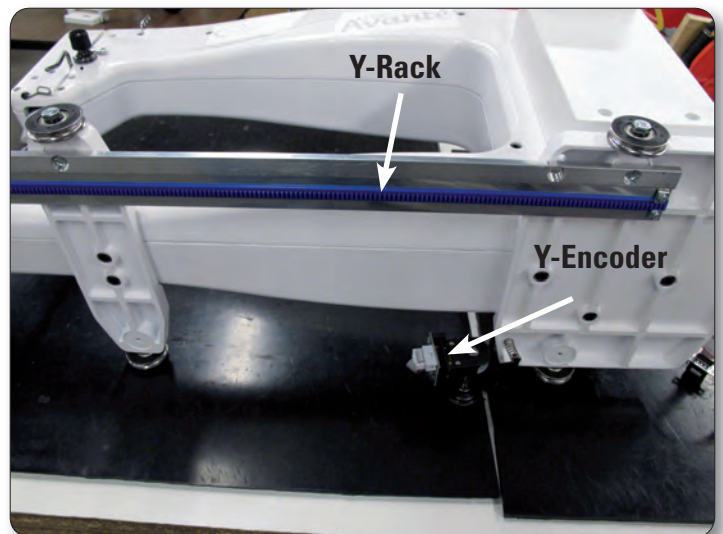


Figure 7

Y-Encoder Assembly Installation (HQ Sixteen only)

Use Figure 8 to help identify whether your HQ Sixteen has the new encoder or an older version. Follow the installation guidelines below according to the scenario which describes your situation best:

The HQ Pro-Stitcher is an upgrade to a Stitch-Regulated HQ Sixteen

- 1.** Place the HQ Sixteen on its side as in Figure 9. Remove the encoder bracket/wheel mounting bolt using a 7/16" wrench and removing the bolt and bracket that attach the wheel to the rear base plate.
- 2.** Replace the old encoder assembly with the one provided with the HQ Pro-Stitcher (Page 16, O), making sure to put the wheel back in place between the nut and the base plate.
- 3.** Tighten the bolt in place with the 7/16" wrench. Use the nut to tighten the wheel to the base plate and then, while holding the nut in position with the wrench, tighten the bolt head with another 7/16" wrench or nut driver to the point that the encoder bracket can still spring up and down but is not excessively wobbly.
- 4.** Reposition the coil spring between the encoder bracket and the bottom of the base plate. The encoder bracket has a tab that the spring goes around and the base plate will either have a nub built into the casting or a small plastic device designed to entrap the opposite end of the spring.

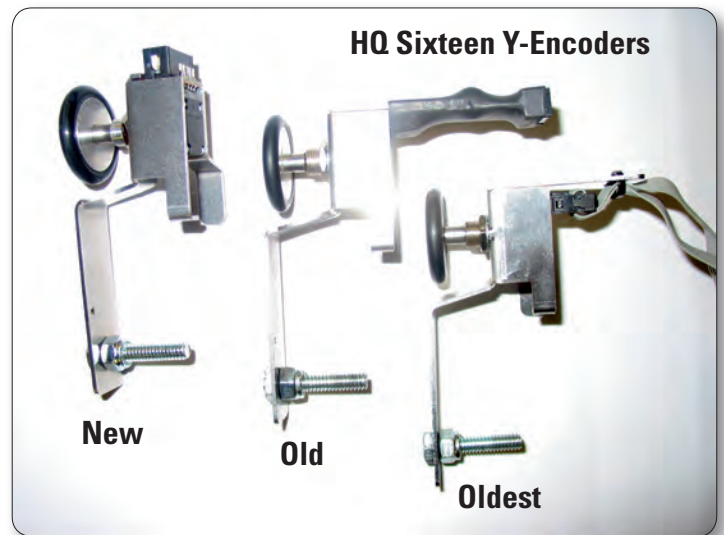


Figure 8

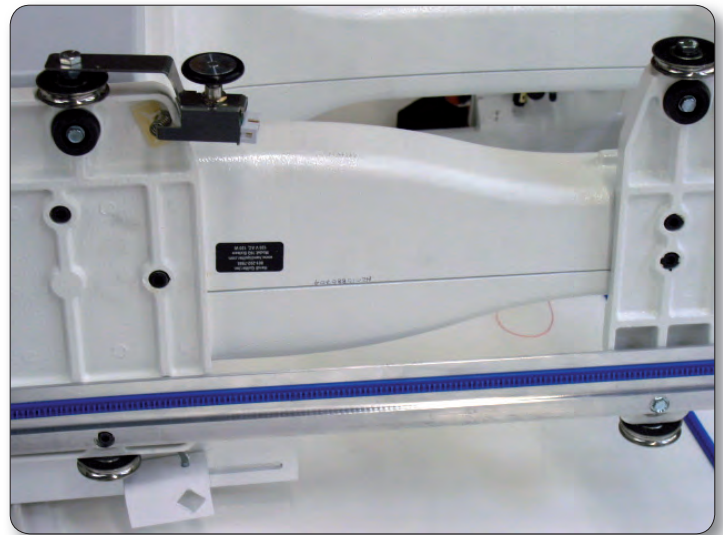


Figure 9

The HQ Pro-Stitcher is an upgrade to a Non-Regulated HQ Sixteen

1. Follow the instructions for attaching a new Y-axis encoder assembly (steps 2-4 above) that came with the Stitch Regulator Upgrade Kit.

The HQ Pro-Stitcher was purchased with a new HQ Sixteen

1. The correct Y-axis encoder assembly should already be attached to the HQ Sixteen.

Power Cord Retaining Clamp Installation (HQ Sixteen only)

1. Set the HQ Sixteen back up on its wheels and make sure it is unplugged.

2. Remove the four P-Pod mounting screws from the P-Pod (the plastic box on the left-hand side of the HQ Sixteen which contains the power cord receptacle) using a Phillips screwdriver. Please note that the bottom left-hand screw is longer than the other three.

3. Carefully disconnect all three cables from the P-Pod.

4. If working with an upgrade that included a new P-Pod, get it out now and continue the following steps using the new P-Pod, otherwise the following steps apply to the P-Pod that was just removed.

5. Loosen the two screws that mount the power cord receptacle to the plastic P-Pod using a Philips screwdriver and, if the screws include nuts on the opposite end, a wrench or small pliers to hold the nut (the two Phillips head screws are accessible from the exterior of the pod while the nuts are on the interior).

6. Slide the retaining clamp (Page 16, P) over one end of the new Y-split power cord (I).

7. Insert the power cord into the receptacle on the P-Pod while sliding the two slots on the clamp behind the two screws that were just loosened.

8. Make sure the power cord is fully inserted, and then tighten the two P-Pod screws so they hold the clamp securely against the P-Pod. Insert the small screw included with the retaining clamp into the clamping portion of the retaining clamp and tighten so the clamp is now tight on the power cord as shown in Figure 10.

9. Re-connect the three P-Pod cables and then re-attach the P-Pod to the HQ Sixteen head (remember, the long screw should be in the bottom left-hand hole).

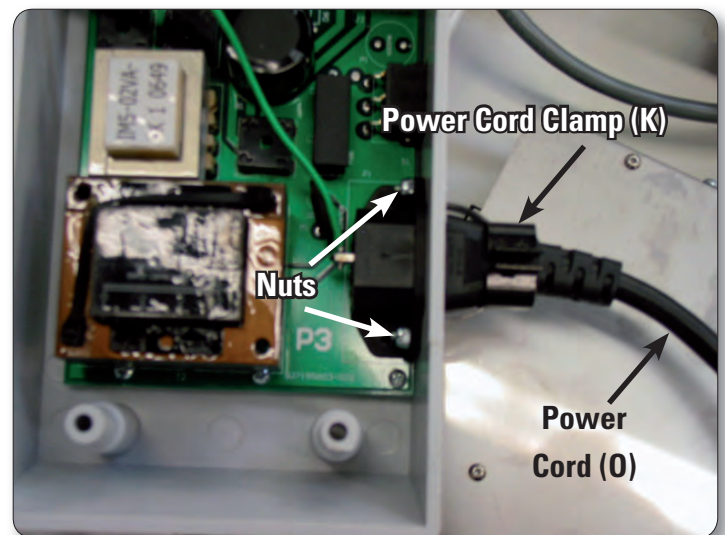


Figure 10

C-Pod Replacement (HQ Sixteen only)

Some kits will come with a new C-Pod (C). If the HQ Sixteen was purchased with the HQ Pro-Stitcher, there is no need to install a new C-Pod. Also, any HQ Sixteen Stitch-regulated systems running version 8.04 or later (the C-Pod screen will identify the version as it boots up) will not require a C-Pod upgrade.

1. Important: To prevent damage due to electrostatic discharge, use a grounded wrist strap or if a wrist strap is not available, discharge any electrostatic energy on your body by touching any exposed metal (non-painted) portion of the HQ Sixteen prior to and several times during this procedure.

2. Remove the C-Pod from the HQ Sixteen head by removing the four mounting screws with a Phillips screwdriver.

3. Carefully disconnect all cables from the C-Pod, taking care not to touch the bare circuit board.

4. If the new C-Pod includes a Lock Board as shown in Figures 11 and 12, skip ahead to step 8.

5. Remove the black Phillips screw that holds the Lock Board in place on the old C-Pod circuit board (Figure 11).

6. On the old C-Pod (the one just removed from the HQ Sixteen), gently pull upward on the Lock Board to remove it from the old C-Pod and press it firmly in place on the new C-Pod (Figure 12). Make sure both rows of pins enter the header on the underside of the Lock Board. The red LED should be located at the top right when looking into the C-Pod.

7. Lightly hand-tighten the black Phillips screw through the Lock Board.

8. Attach the internal cables to the new C-Pod.

9. Fasten the C-Pod to the head using the four screws that were removed in step 2.

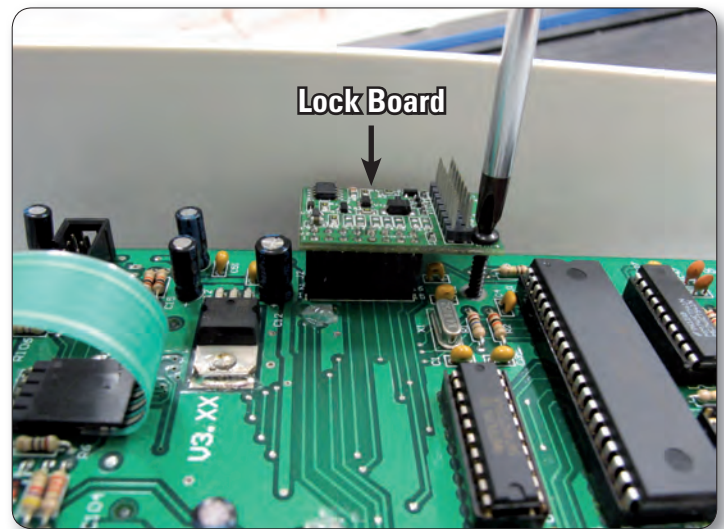


Figure 11

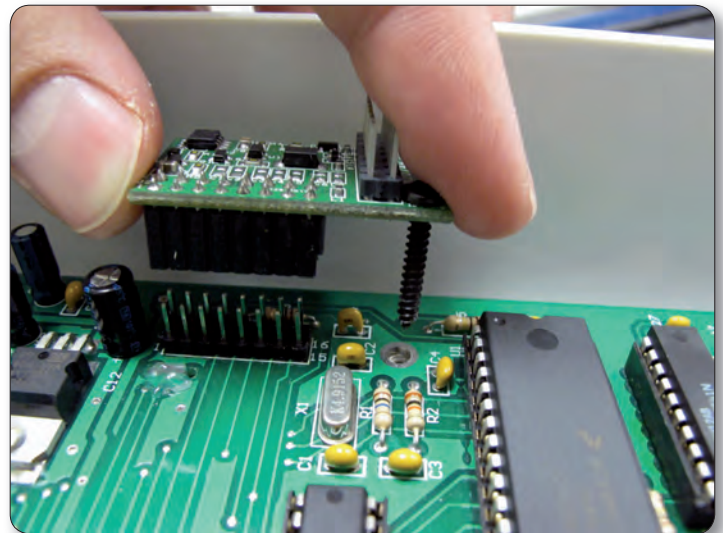


Figure 12

Setting Up the New Carriage

1. Remove the new HQ Pro-Stitcher Carriage (Page 16, E) from the box.

2. Place the carriage on the frame/table to attach the cables.

a. Plug the 10-pin connector on the end of the flat gray stitch-regulator cable (opposite the 9-pin D-sub connector) into the X-axis stitch regulator encoder. Make sure the red stripe on the gray cable is facing up for the HQ-Sixteen (Figure 13 a) and the left (power cord side) for the HQ¹⁸ Avanté (Figure 13 b).

b. Route the cable around the X-axis motor bracket as shown in Figure 13 a, and through the black motor cable loop to keep the gray cable from interfering with the machine or carriage.

3. The “Y” end of the power cord that is not attached to the P-Pod should be attached to the power supply at the back end of the Pro-Stitcher carriage (Figure 14).

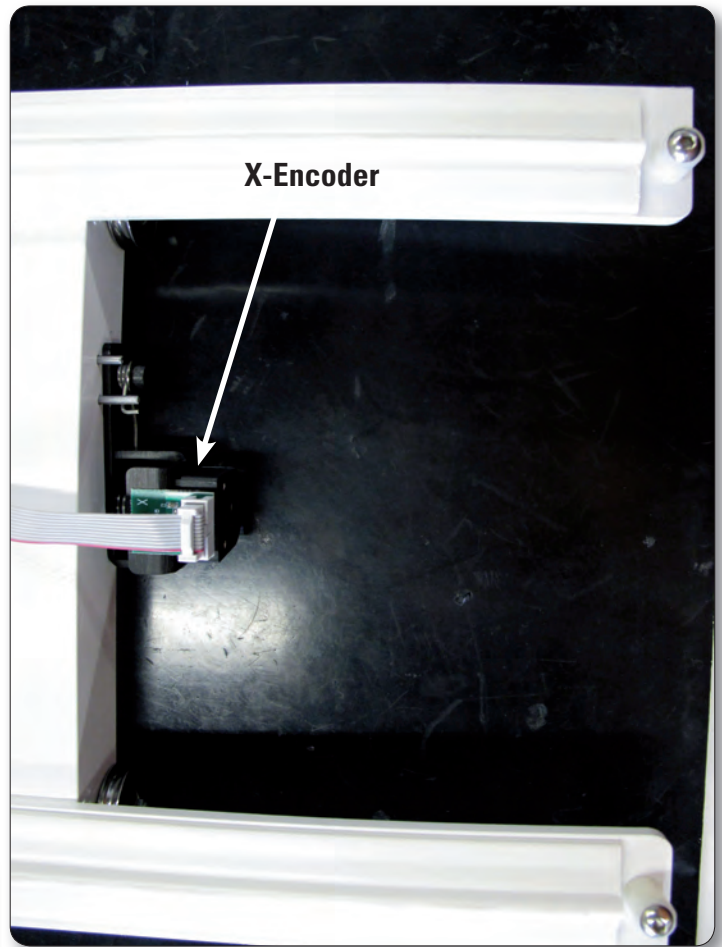


Figure 13 b

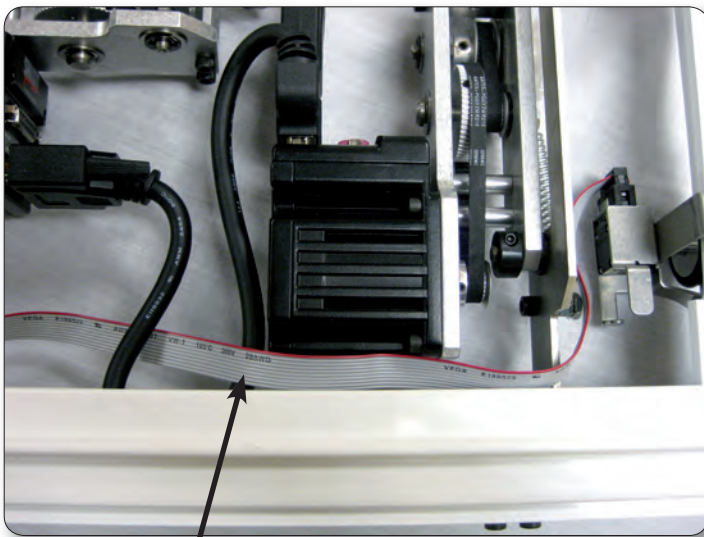


Figure 13 a

Route the stitch regulator cable through the motor cable loop to keep the stitch regulator cable in position.



Figure 14

4. The black cables that extend out the back of the HQ Pro-Stitcher carriage (Figure 15) provide power and communications to the motors and are already attached to the carriage. Lay that cable so it extends out the back and the stitch regulator cable so it extends out the side as shown in Figure 15.

5. Place the carriage on the table so the carriage wheels are in place on the table tracks.

6. Verify that the white gear toward the front of the carriage engages with the blue rack that was installed previously. If the teeth of the white gear do not fully engage the blue rack teeth, be sure the X-axis release mechanism is set in its lowest position and that the blue rack was set the appropriate distance from the front white table track (some minor adjustments to the blue rack may be necessary for proper alignment).

It may be necessary to loosen the two 4mm Allen bolts that mount the X-axis black lever bracket to the side of the carriage in order to allow the X-axis white gear to drop low enough to fully engage the blue rack, then re-tighten those two bolts (Figure 16).

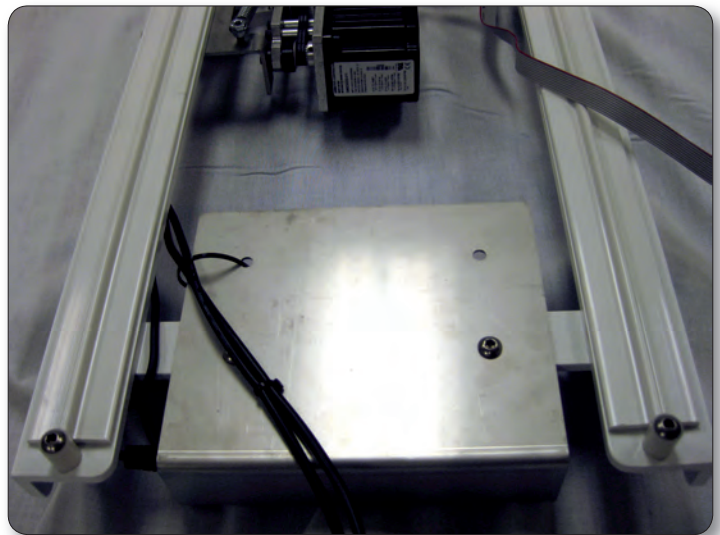


Figure 15

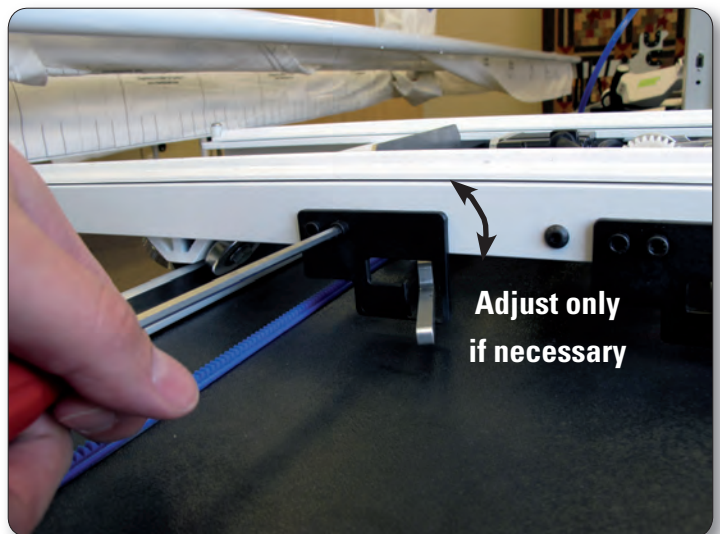


Figure 16

7. Carefully lift the quilting machine and place it on the carriage so the wheels engage the white carriage tracks, making sure not to set the wheels on top of the stitch regulator cable (this is easier to do with two people – one at each end of the quilting machine). The stitch regulator cable should be laying across the carriage in such a manner that it ends up between the front and rear wheels of the quilting machine when it is placed on the carriage.

8. For HQ Sixteen only: Plug the Stitch Regulator Adapter Board (Page 16, Q) into the Y-axis stitch regulator encoder (Figure 17).

9. Plug the middle connector on the gray stitch regulator cable into the Y-axis stitch regulator encoder (the stitch regulator encoder mounted to the rear machine wheel).

10. To prevent the stitch regulator cable from dragging across the motor assemblies during operation, route the final section of the stitch regulator cable around the back of the quilting machine and plug the 9-pin D-sub connector into the C-Pod (Figure 18).

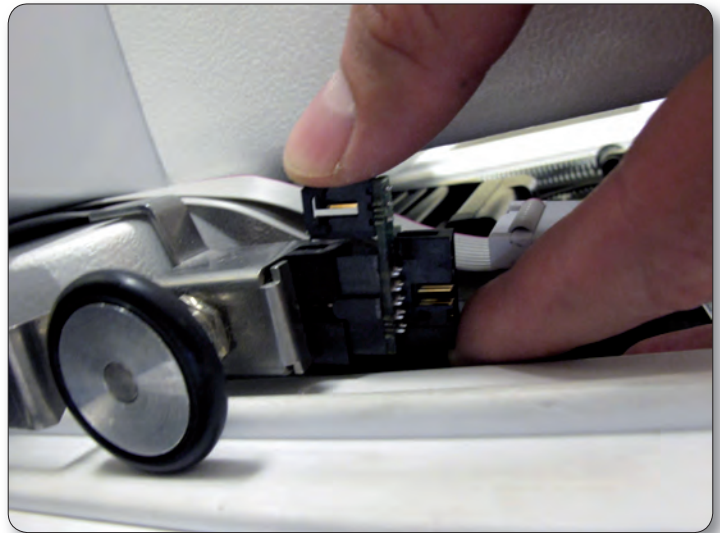


Figure 17

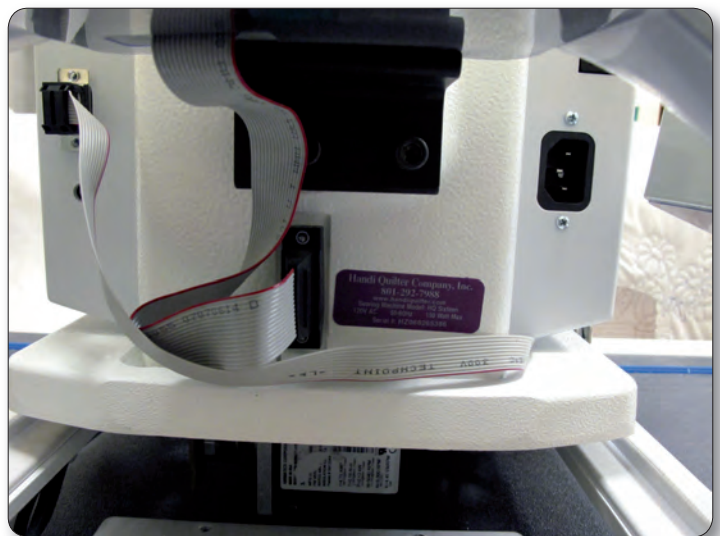


Figure 18

11. The black cables attached to the HQ Pro-Stitcher carriage should be routed up between the rear handles and the quilting machine, toward the right-hand side of the machine (looking at the machine from the back). Place the black cable clips as shown (Figure 19) and route the cable accordingly. The small black cable with the black 3-connector clip should be routed underneath the P-Pod and snapped into the Stitch Regulator Adapter Board (Page 16, J) (Figure 20).



Figure 19

12. Verify that the Y-axis gear engages the blue rack for the Y-axis.

a. To do this, look from the back of the machine, between the bottom of the quilting machine and the top of the carriage. If the white gear is not high enough to engage the blue rack above it (**H**), adjust the lever on the side of the carriage closest to the back of the carriage (the Y-axis disengagement lever) into the lowest position (the teeth of the gear and the teeth of the rack should engage).

b. If horizontal adjustment is needed to ensure at least half the white gear and blue rack are interlocking, loosen the two screws that mount the Y-axis bracket to the base plates and push the bracket in the direction necessary while re-tightening the screws.

13. With the power cable unplugged, ensure that as the HQ Sixteen is moved in both the X and the Y directions that the corresponding gears are rotating as well.

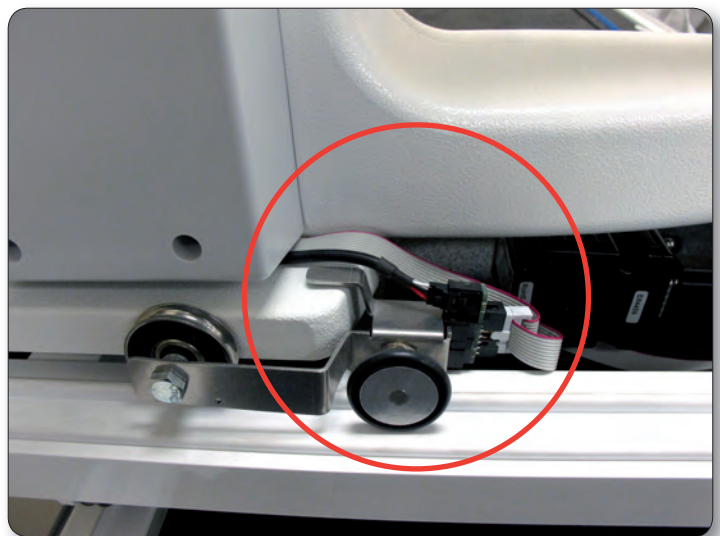


Figure 20

Computer/Touch Screen Monitor Assembly

1. Remove the front handlebar from the front of the quilting machine, making sure to first disconnect the handlebar D-cable from the side of the head and then remove the three (or two if the handlebar is the HQ Sixteen tilt-screen version) hex-head bolts with a 5mm Allen wrench.

2. For HQ Sixteen Tilt-screen Handlebars: Remove the adapter plate that is held in place with one hex-head screw and is revealed after pulling the front handlebar off the HQ Sixteen.

3. Place the black computer bracket (Page 16, F) on the head so the three holes of the bracket line up with the three holes in the head.

4. For HQ Sixteen Tilt-screen Handlebars: Secure the bracket in place by placing the adapter plate on top of the bracket and securing with the short bolt through the hole on the left (Figure 21).

a. Put the two long bolts in position without the handlebar in place just to ensure that when tightening the short bolt, the long bolts will go through.

b. Once the short bolt is tightened, remove the two long bolts and position the front handlebar over the adapter plate (Figure 22).

c. Secure the front handlebar in place with the two long handlebar bolts.

5. For HQ¹⁸ Avanté and HQ Sixteen Non-tilt-screen Handlebars: Position the handlebar over the bracket and secure the handlebar and bracket in place using the three handlebar bolts.

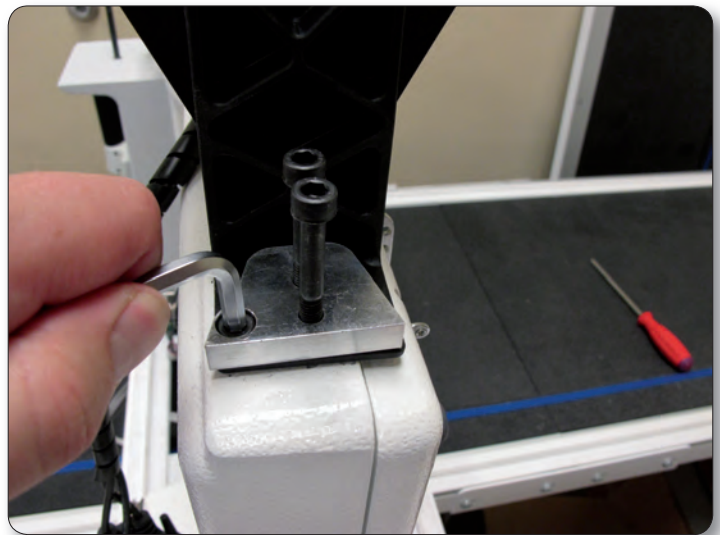


Figure 21



Figure 22

6. The black cable has three connections – two 9-pin serial connectors and one barrel connector for power (Figure 23). Insert the barrel connector into the center jack (B) located on the bottom edge of the black box that is mounted to the back of the computer bracket (Figure 24). Attach the two 9-pin serial cables to the appropriate ports on the back of the same box, making sure cable connectors are plugged into their corresponding ports on the black box.



Figure 23

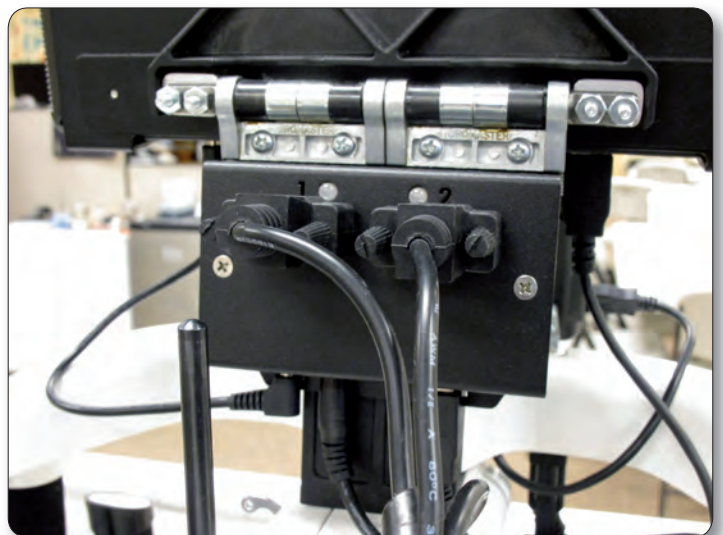


Figure 24

7. Remove the computer from its packaging. Lift open the screen and rotate the display clockwise so the display covers the keyboard. Install the computer battery into the back of the computer. Install the computer into the computer bracket by sliding it into the black bracket from the top downward (Figure 25). With the computer installed in the bracket, connect the USB cable (Page 16, R) between one of the bottom USB ports (Figure 26 position B) and the black box on the back of the bracket (Figure 24 position C). Also connect the computer power cord (Page 16, S) between the computer (Figure 26 position C) and the black box (Figure 24 position A). Either of the two open USB ports (Figure 26 position A or Figure 28) may be used to plug in the USB Flash drive for loading designs.



Figure 25

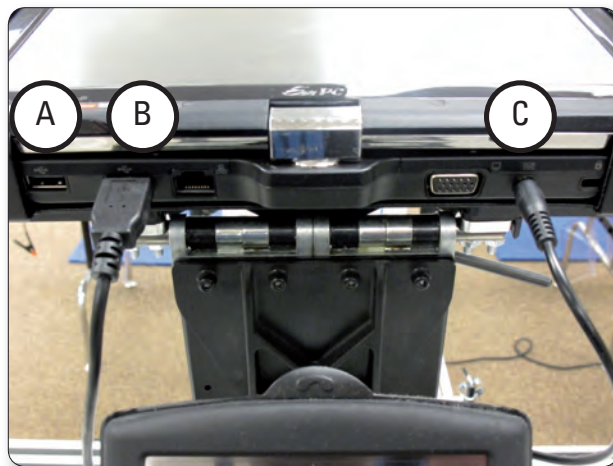


Figure 26

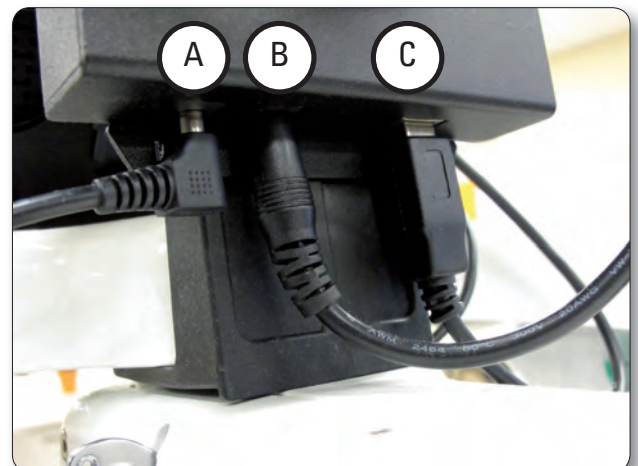


Figure 27



Figure 28

Powering Up and Shutting Down

1. Make sure power is reaching the computer by checking that the power cord is plugged into the power supply located at the back of the carriage. The barrel-shaped power connector should then be plugged into the bottom of the black box behind the computer, and the short power cord connects the black box to the computer. The computer will run on AC power as long as this connection is made. If the cable becomes unplugged, the computer will continue to run on battery power until the battery dies.

2. The tablet computer can be turned on by sliding the power switch at the bottom left-hand side of the screen to the right (Figure 29).

3. Shutting down the computer should be done using the “Shut Down” button on the main window of the Pro-Stitcher screen. If needed, the power switch can be slid to the right in order to begin a shut-down sequence. This should only be used if the “Shut Down” button cannot be accessed or does not work.

4. Leaving the HQ Pro-Stitcher computer powered on with the power cord unplugged will result in the battery discharging and the computer eventually shutting itself down.

5. If the HQ Pro-Stitcher computer is left on for a long period of time, the screen may turn black and enter a sleep mode. It can be revived by tapping on the screen.

Carriage Quick Release Levers

1. To move the HQ quilting machine around on the table after the program has loaded, press the “Engaged” button on the top right-hand side of the touch screen. This toggles the motors between being “engaged” and being “disengaged.” Use the mechanical disengagement levers on the right-hand side of the carriage to physically disengage the white carriage gears from the blue racks (Figure 30). This allows true “free motion” quilting with no added resistance from the HQ Pro-Stitcher. For both levers, the Down position is “Engaged” and the Up position is “Disengaged.”

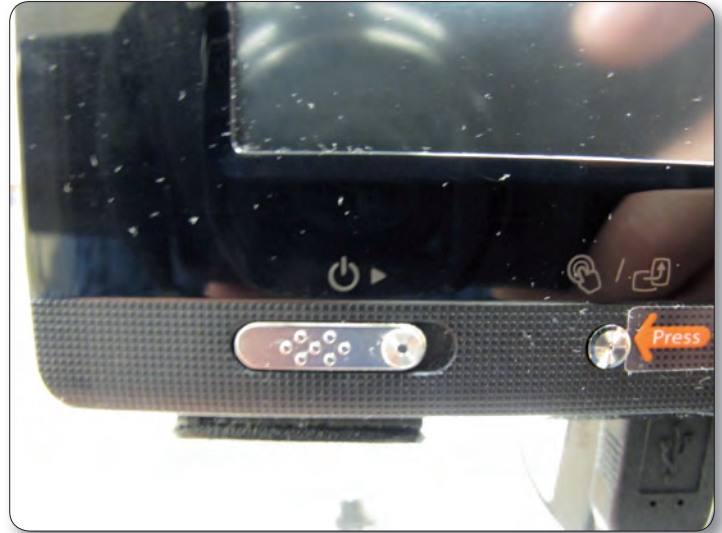


Figure 29

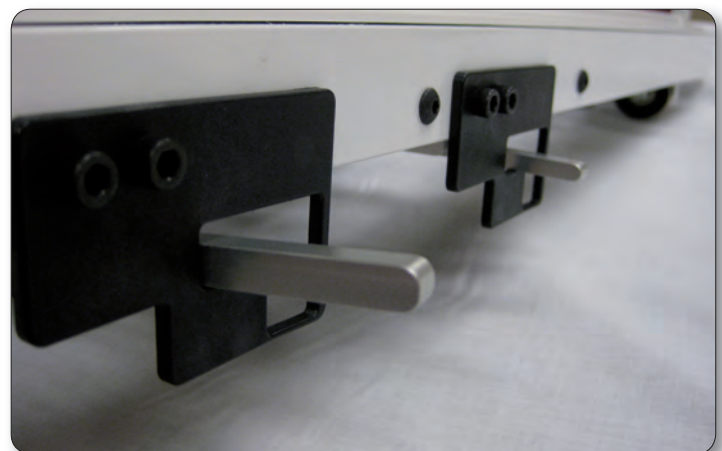


Figure 30
Levers Up = Gears Disengaged/Free Motion

Getting Started

Setting up the HQ Pro-Stitcher

The HQ Pro-Stitcher should be installed as outlined in the Installation Instructions that were included with this system.

USB Flash Drive

A USB flash memory stick is included with the HQ Pro-Stitcher and is pre-loaded with more than 180 patterns. Plug this flash drive into one of the USB ports located on the left-hand side or the bottom of the HQ Pro-Stitcher computer (Figure 1). The computer may need to be tilted back to access the lower USB port. It is not necessary to power down the HQ Pro-Stitcher to install or remove the USB flash drive, but care should be taken not to remove the flash drive while the system is saving to/or loading from the drive.

Stylus

A stylus is located on the lower right-hand corner of the screen. This may be used for more precise touch screen control (Figure 2).



Figure 1



Figure 1

Navigating the HQ Pro-Stitcher Screens

The HQ Pro-Stitcher has five menu buttons located on the right-hand side of most screens (Figure 2). These buttons will aid in navigating quickly through the menu screens. The button that is dark blue indicates the screen that is currently active. Here is a brief description of these screens:

- **Main Menu:** This is the screen in which the system starts. There are options here to update the system, clean the system, shut down the system, and manually establish communication between the HQ Pro-Stitcher and the quilting machine by pressing Connect if necessary.
- **Library:** Here the user can load, save, or optimize a pattern, view copyright information for the current pattern, or close the file.
- **Setup:** This screen allows the user to set stitch length, the number and length of tie-off stitches, auto jump threshold distance, and machine speed, as well as other advanced options.
- **Quilt:** This screen allows the user to perform pattern manipulations, such as Crop, Rotate, Mirror, Resize and Repeat. The user can also Reposition a pattern, use the Channel Lock feature, record Freehand motion and begin the actual stitching of a pattern.



Figure 2

At the top right-hand corner of many of the screens is a button that will state either “Motors Enabled” or “Motors Disabled” (Figure 3). If the motors are enabled and the X and Y axes engagement levers are in their engaged positions (the black levers on the right-hand side of the carriage should both be down to be in the “engaged” position), then the user will be unable to move the HQ Pro-Stitcher by hand. By pressing that button, it will toggle to indicate “Motors Disabled” and now the machine may be pushed around by hand as desired.

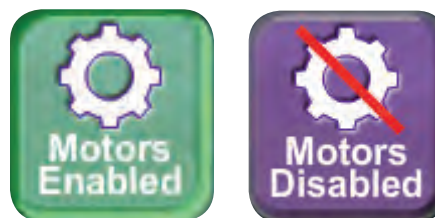


Figure 3

At the top of many of the screens are several buttons that may be used as needed (Figure 4). A description of those functions will be given later in these instructions.

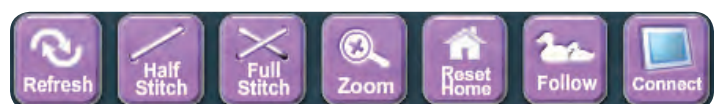


Figure 4

HQ Pro-Stitcher Step-by-Step Instructions

Step 1: Loading a Pattern

Quick Facts: The following pattern file formats can be loaded onto the HQ Pro-Stitcher using the USB flash memory stick:

*.hqf This is the “Handi Quilter File” format as generated by Art&Stitch and other software packages.

*.qli This format is generated for Statler Stitcher® systems. The HQ Pro-Stitcher will read most patterns of this format. However, patterns that are encrypted cannot be read.

*.txt This is the file format for the PC Quilter.

*.tap Saving a pattern directly on the HQ Pro-Stitcher (either using the Freehand option or just saving changes to a pattern), will result in a file in this format.

With the HQ Pro-Stitcher and quilting machine powered on, the first screen visible is the main menu screen (Figure 5).

Press the “Library” button gives access to the primary Library screen. The USB flash drive should be plugged into one of the USB ports under the computer (the computer may need to be tilted back to access the USB ports).



Press on the “Load Pattern” button opens the design library, which consists of all the quilt patterns stored on the USB flash drive.



Figure 5

The Design Library lists folders on the lower left-hand side and the actual patterns within those folders on the right-hand side. A preview of the selected pattern is shown in the upper left-hand block. To browse through the USB flash drive, the following functions must be understood (Figure 6).

Current Path: The line just below the “Back” and “Options” tabs on the lower left-hand section shows the current path the Pro-Stitcher is looking at to find the patterns (Figure 7). The drive letter at the beginning of the current path should be “E:\”. If there are not any yellow folders listed below the current path on the left, and there are no patterns on the right, try pressing the “Back” button until the current path reads only “E:\”. If there are still no folders or patterns, it is possible that the USB flash drive being used has been given a different drive letter (this can happen if there have ever been two USB sticks plugged into the HQ Pro-Stitcher computer at the same time). Check the “F:\” drive by pressing on the small black triangle located just to the right of the current path and selecting the “F:\” drive (Figure 7).

Back: This button will move back in the file tree of the USB flash drive. For example, if the current path shows “E:\Designs\HQ Designs\Continuous Line\”, then pressing “Back” will change the current path to “E:\Designs\HQ Designs” where one of the other yellow file folders may be selected.

Up/Down Arrows: These arrows are used to scroll up and down through the pattern files on the right or the yellow file folders on the left. Press and hold the arrow to scroll through the files or folders.

All of the designs on the USB stick “E:\” drive can also be found on the “D:\” drive under the “Designs” folder. If you choose to save other designs to the computer’s hard drive, it is recommended that you save them under the “Designs” folder to keep all your designs in the same location.

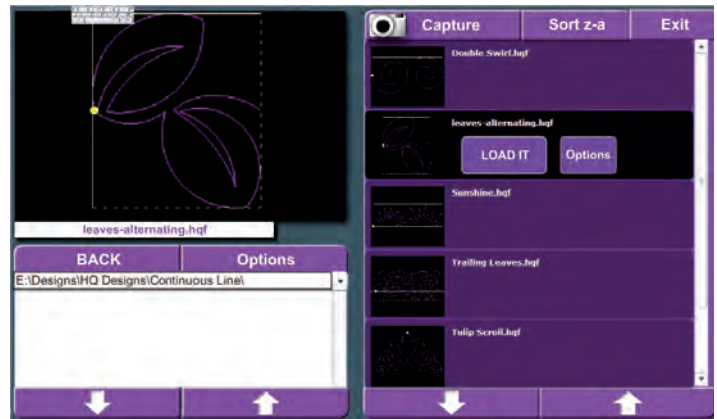


Figure 6

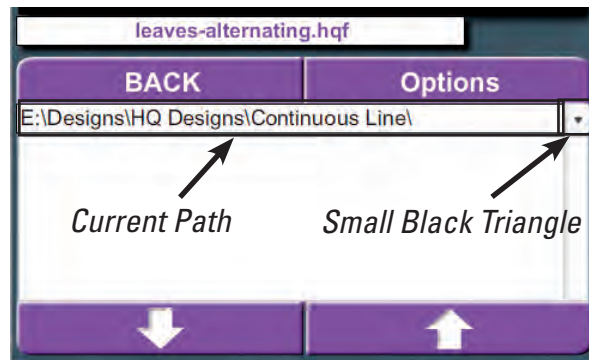


Figure 7

Load It

After identifying the desired pattern, tap on the file name on the right-hand side of the screen to highlight that pattern file and then press the “Load It” button under the file name. The file will be loaded and the user will be returned to the primary Library screen.



Step 2: Viewing the Pattern and Moving the Quilting Machine

The pattern should now be loaded and visible in the black pattern window (Figure 8).

The button at the top right-hand corner of most screens indicates the current state of the motors. If the button is green (Motors Enabled), then the motors are locked in position. As long as the levers on the right-hand side of the carriage are in their “Engaged” position (down), the quilting machine should be locked in position and the machine will not be able to be moved manually without grinding the gears.



If the button is purple, it indicates that the motors are “Disabled” and the machine may now be moved around as desired. Press this button to toggle the current state of the motors. With the motors “disabled,” the user can push the machine around, even with the black levers on the carriage in the “engaged” position.

Yellow Dot: The yellow dot on the pattern indicates the starting point for the pattern. Do not confuse the “Start Point” with the “Home” position. The “Start Point,” as indicated by the yellow dot, is always where the pattern will start stitching. The “Home” is the location within the pattern where the X and Y position values equal zero.

Crosshairs: The white crosshairs on the pattern-window mark the current location of the needle in relation to the current location of the pattern. Make sure the motors are disabled by toggling the Motors Enabled/Disabled button at the top right-hand corner of the screen until the button is purple and indicates “Motors Disabled.” Now by pushing the quilting machine around the crosshairs can be seen moving around as well. If the crosshairs are not moving,

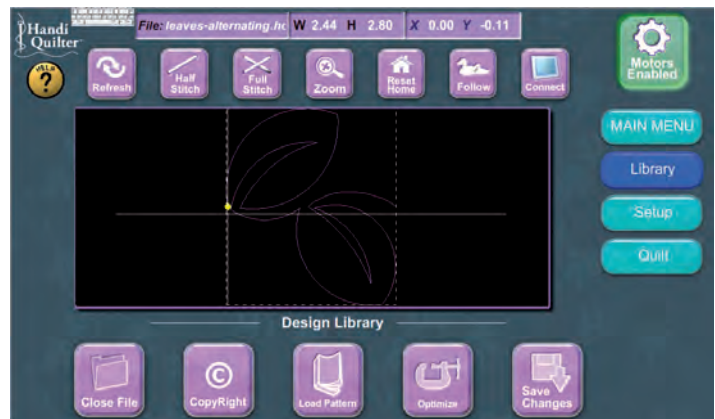


Figure 8

make sure the two black levers on the right-hand side of the HQ Pro-Stitcher carriage are in the lowest “engaged” position.

Dashed Box: A white dashed line encloses the loaded pattern in a box. This dashed box is the “Width” and “Height” of the pattern as shown at the top of the screen in the “W” and “H” box. If the crosshairs are off the screen, look for a solid white line rather than a dashed line to indicate which side the crosshairs are on. In other words, if the left-hand side of the white boundary box is solid, that would mean that the crosshairs are off the screen to the left. Moving the machine to the right should bring the crosshairs back in view.

File Name/Size and Pattern Position: Across the top of the screen there is information about the current working pattern file, including the name of the file, followed by the width and height of the pattern (measured in inches) and the current “X” and “Y” position of the crosshairs (the position of the needle in relation to the Home position of the pattern in inches).

The Refresh button re-sets the zoom and pan back to their original settings so the entire pattern can be viewed in the pattern window.



The Half Stitch button will cycle the quilting machine needle one half stitch.



The Full Stitch button will cycle the needle one full stitch if the needle is currently in the “up” position. If the needle is in the “down” position, it will just move the needle into the “up” position.



The Pan button toggles between “Pan” and “Zoom.” If the button says “Zoom,” then dragging a stylus or finger upward from the lower part of the pattern window to the upper part of the pattern window will zoom in on the pattern and dragging from the top to the bottom will zoom out. If the button says “Pan,” then the pattern will be dragged in the direction a stylus or finger is dragged on the pattern window.



Pressing the reset home button will shift the pattern so that the current crosshair location will become the new “Home” position. Home position is defined as the X=0, Y=0 point of the pattern. Depending upon how a pattern is created, the 0,0 (or “Home”) position could be anywhere in the pattern. Because of this, the use of “Reset Home” as a positioning tool is discouraged. It may be used to put the pattern within view of the crosshairs, but should not normally be used for accurate positioning of a pattern. “Reset Home” will be used later in re-sizing and repeating patterns.



Using “Reset Home” as a Measuring Tool

Pressing “Reset Home” sets the current X and Y positions to zero. The distance traveled in the X (left/right) or the Y (forward/back) directions can be measured by watching the X and Y values at the top of the screen to see how far the quilting machine has moved.

Measure the width of a block by moving the machine to line up the needle with the left-hand side of a block and pressing “Reset Home.” Then move the machine to line up the needle with the right-hand side of the block and look at the “X” measurement at the top of the screen. This is the width of the block in inches. To measure the height, do the same thing, but go from the bottom to the top of the block and watch the “Y” measurement instead. Or do both at once by moving the needle to the lower left-hand corner of the block, pressing “Reset Home,” then moving to the upper right-hand corner of the block. At the top of the screen, “X” is the measured width and “Y” is the height.

Step 3: Setup Menu

By pressing the “Follow” button, the button will turn green and the crosshairs will now be centered in the pattern window. Pushing the quilting machine around no longer moves the crosshairs, but appears to move the pattern in the opposite direction the machine is being pushed. In reality, the crosshairs are still moving and the pattern remains fixed in position relative to your quilt. It’s just an alternative way of looking at it.



What reason would there be to use this view? Assume the loaded pattern is a long pantograph that is the full width of the quilt. After positioning the pattern on the quilt, in order to view the entire pantograph in the pattern window, the pattern has to be zoomed out so it is very small and it may be hard to make out any of the details. The user would most likely want to zoom in to view the details, but by zooming in, the user now has to pan as well in order to shift the pattern across the pattern window to view the whole pattern.

The user may wish to view the entire top edge of the pattern and make sure it lines up with the quilt properly. With “Follow,” the user can zoom in to get a better view of the top edge, and then just push the machine along, checking to make sure that when the crosshairs are at each peak of the top edge, the needle is not crossing beyond the quilt border.

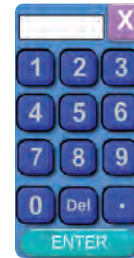
Refer to the “Getting Started” section of this manual for information regarding the “Connect” button.



Press the “Setup” menu button on the right to access the system settings. Beginners may only wish to adjust the “Stitches” settings. Then come back later to try adjusting the other settings to see how they affect their quilting.



Stitches: Press the “Add” or “Subtract” buttons to adjust the stitches per inch, or tap directly on the number, which will bring up a number pad that can be used to directly enter the value desired.



Auto Jump: The “Auto Jump” threshold is the jump distance that the HQ Pro-Stitcher uses to determine whether to perform an “Auto” jump or a “Manual” jump. If there is a jump in the pattern that is greater than this value (in inches), the HQ Pro-Stitcher will pause and ask the user to trim their thread prior to jumping to the next stitching position in the pattern. If the jump distance is less than this value, the HQ Pro-Stitcher will not pause, assuming the user will come back and trim the thread at a later time.

Jumps that are of significant length may lead to broken thread or distortion of the quilt as the machine pulls on the thread to move to the next location, so consider this value carefully. If the thread is very delicate, consider making this “Auto Jump” value very low (i.e. 0.1) so every jump longer than a normal stitch length allows the user to manually trim their thread. However, if trimming thread is bothersome and the thread is strong, the user may want to keep this value high to speed up the quilting process. The “Add” and “Subtract” options for this value will bring up the number pad and require the user to enter the value manually.

Tie-Off Stitches: Tie-off stitches can be set to occur at the beginning and end of the pattern as well as start and end points of jump sections. Adjust the number of “tie-off stitches” using either the add or subtract buttons or by pressing the number in the “#” field and entering a value with the pop-up number pad. The length of the tie-off stitches can be adjusted by tapping on the “dist” box and entering a value (in inches) in the pop-up number pad.

Please keep in mind that the number of tie-off stitches is not equal to the number of needle cycles that will occur. The word “stitch” in this case refers to the length of thread that is left in the fabric, not the single motion of the needle. For example, a tie-off stitch of “1” will result in 3 needle cycles. The needle will cycle at the start position, shift the distance entered in the “dist” box, cycle again, and then return to the start position and cycle once more. This results in one complete “stitch.” A tie-off number of “2” will likewise result in 5 needle cycles in order to lay down two complete “stitches” and return to the beginning (Figure 9).

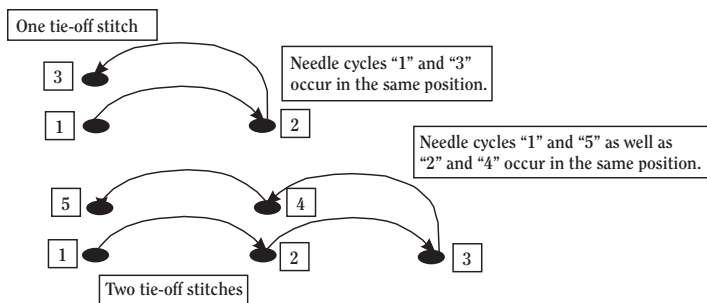


Figure 9

Machine Speed Control: “Machine Speed” refers to the speed at which the HQ Pro-Stitcher will travel through a pattern. This value can be set at slow, medium or fast or the user may manually enter any value (0 to 200) by tapping directly on the number box and entering a value with the pop-up number pad. The actual speed may vary from pattern to pattern, depending upon how the pattern is created, how it is sized, etc. Most patterns will reach their fastest stitching speed by 100, so there is rarely any need to go beyond 100. If the speed is too fast, some “wobbling” in the stitching and/or some rounding of corners may occur. Try slowing the system down if this is occurring. Some patterns will do just fine at high speeds while others will require more care and slower speeds.

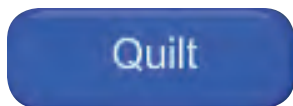


Thread Break (HQ²⁴ Fusion Only): The HQ²⁴ Fusion is equipped with a thread break sensor. This sensor is tied into the HQ Pro-Stitcher and will cause the HQ Pro-Stitcher to pause when the top thread breaks. To turn this option on, make sure there is a green check mark in this box by tapping on the box if necessary. This option may be turned off by tapping the box again to remove the green check mark.

Step 4: Manipulating the Pattern

Quilt

Press the “Quilt” button to access the pattern manipulation and positioning tools and to begin stitching.



There are many options on this screen (Figure 10) to alter the pattern to fit the needs of the quilt and the user. The beginner may wish to try only one of these options rather than each one and then come back later to try some of the others. A recommendation for the beginner would be to start with the “Resize” tool and then skip ahead to “Step 5: Repositioning the Pattern.”

Resize

Press the “Resize” button to enter the “Resize” screen. Re-sizing a pattern can be done multiple ways.



Fit to Area

The simplest way to size a pattern to fit within a block (or a rectangular area such as a border) is to do the following:

1. Move the quilting machine so the needle lines up with the bottom left-hand corner of the block or rectangle in which the pattern is to be quilted.
2. Press “Reset Home”. This will reset the X and Y positioning to zero to allow the user to begin measuring the block. It is normal for the pattern to appear to be in an odd location in the pattern window. The pattern will need to be repositioned when this step is finished.
3. Move the quilting machine until the needle is aligned with the top right-hand corner of the block. Notice the “Width” and “Height” values at the top of



Figure 10

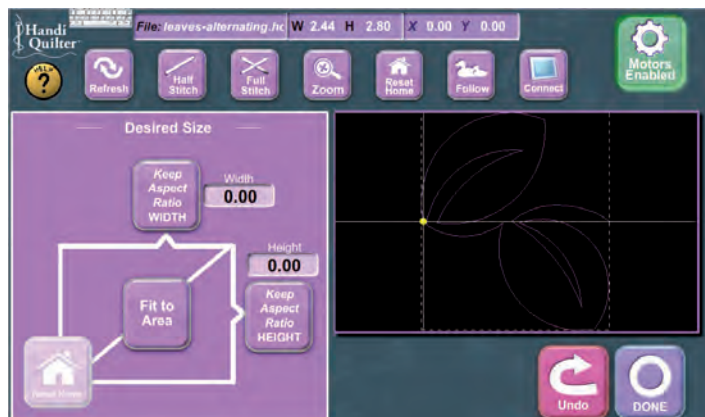


Figure 11

the screen increase as they measure the distance the quilting machine is being moved.

4. With the needle in the top right-hand corner of the block, press the “Fit to Area” button.



5. Verify that the pattern is now the correct size by looking at the top of the screen. The “W” and “H” values should now match the “Width” and “Height” values that were just measured (Figure 12). As an alternative, if the desired pattern dimensions are already known, the user can manually enter those values into the “Height” and “Width” boxes by pressing the number boxes and entering the values with the pop-up number pad.

Note: Please keep in mind that this re-sizing option will stretch your pattern to fit an exact area. If there is concern about distorting the pattern, try one of the other re-sizing options that follow.

Keep Aspect Ratio (no distorting)

If a pattern needs to be re-sized and the only critical dimension is the height (or width) but the user wants to keep the pattern proportional, use the “Keep Aspect Ratio” feature. When using this feature, it is not necessary to use both the width and the height buttons. Just work with the most critical dimension (height or width) as described on the next page.

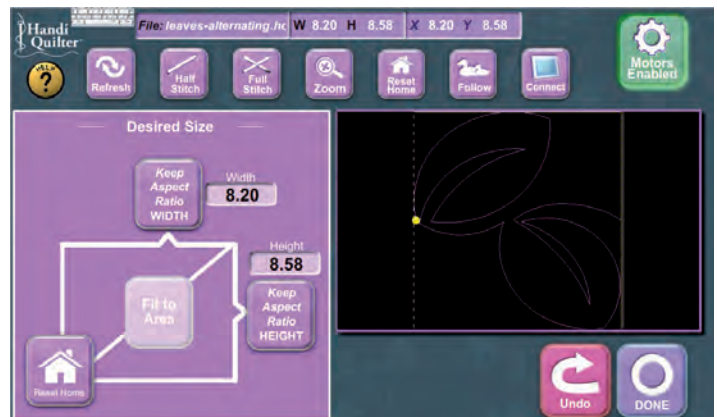


Figure 12

Defining “Keep Aspect Ratio”

“Aspect Ratio” is another way of saying “Proportional”. Keeping the aspect ratio means to keep a design in proportion, even when changing the size.

For example, if a design measures 2” x 4”, but you want it to be 4” tall, in order for it to be proportional to the original design, the 4” tall version would be 8” wide. Each dimension was doubled.

You could do the math and enter the numbers, but HQ Pro-Stitcher will do this for you. Choose the dimension that you already know (height or width) and enter it in the appropriate box. Press the appropriate “Keep Aspect Ratio” button and the math is done for you.

Remember, the new dimensions appear at the top of the screen, not in the “Desired Size” box, which is only used for entering numbers.

1. Enter the value of the desired pattern height by tapping the number box under “Height” and entering the desired height in the pop-up number pad.

2. Press the “Keep Aspect Ratio” button and the HQ Pro-Stitcher will calculate the width required to maintain the current aspect ratio based upon the new height entered (Figure 13).

3. Verify that the pattern is now the correct size by looking at the top of the screen. The “H” values will now match the height value that was entered and the “W” value is a width that keeps the design proportionate to the height.

4. The same can be done with the width by entering a desired width and using the “Keep Aspect Ratio Width” button (Figure 14).

As an alternative, the quilting machine may be used to measure a desired width or height:

1. Move the quilting machine to the bottom of the area being measured (if measuring height) or left-hand side (if measuring width).

2. Press the “Reset Home” button to zero out the measurements.



3. Move the machine to the top (if measuring height) or right (if measuring width) of the area being measured.

4. Press the “Keep Aspect Ratio Height” or “Keep Aspect Ratio Width” buttons.

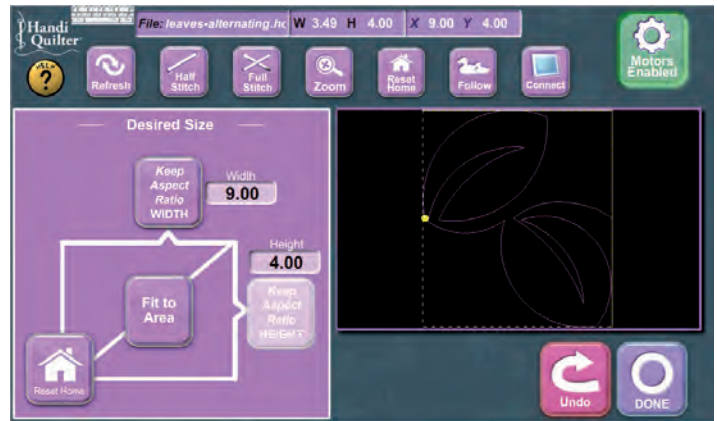


Figure 13

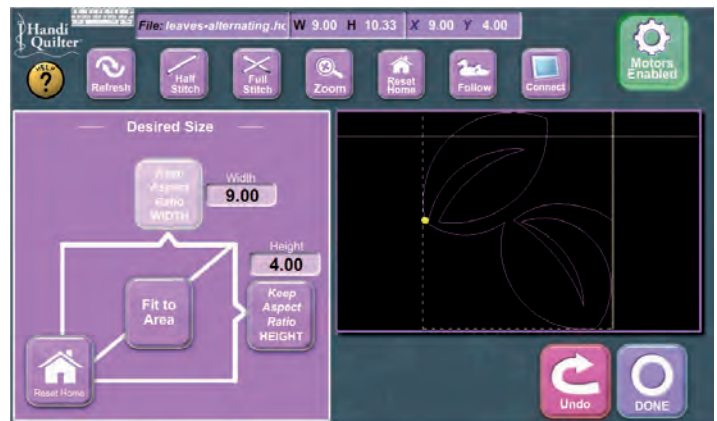


Figure 14

Press the “Done” button to save the changes and exit back to the “Quilt” menu screen.



Rotate

Press the “Rotate” button to enter the “Rotate” screen (Figure 15).



There are three methods available to rotate a pattern.

1. Pressing the counter clock-wise 45 button will rotate the pattern counter clockwise by 45 degrees. Pressing the clock-wise 45 button will rotate the pattern clockwise by 45 degrees.



2. By tapping the number box and entering a value in the pop-up number box, the user may directly enter a desired rotation angle (0 – 360). After entering this value, the user must then press the rotate button. Use the chart to aid in determining what angle value to use (Figure 16). Try to picture the pattern being rotated as a box, bounded by the white dashed outline in the pattern window. The bottom line of the pattern box is the line that correlates with the angle lines in Figure 16.

3. Within the “Rotate” menu is the ability to identify two points by which to create an angle. For example, assume a quilt is loaded and it happens to be at a slight angle. The pattern that is loaded is a pantograph that extends the width of the quilt.

Rather than try to get the quilt straightened or try to guess what the actual angle is that the pattern would need to be rotated to compensate, the user can identify a point on the left and then a point on the right (by moving the machine to those points) and the pattern will be rotated to the angle between those two points. Likewise, if there is an odd angle (such as a sashing on an angle or a block on point) that needs to be matched on the quilt, use the same process to



Figure 15

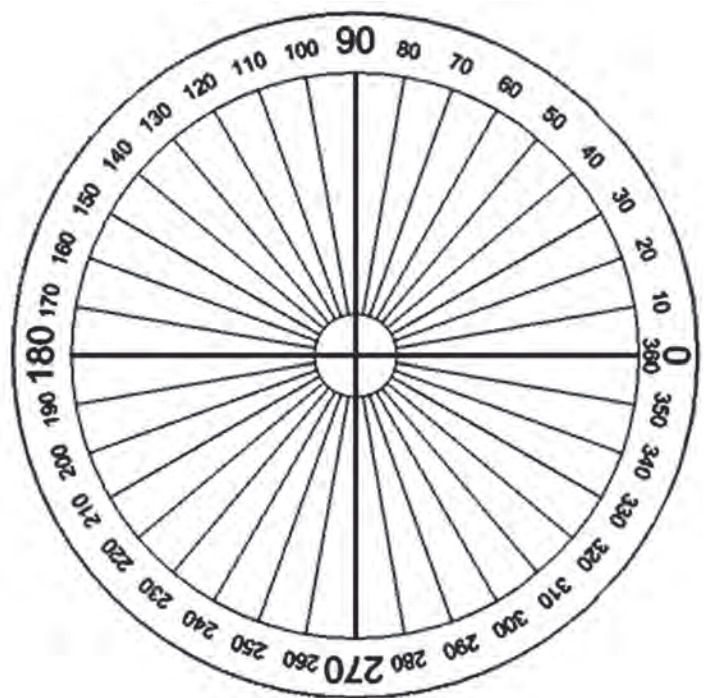


Figure 16

identify two points on the line and rotate the pattern to match that angle.

- Identify the left-hand side of the line on the quilt that the pattern should follow and press “Start Point” button.



- Identify the right-hand side of that same line and press “End Point” button.



- Press “Rotate” button.



- The pattern should now be rotated to match the line.

- To make the pattern follow the same line but upside down, simply identify the right-hand side as the “Start Point” and the left-hand side as the “End Point” and the pattern will be upside down.

This process can be thought of as drawing a line from the “Start Point” to the “End Point” as indicated by the arrows in the illustration below (Figure 17). The line then defines the angle that the pattern will be rotated.

For example, by pressing “Start Point” and then moving the machine directly to the right (0° angle) and then pressing “End Point,” the pattern will not have been rotated at all. However, by pressing “Start Point” and then moving directly to the left (180° angle) and pressing “End Point,” the pattern will now be rotated 180°, or in other words it is now upside down.

Don’t worry too much about where on the quilt these points are selected, as long as they are somewhere along the line to be followed, since the computer just calculates the angle between the two points. Keep in mind that the pattern must be re-positioned after it has been rotated to make sure the rotated pattern is in the correct location on the quilt.



Figure 17

Press the “Done” button to save the changes and return to the “Quilt” menu.



Mirror

Press the “Mirror” button to enter the “Mirror” screen (Figure 18).

Press the “Mirror Vertically” button to mirror the current pattern vertically.

Press the “Mirror Horizontally” button to mirror the current pattern horizontally.



Press the “Done” button to save your changes and return to the “Quilt” menu.

Two-Point Cropping

The Crop function can be used to cut off portions of a pattern that should not be stitched. It is possible to crop any combination of the top, bottom, left and right edges of any pattern, whether it is a single block or an entire row of repeated blocks (also known as a pantograph or edge-to-edge design).

For example, if only the top half of the last row of an edge-to-edge design will fit at the bottom of the quilt, it can be cropped to avoid stitching below the quilt bottom.

CAUTION: The perimeter of the cropped area will stitch out as a straight line. Be sure to plan this to fall just beyond the edge of the quilt or in a place where it is not likely to be noticed (such as in a seam).

Cropping Left Edge and/or Bottom of Quilt

To crop only the left edge, only the bottom, or a combination of the left edge and the bottom, use the “Bottom Left” button and the “Crop” button.

Cropping Right Edge and/or Top of Quilt

To crop only the right edge, only the top, or a combination of the right edge and the top, use the “Top Right” button and the “Crop” button.

Cropping All Edges at Once

It is possible to crop all four edges at once, by using the “Bottom Left”, “Top Right” and “Crop” buttons in the following sequence:

- From the “Quilt” menu select the “Crop” button.



- Identify the bottom left-hand corner of the pattern area that is to be kept by moving the machine to align the crosshairs with that point (Figure 19).
- Press the “Bottom Left” button. The button will briefly light up to indicate it has been pressed.

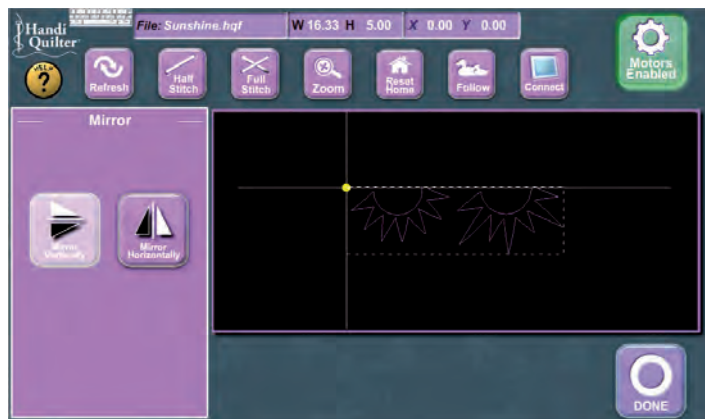


Figure 18

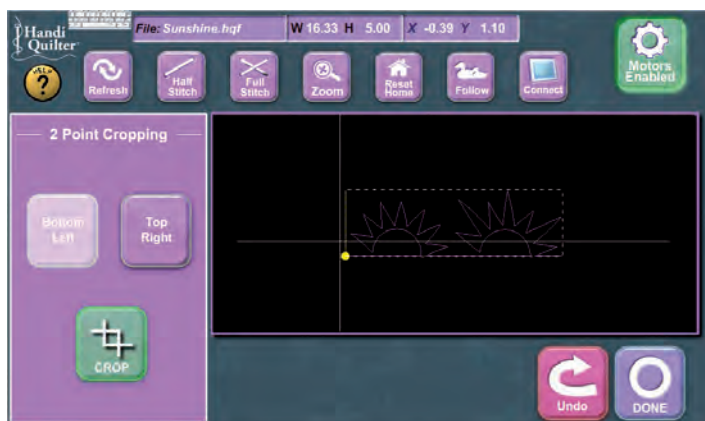


Figure 19

- Move the machine to align the crosshairs with the top right corner of the pattern area to be kept.
- Press the “Top Right Button” (Figure 20 on next page).



- Press the “Crop” button to crop the area that has just been defined (Figure 21 on next page).



What if the First Crop was Wrong?

- The bottom left or top right may be re-defined by moving the crosshairs to a new location and pressing the appropriate button (“Bottom Left” or “Top Right”) to redefine that particular corner and then press the “Crop” button.
- If too much has been cropped off, simply move the crosshairs beyond the cropped portion of pattern that is visible and into the black to the point that is to be added back into the cropped area and press the appropriate corner button (“Bottom Left” or “Top Right”) and press the “Crop” button. That area will be added back to the cropped pattern.

- As long as the “Done” button has not been pressed, the user can continue to adjust the cropping points until the pattern is cropped as desired.

- It is permissible to move beyond the pattern edges out into the black space to avoid accidentally cropping the edges off a pattern.

For example, if the user wishes only to crop the left and right sides of a pattern but keep the top and bottom as they are, identify the “Bottom Left” by moving the crosshairs well below the actual pattern and into the black space, but making sure that the vertical portion of the crosshair is lined up with the left-hand cropping point and then press the “Bottom Left” button.

Next, move the crosshairs to the “Top Right” portion of the area to be cropped. Again, the crosshairs may be moved above the pattern into the black space to be certain the entire top part of the pattern is included and only be concerned about lining the vertical portion of the crosshairs with the right-hand side of the area to be cropped. Then press the “Top Right” button. Now, press “Crop”.

Press the “Done” button to save the changes and return to the “Quilt” menu.

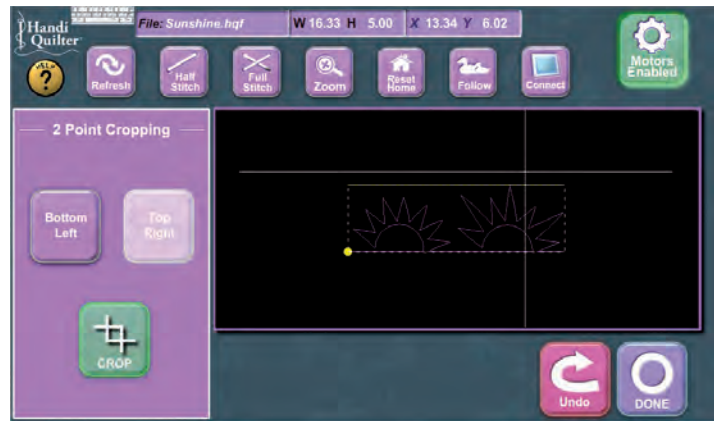


Figure 20

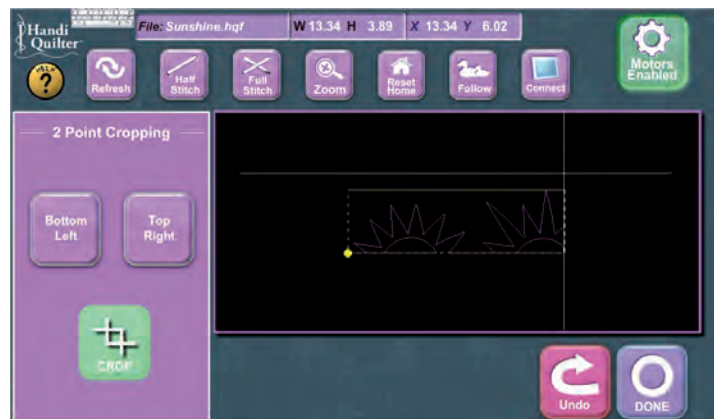


Figure 21

The Cropping “L” and “7”

Think of the “Bottom Left” tool as an uppercase letter “L”. When you slide the “L” along the design, everything inside the “L” is saved. Everything to the left of and below the “L” goes away.

Think of the “Top Right” tool as the number “7”. When you slide the “7” along the design, everything inside the “7” is saved. Everything to the right of and above the “7” goes away.

You can visualize this by making an “L” with your left hand and a “7” with your right hand and move your hands together and apart. The area between your hands is saved.

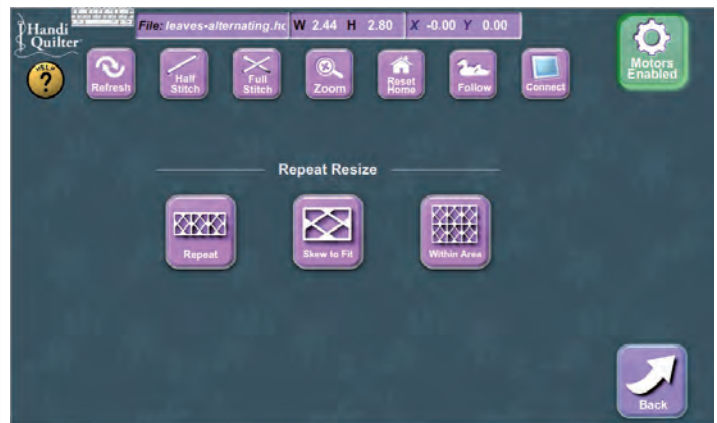


Figure 22

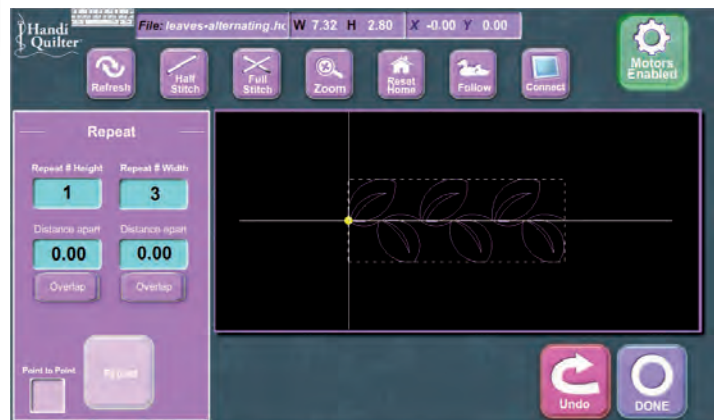


Figure 23

Repeat Pattern

The “Repeat Pattern” button will give the user three repeat options (Figure 22).

The “Repeat” button allows the user to specify the number of repeats horizontally and vertically without changing the size of the original pattern.



1. Enter the number of repeats desired in the “Repeat # Height” and/or “Repeat # Width” boxes by tapping on the appropriate box and entering the number of repeats in the pop-up number pad (Figure 23).

2. If a gap is desired between each pattern or each row of patterns, enter a value in the “Distance Apart” boxes (in inches) (Figure 24).

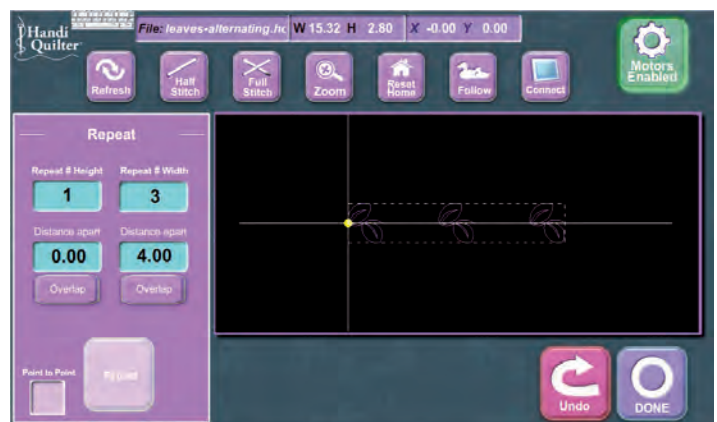


Figure 24

3. If the patterns should be overlapped, enter the overlap distance in the appropriate “Distance Apart” box followed by the “Overlap” button. The value in the “Distance Apart” box will turn to a negative number. (Figure 25).

4. If the pattern is designed to be a “Point to Point” or “continuous” pattern, do not enter a value in the “Distance Apart” box for the width, and tap on the “Point to Point” box so a green check mark appears. When the “Point to Point” option is selected, the HQ Pro-Stitcher will align the end point of the first pattern with the start point of the next repeat. It will only align horizontally, not vertically. Because of this, the pattern should be designed such that the start and end points are at the same vertical location. (i.e., on the same plane). Most block and triangle patterns are not designed to repeat in this fashion, so the “Point to Point” option should be turned off for these.

5. Press the “Repeat” button to process the repeats as entered.

6. If the user wishes to make a change to any of the values after pressing the “Repeat” button, they may do so by simply changing the desired value and pressing the “Repeat” button again to re-process the repeats.

7. Press the “Done” button when the pattern is repeated as desired.



After pressing “Done,” the pattern is saved and will be treated as a single pattern in any future alterations.

For example, if a pattern is repeated three times and the user presses “Done,” then decides they really wanted four repeats, they would need to use the

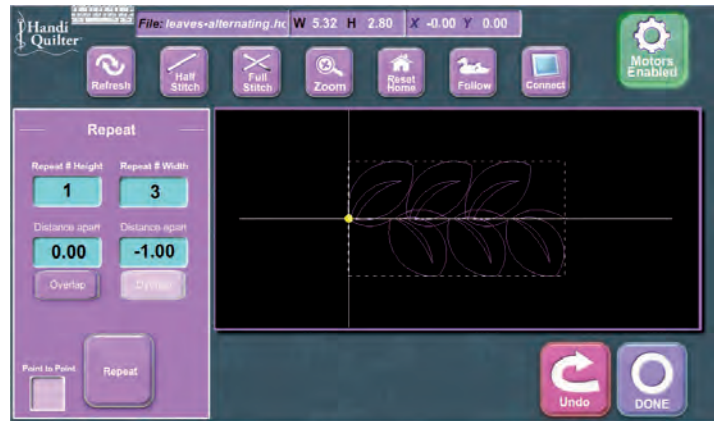


Figure 25

“Undo” button to revert back to a single instance of the pattern prior to re-doing the “Repeat” function. If they were to return to the “Repeat” screen without using the “Undo” feature, their new repeat of four would really be a repeat of twelve because the computer is treating the first repeat of three as a new single pattern and repeating it four times.

Skew to Fit

“Skew to Fit” allows horizontal and vertical repeats, but it also allows the user to enter the width and height of an area to be filled.



1. Determine the area that is to be filled in one of two ways.

A. Enter the height and width (in inches) of the area to be filled in the appropriate boxes using the pop-up number pad (Figure 26).

B. Use the quilting machine to measure the area to be filled. Move the quilting machine to align the needle with the bottom left-hand corner of the area to be filled and press the “Reset Home” button at the top of the screen to zero out the X and Y measurements. Then move the quilting machine to the top right-hand corner of the area to be filled. The “Height” and “Width” boxes should now indicate the measurements of the area to be filled.

2. Enable the motors by pressing the button at the top right-hand corner of the screen to toggle from “Motors Disabled” to “Motors Enabled.” This will hold the machine steady so the measurements don’t change during the next steps.

3. Enter values in the “Repeat # Height” and “Repeat # Width” boxes, as well as the “Distance Apart” boxes, if desired, as described in the previous section.

4. Select the “Point to Point” option if desired as described in the previous section.

5. Press the “Fit to Area” button to process the repeats. The HQ Pro-Stitcher will stretch or shrink the patterns as needed to precisely fit the desired area with the number of repeats selected (Figure 26).



Figure 26

6. If the repeated patterns are stretched too much, try increasing the value in the repeat boxes and press the “Fit to Area” button again to re-process the repeats. Likewise, if the patterns are too compressed, try reducing the value in the repeat boxes and press the “Fit to Area” button again.

7. Press the “Done” button to save the repeated pattern and return to the “Repeat” menu screen.



8. As with the previous “Repeat” function, the repeated pattern will now be treated by the HQ Pro-Stitcher as a single pattern.

Within Area

The “Within Area” function allows the user to define the width and height of an area to be filled and the HQ Pro-Stitcher determines how many repeats of the pattern will fit within that area. The area must be larger than a single instance of the pattern. The pattern will not be skewed or cropped to fit within the area defined and may not fill the area completely.



1. Determine the area that is to be filled in one of two ways.

A. Enter the height and width (in inches) of the area to be filled in the appropriate boxes using the pop-up number pad.

B. Use the quilting machine to measure the area to be filled. Move the quilting machine to align the needle with the bottom left-hand corner of the area to be filled and press the “Reset Home” button at the top of the screen to zero out the X and Y measurements. Then move the quilting machine to the top right-hand corner of the area to be filled. The “Height” and “Width” boxes should now indicate the measurements of the area to be filled.

2. Enable the motors by pressing the button at the top right-hand corner of the screen to toggle from “Motors Disabled” to “Motors Enabled.” This will hold the machine steady so the measurements don’t change during the next steps.

3. Enter values in the “Distance Apart” boxes (if needed), as described in the “Repeat” section.

4. Select the “Point to Point” option if desired as described in the “Repeat” section.

5. Press the “Repeat Both” button to process the repeats (Figure 27). The HQ Pro-Stitcher will fit as many repeats of the original pattern within the defined area as it can without stretching the pattern. There will most likely be left-over areas at the right and bottom of the pattern that will not be filled because further repeats would be too large for the designated area as shown in Figure 28.

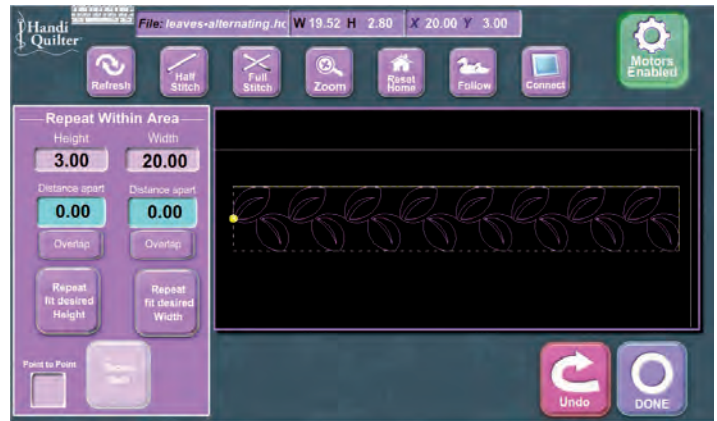


Figure 27

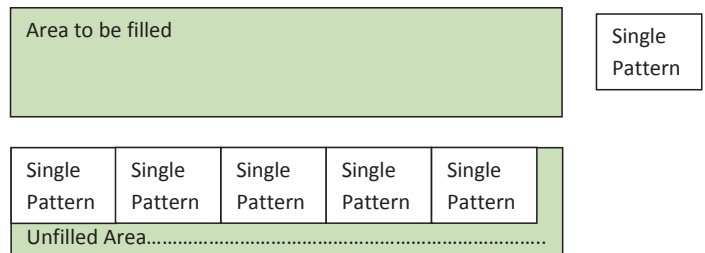


Figure 28

6. If the user only wishes to repeat in width, there is no need to enter anything in the “Height” box. Simply enter the desired width in the “Width” box and press the “Repeat Width” button (Figure 29). The same can be done for repeating only height using the repeat height button.



7. If the size of the defined area is smaller than one instance of the loaded pattern, a message will pop up, instructing the user to enter a larger value (Figure 30). Press the “Accept” button and correct the height and/or width and try again. In Figure 30, the height entered is 3 inches, but the height of the pattern (as can be seen at the top of the screen) is 5.37 inches. The error pops up because the Pro-Stitcher cannot fit this pattern into the desired size box without shrinking the pattern.

8. Press the “Done” button to save the repeated pattern and return to the “Repeat” menu screen.



9. If the final size after using the “Repeat Within Area” function does not match the desired size, go back to the “Resize” screen and resize the entire repeated pattern to the desired size.

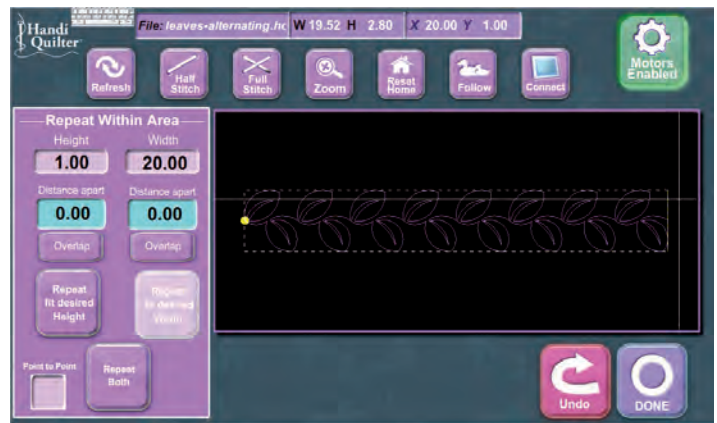


Figure 29

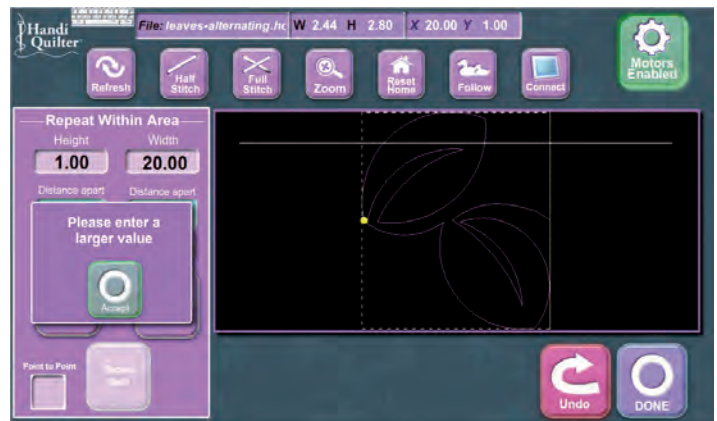


Figure 30

Step 5: Positioning the Pattern

After loading a pattern and manipulating the pattern as desired, the next step is to position the pattern on the quilt. Even though some of the previous steps require that the pattern be sized to a specific area, the pattern is not necessarily positioned within that area. For this reason, the user should always position the pattern prior to quilting it.

From the “Quilt” menu screen, select the “Reposition Pattern” button. This will bring up the “Reposition Pattern” screen (Figure 31).



There are three methods that can be used for positioning a pattern on the quilt.

Find Center Point

1. The “Find Center Point” button will position the pattern so that the center of the pattern is aligned with the current needle position. If there is a point on the quilt that should be the center of the pattern, simply move the quilting machine so the needle is at that center point and press the “Find Center Point” button on the screen (Figure 31).



Find Start Point

2. Sometimes the user will want to match a point on the quilt with the exact starting point of the current pattern (the start point of the pattern is indicated by a yellow dot on the HQ Pro-Stitcher screen).

To do so, move the quilting machine so the needle matches up with the point on the quilt that you wish to start the pattern from. Then press the “Find Start Point” button on the screen (Figure 32).

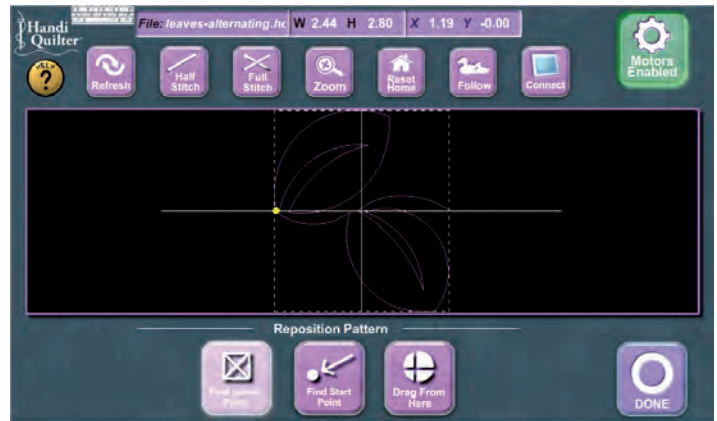


Figure 31

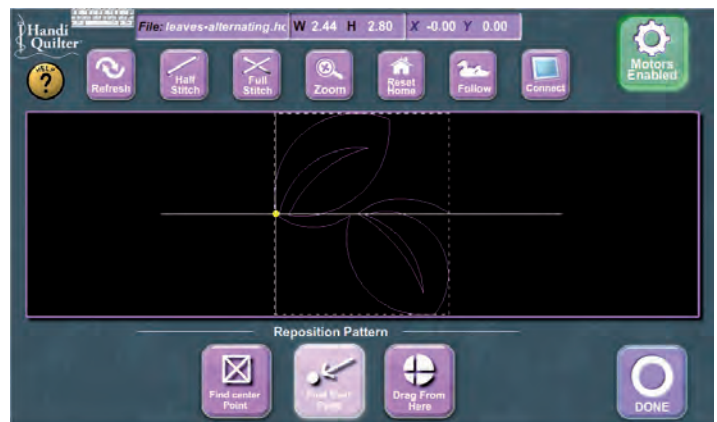


Figure 32

Drag From Here

3. The third way to position a pattern on the quilt is to use the “Drag From Here” function. This function allows the user to position the pattern based upon any point within the pattern block.



1. If the crosshairs are not visible in the pattern window, press the “Reset Home” button at the top. This will position the crosshairs at the $x=0, y=0$ location of the pattern, which is usually within the extents of the pattern for most patterns.

2. Watch the screen while moving the machine and position the crosshairs on the point that is to be the reference for positioning (i.e., a corner of the pattern block, or a specific point on the pattern that needs to match up with a certain spot on the quilt, such as the top of the tree shown in Figure 33). Use the “Pan/Zoom” feature to reposition the pattern on the screen, if needed.

3. Press the “Drag From Here” button. The icon will change to “Move Pattern” and turn green (Figure 33).

4. Focus now on the quilt and move the machine to the point where the needle is at the position on the quilt that is to be matched with the point in the pattern that was chosen.

5. Press the “Move Pattern” button to place the pattern in the location that has been chosen.

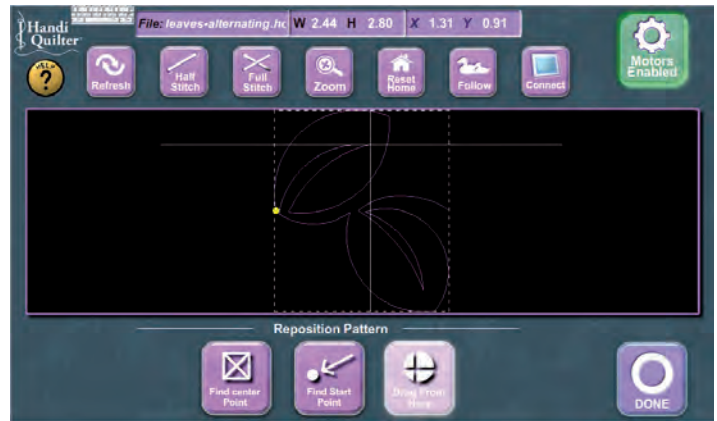


Figure 33

6. Move the machine around and watch the crosshairs (which represent the needle on the machine) to verify the pattern is now positioned properly on the quilt.

Press the “Done” button to return to the “Quilt” menu screen.

Step 6: Quilting the Pattern

Save the Pattern First

After all manipulations to the pattern have been performed, and prior to quilting the pattern, it is highly recommended that the user return to the “Library” screen (press the library button on the right-hand side of the screen) and **SAVE** the changes that have been made. If something happens to the HQ Pro-Stitcher (such as a power cord coming unplugged, etc.), a failsafe has been put in place to allow the user to re-load their design to the last-known state. However, it is always safest to save the design.



Instructions on saving a file can be found in the “HQ Pro-Stitcher Additional Features and Functions” section of this manual.

Run Quilt Menu

After loading the pattern, manipulating it, and positioning it, the next step is to quilt the pattern. From the “Quilt” menu, press the “Run Quilt” button. This will take you to the “Run Quilt” menu screen (Figure 34).



Before stitching the pattern, it is a good idea to double-check the placement of the pattern.

Check Placement

1. First, manually move the crosshairs on the screen (by moving the quilting machine) to various check points on the pattern block on the screen. Verify that the pattern is positioned properly on the quilt and that the machine will not hit the bars or go beyond the edges of the quilt.

2. After performing a quick manual check, the user can press the “Trace Outline” button to allow the HQ Pro-Stitcher to “outline” the perimeter of the pattern block. “Trace Outline” starts by moving the machine

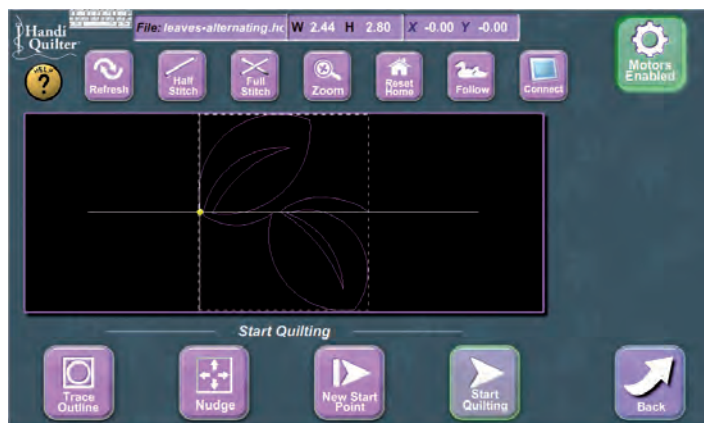


Figure 34

to the lower left-hand corner of the pattern block. A message will pop up to have the user verify that the needle is not down in the fabric before it moves (Figure 36). The machine will then move to the lower right-hand corner, followed by the upper right-hand corner, etc., until it has moved around the perimeter of the pattern block and back to the start point. If required, there is a “Stop Trace” button that the user can press to stop the trace.



3. If the pattern needs to be re-positioned, the user has the option of going back to the “Reposition Pattern” screen, or using the “Nudge” tool to fine-tune the pattern position.

4. This is a good place to use the “Follow” feature, especially if the pattern is now very large. Using “Follow” will help the user verify the exact placement of the pattern. Just make sure the “Follow” button is enabled and zoom in enough to see the details of the pattern. Manually move the machine across the quilt and verify that the various points within the pattern are lining up on the quilt where they should. Make any adjustments as needed using “Nudge” or by going back to the “Reposition Pattern” screen.

How to Nudge

“Nudge” is used to shift a pattern vertically or horizontally a specified amount (Figure 36).



1. Press on the “Nudge Amount” number box to enter a value (in inches) in the pop-up number pad (i.e., 1/8 inch is entered as 0.125, etc.).

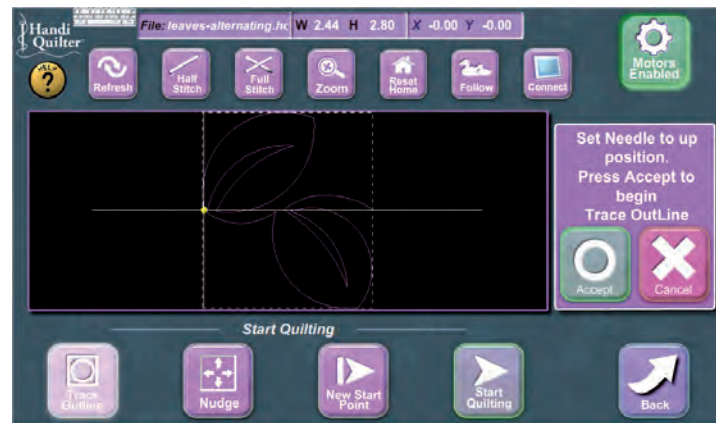


Figure 35

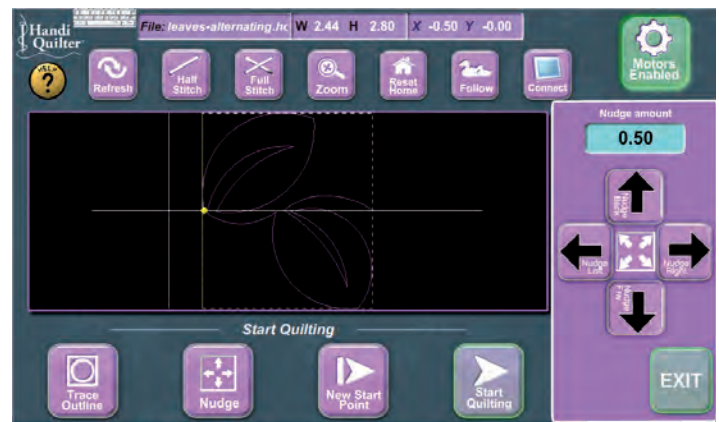


Figure 36

2. Press one of the four arrows to nudge the pattern in that direction the amount that was entered in the “Nudge Amount” box.

3. Press on the “Exit” button to exit the “Nudge” screen.



Start Quilting

Press the “Start Quilting” button to select or adjust some final quilting settings prior to stitching the pattern.



Settings

If the user decides to make some changes at the last minute to the settings included in the “Setup” menu (Figure 37), some of those changes can be made on this screen by touching the number box and entering a new value on the pop-up number pad. The values that can be adjusted here are:

- o Auto Jump Threshold
- o Tie-Off Stitches
- o Stitches Per Inch
- o Machine Speed

See Step 3: Setup Menu on page 36 for more details about the Auto Jump Threshold and Tie-Off Stitches settings.

Pause Delay

The HQ Pro-Stitcher can be programmed to automatically pause and allow the user the opportunity to trim the thread. After trimming the thread, the user then presses the “Resume” button (Figure 38). The user may choose to pause after a number of seconds or after a number of inches the machine has stitched. Enter a number in the box below “Pause Delay,” which will either be in seconds or inches depending on whether the delay button says delay in seconds or delay in inches. Press the button to toggle between the two options.



Please be aware that these values are not exact due to the fact that the system will need to finish stitching

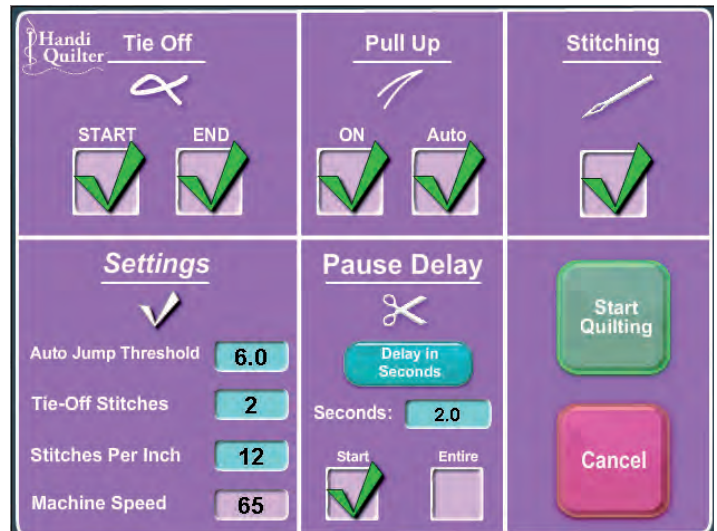


Figure 37

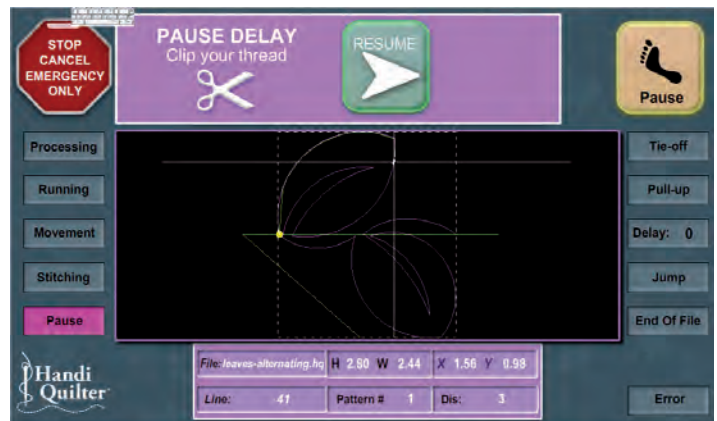


Figure 38

the line segments that have been stored in the buffer before it can stop. If your pattern is made of large line segments then it will stitch a little longer than it would if it was made up of smaller line segments even though the same value may be entered in the “Pause Delay” box. Use it as a rough estimate only, not an exact measurement of time or distance.

There are two options for the “Pause Delay.” “Pause Delay” can be active for just the initial starting point

(a green check in the “Start” box) or for every manual jump within the pattern (a green check in the “Entire” box). With both boxes blank, there will be no pause for trimming thread. A green check mark in a box indicates that the option is turned on, while an empty box indicates that it is turned off (Figure 37).

Tie Off

The “Tie-Off” stitches may be turned on or off for the start and end points of a pattern. A description of the tie-off stitches can be found under Step 3 on page 36. A green check mark indicates the tie-off is turned on and a blank box indicates that it is turned off.

Pull Up

The “Pull-up” process includes the steps necessary to pull the bobbin thread up to the top of the quilt prior to stitching. There are two pull-up settings to choose from, “On” or “Auto”.

On

A green check mark in this box indicates that the “Pull-up” option is turned on and will occur at the beginning of the pattern. A blank box indicates that this option is turned off and will be skipped.

Auto Turned On

A green check mark in this box will cause the HQ Pro-Stitcher to perform the following steps at the beginning of the pattern (assuming the “On” option is selected):

1. The machine will move to the start point and take a full stitch, then shift to the right 3 inches.
2. The user should pull up the bobbin thread and hold both the bobbin and top threads and press the “Resume” button.

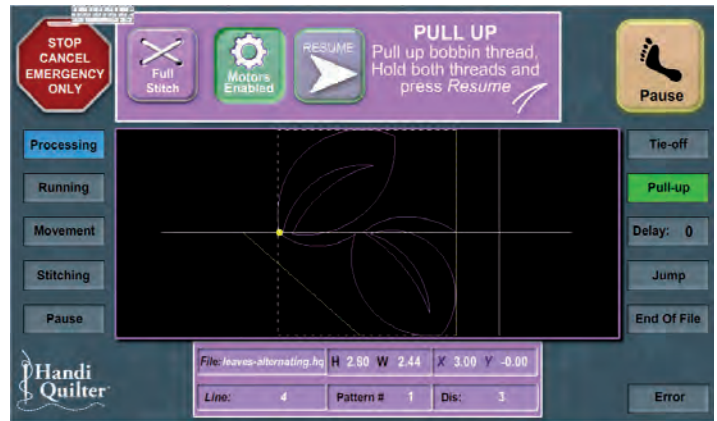


Figure 39

3. The machine will return to the start position and execute the “Tie-Off” stitches if that option is turned on or start stitching out the pattern if turned off.

Bobbin Thread Pull Up Fixes

If the bobbin thread does not come up or is pulled back under the quilt when the machine shifts aside, the user can press the “Enable Motors” button to toggle the motors to a “Disabled” state. The user can then push the machine back to the start point and use the “Full Stitch” button to pull the thread up manually. Pressing “Resume” will then move the machine back to the start point and continue the quilting process (Figure 39).



Auto Turned Off

If the “Auto” box is left blank (“Off”), the HQ Pro-Stitcher performs the “Pull Up” in a manual mode and the following will occur at the beginning of the pattern (assuming the “On” option is selected):

1. The machine will move to the start point and take a full stitch.
2. The motors are then disabled so the user can manually push the machine aside and pull up the bobbin thread.
3. The user should hold both the bobbin and top threads and press the “Resume” button.

The machine will return to the start position and execute the “Tie Off” stitches if that option is turned on or start stitching the pattern if turned off.

Stitching

This option controls whether or not the machine stitches as it moves through the pattern. A user may wish to see how the machine moves through a pattern without actually stitching the pattern. In this case, the “Stitching” option should be turned off. It is likely that the user would also want to turn off the “Pull Up” and “Tie Off” options as well in that case.

After checking all the settings, press either the “Cancel” button to return to the previous screen or the “Start Quilting” button to start quilting the pattern.



Step 7: Functions Available While Quilting

At the top of the screen while the HQ Pro-Stitcher is quilting, is a banner with left and right arrows leading to various functions (Figure 40). Press one of these arrows to cycle through the various function banners.

The user can zoom and/or pan the view of the pattern while the HQ Pro-Stitcher is quilting. Follow the instructions given previously in Step 2 on page 34 for zooming and panning. Pressing the “Zoom” or “Pan” button will toggle between “Zoom” and “Pan.”



From the “View” banner, press the right arrow to get to the “Speed” banner (Figure 41). This banner allows the user to select one of the preset speeds or tap on the number box to enter any other speed value in the pop-up number box.

From the “Speed” banner, press the right arrow to get to the “Stitching” banner. Here the user can adjust the stitches per inch while the machine is in motion (HQ¹⁸ Avanté and HQ²⁴ Fusion models only). Tap on the number box and enter a new value in the pop-up number pad.

Press the right arrow from within the “Stitching” banner (Figure 42) to get to the “Pause Delay” banner. The user can change the settings related to “Pause Delay” (described previously in Step 6).

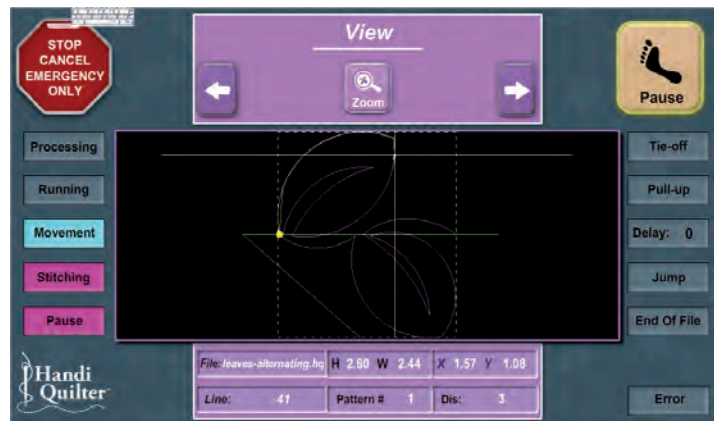


Figure 40



Figure 41



Figure 42

Press the right arrow from within the “Pause Delay” banner to get to the “Tie Off” banner (Figure 43). Adjustments can be made here relating to the length of the tie-off stitch, the number of tie-off stitches, and whether the tie-off stitch sequence is turned on at the beginning and end of a pattern.

Emergency Stop

The “Emergency Stop” button should be used if there is a situation in which the user, quilt, or machine may be harmed if it continues to attempt to stitch the pattern. This button will immediately stop the HQ Pro-Stitcher from moving and the quilting machine from quilting. It will also disable the motors in case the machine needs to be moved to a new location.



The HQ Pro-Stitcher will go back to the “Library” screen and will not hold its current position within the pattern it is stitching. If the user wishes to continue stitching the pattern after the emergency situation has been cleared, the pattern will need to be re-started or the “New Start Point” function can be used to locate a point in the pattern from which to resume.

Pause

If the bobbin or top thread breaks, or runs out in the middle of a pattern, or if the user wishes to pause the system for any other reason, press the “Pause” button in the top right-hand corner of the screen (Figure 43). The HQ Pro-Stitcher will continue to stitch a short distance until the data in the motor buffers has been executed. The HQ Pro-Stitcher will then display the “Pause Screen” (Figure 44). A description of the functions available from the “Pause Screen” follows on the next page.

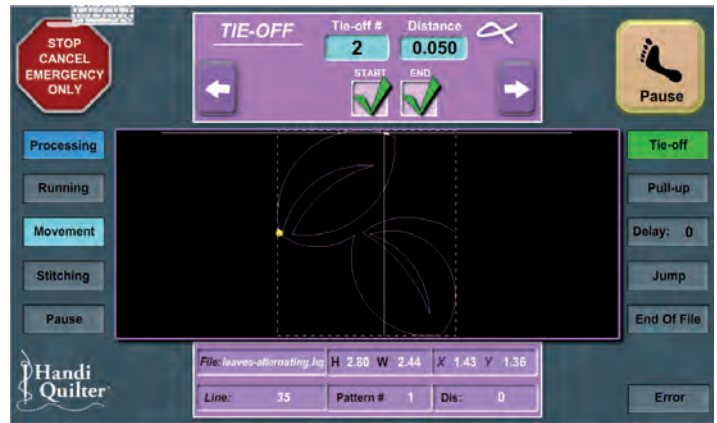


Figure 43

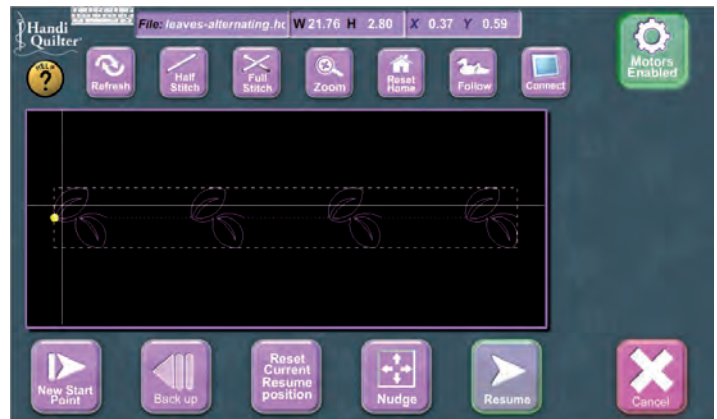


Figure 44

New Start Point

The “New Start Point” option can be used to scroll through the pattern to a point the user wishes to start from, rather than starting from the beginning of a pattern.

If the system has been paused because the thread broke, typically the user would use the “Back up” option to return to the position where the thread broke. However, if the back-up distance is significant, the “New Start Point” option may be quicker. Pressing the “New Start Point” button will bring the user to the “New Start Point” screen (Figure 45). There are four ways to locate a new starting point.

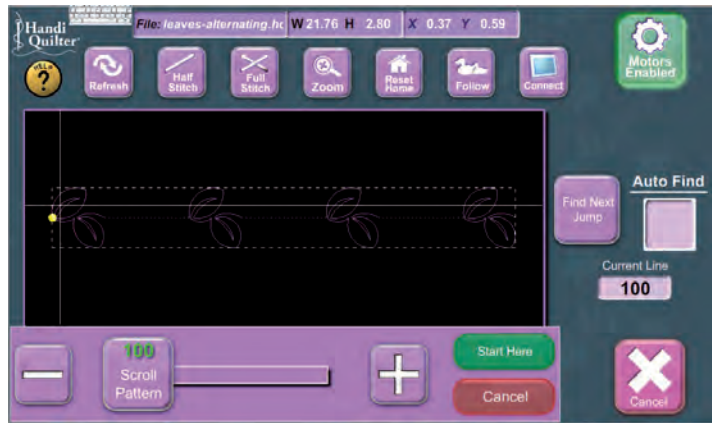


Figure 45



Scroll Pattern

The “Scroll Pattern” button may be dragged back and forth until the user determines that the small white line segment is at the point in the pattern that correlates with the desired new starting point. It may be necessary to zoom in to see the small white segment. The “+” and “-” buttons may be used to fine-tune the position of the white line segment. The user may also press and hold the “+” or “-” button to scroll through the pattern (Figure 46).

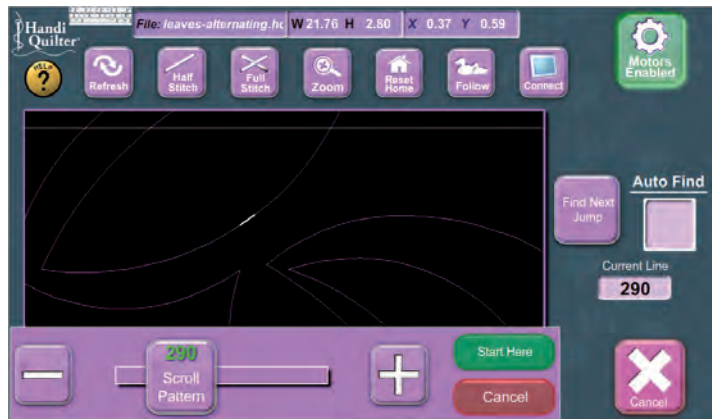


Figure 46



Another option for locating a new starting point is to use the “Find Next Jump” button. In a pattern with multiple jump points, this can be used to jump quickly from one jump point to the next (Figure 47).



If the “Auto Find” option box is selected, the user just has to move the quilting machine back to the desired resume point on the quilt (i.e., where the thread broke). The HQ Pro-Stitcher will locate the closest point on the pattern to the current position of the quilting machine (Figure 48). It may be necessary to toggle the “Enable Motors” button prior to moving the machine. It is also helpful to toggle back to lock the machine in position once the desired location is reached.

The final way to set a new starting position is to manually enter the line number in the “Current Line” box located under the “Auto Find” option (Figure 48). This can be useful if the user has a pattern that she wishes to repeatedly start from a point other than the actual start point. The user must first determine what that line number is by using one of the above methods and then take note of the “Current Line” value. Then the user can simply enter that number into the box using the pop-up number pad.

In any of the above cases, when the white segment is at the appropriate location in the pattern, the user should press the “Start Here” button. The HQ Pro-Stitcher will warn the user that the machine is about to move to that location.



Make sure the needle is in the “Up” position and press the “Accept” button to continue or the “Cancel” button to make additional changes or cancel the process. After pressing “Accept,” the machine will move to the new start point and return the user to the “Pause Screen.” The HQ Pro-Stitcher is now set to resume at the beginning of the white line segment indicated in the pattern.

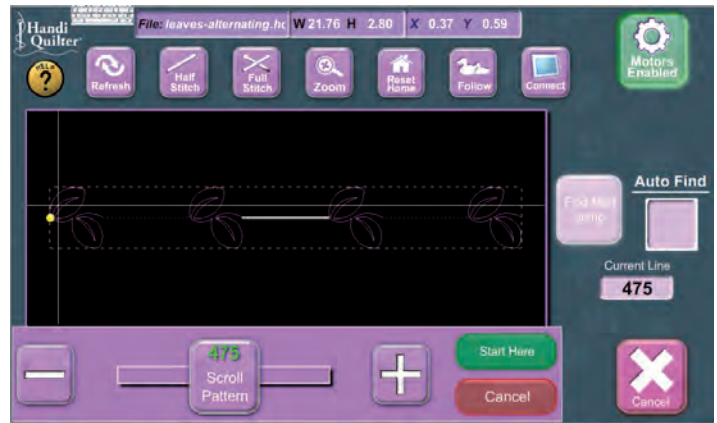


Figure 47

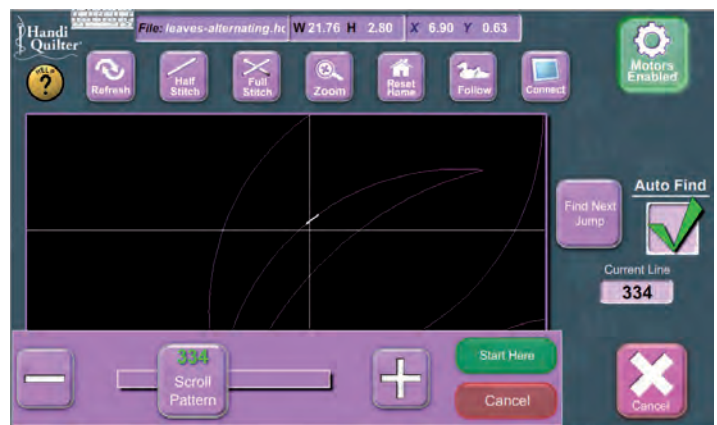


Figure 48

Back Up

Pressing the “Back Up” button will bring the user to the “Back-up Screen” (Figure 49). Here the user is able to move backward or forward through the pattern with or without stitching.



The speed at which the HQ Pro-Stitcher moves forward or backward through the pattern defaults to 10. This speed may be adjusted by tapping on the speed number and entering a new value in the pop-up number pad or by pressing the “+” or “-” buttons.



If the “Stitch” option is selected (has a green check mark), the HQ Pro-Stitcher will cause the quilting machine to stitch as it moves backwards or forwards.



Press and hold the “Back Up” button or the “Forward” button to move backward or forward. Release the button to stop moving backward or forward. The faster the HQ Pro-Stitcher is moving, the more overshoot there will be after releasing the button. Please be aware that before the HQ Pro-Stitcher can move backward, it must finish moving forward through the line segment that it is currently on. Because of this, the user will notice the HQ Pro-Stitcher move forward slightly through the pattern and then start to move backward the first time the “Back Up” button is pressed.



Press the “Done” button to return to the pause screen.



Figure 49

Reset Current Resume Postion

After locating the desired starting point in the pattern (either using the “New Start Point” feature or the “Back Up” feature), the user may notice that the quilt has shifted slightly such that the resume point in the pattern does not line up exactly with the correct point on the quilt. The simplest way to correct this is to disable the motors by toggling the “Enable Motors” button and move the needle to the precise desired point on the quilt. Then press the “Reset Current Resume Position” button and the pattern will be shifted to line up the resume point of the pattern with the current needle position on the quilt.



Nudge

Another option for shifting the pattern to line things up due to either the quilt shifting or draw-in of the quilt is to use the “Nudge” option. Use this function as described previously in Step 6 on page 52.



Resume

Once the new starting position has been determined and any positioning adjustments needed have been made, press the “Resume” button to resume quilting. Upon pressing the “Resume” button, the user will be able to confirm or change the current stitching options. The only difference between this screen and the options given at the beginning of a pattern is the “Current Pattern” option under “Tie-Off.” If this option is selected, a tie-off will occur as soon as the pattern resumes, even though it may not be at the beginning or end of a pattern. Press the “Resume” button once more to begin stitching, or the “Cancel” button to return to the “Pause Screen” (Figure 50).

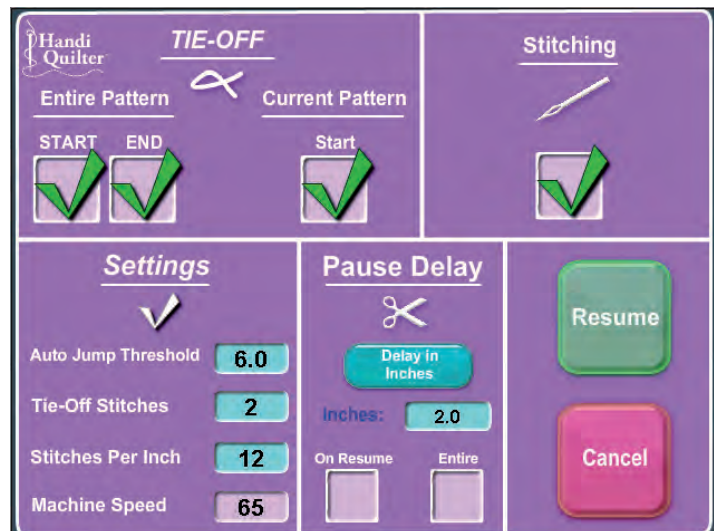


Figure 50

HQ Pro-Stitcher Additional Features and Functions

Software updates are available on the Handi Quilter website as they are released at www.HandiQuilter.com/prostitcher. Updates are available free of charge. UpGRADES may also be available on the website, but these will incur a charge.

1. Browse to the HQ Pro-Stitcher software update page and download the latest update file.
2. Copy the file to a USB flash drive and plug the USB flash drive into the HQ Pro-Stitcher.
3. Press the “Update” button.



4. The library screen will open to allow the user to browse the USB flash drive to locate the update file. When the update file is located, press the “Load It” button to start the update.



5. Follow the instructions on the screen to install the update.

Art & Stitch

Press the “Art & Stitch” button on the Main screen to start the Art & Stitch software. This software can be used directly on the HQ Pro-Stitcher computer either with the touch screen interface or the computer can be removed from the bracket and the keyboard and touch pad mouse can be used. The software license allows the user to install a 2nd copy on a home computer if desired. Refer to the Art & Stitch instructions and help files for information on how to use this software. After the user is finished using Art & Stitch, closing the Art & Stitch program will revert back to the HQ Pro-Stitcher software.

Clean System

The “Clean System” function deletes old temporary files to free up space on the hard disk. This process is performed automatically under normal boot-up conditions, but may be performed manually if it is suspected that a recently-used large pattern file may be slowing down the system. The process should take just a few seconds and will re-boot the system when it is finished.



Close File

Although closing a pattern file is not necessary, some users may want to clear out the pattern window. Pressing the “Close File” button will close the pattern file and clear the pattern window.



Copyright

Many pattern designers include copyright information as well as instructions on how to use their patterns within the pattern file itself. To view this information, load the pattern file and press the “Copyright” button. A pop-up screen will display information contained within the pattern related to copyrights and user instructions. Scroll arrows may be used to scroll up and down as needed to view all the information available (Figure 52).



Press the “Done” button to close the “Copyright” window and return to the “Library” screen.



Figure 52

Optimize

This function is useful for patterns that are stitching too slowly due to the way the pattern is created or re-sized. A pattern will stitch more slowly when the file is made up of many very small line segments (which can happen by shrinking a pattern or it may be the way the pattern was created). “Optimize” pre-processes the file and looks for line segments that are shorter than a given length and combines those segments into one longer segment. It also checks to make sure that angles greater than a given amount are not altered during the optimize routine.



1. Tapping the “Optimize” button opens a pop-up window with four optimizing options – Low, Med, High and Very High (Figure 53). Low will have the least effect on speed and Very High will have the greatest. Very High also has the greatest potential to alter the look of the pattern.

2. Be sure to zoom in on the pattern after optimizing a file to make sure the optimize routine has not altered the look of the pattern. If there are noticeable changes that will affect the way the pattern stitches out, press the “Load Orig” (load original) button and try a lower optimization.



3. Press the “Done” button to return to the “Library” screen.



Saving Files

It is highly recommended that the user save all alterations prior to quilting the pattern. To save changes, press the “Save” button in the “Library” screen and use the new screen that will appear (Figure 54).

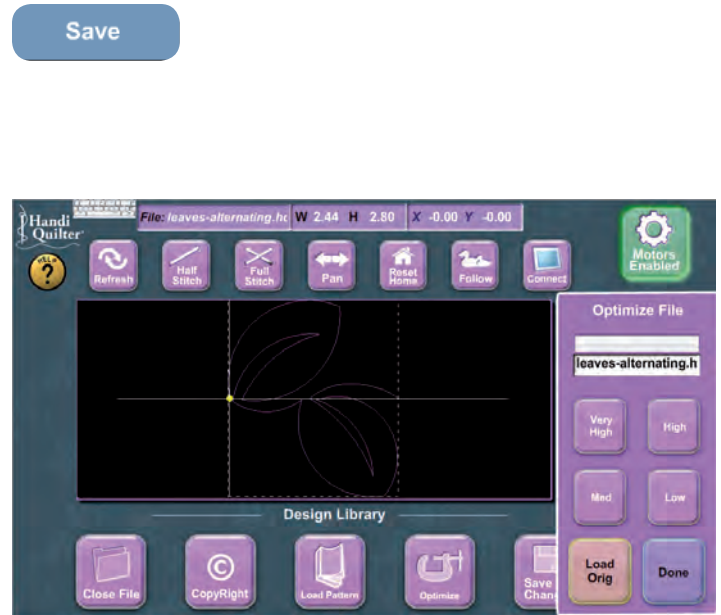


Figure 53

When to Optimize First

If the loaded pattern is already roughly the desired size for the quilt, it is easiest to perform the “Optimize” function prior to any repeats. It will take less time to optimize the file this way and if the level of optimization needs to be changed, then all the other operations that would have already been performed will not be lost when the “Load Original” button is pressed.

When to Optimize After Resizing

If it is known in advance that the pattern will be shrunk significantly, it is best to first re-size the pattern to roughly the size desired and then perform the “Optimize” function (remember that when a pattern is shrunk, the line segments shrink with it). Any other alterations (repeats, rotations, etc.) can then be done after the optimization.



Figure 54

1. The line at the top center of the screen shows the current path in which the file will be saved. The user can change the drive letter as well as the folder in which to save the pattern.

2. To change the drive letter, tap the small black triangle to the right of the current directory and select the appropriate drive letter (please do not save to the C:/ drive as this is the computer's hard disk and there is not enough space to allow the user to save patterns to the hard disk).

3. Select the appropriate folder by double-tapping on the desired folder name (if any). Use the scroll arrows below the folder names or the scroll bar to the right of the folder names as needed to find the desired folder.

4. Tap on the long white bar in the middle of the screen and use the key pad to type the desired name for the pattern.

5. Press the "Save" button to save the file in the selected folder on the selected drive.

6. The file can now be opened as described previously in Step 1. The file name extension for all patterns saved in this way is *.tap.

Capture

Thumbnail images can be created for pattern files that do not have a thumbnail image associated with them in the design library. Patterns that are created or saved from within the HQ Pro-Stitcher itself will not have such an image, and neither will purchased patterns unless those patterns also come with a separate image file (in .jpg or .bmp format). To "capture" an image for these patterns, follow the steps in the next column.



1. Open the design library by pressing the "Load" Pattern button in the "Library" screen.

2. Locate and highlight the desired pattern (do not press the "Load It" button).



3. Press the "Capture" button at the top of the screen.



4. The pattern will load with a pink translucent box in front of the pattern (Figure 55).

5. Tap and drag the pink box so the pattern is centered behind it. Whatever is behind the pink box when the "Snap Shot" button is pressed will become the thumbnail image. Zoom in and pan the image as desired to get the best representation of the pattern.

6. Press the "Snap Shot" button. The image will be saved and the pink box will disappear.



Figure 55

Additional Library Functions

Library Screen - Load Pattern

Additional File and Folder options are made available by pressing the “Options” button by the file name (for file options) or above the folder section (for folder options) (Figures 56 & 57).

File Options

File Options (Press the “Options” button under the file name)

Options

To delete a file, press the “Delete” button under the file name.

Delete

Press either “Accept” or “Cancel” when prompted.

To copy a file to a new location, press the “Copy” button.

Copy

A box will pop up, asking where to copy the file to.



While the pop-up box is open, browse to the new location in the Folder section on the bottom left-hand portion of the screen. The file will be copied into the folder that is currently open.

Press “Accept” or “Cancel.”

Press the “Exit” button under the file name to return to the “Load It” and “Options” buttons.

Exit

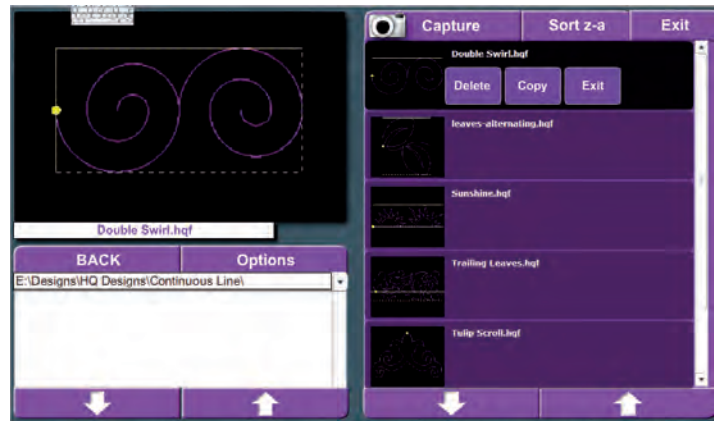


Figure 56

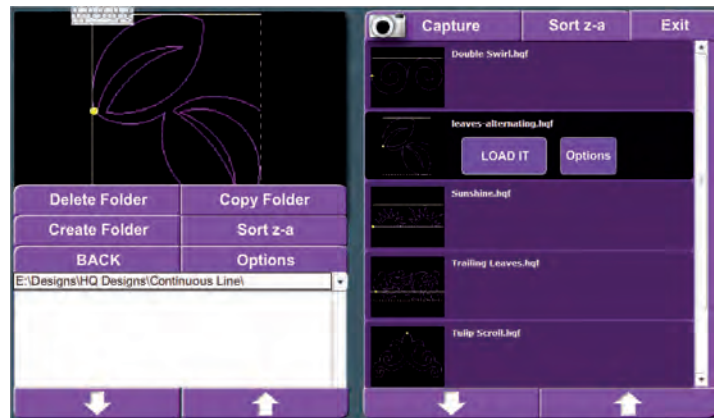


Figure 57

Folder Options

Folder Options (Press the “Options” button above the “Current Path” box).

To delete a folder, tap once on the folder to be deleted.

Press the “Delete Folder” button.

Delete Folder

Press either “Accept” or “Cancel” when prompted.

To copy a folder to a new location, tap once on the folder to be copied.

Press the “Copy Folder” button.

Copy Folder

A box will pop up, asking where to copy the folder to.

While the pop-up box is open, browse to the new location in the Folder section on the bottom left-hand portion of the screen.

The folder will be copied into the folder that is currently open.

Press “Accept” or “Cancel.”

To create a folder, browse to the location in the Folder section on the bottom left-hand portion of the screen that you wish the new folder to be created in. The folder will be created in the folder that is currently open. Press the “Create Folder” button.

Create Folder

Press “Accept” or “Cancel.”

Sort

Sorting is available for the folder section as well as the file section of the design library.

Press the “Sort z-a” or “Sort a-z” button to toggle between alphabetical and reverse-alphabetical sorting of the file names.

Sort z-a

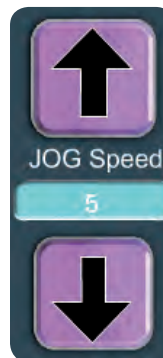
Move

From the “Quilt” screen, pressing the “Move” button gives access to some very useful functions (Figure 58). By pressing any of the 8 arrow buttons in this screen, the HQ Pro-Stitcher will move in the direction pressed.



Jog Speed

This is the speed at which the HQ Pro-Stitcher will move the quilting machine when a direction arrow is pressed. Tap the number box to enter a value or use the “Up” or “Down” arrows to adjust the speed accordingly. The machine must be stopped before changing the “jog speed.”



Continuous

With this box checked, the user only has to tap on one of the direction arrows and the HQ Pro-Stitcher will continue to move in that direction until the “Stop” button is pressed (the direction arrow that was tapped will turn into a “Stop” button) or until another direction arrow is pressed to change the direction the HQ Pro-Stitcher is moving.



With this box unchecked, the HQ Pro-Stitcher will only move while the direction arrow is being pressed. As soon as the arrow button is released, the HQ Pro-Stitcher will stop moving.

Stitch

With this button checked, the quilting machine will begin stitching when the HQ Pro-Stitcher starts moving and stop stitching when it stops moving.



Unchecked, the HQ Pro-Stitcher moves without causing the quilting machine to stitch.

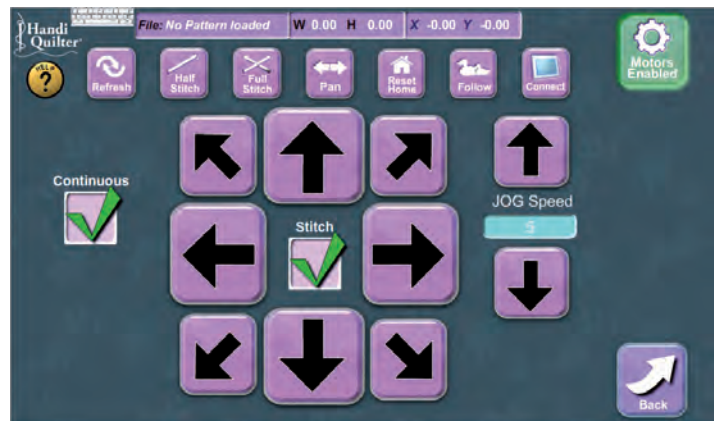


Figure 58

Uses for Move Function

Some of the uses for the “Move” function include:

Basting: Set the stitches per inch setting to 4 to get the largest possible stitch.

Crosshatching: Press the “Reset Home” button at the top of the screen to zero out the “X” and “Y” measurements (also at the top of the screen). Use the “X” and “Y” values to measure the distance to the next crosshatch line. Continue to “Reset Home” prior to moving to each consecutive line if desired.

Stitch-in-the-ditch: If the jog speed is slow, the user can gently adjust the quilt while the machine is stitching to accurately follow seams that may not be perfectly straight.

Stitching straight lines: Using the “Stitch” option, stitch in any of the eight directions available to get perfectly straight lines.

Aligning the quilt: Use “Continuous” mode without the “Stitch” option to have the HQ Pro-Stitcher move slowly in a straight line across the length of the quilt to assist in getting the quilt lined up straight. Adjust the quilt as necessary as the machine moves along.

Manual/Channel

This screen is intended to allow the user to quickly change between free motion quilting and Pro-Stitcher quilting and provide them with access to the “Channel Lock” feature (Figure 59).



Handlebar Control

This button passes control of the quilting machine back to the handlebars on the HQ Sixteen. HQ¹⁸ Avanté and HQ²⁴ Fusion users have constant handlebar control, so it is unnecessary for them to use the “Handlebar Control” button.



Computer Control

Pressing “Computer Control” passes control back to the HQ Pro-Stitcher. It has the same effect as pressing the “Connect” button.



Channel Locks

Press one of these buttons to activate the channel lock for the desired direction. The button will turn green to indicate it is active. Press the same button again to disable the channel lock. With the “Horizontal Channel Lock” enabled, the HQ Pro-Stitcher will allow the user to move the quilting machine horizontally while locking the vertical motor. With the “Vertical Channel Lock” enabled, the horizontal direction is locked so the user can only quilt vertical lines.



Figure 59

Note: To use “Absolute Free-Motion,” physically disengage the motors from the racks by using the disengagement levers on the right-hand side of the carriage (looking at it from the front). For disengagement, both black levers should be raised. To re-engage the motors for computerized quilting, move these levers to the lowest position. Keep in mind that if the levers are disengaged, the Horizontal and Vertical channel locks will not function since they are locked in place with the HQ Pro-Stitcher motors.

Freehand

“Freehand” allows the user to record the movement of the HQ Pro-Stitcher and save the sequence of movements as a pattern file (Figure 60 & 61).



Clear

Press the “Clear” button to clear the pattern window before starting to record.



Handlebar Control

For HQ Sixteen users, press the “Handlebar Control” button to pass control to the HQ Sixteen handles to allow the user to control stitching while recording the freehand motion. HQ¹⁸ Avanté and HQ²⁴ Fusion users have handlebar control all the time, even while the HQ Pro-Stitcher is in control, so this step is not necessary for those users.



Start Record

Make sure the “Motors Enabled/Disabled” button in the top right-hand corner of the screen is in the “Motors Disabled” state. Press the “Start Record” button to begin recording the movements of the quilting machine.

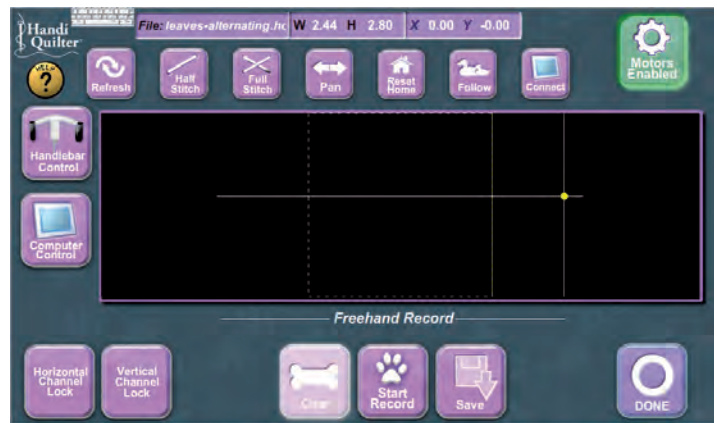


Figure 60

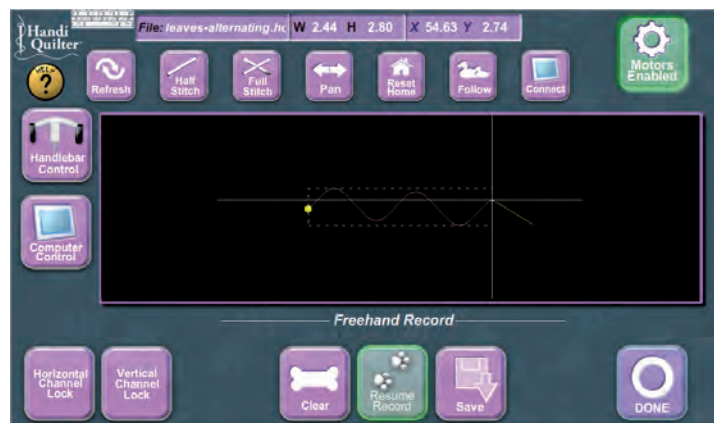


Figure 61

Pause Record

When finished, or if the user wishes to add a “Jump” to recorded pattern, press “Pause Record” (Figure 61). Move the machine to a new position and press “Resume Record” to begin recording again (which will add a dashed line representing a Jump) if desired (Figure 62).



Press the “Save” button if the user is finished and wishes to save the pattern. Browse to the desired folder on the USB flash drive and enter a name in the “Save” screen (Figure 63).

Channel Locks

The “Channel Lock” buttons are available in the “Freehand” screen to allow the user to lock the Pro-Stitcher horizontally or vertically while recording the motion of the quilting machine.



Done

When finished, press the “Done” button. If the user has not saved the pattern, a dialog box will pop up to remind the user to save the pattern. If the user decides to save the pattern, press the “Accept” button and save the pattern as described previously. Otherwise, press the “Back” button and the user will be returned to the “Quilt” menu screen.

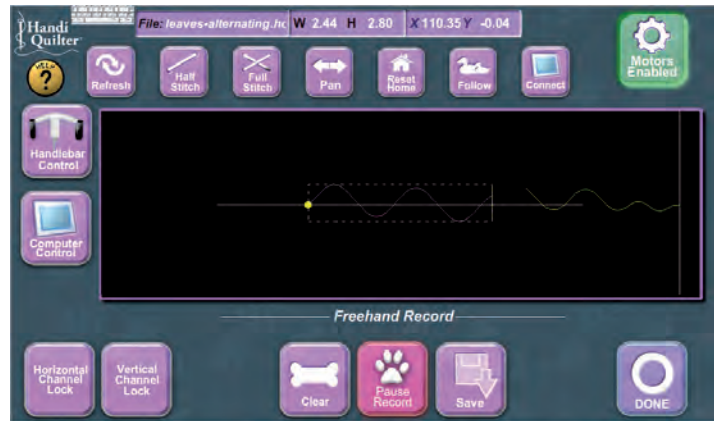


Figure 62

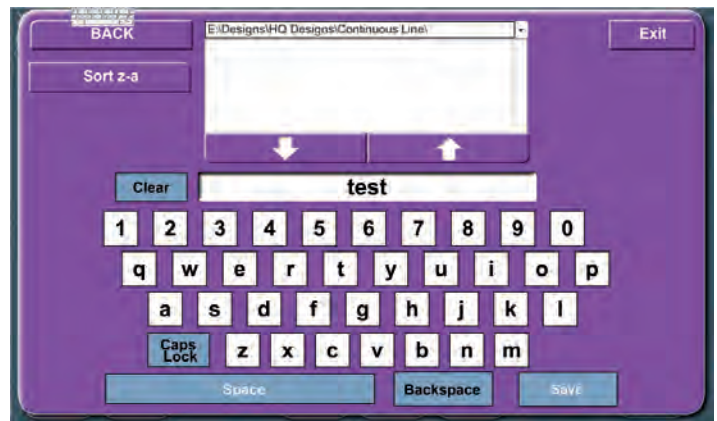


Figure 63

Help

“Help” buttons are located on most screens to aid the quilter in the use of the HQ Pro-Stitcher. To use the “Help” feature, press the “Help” button. Question marks will appear on the buttons that have “Help” information associated with them (Figure 64). To receive instructions regarding a particular button, press that button. An information screen will pop up with scroll buttons at the bottom if the text is longer than a single screen (Figure 65).



Close/Cancel

To close the “Help” screen, press anywhere on the screen that is not a “Help” or scroll button. The user will be given two options. Either press the “Close” button on the “Help” screen or “Cancel” button and continue using the “Help” screen.



Undo

An “Undo” option is provided in most screens that allow the user to manipulate the pattern file. To use this option, press the “Undo” button. A pop-up window will list the functions that have been performed up to the current state of the pattern (Figure 66). The user can select any of the previous operations to return to by double-tapping that particular line in the “Undo” list. At the bottom of the list is the “Original File.”

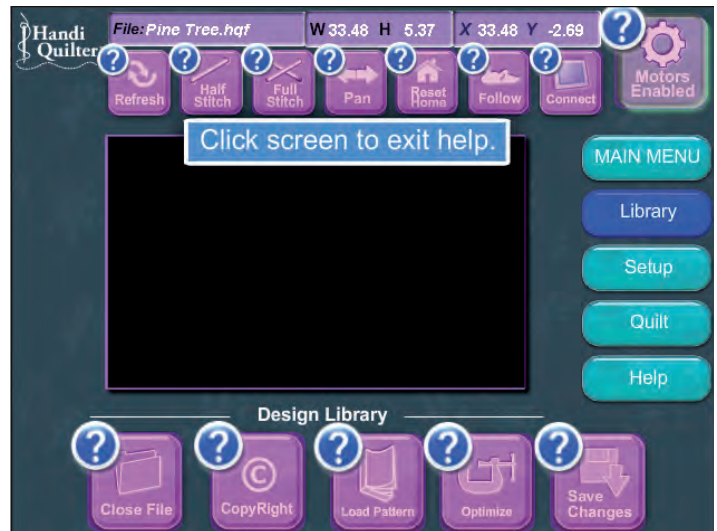


Figure 64

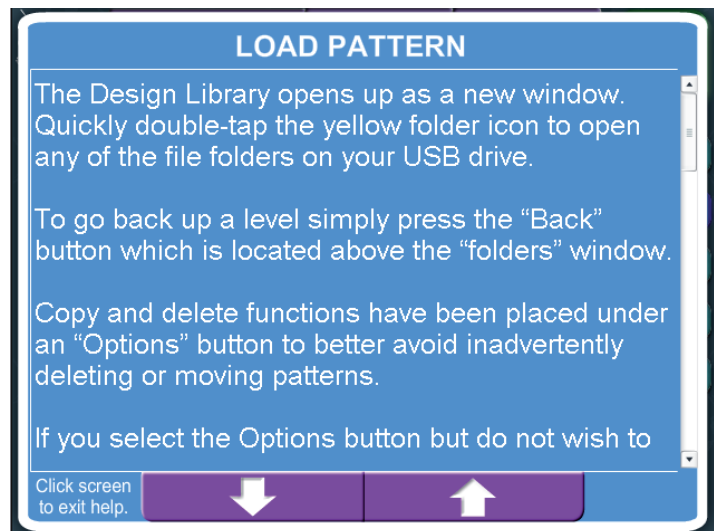


Figure 65

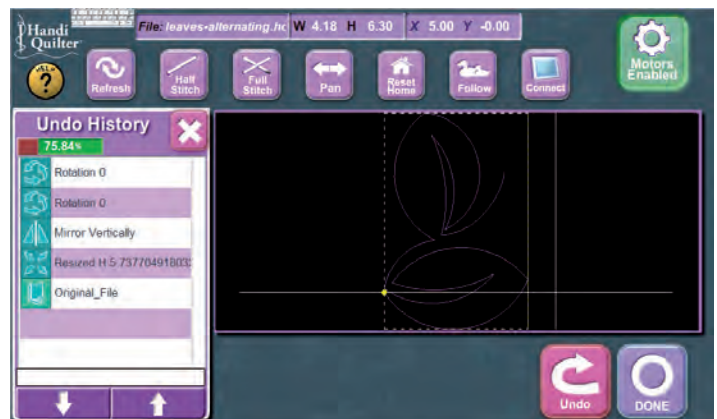


Figure 66

HQ Pro-Stitcher Advanced Features

Advanced Features

The HQ Pro-Stitcher has some advanced features that may be used for trouble-shooting, diagnosing issues or simply making some advanced adjustments. These features can be accessed by pressing the “Advanced” button from within the “Setup” screen (Figure 67). The “Advanced” screen includes buttons that will send certain commands to the quilting machine. These buttons may be used to verify proper communication from the HQ Pro-Stitcher out to the quilting machine.

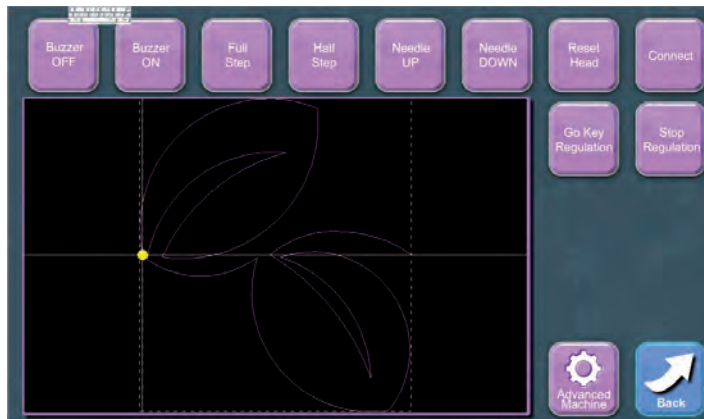


Figure 67



Buzzer On

Use to turn on buzzer when directed by HQ Technical Support. Can be used as a quick check to see if you're connected.



Buzzer Off

Turns the quilting machine's buzzer off after Buzzer check above.



Full Step

Issues a “Full Stitch” command to the quilting machine. For safety reasons, this is not a true “Full Stitch,” but instead simply commands the needle to move until it is in the “Up” position. If the needle is already up, that will result in a full stitch. If it is down, it will result in a half stitch.



Half Step

Issues a “Half Stitch” command to the quilting machine.



Needle Up

Commands the needle to move to the “Up” position.



Stop Regulation

Stops the quilting machine’s motor.



Needle Down

Commands the needle to move to the “Down” position.



Connect

Sends a command to the quilting machine to establish a communication path. If none of the other buttons on this screen causes the quilting machine to respond, press this button to manually establish communication between the two.



Go Key Regulation

Start the quilting machine’s motor in Stitch Regulation mode.



Reset Head

Sends a command to the quilting machine to re-set and cut off the communication path.



To access further advanced features related to the HQ Pro-Stitcher, press the “Advanced Machine” button from within the “Advanced” screen.



HQ Pro-Stitcher Advanced Features (Continued)

The “Scripts,” “Time in Driver,” and “Update Loop” boxes at the top are used by Handi Quilter to diagnose certain software-related issues. The four buttons below these boxes can be used as follows: (Figure 68):

1. Head Log

This button opens a text file that shows the communications that have occurred between the quilting machine and the HQ Pro-Stitcher. This is sometimes used for trouble-shooting purposes.



2. Touch Screen

This button starts the Touch Screen calibration program. This should only be used if the touch screen calibration is not accurate.



3. File View/Edit

The design file can be opened as a text file and viewed or edited as desired.



4. Close HQ Pro-Stitcher

This button shuts down the HQ Pro-Stitcher software and leaves the user in the Windows desktop (Figure 69). To start the HQ Pro-Stitcher software from the Windows desktop, double-tap the “Pro-Stitcher” shortcut icon.



5. Log off

Pressing this button will shut down the HQ Pro-Stitcher software and log off as a HQ Pro-Stitcher user in Windows. Log back in as “Pro-Stitcher” or restart to get back into the HQ Pro-Stitcher software.

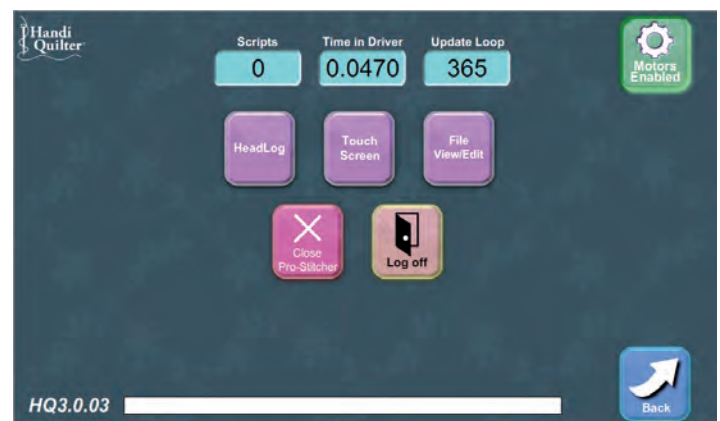


Figure 68

Indicators & Information Boxes

During the stitching process, there are several indicators and information boxes that can help the user understand what the HQ Pro-Stitcher computer is doing (Figure 69).

- “Processing” – lights up when the computer is processing the pattern file.
- “Running” – indicates that the file is running (does not light up during tie-off or pull-up).
- “Movement” – indicates when the HQ Pro-Stitcher motors are physically moving.
- “Stitching” – lights up when the quilting machine should be stitching (does not include tie-off or pull-up).
- “Pause” – lights up when the system is paused for cutting thread.
- “Tie-off” – indicates the system is performing the specified tie-off stitches.
- “Pull-up” – indicates the system is performing the pull-up function.
- “Delay: *” – turns on after the initial pull-up and/or tie-off if the “Pause Delay” option is active and will turn off after pausing to allow the user to cut their thread. If the delay is in seconds, it will count down the specified number of seconds. If the delay is in inches, it will just show a “0.”
- “Jump” – indicates the system is processing a jump.
- “End of File” – indicates the end of the pattern has been reached.
- “Error” – will light if certain errors are encountered.
- “File:” – is the name of the pattern being stitched.
- “H” & “W” – show the height and width of the pattern.
- “X” & “Y” – show the current location of the needle.
- “Line:” – shows the current line number in the pattern file being processed.
- “Pattern #” – shows which section of the pattern (as separated by jumps) that is currently being stitched. If a pattern is repeated but has no jumps, the computer assumes it is all one pattern.
- “Dis:” (distance) – indicates the number of linear inches traveled by the HQ Pro-Stitcher.

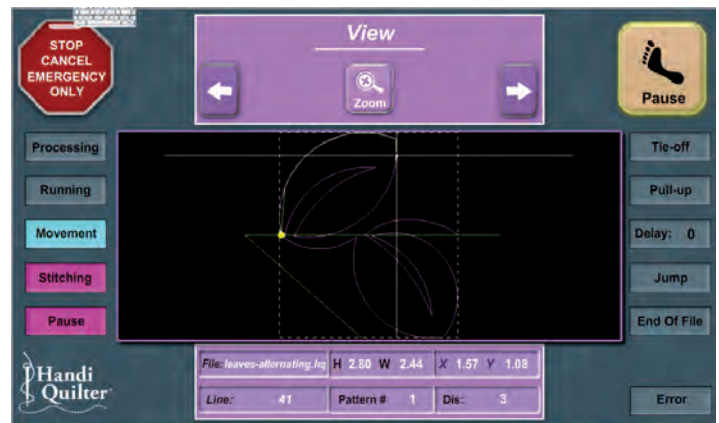


Figure 69

HQ Pro-Stitcher Trouble-shooting Guide

Problem/Symptom	Corrective Measure
<p>No Display on the Touch-Screen Monitor</p>	
<ul style="list-style-type: none"> ➤ LED under the battery symbol at the bottom left corner of the screen is OFF. ➤ LED under the battery symbol is GREEN. 	<p>The HQ Pro-Stitcher computer is powered off. Make certain the power cord to the HQ Pro-Stitcher is plugged into a powered outlet on one end and the power supply under the carriage on one of the “Y” branch ends of the power cord. Also check that the round barrel connector is plugged firmly into the mating cable connector under the HQ Pro-Stitcher carriage.</p> <p>If all cables are plugged in properly and the LED remains off, toggle the “Power” button on the bottom right corner of the monitor.</p> <p>The computer may be in a “standby” or screen saver mode. Tap the display to wake the system up. If that does not work, slide the power switch to the right.</p>
<p>Touch-Screen is not calibrated</p>	
<ul style="list-style-type: none"> ➤ Touching the monitor in one place on the monitor puts the cursor in a place other than where the monitor was touched. 	<p>Re-calibrate the touch-screen by going to SETUP -> ADVANCED -> ADVANCED MACHINE -> TOUCH SCREEN and follow the calibration instructions (refer to the calibration instructions that follow this section).</p>
<p>The stitch-regulator cable is not connected properly</p>	
<ul style="list-style-type: none"> ➤ The HQ Pro-Stitcher moves but does not stitch. ➤ The Pro-Stitcher stitches, but the stitch lengths vary and the HQ Sixteen slows down or even stops in some directions. 	<p>Make sure the gray flat stitch-regulator cable is plugged into the back of the C-Pod, the encoder wheel on the back wheel of the quilting machine, and the encoder wheel on the carriage.</p> <p>Check the black cable that connects the HQ Pro-Stitcher to the machine encoder wheel. This cable has a 3-wire connector at the end that plugs into the machine’s stitch-regulator encoder circuit board attached to the back left wheel of the quilting machine.</p> <p>Verify the HQ Pro-Stitcher and the quilting machine are communicating with each other by pressing “Connect” either from the Main Menu or the top of most other screens. If the two systems are communicating, pressing the “Full Stitch” or “Half Stitch” buttons on the HQ Pro-Stitcher will result in the quilting machine’s needle performing that function.</p> <p>Check the gray stitch-regulator cable for damage (the end of the cable that plugs into the C-Pod will have one wire clipped – this is normal).</p> <p>Check both encoder wheels (one on the carriage and one on the back left quilting machine wheel). Make sure the gray stitch-regulator cable is plugged into both encoders (wheels with the black rubber ring around them) and that both wheels rotate when the system is moving.</p> <p>The problem can be narrowed to a specific encoder wheel by running the quilting machine manually (HQ Sixteen owners will need to go to Quilt->Manual->Handlebar Control to pass control back to the handles). Start the quilting machine from the handlebars in Stitch Regulated mode and only move the machine left and right. Then try only moving front and back. If the quilting machine stops stitching while moving front and back, then the problem is with the encoder mounted to the back of the machine. If it stops stitching left and right then the problem is with the encoder on</p>

Problem/Symptom	Corrective Measure
<p>➤ HQ Sixteen owners: The C-Pod screen is blank or scrambled and the handlebar screens are stuck on a screen that says, "Handlebars Version X.X"</p>	<p>the carriage. Make sure the encoder wheels roll on the tracks when moving the quilting machine and also that the gray stitch-regulator cable is plugged in securely to the encoders.</p> <p>The gray flat stitch-regulator cable is plugged in upside-down to one or both of the stitch-regulator encoder wheels. Make sure the red stripe on the gray cable is facing up on both encoder connections.</p>
<p>An older version of the "Y" encoder is mounted to the HQ Sixteen</p>	
<p>➤ The HQ Pro-Stitcher begins to stitch but stops right away.</p>	<p>Make sure the "Y" or "machine" encoder, which is mounted to the back left-hand side (when looking from the front) is the newest version encoder for the HQ Sixteen. The old version has a 2-inch section of black plastic heat shrink encasing a small circuit board where the cable plugs in. The new version does not have that 2-inch section of black heat shrink. If the old encoder is mounted to the machine, then replace it with the new encoder that is included in the HQ Pro-Stitcher accessory bag.</p>
<p>The X and/or Y axis quick release levers are not engaged</p>	
<p>➤ When the quilting machine is pushed by hand, the horizontal and/or vertical crosshair lines do not move.</p>	<p>Make sure the quick release levers on the carriage are allowing the white gears to engage the blue rack. Both levers should be in the lowest position.</p>
<p>Lubrication required between white gears and blue rack</p>	
<p>➤ When the Pro-Stitcher carriage levers are engaged squeaking can be heard as the machine is pushed or driven.</p>	<p>Lubricate the teeth of the white plastic gears for both the X and the Y axes by applying a small amount of silicone lubricant to the teeth of the white gears. Do not use an oil-based lubricant (such as WD-40 or sewing machine oil) as this will attract dust and eventually clog the gears.</p>
<p>A bad image was created for a pattern thumbnail.</p>	
<p>➤ When in the design library, the graphic that should identify the selected pattern is either missing or is not the proper picture.</p>	<p>While in the Design Library, select the name of the pattern with the incorrect or missing image. Press the "Capture" button. The pattern will load with a pink box over the top of it. The pink box represents the "camera" that will create the image. Anything behind the pink box becomes the identifying image once "Snapshot" is pressed. Drag the pink box to position it best. Zoom in on the pattern if desired to get a better shot of the pattern.</p>
<p>Positioning a pattern using the "Reset Home" button</p>	
<p>➤ When the "Reset Home" button is pressed, the pattern is not positioned properly.</p>	<p>The "Reset Home" button is not intended to be used as a re-positioning tool. "Reset Home" simply makes the current needle position match up with the "X=0, Y=0" point of the pattern. This "0,0" position can vary from pattern to pattern, so the best way to re-position is by using the "Reposition Pattern" button in the Quilt Menu.</p>
<p>The initial stitching speed is too fast or too slow</p>	
<p>➤ Stitches are either too long or too short at the beginning of every pattern.</p>	<p>For HQ Sixteen Owners: The starting speed can be adjusted to help achieve the most appropriate stitch length. To change this setting, first get handlebar control (Quilt Menu->Manual->Handlebar Control). Scroll down to Diagnostics on the handlebar screen and press Select. A warning message will appear on the handlebar screen. Press and hold the up and down arrows on the center box followed by the Select button (all three buttons are now being pressed) and then release them. This should reveal the Diagnostics menu. Scroll down to Cruise Speed and press Select. Adjust the starting speed by pressing up or down to get the desired speed followed by Select. Start with 25% speed and then adjust from there to find a speed that works best.</p>

Problem/Symptom	Corrective Measure
<p>No Patterns or Folders show up in the Design Library</p>	<p>Make sure the USB Flash drive is plugged in securely to the HQ Pro-Stitcher computer.</p> <p>Try pressing the “Back” button in the bottom left-hand section of the screen in case the HQ Pro-Stitcher’s path is looking for a folder that does not exist. Press “Back” until the current path reads “E:\” or the desired folder appears.</p> <p>Verify that the current path (located under the “Back” and “Options” buttons in the bottom left-hand section of the design library screen) starts with “E:\”. If not, press the small black triangle to the left of the path window and select the “E:\” drive. If the current path is already set to “E:\”, try selecting the one of the other available drive letters to see if the USB flash drive has been identified with another letter.</p> <p>The patterns that come pre-loaded on the Handi Quilter USB Flash drive are located in a folder called “Designs” on the USB flash drive. If the current path is pointing to the root of the USB stick (the current path shows “E:\”), there should be a yellow “Designs” folder on the bottom left-hand side of the screen. Double-tap this folder to open it and reveal further folders and patterns located within those folders on the right.</p> <p>If there continues to be nothing showing up on the USB Flash drive, plug it into a desktop or laptop computer and verify that the USB flash drive has the desired files on it. If the computer says it wants to “reformat” the flash drive then the flash drive has gone bad and will need to be replaced. If it opens but there are no files on the flash drive, contact Handi Quilter for replacement files*.</p> <p>*Handi Quilter highly recommends backing up all pattern files on a home computer or another disk.</p>
<p>Jumps between repeated patterns</p>	<p>When using the “Repeat” functions, if the start and/or stop points are within the block of the pattern (i.e. they are not located at the left and right-hand sides of the pattern block) and/or not at the same height, there will be a jump between each repeat of the pattern. This can be corrected by selecting the “Point to Point” box in the “Repeat” screen prior to pressing the appropriate “Repeat” button.</p>
<p>The HQ²⁴ Fusion often ends in the “Needle Down” position</p>	<p>Go to Setup -> Advanced -> Advanced Machine and press the number box under “Time in Driver” followed by the version number in the bottom left-hand corner. A lot of hidden buttons and settings will appear. On the right-hand side is a setting titled “Needle Delay.” Tap the number in this box to bring up the number pad and enter “750.” Press Back -> Back to get back to the Setup menu.</p> <p>If changing that value helped, but did not completely resolve the problem, enter the value “1000” and try it again.</p>

Problem/Symptom	Corrective Measure
Error Messages	
<p>➤ Smart Quilt. Connection Error. Check cables, and restart Pro-Stitcher.</p>	<p>Check to make sure the USB cable from the computer to the black box behind the computer is plugged in properly. Also verify that the cables running from the black box down to the carriage motors are all connected and that the power cord is plugged in to the carriage power supply. Reboot the Pro-Stitcher. It is likely that in this scenario the Shutdown button will not function and the system will remain locked after pressing "Reboot." If this is the case, simply slide the power switch to the right to shut the computer down. Wait about 10 seconds after the computer shuts down, then slide the power switch to the right again to turn it on.</p>
<p>➤ Smart Quilt. Oops! Pro-Stitcher has lost communications with the motors.</p>	<p>Follow the instructions on the screen to re-set the USB port.</p> <ol style="list-style-type: none"> 1. Unplug the USB cable (the cable running from the bottom left-hand side of the computer to the black box behind the computer). 2. Wait 10 seconds 3. Plug in the USB cable (make sure you put it back in the same USB port you removed it from or you may receive a "Connection Error" described above). 4. Wait 10 seconds (while Windows sets up the USB port) 5. Press "OK" <p>If this occurs during stitching, the HQ Pro-Stitcher should automatically enter the "Pause" screen. To resume stitching, back up and/or reposition as needed. Follow the instructions regarding the "Pause" screen to resume stitching again.</p>
<p>➤ "Buffer Underflow"</p>	<p>If a message with the words "Buffer Underflow" appears while stitching, it is an indication that data is not getting to the motors quickly enough. This may be due to something in the computer tying up memory. Although it may be possible to resume quilting by simply pressing "OK," it is best to cancel the current design stitch-out, save the pattern, and re-boot the computer. Use the "New Start Point" function if necessary to resume from where stitching was left off.</p>

Procedure for Calibrating the Touch-Screen Monitor

This procedure resolves the issue of the touch screen being activated at a point inconsistent with where the stylus is being pressed. It may be necessary to use a USB mouse if the calibration is too far off.

1. From the HQ Pro-Stitcher “Main Menu”, press the “Setup” button.



2. Press the “Advanced” button at the bottom of the screen.



3. Press the “Advanced Machine” button.



4. Press the “Touch Screen” button.



5. The screen will turn white and a black cross hair will appear at the top left-hand corner of the screen.

6. Using the stylus, tap the crosshair each time it appears.
7. Press “Yes” to save the new calibration data or “No” to cancel.

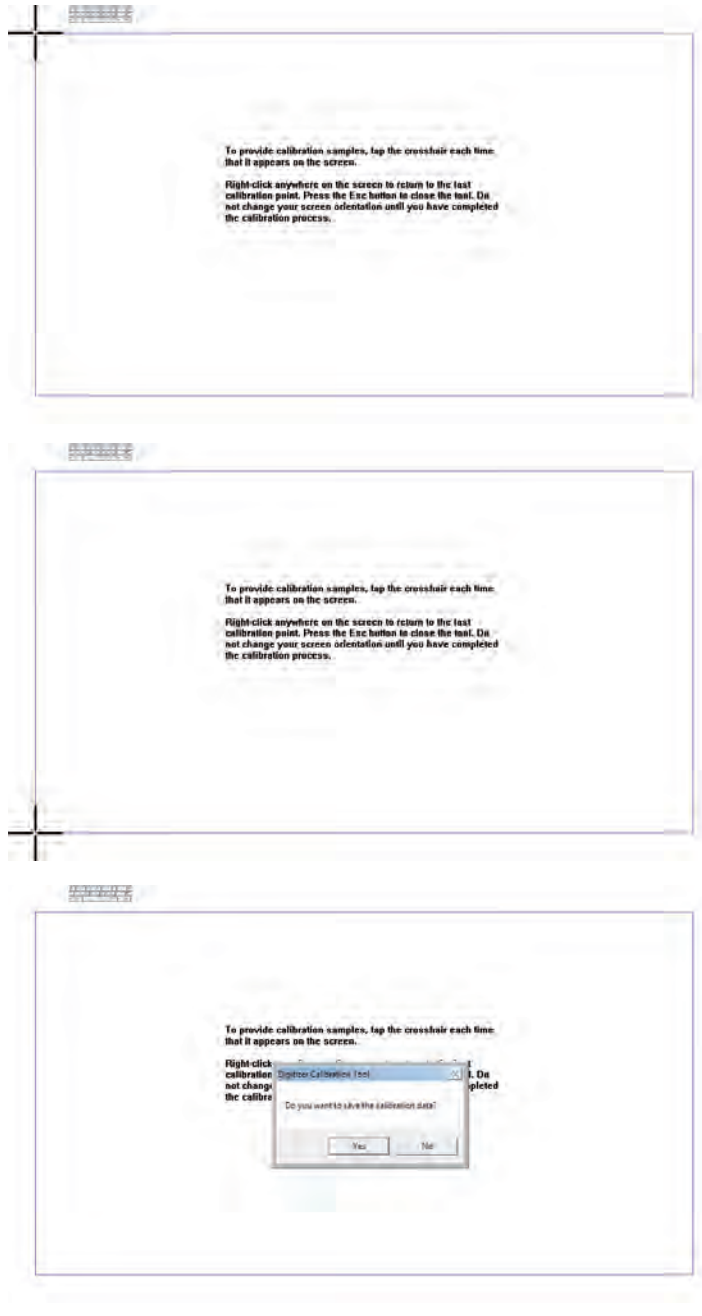


Figure 72

Warranty

Warranty issues should, whenever possible, first be submitted to the Authorized Representative who completed your service and training. These representatives have been selected for their dedication to customer satisfaction and have been trained in technical service. They also may provide follow-up advice, training, service, accessories, and other services.

HQ Authorized Representatives may offer their *own warranties* in addition to those offered by the manufacturer, but do not obligate the manufacturer.

HQ Pro-Stitcher® - LIMITED WARRANTY

Handi Quilter, Inc (hereinafter HQ) offers a limited warranty on the HQ Pro-Stitcher (hereinafter “Product”) to be free of defects in workmanship and materials under normal use upon the terms and conditions hereinafter set forth:

- (a) **90 day Limited Warranty** - During the first 90 days from date of purchase, HQ will repair any manufacturing defect without charge for parts or labor. All subsequent warranties include parts costs only.
- (b) **Three year Mechanical Warranty:** For any mechanical failure within this period, manufacturer will provide free replacement parts, customer pays for labor and shipping.
- (c) **Lifetime Software Update Warranty:** From the date of purchase HQ will provide updates (minor changes to the HQ Pro-Stitcher software), free of charge, to the consumer via electronic downloads. These are intended to provide the consumer with the latest software updates for the HQ Pro-Stitcher and are not the same as UpGRADES, which will incur a fee to the consumer.
- (d) **One year Electronic/Electrical Warranty:** The electric/electronic components are warranted to be free from manufacturing defects for one year from the date of purchase. If any defect is reported within this period, manufacturer will provide free replacement parts, customer pays for labor and shipping. The 1 year electronic/electrical warranty will be invalid if the product is ***left plugged into a power source when not in use.***

The limited warranty stated in sections (b), (c) and (d) above shall be limited solely to the replacement of parts which, in the opinion of HQ, are defective in workmanship or material and are returned to HQ, or an authorized repair facility, or such other point or place that may be designated by HQ. All other costs, including cost of freight and shipment for repair under this warranty, shall be the customer's costs.

The product registration card must be completed and received by HQ before warranty is valid.

Warranty Exclusions

HQ shall have no obligation for any claim under this warranty if the HQ Pro-Stitcher has been misused, abused, neglected, damaged in transit or has been altered from the standard specifications established by HQ, if proper cleaning and maintenance has not been performed, or if the HQ Pro-Stitcher is used on other frame systems or with other machines than those specified by Handi Quilter. No warranties extend beyond the express warranty offered. HQ disclaims all other warranties, express or implied, regarding the Product, including any implied warranties of merchantability or fitness for a particular purpose. In the United States, some laws do not allow the exclusion of the implied warranties.

Specific exclusions of warranty limitations include, but are not limited to, the following:

- General, consequential, incidental or special damages including damage to fabric or material, the cost of rework or lost profits, the cost of installation or removal of any Products, and any inspection, testing, or redesign caused by any defect or by the repair or replacement of Products arising from a defect in any Product.
- Products which are received by HQ improperly packaged, altered, or physically damaged.
- Counterfeit or altered label(s) or stickers.
- Broken pins on connectors.
- Stripped screws or nuts.
- Connector(s) damaged, cracked, missing or broken.
- Missing, torn or punctured seal(s).
- Any use besides computerized machine quilting applications.
- Operator error in the customary use of the Product.
- Internal adjustments, tampering or parts replacement done by anyone except authorized Representatives or customers specifically authorized by Handi Quilter Customer Support or warranty repair personnel on a case by case basis.

The warranty does not cover and the user assumes the risk of and there is hereby excluded any liability to HQ for failure, defects, loss, deterioration, personal injury or damage which are due to: (1) ordinary wear and tear or exposure, (2) abuse, misuse, negligence, operator error, or (3) use of parts, components, or accessories not authorized by HQ.

In no event shall HQ be liable to the purchaser of the Product or to third parties for special or consequential damages, including, but not limited to, death or personal injuries.

HQ does not assume, or authorize any person to assume on its behalf, any other obligation of liability other than that set forth herein.

Some states do not allow exclusion of limitation of incidental or consequential damages, so above limitation or exclusion may not apply. This warranty gives the purchaser specific legal rights and the purchaser may also have other rights, which may vary from State to State.

Exclusive Remedy

Remedy is limited to the repair or replacement of the defective Product. HQ may elect which remedy or combination of remedies to provide at its sole discretion and shall have a reasonable time, after determining that a defective Product exists, to repair or replace the defective product. Replacement Product may be from new or serviceable used parts. HQ's warranty applies to repaired or replaced Products for the balance of the applicable period of the original warranty or ninety days from the date of shipment of a repaired or replaced Product, whichever is longer.

HQ's entire liability for any defective Product shall in no event exceed the purchase price for the defective Product. This limitation applies even if Handi Quilter cannot or does not repair or replace any defective Product.

Warranty Claims

Service under the above warranties may be obtained by returning the product, with proof of purchase, to the authorized Representative from whom the product was purchased, a local Representative, or to Handi Quilter Customer Support.

Any product to be returned to the factory, either by customers or Representatives, must be accompanied by a Return Material Authorization Number (RMA). RMAs may be obtained by email (sales@handiquilter.com) or by calling customer support at 801-292-7988 or toll-free at 1-877-697-8458. If it is determined that the Product may be defective, an RMA number will be issued with instructions for Product return. An unauthorized return (a return without an RMA number) will be shipped back to customer at customer's expense. Authorized returns are to be shipped prepaid and insured in an approved shipping container. The original box and packaging materials should be kept for storing or shipping.

Shipping Costs

Shipping is the responsibility of the customer.

Product Service and Maintenance

Periodically use a small brush to clean all lint and threads from under the carriage, track and rack. Keep rack and track clean and clear of any foreign material, build up, or obstruction.

Follow HQ Quilting Machine Service and Maintenance for best results with the HQ Pro-Stitcher.

Replace needles every 2-4 hours (1-2 per large quilt) and lubricate hook every 3-4 hours of use (about every 2nd bobbin change). Periodically check the thread tensioner. Use small brush to clean out all lint, loose thread or obstructions from the bobbin hook each time you begin to use the HQ Pro-Stitcher and HQ quilting machine.

Servicing is recommended for your HQ quilting machine annually from a qualified representative. Servicing will cover belt tensioning, encoder positioning, bearing retainers, hook axial play and timing, presser and needle bar adjustment, and internal lubrication to take-up lever, hopping foot levers, bushings/bearings.

Handi Quilter, Inc.
Customer Service Department
445 N. 700 W.
North Salt Lake, UT 84054
Toll Free: 1-877-MY-QUILT (697-8458)
Local Phone: 801-292-7988
sales@handiquilter.com

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HQ Pro-Stitcher® Warranty Registration

Mail or Fax completed Warranty Registration Card within 30 days of purchase. If you have questions, email sales@HandiQuilter.com or call Customer Relations at 1-877-697-8458.

MAIL: Handi Quilter, Inc.
Warranty Registration Dept.
445 N 700 W
North Salt Lake, Utah 8405

FAX: 801-294-3011

HQ PRO-STITCHER WARRANTY REGISTRATION CARD

The HQ Pro-Stitcher warranty consists of one-year electronic/electrical, three-year mechanical and lifetime software updates (see detailed warranty information in HQ Pro-Stitcher User Manual). Check with your local HQ Representative for details on service of making warranty claims.

Customer Name:

Company/Business Name (if applicable):

Address:

City, State, Zip:

Daytime Phone:

Evening Phone:

Fax:

Email:

HQ Pro-Stitcher Serial Number:

Order Number (5 digits):

Purchase Date:

Date Product Received:

Location of Purchase (Shop or Show name, City & State):

Signature:

Date:

Cut along dotted line and mail or fax this registration information within 30 days of purchase.

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HQ Pro-Stitcher®

Installation and Training Checklist



Customer Name _____ Date of Purchase _____

HQ Representative _____ Date of Training _____

Installation and Set Up

- Rack System
- Carriage System
- Encoder Cables
- Gears Engage the Racks
- Quick Release Mechanism

HQ Pro-Stitcher Training

- Disable/Enable Motors
- Zoom/Pan Function
- Refresh, Half-Stitch, Reset Home, Follow

Art & Stitch

- Creating a Design
- Loading a Design
- Exporting a Design

Library Function

- Load Patterns
- Capture Thumbnail Image

Warranty Review

- Review Manufacturer's Warranty

Set Up

- Tie Off
- Stitches per inch
- Auto Jump
- Speed Control
- Rotate a Design
- Resizing Options
- Repeat Pattern
- Move Function
- Positioning a Pattern
- Undo
- Find new Start Point

Quilting

- Tie Off
- Pull up Bobbin Thread
- Trace Function
- Setting Needle Position
- Pause and Resume

Cleaning and Maintenance

- Cleaning Rack
- Maintenance of HQ Machine

I have received installation and set-up assistance and have been trained on the above items on the HQ Pro-Stitcher.

Signature of Owner

HQ Rep Signature

Note to HQ Rep: Upon completion, please cut along dotted line and fax the signed copy to Handi Quilter at 801-294-3011.



Designed by a Quilter, for Quilters.®

Handi Quilter, Inc.
445 N. 700 W.
North Salt Lake, UT 84054
1-877-697-8458
www.handiquilter.com