

HQ/8 *Avanté*

USER MANUAL



Designed by a Quilter, for Quilters.®

IMPORTANT INFORMATION: REGULATIONS

Federal Communications Commissions (FCC) Declaration of Conformity (For USA Only)

Responsible Party: Handi Quilter, Incorporated
445 North 700 West
North Salt Lake, UT 84054 USA

declares that the product

Product Name: HQ¹⁸ Avanté

complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Consult the dealer or an experienced radio/TV technician for help.
- Changes or modifications not expressly approved by the manufacturer or local sales distributor could void the user's authority to operate the equipment.

Canadian Department of Communications Compliance Statement (For Canada Only)

This digital apparatus does not exceed the Class B limits for radio noise emission from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Department of Communications.

Radio Interference (Other than USA and Canada)

This machine complies with EN55022 (CISPR Publication 22) /Class B and AUS/NZ 55022/Class B.

Quick Facts

The HQ¹⁸ Avanté utilizes high-tech electronics and an innovative touch-screen user interface to offer greater functionality and ease of operation to home quilters than ever before conceived in the quilting industry. The HQ¹⁸ Avanté quilting machine is a high quality machine that incorporates very robust design features and is very easy to service.

IMPORTANT SAFETY INSTRUCTIONS

Read all instructions before using.

When using this machine, basic safety precautions should always be taken, including the following:

Read all instructions before using.

DANGER - To reduce the risk of electric shock:

- A quilting machine should never be left unattended when plugged in. Always unplug the machine from the electrical outlet immediately after using and before cleaning.

WARNING - To reduce the risk of burns, fire, electric shock, or injury to persons:

- Do not allow to be used as a toy. Close attention is necessary when this quilting machine is used by or near children.
- Use this quilting machine only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this manual.
- Never operate this quilting machine if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return the quilting machine to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
- Never operate the machine with any air openings blocked. Keep ventilation openings of the machine free from the accumulation of lint, dust, and loose cloth.
- Never drop or insert any object into any opening.
- Do not use outdoors.
- Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
- To disconnect, turn the machine switch to the symbol "O" position which represents off, then remove plug from outlet.
- Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
- Keep fingers away from all moving parts. Special care is required around the machine needle.
- Always use the proper needle plate. The wrong plate can cause the needle to break.
- Do not use bent needles.
- Switch the machine to the symbol "O" position to turn it off when making any adjustments in the needle area, such as threading needle, changing needle, threading bobbin, or changing presser foot, and the like.
- Always unplug the machine from the electrical outlet when removing covers, lubricating, or when making any other user servicing adjustments mentioned in the instruction manual.
- This sewing machine is not intended for use by young children or infirm persons without supervision. (For Australia and New Zealand only)
- Young children should be supervised to ensure that they do not play with this machine.

SAVE THESE INSTRUCTIONS

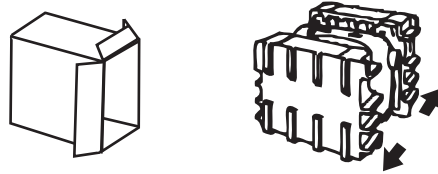
This machine is intended for household use.

Disclaimer

Handi Quilter and its Representatives are in no way legally responsible or liable for damage to the HQ¹⁸ Avanté when used improperly or not in accordance with the guidelines stated in this manual or when used on machine quilting frames not recommended by Handi Quilter.

HOW TO UNPACK/REPACK THE MACHINE

Keep the carton and packing materials. You will need them in the event that you need to return the machine to the dealer or send it for repair. If you do not pack the machine properly or if you do not use the correct packaging materials, the machine could be damaged. Handi Quilter is not liable for damage that occurs during return shipping. Follow the diagram below to unpack and repack the machine.



IMPORTANT

These packaging materials are designed to prevent the machine from being damaged. Keep them in case you need to bring this machine to the dealer or send it for repair.

PLEASE READ THESE INSTRUCTIONS BEFORE USING THE MACHINE.

To use the machine safely

1. Carefully watch the needle when sewing. Do not touch the hand wheel, take up lever, needle or other moving parts.
2. Turn the machine off and unplug the cord in the following cases
 - when you have stopped using the machine;
 - when you replace or remove the needle or any other part;
 - in case of failure when you use the machine;
 - when you check or clean the machine;
 - when you leave the machine unattended.
3. Connect the machine directly to the wall outlet. Do not use extension cords.

To increase the life of your machine

1. Do not store this machine in areas exposed to direct sunlight or high humidity. Never use or store the machine near a heater, an iron, a halogen lamp or other hot things.
2. Use only neutral soaps or detergents to clean the machine. Benzene, solvents and scouring powders can damage the case and the machine and therefore should never be used.
3. Do not drop or bump the machine.
4. Always consult the manual to replace or fix the presser foot, needle or any other part of the machine.

To repair or adjust the machine

If the machine breaks down or needs adjustment, first check the troubleshooting chart in the appendix to inspect and adjust the machine yourself.

For more product information and updates, visit our website at www.HandiQuilter.com.

The contents of this manual and product specifications are subject to change without prior notice.

FOR USERS IN THE UK, EIRE, MALTA AND CYPRUS ONLY

If this machine is fitted with a three-pin non-rewireable BS plug then please read the following.

IMPORTANT

If the available socket outlet is not suitable for the plug supplied with this equipment, it should be cut off and an appropriate three pin plug fitted. With alternative plugs an approved fuse must be fitted in the plug.

NOTE: The plug severed from the main leads must be destroyed as a plug with bared flexible cords is hazardous if engaged in a live socket outlet. In the event of replacing the plug fuse, use a fuse approved by ASTA to BS 1362, i.e. carrying the mark, rating as marked on plug.

Always replace the fuse cover. Never use plugs with the fuse cover omitted.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER 'E', BY THE EARTH SYMBOL OR COLOURED GREEN OR GREEN AND YELLOW.

The wires in this main lead are coloured in accordance with the following code:

Blue	Neutral
Brown	Live

As the colours of the wiring in the main lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter 'N' or coloured black or blue.

The wire which is coloured brown must be connected to the terminal which is marked with the letter 'L' or coloured red or brown.

GROUNDING

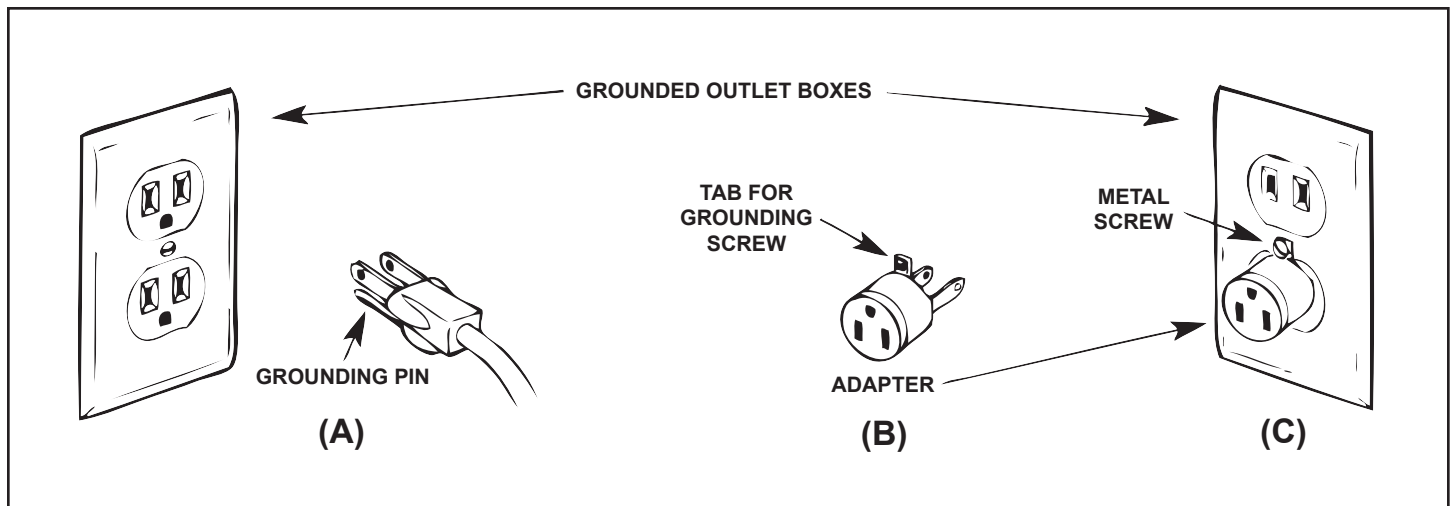


Figure 1

This product is for use on a nominal 120 V or nominal 220 V circuit, and has a grounding plug that looks like the plug illustrated in sketch A in Figure 1. A temporary adapter, which looks like the adapter illustrated in sketches B and C, may be used to connect this plug to a 2-pole receptacle as shown in sketch B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adapter is used, it must be held in place by the metal screw.

Note: In Canada, the use of a temporary adapter is not permitted by the Canadian Electric Code.

INSTRUCTIONS DE SÉCURITÉ IMPORTANTES

Lorsque vous utilisez cette machine, vous devez toujours respecter des précautions de base, notamment les suivantes :

Lisez toutes les instructions avant d'utiliser la machine.

DANGER - Pour réduire le risque de choc électrique:

- Ne laissez jamais la machine sans surveillance alors qu'elle est branchée. Débranchez toujours la machine de la prise de courant dès que vous avez fini de l'utiliser et avant de la nettoyer.

WARNING - Pour réduire le risque de brûlure, d'incendie, de choc électrique ou de blessure:

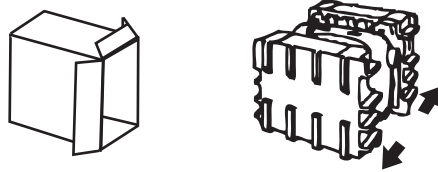
- Cette machine n'est pas un jouet. Vous devez donc être très attentif lorsque des enfants l'utilisent ou se trouvent à proximité.
- N'utilisez cette machine que de la manière prévue, décrite dans ce manuel. N'utilisez que les accessoires recommandés par le fabricant, conformément au manuel.
- N'utilisez jamais cette machine si une fiche ou un câble est endommagé, si elle ne fonctionne pas correctement, si elle a chuté ou a été endommagée ou si elle est tombée dans l'eau. Renvoyez-la au revendeur ou centre de dépannage agréé le plus proche à des fins d'examen, de réparation ou de réglage électrique ou mécanique.
- N'utilisez jamais la machine lorsque les aérations sont bloquées. Ne laissez pas des peluches, poussières et tissus s'accumuler dans les ouvertures de ventilation de la machine.
- N'insérez ni ne laissez tomber aucun objet dans les ouvertures.
- N'utilisez pas la machine à l'extérieur.
- Ne faites pas fonctionner la machine en cas d'utilisation d'aérosols (pulvérisations) ou d'administration d'oxygène.
- Pour débrancher la machine, mettez l'interrupteur de la machine en position "O" (position d'arrêt), puis retirez la fiche de la prise.
- Ne débranchez pas la machine en tirant sur le câble. Tirez plutôt sur la fiche.
- Ne touchez pas les pièces mobiles. Faites particulièrement attention à l'aiguille de la machine.
- Utilisez toujours la plaque d'aiguille appropriée. Si vous utilisez une plaque inadéquate, vous risquez de casser l'aiguille.
- N'utilisez pas d'aiguilles tordues.
- Mettez la machine hors tension (interrupteur principal sur "O") lorsque vous effectuez des réglages liés à l'aiguille, comme l'enfilage et le changement d'aiguille, l'enfilage de la canette ou le changement de pied-de-biche, etc.
- Débranchez toujours la machine de la prise électrique lorsque vous retirez les capots, ajoutez du lubrifiant ou effectuez d'autres opérations d'entretien mentionnées dans le manuel d'instructions.
- Cette machine à coudre n'est pas conçue pour être utilisée par de jeunes enfants ou des handicapés sans surveillance. (Uniquement pour l'Australie et la Nouvelle-Zélande)
- Les jeunes enfants doivent être surveillés pour s'assurer qu'ils ne jouent pas avec cette machine.

CONSERVEZ CES INSTRUCTIONS

Cette machine est conçue pour une utilisation domestique.

COMMENT DÉBALLER/REBALLER LA MACHINE

Conservez le carton et les matériaux d'emballage. Il est possible que vous deviez ramener la machine au revendeur ou l'envoyer pour la faire réparer. Si vous ne l'emballez pas correctement ou si vous n'utilisez pas les matériaux d'emballage corrects, la machine pourrait être endommagée. Suivez le schéma ci-dessous pour déballer et remballer la machine.



IMPORTANT

Ces matériaux d'emballage sont conçus pour éviter que la machine ne soit endommagée. Conservez-les au cas où vous auriez besoin de ramener cette machine au revendeur ou de l'envoyer pour la faire réparer.

VEUILLEZ LIRE CES INSTRUCTIONS AVANT D'UTILISER LA MACHINE.

Pour utiliser la machine en toute sécurité

1. Surveillez attentivement l'aiguille lorsque vous cousez. Ne touchez pas la molette, le levier compensateur du fil, l'aiguille ou d'autres pièces mobiles.
2. Mettez la machine hors tension et débranchez le cordon dans les cas suivants:
 - lorsque vous avez cessé d'utiliser la machine ;
 - lorsque vous remplacez ou retirez l'aiguille ou toute autre pièce ;
 - en cas de panne lorsque vous utilisez la machine ;
 - lorsque vous vérifiez ou nettoyez la machine ;
 - lorsque vous laissez la machine sans surveillance.
3. Branchez la machine directement à la prise murale. N'utilisez pas de rallonge.

Pour augmenter la durée de vie de votre machine

1. Ne rangez pas cette machine dans des endroits exposés directement à la lumière du soleil ou très humides. N'utilisez pas et ne rangez pas la machine près d'un chauffage, d'un fer à repasser, d'une lampe à halogène ou d'autres objets chauds.
2. N'utilisez que des savons ou détergents neutres pour nettoyer le boîtier. Le benzène, les solvants et les poudres à récurer peuvent endommager le boîtier et la machine et ne doivent donc jamais être utilisés.
3. Ne faites pas tomber et ne cognez jamais la machine.
4. Consultez toujours ce manuel pour remplacer ou fixer correctement les pieds-de-biche, l'aiguille ou toute autre pièce.

Pour réparer ou régler la machine

Si la machine tombe en panne ou nécessite des réglages, consultez tout d'abord le tableau de dépannage en annexe pour inspecter et régler la machine vous-même. Si le problème persiste, contactez votre revendeur local agréé.

Pour plus d'informations sur le produit et les mises à jour, visitez notre site Web à l'adresse www.HandiQuilter.com.

Le contenu de ce manuel et des spécifications de ce produit sont sujets à des modifications sans préavis.

Congratulations on your purchase of the HQ¹⁸ Avanté from Handi Quilter!

You haven't just purchased a quilting machine, you've joined the Handi Quilter family and we welcome you.

Handi Quilter is committed to innovation, reliability, customer service and education. Our machines are "Designed by a Quilter, for Quilters®" and we are committed to your quilting success.

With that in mind, we invite you to bookmark our website: www.HandiQuilter.com and invite you to visit to learn more about the art of quilting. We've posted tips, tricks and tutorials on subjects as diverse as "Oiling Your Machine" to "Loading a Quilt"

to "Making Perfect Feathers". We've got videos to watch, pdf files to print out for reference and forums for asking questions.

Set up your own Handi Quilter "Glog" (a combination blog and photo gallery) where you can share your own quilting story. Your new quilting friends are already there, waiting for you!

Remember, if you ever have questions, your local Rep can help you. If the Rep is not available, contact Handi Quilter directly at techsupport@HandiQuilter.com or by calling us at 1-877-697-8458, Monday-Friday, 8-5 MST.

Package Contents

Please keep your original box and packaging

Contents of Package

1. Bobbins (5 pieces, one in machine)
2. Needle (135x5) size 16 (pack of 10)
3. Needle (135x5) size 18 (pack of 10)
4. Bobbin Case
5. Thread Mast
6. Pin Oiler
7. Lint Brush
8. Screwdriver
9. Power Cord
10. 2.5 mm L Allen tool
11. 3 mm L Allen tool
12. 5 mm L Allen tool
13. Laser Stylus and Clamp
14. Laser Stylus Post
15. HQ Quilting Machines "Getting Started" DVD
16. User Manual
17. HQ¹⁸ Avante Quilting Machine

Optional Accessories

1. Micro Handles
2. Ruler Base
3. Horizontal Spool Pin
4. Groovy Board Stylus and Adaptor
5. HQ Pro-Stitcher

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Note: A Handi Quilter “Getting Started” DVD is included with your HQ¹⁸ Avanté machine. Review the DVD and these instructions to better understand how to set up and use the HQ¹⁸ Avanté.

Safety Section

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Please note: Do not operate your HQ¹⁸ Avanté® quilting machine until you have completely read the information contained in this manual. Please keep all packaging and order information for warranty purposes.

1. The HQ¹⁸ Avanté is very heavy. Never attempt to lift it alone – always use two people when lifting.
2. Always unplug the HQ¹⁸ Avanté from the electrical outlet when performing any maintenance, changing the needle, removing thread locks, or when left unattended.
3. Keep fingers away from all moving parts. Use caution around the needle or sharp external components.
4. Change the needle often. Do not use bent or dull needles. “Every quilt deserves a new needle”.
5. Switch the power off when making any adjustments in the needle or bobbin area, such as threading the needle, installing the bobbin case, or when oiling or cleaning.
6. Never drop or insert foreign objects into any opening.
7. The HQ¹⁸ Avanté should only be used indoors away from moisture.
8. The HQ¹⁸ Avanté should not be stored or used in extreme temperatures.
9. Use the HQ¹⁸ Avanté only for its intended use as described in this manual.
10. Use only attachments recommended by the manufacturer.
11. To disconnect from the wall outlet, push the switch to the off position, then remove the plug from outlet pulling from the plug, not the cord. Never operate the HQ¹⁸ Avanté if the cord is damaged or not working correctly. If a mechanical or electrical problem is encountered, return the HQ¹⁸ Avanté to the nearest authorized service center or the manufacturer for examination, repair, electrical or mechanical adjustment.

12. It is not recommended that the HQ¹⁸ Avanté Quilting Machine be used with any machine quilting frame other than those recommended by Handi Quilter.

General Specifications

The HQ¹⁸ Avanté utilizes high-tech electronics and an innovative touch-pad user interface to offer greater functionality and ease of operation to home quilters than ever before conceived in the quilting industry. The HQ¹⁸ Avanté quilting machine is a high quality machine that incorporates very robust design features and is very easy to service.

Sewing Opening Dimensions:	(245 mm X 610 mm) 8.25" X 18"
Sewing Speed:	Manual Mode: Min 90spm, Max 1800spm Regulated Mode: Min 0spm, Max full speed
Stitches-Per-Inch:	4spi – 18spi
Needle System:	134 (135 X 7)
Needle Sizes, (recommended):	12/80 - 20/125
Hook System:	Rotary, Vertical, M-class bobbin
Bobbin Type:	Aluminum, Class M
Bobbin Case:	Type MF
Motor Type:	Brushless DC
Needle Positioning:	Up and down, walking stitch
Electrical Power:	90 – 264 VAC, 47-63Hz, 300W peak
LED Power Consumption:	8 W
Sew Foot Stroke/Lift:	5 mm
Needle Bar Stroke:	35.3 mm
Take-Up Stroke:	73 mm
Lubrication, main components:	Kluber Lube, permanent
Lubrication of hook:	Velocite 10, Texaco 22

Disclaimer

Handi Quilter and its Representatives are in no way legally responsible or liable for damage to the HQ¹⁸ Avanté when used improperly or not in accordance with the guidelines stated in this manual or when used on Machine Quilting Frames not recommended by Handi Quilter.

HQ¹⁸ Avanté Components

Front Side View

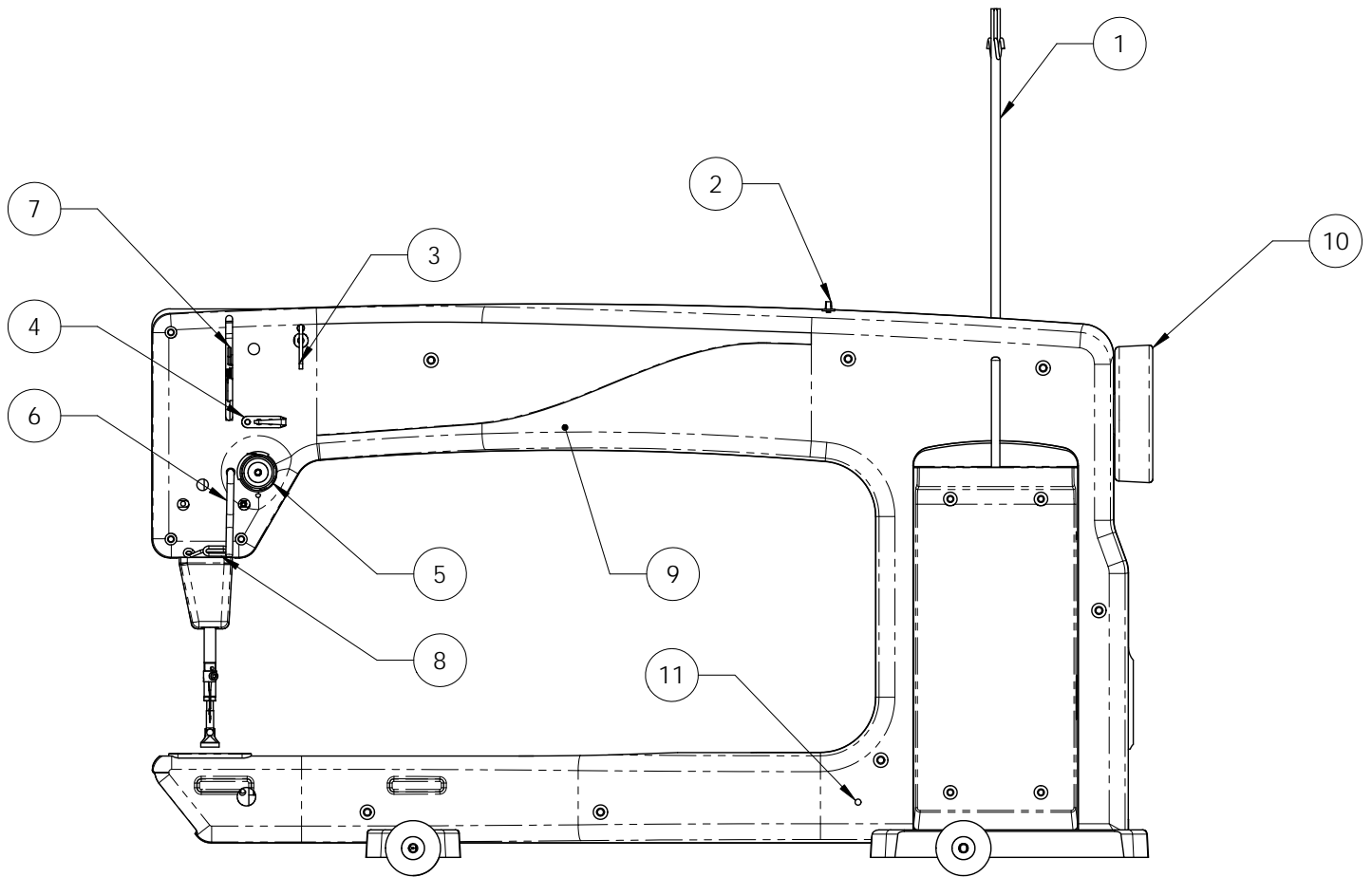


Figure 1

1. Thread Mast
2. Thread Guide A
3. Three Hole Thread Guide B
4. Thread Guide C
5. Tension Assembly
6. Stirrup Thread Guide E
7. Take-Up Lever
8. Thread Guide F
9. Front Casing/Frame
10. Handwheel
11. Side Laser Stylus Post Hole

Back Side View

- 12. Hopping Foot
- 13. Needle
- 14. Needle Bar Thread Guide
- 15. Needle Bar
- 16. Presser Bar
- 17. Needle Plate
- 18. Front Handlebar Connector
- 19. Ruler Base Position Guides
- 20. Front Wheel Base
- 21. Wheels (4)
- 22. Back Casing/Frame
- 23. Rear Wheel Base
- 24. Front Threaded Handle Holes
- 25. Top Laser Stylus Post Hole

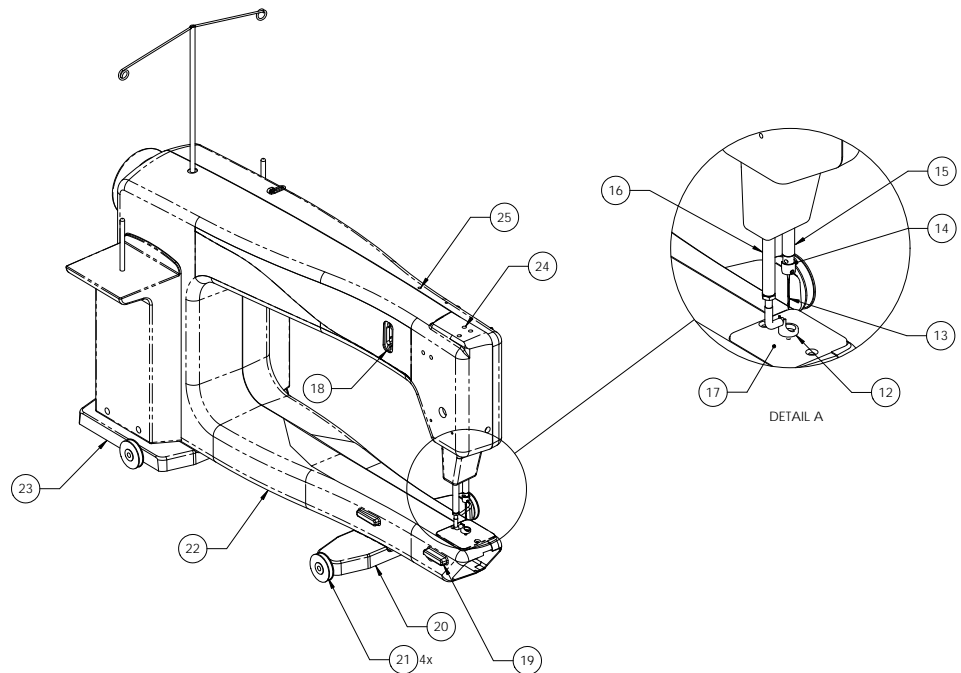


Figure 2

Rear and Front Views

- 26. Spool Pin 1
- 27. Electronic Control Pod (C-Pod)
- 28. Laser Stylus Power Connector
- 29. Serial Port for Stitch Regulator
- 30. Rear Handle Bar Serial Port
- 31. Rear Threaded Handle Holes
- 32. Accessory Power Outlet
- 33. Power Cord Connector
- 34. On/Off Switch
- 35. Power Pod (P-Pod)
- 36. Spool Pin 2
- 37. Bobbin Assembly

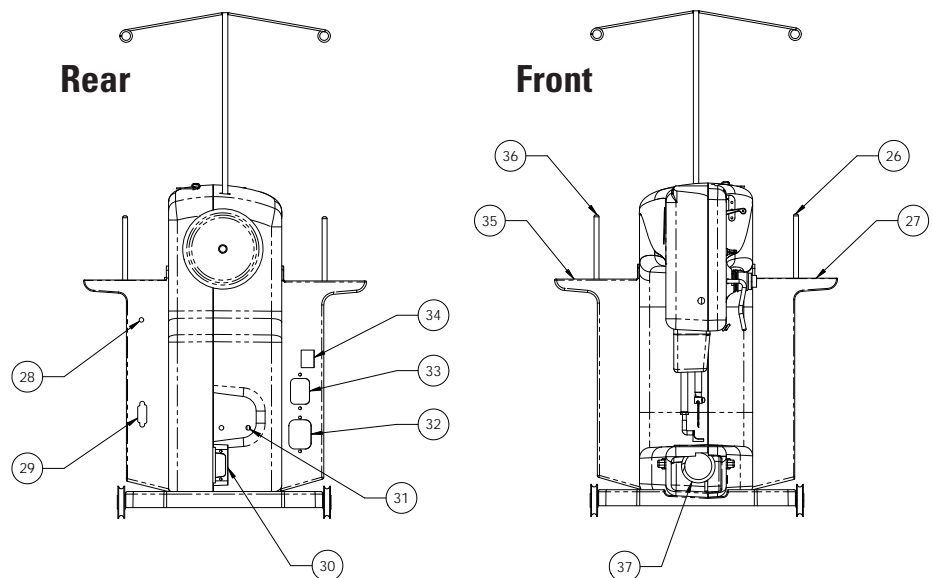


Figure 3

Installation (Studio Frame)

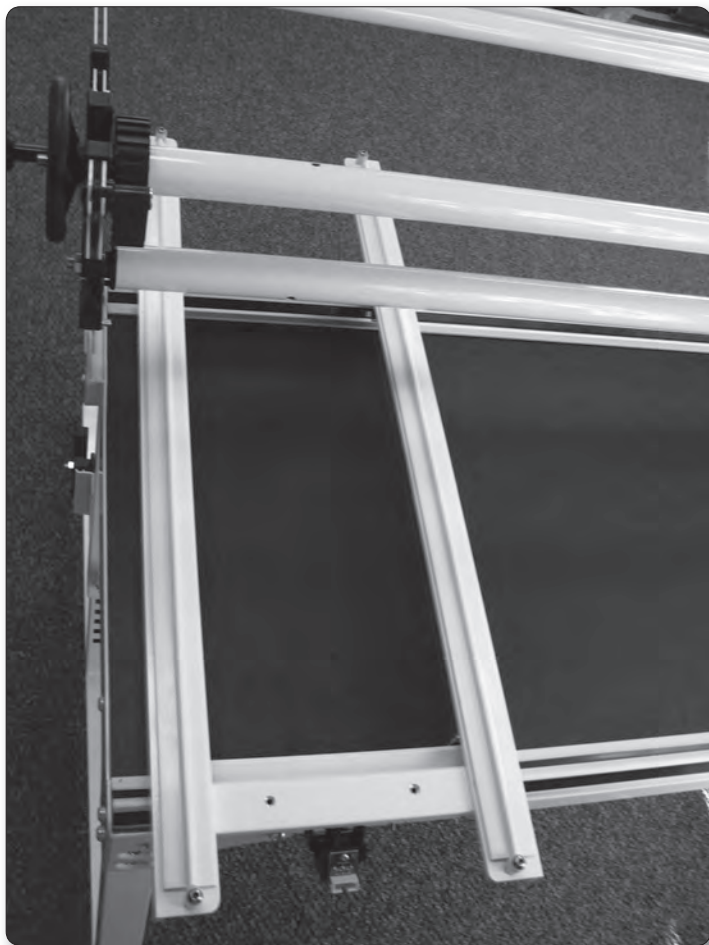


Figure 4

1. Place the carriage on the table rails, ensuring that the Carriage Encoder Assembly will be toward the back of the machine (the power cord side of the machine). The back side of the carriage has an encoder assembly attached to the rear cross-piece. Be sure to place the carriage on the frame correctly (see Figure 4).
2. Place the machine on the carriage.
3. Plug the Ribbon cable into the Carriage Encoder Assembly. The connector is keyed to assure correct alignment. Make sure the keyed portion of the cable connector aligns with the keyed portion of the encoder connector. Do not force.
4. The remaining length of cable comes back under the Power Pod from the Rear Encoder Assembly, behind the machine, and into the 9 pin serial port of the machine (see Figure 5).
5. REMEMBER that if the machine is to be removed from the carriage, the cable must be disconnected from the Carriage Encoder Assembly. The other two connectors on the cable should remain in place. Failure to unplug the cable when removing the machine from the carriage could result in damage to the cable, encoders, and carriage.

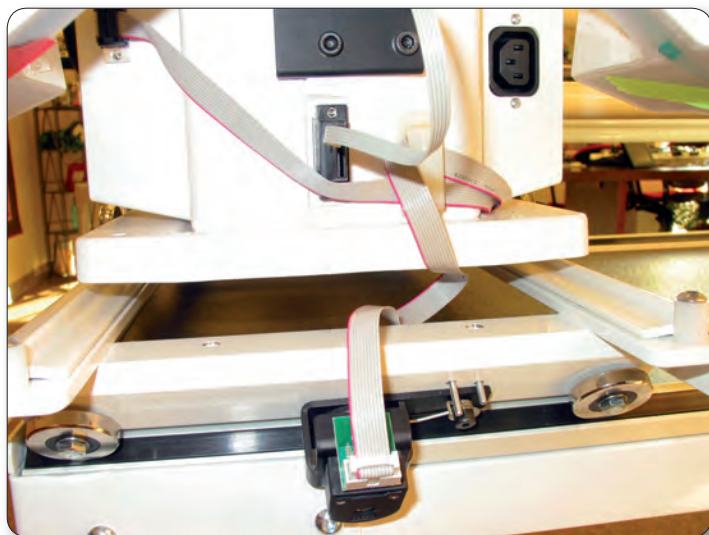


Figure 5

Installation (Portable Professional Frame) used with HQ Adjustable table or HQ QuilTable

1. Follow the instructions as directed for the Studio Frame, with the exception of the carriage encoder orientation. On the Portable Professional Frame, the carriage encoder is placed at the front of the frame (closest to the needle of the machine).
2. The ribbon cable routes from the machine encoder under the arm of the machine and plugs into the carriage encoder at the front of the carriage.

Installing Front Handlebars

Caution: Unplug the HQ¹⁸ Avanté from the electrical outlet. All power to the machine must be turned off when installing the front handles. Failure to do so can result in damage to the machine.

Locate the three long bolts and the 5mm Hex wrench. To install the handlebar, line up the holes on top of the handles with the pre-drilled holes on top of the machine. Slide a single bolt into one of the holes until it stops. Hand-tighten the bolt enough to secure the handles to the top of the machine. Insert and hand-tighten the remaining two handlebar bolts.

Use the included 5 mm Hex wrench to securely fasten the handles to the front of the machine.

Once the bolts are in place, plug the 9-pin connector into the serial port located on the left-hand side of the machine (Figure 2, #18, page 6). Ensure the pins are lined up so they are not damaged when the plug is pushed in. Push the plug securely in place.

Note: After the handles have been completely installed and plugged in, test them by turning the HQ¹⁸ Avanté on/off switch to “on”. If nothing is displayed, check that the handlebar cable on the side of the machine is plugged in securely, that your machine is turned on, and that the power cord is plugged into the machine as well as a power source.

Installing the Power Cord



Figure 6

Installing Rear Handlebars

Check that the HQ¹⁸ Avanté is unplugged from the electrical outlet. All power to the machine must be turned off when installing the back handlebar. Failure to do so can result in damage to the machine.

The rear handle bar comes mounted with three screws to the “L” bracket. Line up the two holes in the “L” bracket with those on the rear of the machine. Slide the short bolts into holes until they stop. Hand tighten, and then use the 5mm wrench to securely fasten the handles to the back of the machine.

Once the two bolts are in place, plug the 9-pin connector into the serial port underneath the rear handles. Ensure the pins are lined up so they are not damaged when the plug is pushed in. Push the plug securely in place.

Insert the cord into top power connector on the rear of the machine. Plug the three-prong end into a power source (see Figure 6).

The lower power connector is for powering other attachments developed by Handi Quilter. (Not yet available)

Inserting (or changing) the Needle

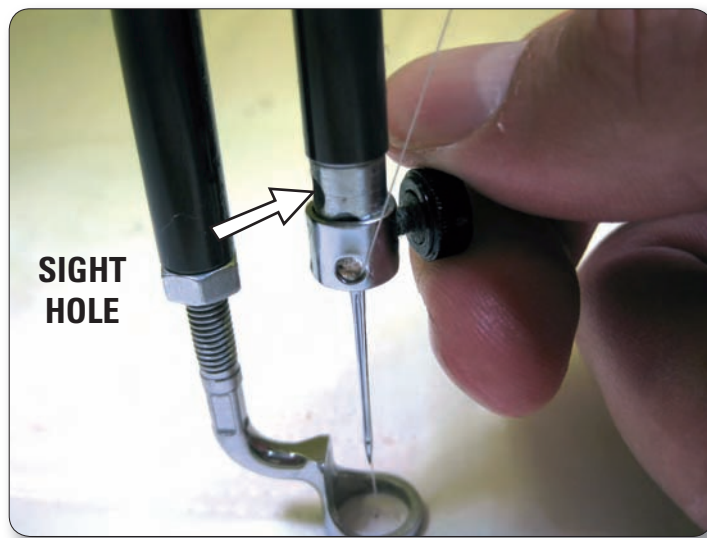


Figure 7

Important: Check the needle to confirm that it is fully inserted. The needle bar has a stop/sight hole above the needle bar clamp screw – make sure the needle is touching the top of the stop/sight hole (Figure 7). If it is not, the machine timing will be off and it may be possible for the needle to collide with internal parts causing damage not covered by warranty.

Adjusting the Hopping Foot

The foot is adjusted at the factory and should not be moved without consulting the manufacturer.

1. Check that all power is turned off.
2. Move the needle bar to the highest position by turning the hand wheel or by pressing the needle up/down control on the handles (prior to turning the power off).
3. Loosen the needle-bar clamp thumb screw (see Photo 3).
4. With the scarf (small ground out section/dip on the back side of the needle just above the needle eye) facing the rear hand wheel side of the machine, and the long groove down the front of the needle facing the bobbin case side (see Figure 7), push the needle all the way up into the needle bar – until it can go no farther. Look into the sight hole to verify that the butt of the needle reaches the top of the sight hole.
5. Carefully tighten the needle bar clamp screw. Over tightening the needle clamp screw will result in damaged threads stripping the hole. Stripped holes are not covered under warranty. Another side effect of damaged threads from over-tightening that the needle may be very tight when inserted up into the needle bar. To avoid over-tightening the screw, finger tighten only.

Note: Changing the needle is recommended for each new quilt loaded on the machine or any time the needle becomes bent, dull or burred.

Laser Stylus Safety and Use Guidelines



Figure 8

Theory of Operation

The laser stylus projects a straight laser beam visible as a dot on surfaces it hits. The laser dot is used as a guide or stylus, allowing you to stitch the same pattern onto a quilt that is being traced with the laser dot.

Laser Operation and Use

There is not a separate on/off switch for the laser. Power is supplied to the laser when it is plugged into the HQ¹⁸ Avanté. Be sure the laser is attached to the HQ¹⁸ Avanté and pointed downward toward the table before connecting it to the port. Never point it in a direction that would project the beam into someone's eyes. If the laser should cease to operate, check to ensure the plug is firmly seated into the HQ¹⁸ Avanté laser port.

Caution: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Laser Focus/Laser Image Size

This high quality laser is focusable. The laser is focused by simply grasping the threaded housing surrounding the lens and turning clockwise or counter-clockwise (see Figure 8). The laser image can be adjusted bigger or smaller. The direction of rotation needed is determined by the distance of the laser from the intended focal plane. Experiment by turning the threaded end to achieve your desired focal size.

Clamp Adjustment

The laser attaches to a mounting post. The post may be vertical or horizontal. The clamp is designed to articulate in any direction by rotating the clamp on the post and pivoting the laser up or down. To make an adjustment, simply loosen the black thumbscrews, position, and retighten.

Location of Laser Labels

The label is attached to the case of the laser and contains an arrow which indicates the direction the laser light will shine when energized. The label must remain in place on the laser. Removal of the label will void the laser's warranty.

HQ¹⁸ Avanté User Manual

Installing the Laser Stylus



Figure 9

For use at front of machine

Begin by locating the laser stylus post, the laser holder and the laser stylus.

To attach the laser stylus to the top of the machine:

1. Locate the threaded hole on top of the machine

Installing the Thread Mast



Figure 10

near the front (see Figure 2, #20, page 6). The laser stylus guide post comes with the washer and nut on it. Remove the nut and washer, replace the nut onto the post and then place the washer under the nut and onto the machine painted surface. The washer protects the painted surface when the nut is tightened. Tighten the post clockwise until it is securely in place. Use the nut to secure the post to the machine.

2. Be sure the laser stylus is inserted into the laser clamp.
3. Slide the laser clamp over the post to the desired height.
4. Plug the laser into the top port on the side of the front electronic control pod (see Figure 9).

For use at rear of machine

To attach the laser stylus to the side of the machine:

1. Place the nut on the laser stylus post with the washer under it and thread the laser post into the threaded hole (see Figure 1, #11, page 5), near the rear wheel base. Turn until securely in place. Lock in place with lock nut. The washer will be under the nut to protect the machine paint (see Figure 9). An unused spool pin can also be used to mount the laser.

Follow steps 2-4 above.

Locate the threaded hole on top of the machine near the rear by the hand wheel. The thread mast comes with the washer and nut on it. Remove the nut and washer, replace the nut onto the mast and then place the washer under the nut and onto the machine painted surface. The washer protects the painted surface when the nut is tightened. Tighten the mast clockwise until it is securely in place. Use the nut to secure the mast to the machine.

Note: The eyelets of the thread mast **MUST** be centered over the spool pins. This ensures that the cone of thread will not pull, turn or tilt, causing thread tension problems (see Figure 10).

Threading the Machine

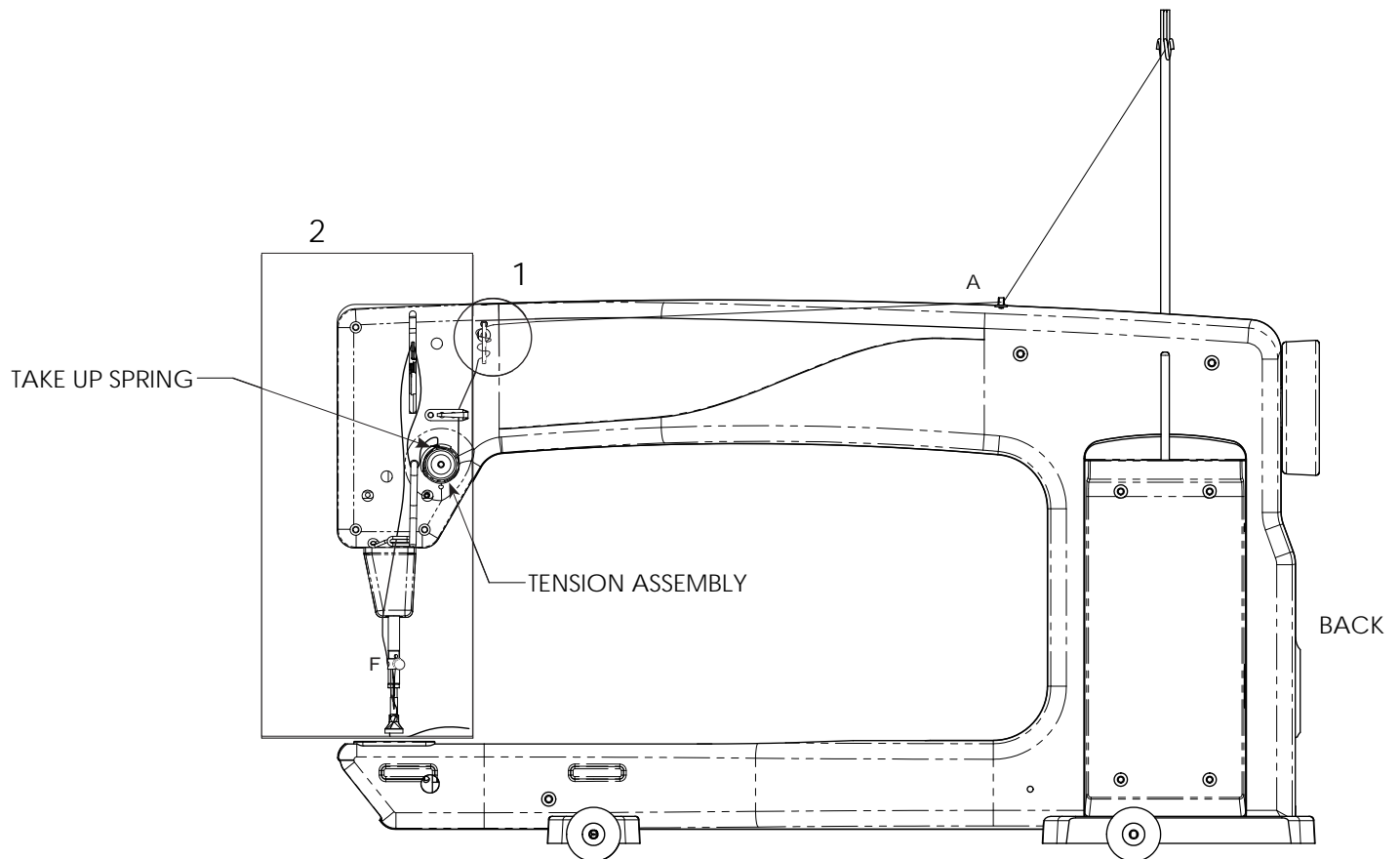


Figure 11

1. Place a cone or spool of thread on the spool pin. Pass the thread through the thread-mast eyelet from back to front, continuing to thread guide A. (Figure 11)

2. Continue to the three-hole thread guide B. Wrap all three holes from back to front, hand wheel side to needle side (see Figure 12).

Note: The purpose of the three-hole thread guide B is to prevent loops of thread coming off the thread cone from going into the top tension as a knot causing thread breakage and bad tension. For most threads on a cone, it is important to thread all three holes for consistent results and to make adjustments at the top tension assembly. An exception to this rule is when working with very delicate threads, such as holographic or threads that are prone to breakage, in which case you may try skipping one or two holes on thread guide B.

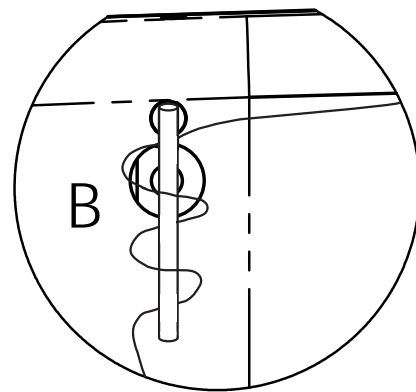
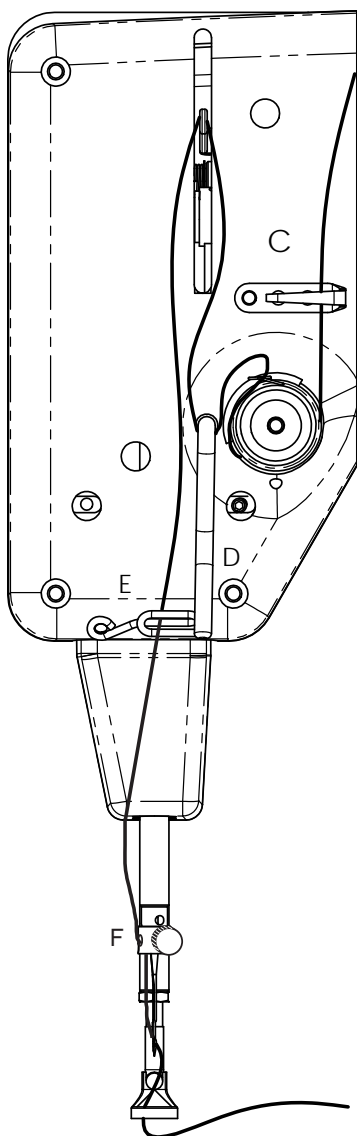


Figure 12

Note: See “HQ Quilting Machines Getting Started” DVD (included with your machine) for videos showing threading and other tips. These videos are also available on www.HandiQuilter.com.



DETAIL 2

Figure 13

3. Thread continues through thread guide C, and then down to the tension assembly (see Figure 13).

NOTE: It is important that the thread is “flossed” up between the two tension discs. If the thread is not firmly in place between the two tension discs, the thread rests on the outside of the tension discs (without tension) and looping on fabric or thread nests may occur.

4. Once the thread is in place, be sure that the thread catches on the take-up spring and then pull it down under the stirrup (thread guide D).

5. Bring the thread back up through the take-up lever from back to front, and then down through thread guide E. Pull the thread at the take up lever to ensure that it is properly flossed between the tension disks. If it is properly flossed in the tension disks you should feel some resistance as you pull the thread. If it is not, then the thread will pull freely.

6. Pull the thread down to the needle thread guide and thread through the hole (thread guide F).

7. Make sure the thread is following the groove down the front of the needle and threads from front to back. Be careful that the thread does not twist around the needle.

Important notes: The HQ¹⁸ Avanté quilting machine does not have a presser foot lever or top tension release like a home sewing machine. On a home sewing machine the top tension is released when the presser foot is raised, allowing the thread to come freely out of the machine. When a home machine is threaded, the presser foot is raised and the tension discs are released and open for the thread to easily fall between the tension discs. This is not the case with the HQ¹⁸ Avanté quilting machine where the top tension is always tight and the tension discs are never open. Therefore, the thread must be pulled up or “flossed” between the tension discs or it will stay outside the discs and float without tension, causing serious tension problems and/or thread nests. It is also possible to bend the needle while it is threaded if care is not taken while moving the machine around the quilt because the top tension is never released.

Optional Horizontal Spool Pin



Figure 14

1. An optional horizontal spool pin is available for metallic and specialty threads wound on a spool (not a cone).
2. The horizontal spool pin mounts on the laser stylus guide post on the top of the machine (see Figure 14).
3. When using threads on the Horizontal Spool Holder, skip thread guide A. Thread the top hole only of the three-hole thread guide B, back to front.
4. Continue threading the machine as described in steps 3 through 7 on page 13.

Bobbin and Thread Tension Adjustments

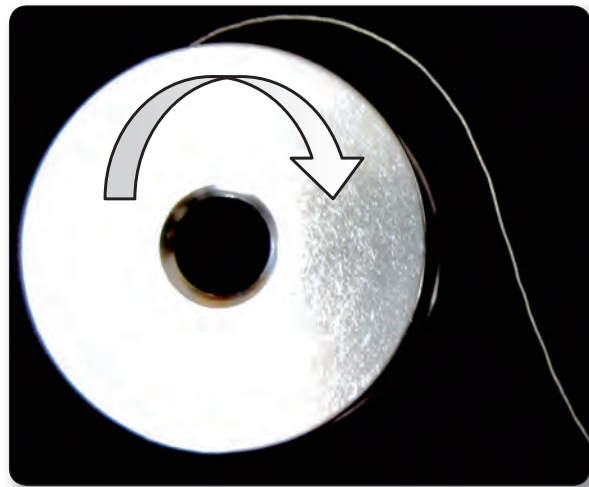


Figure 15

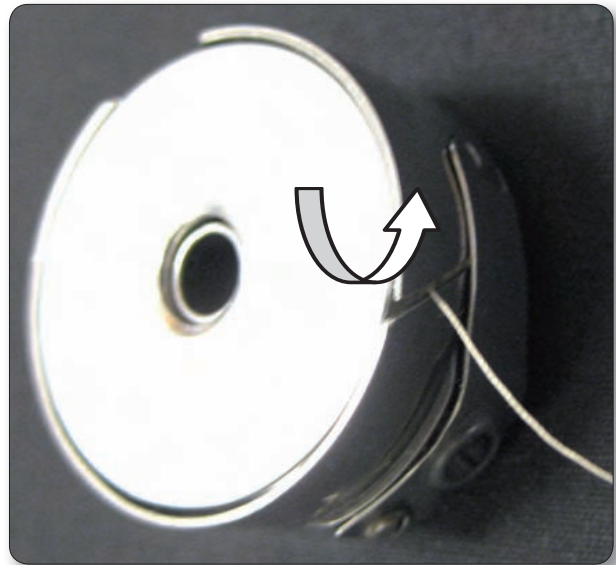


Figure 16

Inserting the Bobbin

Note: Turn off the power switch while inserting the bobbin case or anytime your hands are near the needle area.

1. Place the bobbin in the bobbin case so that the thread pulls off clockwise when viewing the open side (Figure xx).
2. Slide the thread through the slot (Figure 16) and under the tension spring leaving 5-6 inches of thread hanging loose (Figure 17, next page).

Note: See “HQ Quilting Machines Getting Started” DVD (included with your machine) for videos showing adjusting bobbin tension and other tips. These videos are also available on www.HandiQuilter.com.



Figure 17



Figure 18

3. Turn off the power switch while inserting the bobbin case or anytime the hands are near the needle area.
4. Do not lift the lever on bobbin case. When placing the machine fit the bobbin case onto the hook spindle in the machine. Rotate the casing until the open throat keys into the alignment notch in the middle of the hook. Push the casing in until it stops in place. Push inward until it clicks (see Figure 18).

Note: It is not suggested that the lever on the bobbin case be used for this installation. The latch lever should be used only for removal of the bobbin case.

Drawing the Bobbin Thread to the Top of the Quilt

1. After the machine is threaded, locate needle up/needle down button on the left handle.
2. While firmly holding the tail of the needle thread with the left hand, press the needle up/down button with right hand, bringing the needle back to the up position.
3. Pull the machine 3-4 inches away while holding the needle thread.
4. Bobbin thread will pull up and through to the top, allowing you to grasp the loop and pull it to the desired length.

Bobbin Tension

The bobbin tension is the foundation tension for the entire machine. To test that bobbin tension is correct, hold the bobbin case in the palm of your hand with the open end facing up. Wrap the thread around your index finger and while pulling up on the thread and gently wiggling the finger front to back (not up and down which is not consistent), the bobbin case should lift up on its side, but NOT lift out of your hand. If it will not lift up onto its side, it is too loose and if it lifts out of your hand, it is too tight. The small screw in the center of the tension spring is where the adjustment is made (see Figure 19). Turn clockwise to tighten and counter-clockwise to loosen the bobbin case tension. Check your bobbin tension every time a new bobbin is inserted.



Figure 19

Top Thread Tension Adjustment

Important: Top tension should be adjusted only after the bobbin case foundation tension adjustment is made.

Puckering, gathers and thread breakage occur when the top tension is too tight. Loops and thread nests occur on the back when the top thread tension is too loose. Tension may need to be adjusted depending on the fabric, thread or batting you are using on each project.

To adjust the top tension tighter, turn the tension knob clockwise. To loosen the tension, turn the tension knob counter-clockwise. Unlike the bobbin-case adjustment, which requires minute adjustments (like the tick of a clock), the top tension knob might need to be turned anywhere from 1/4 of a turn to 2-4 turns to achieve balanced tension.

Note: Before adjusting your top tension, remember to floss or pull the top thread up into the tension discs or it will float outside the discs providing little or no top tension. This could cause significant tension or nesting problems on the bottom side of the quilt.

Maintenance

Cleaning and Lubricating the Machine

Only use light sewing machine oil in the HQ¹⁸ Avanté. Internal oiling is not necessary on the HQ¹⁸ Avanté except when the machine is taken to a service technician for routine maintenance and cleaning. The hook assembly, however, needs regular lubricating. Failure to keep the hook assembly lubricated can cause severe damage to the machine.

To lubricate, turn off the machine. Remove bobbin and case before oiling. Clean around the hook assembly with a soft brush to remove lint. Put a very small drop of oil on the hook in the region where the bobbin basket assembly and the rotating hook meet (see Figure 20). The bobbin basket is the portion of the hook that the bobbin case snaps into. The bobbin basket remains stationary while the hook rotates



Figure 20

around the basket. The oil lubricates the region where these two components interlock. A drop of oil in the region indicated will work its way back into the interlocking area of the hook and bobbin basket.

The frequency of lubrication depends upon the usage of the machine. Lubricating is recommended before running the machine if it has not been used regularly, or every other bobbin change if used frequently. After oiling, always sew a scrap piece as oil may cling to thread. Over oiling can cause excess dripping from the bobbin assembly. Lack of lubricant may be noticed by a change in the sound of the machine and will affect stitch quality.

Cleaning the Touch Screen Display

Never use any chemicals to clean your display as this may adversely affect the touch screen response. Use a soft rag dampened with isopropyl alcohol and gently wipe the display to remove any marks.

Using the Touch Screen Displays on the Handlebars

Machine and Handlebar Menus

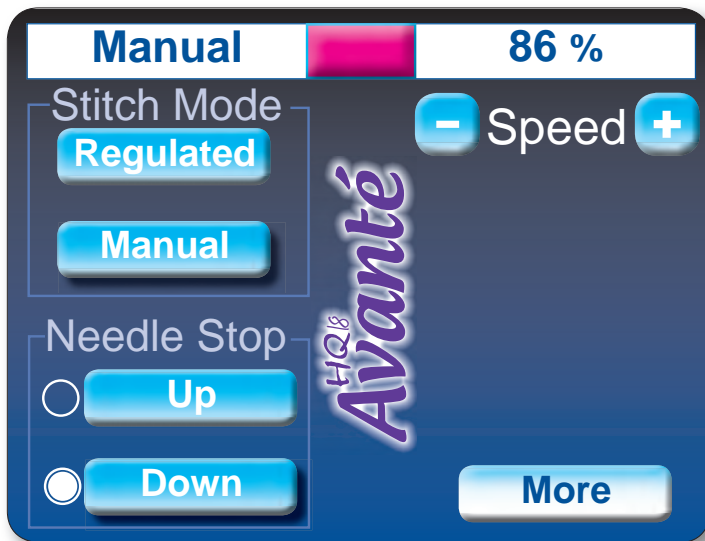


Figure 21

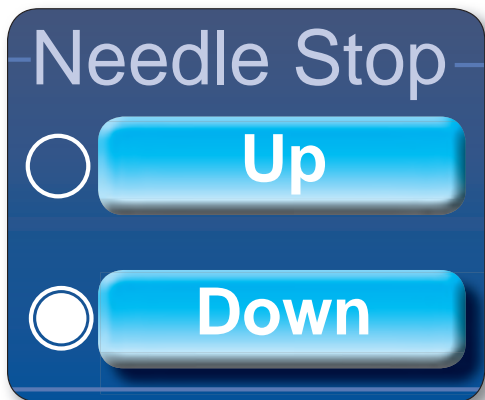


Figure 22

Note: Review the Handi Quilter “Welcome” DVD for interactive instruction on the HQ 18 Avanté menu functions.

The HQ¹⁸ Avanté has touch-screen displays on the front and rear handlebars. Settings may be changed at either of these locations.

Main Screen

Manual Mode Screen

Button Functions:

Pressing the “Regulated” button while in the Manual Mode Screen will toggle to the Regulated Mode Screen. The current stitching mode is displayed at the top left corner of the screen. Different options are available depending upon which mode the system is in. (Figure 21)

Needle Stop

When in “Needle Up” mode (indicated by a white circle), the needle ends in the “Up” position upon pressing the “Stop” button on the handles. This button does not move the needle, but simply determines the final needle position after the machine has been stopped. (Figure 22)

When in “Needle Down” mode (the radio button is white when activated), the needle ends in the “Down” position upon pressing the “Stop” button on the handles. Again, this button does not move the needle, but sets the final resting position of the needle after “Stop” is pressed.

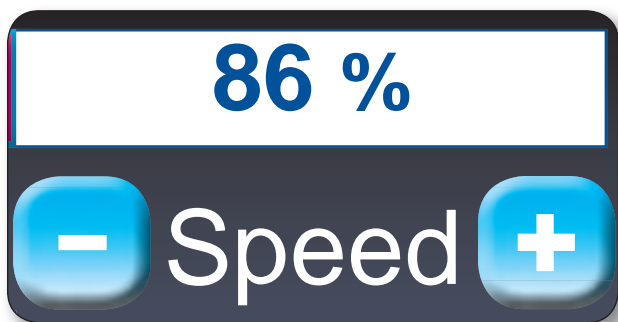


Figure 23



Figure 24



Figure 25

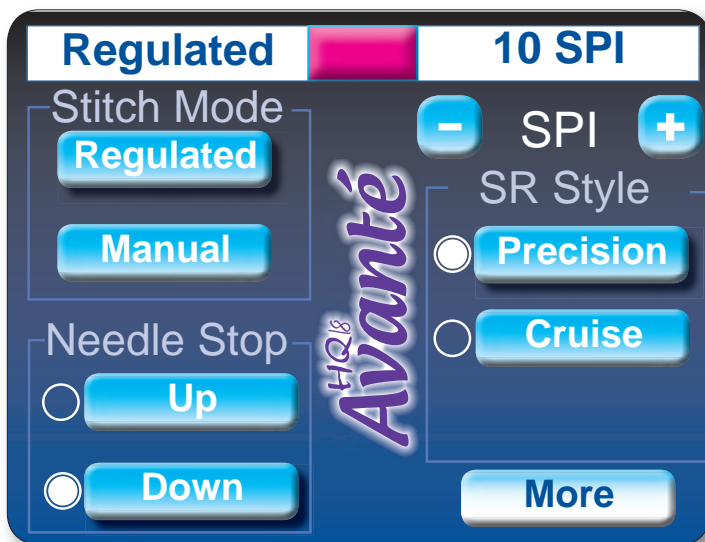


Figure 26



Figure 27

Speed

Pressing the Speed "+" will increase the manual mode motor speed and pressing the Speed "-" button will decrease the manual mode motor speed. This has the same effect as pressing the "+" and "-" buttons on the actual handles. The speed range is between 5% and 100%, or between 90 and 1800 stitches per minute (SPM). The percent speed is displayed in the white box at the top of the screen. (Figure 23)

More

The "More" button will access the "More" menu screen, which allows access to lighting options, sound options, diagnostics menus, system information and a calculator. (Figure 24)

On/Off Indicator

The box in the center of the top bar turns green when you press the "Start" button on the handles to indicate the needle is in motion. When you press "Stop," the box will turn red. (Figure 25)

Regulated Mode Screen Button Functions Stitches Per Inch (SPI)

Pressing the "+" or "-" buttons near the top right portion of the screen will increase or decrease the stitches per inch (SPI) setting. The setting is reflected in the white indicator box at the top right portion of the screen. This value can be adjusted between 4 and 18 stitches per inch. (Figure 26)

Stitch Regulation Style (SR)

The "SR Style" box in the lower left-hand corner of the screen indicates whether the machine is in "Precision" regulation mode or in "Cruise" regulation mode. (Figure 27 on next page.)

Precision

If "Precision" mode is selected, the HQ18 Avanté will not start stitching until you begin pushing the machine. (Figure 28 on next page.)

Cruise

If "Cruise" mode is selected, when you press "Start" on the handles the machine will immediately begin stitching at the percent speed indicated below the "Cruise" button. The "Cruise" speed is the minimum

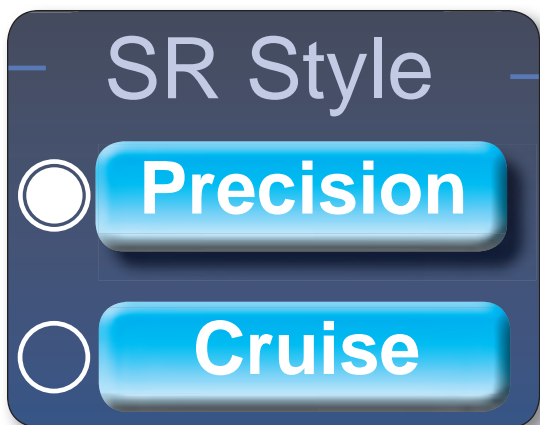


Figure 27

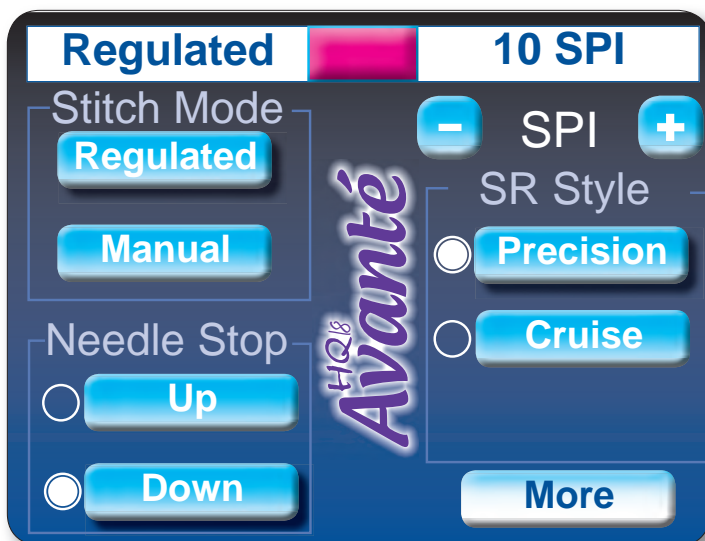


Figure 28

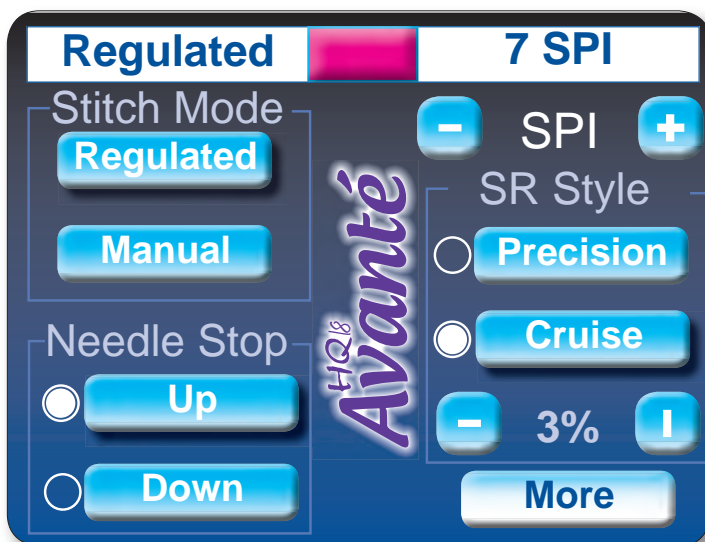


Figure 29

speed the machine will stitch, regardless of how slow you are pushing the machine. This means that when you slow down to a stop, the needle will continue stitching at the set cruise speed until you begin moving the machine faster than what the cruise speed is set to or you press the "Stop" button on the handles. The "Cruise" speed can be adjusted using the "+" and "-" buttons that appear below the "Cruise" button when "Cruise" mode is selected. "Cruise" speed can be adjusted between 3% and 50%. (Figure 29)

The start indicator box, which is the box at the top center of the screen, will change from red to green as soon as you press the "Start" button on the handles. If you are in "Precision" mode, the needle will not start moving until you start moving the machine, so this green indicator shows that the "Start" command was accepted and the machine is ready to begin stitching. In "Cruise" mode, the red box will turn to green and the needle will begin stitching immediately at the set "Cruise" speed.

On/Off Indicator

If the machine does not sense that it has been moved in any direction after it has been started, it will automatically stop regulation mode and the start indicator box will turn red. When in "Precision" mode, this happens when no movement of the machine has been detected for two minutes. A system message will appear on the screen to warn the user the machine has stopped. This box is cleared by pressing the "OK" button. In "Cruise" mode, the machine will stop stitching after about three seconds if no movement has occurred.

For information on other buttons on this screen, please refer back to the Manual Mode screen.

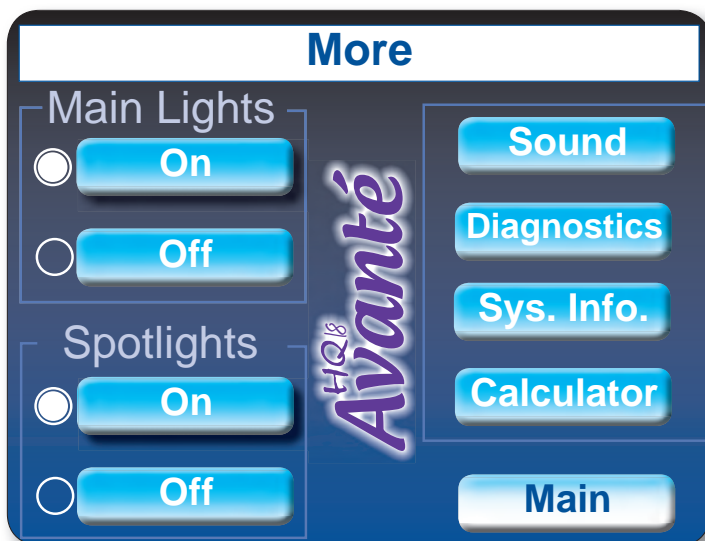


Figure 30

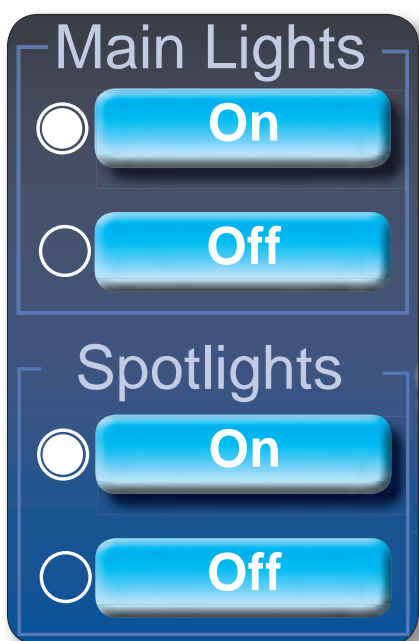


Figure 31



Figure 32



Figure 33



Figure 34



Figure 35



Figure 36

LED Lights

The LED modules in the handlebar are grouped in two sets. One set consists of the three LED modules on each side of the machine, closest to the machine body. These six (total) LED modules are the “Spotlights”. (Figure 30) The remaining modules are the “Main Lights”. There are two boxes on the “More” screen with buttons to turn the “Main Lights” and “Spotlights” on and off as individual groups. This grouping is designed to allow the convenient control of special modules, such as ultraviolet (UV) LEDs, (available as an option) in the Spotlight positions while regular white LED modules are installed in the remaining positions. The white dot next to the buttons indicate whether the lights are on or off. (Figure 31)

Sound

The “Sound” button activates the screen where the alarm volume can be adjusted. The over-speed alarm can also be turned on and off from this screen. (Figure 32)

Diagnostics

The “Diagnostics” button activates the screen where machine diagnostic functions can be performed. Diagnostic functions are generally only used when working with Handi Quilter Technical Support to resolve issues. (Figure 33)

System Information

The “Sys. Info.” Button provides access to machine information. This includes the machine Serial Number, the hardware and firmware version numbers and the Stitch Counters. (Figure 34)

Calculator

An on-screen calculator may be accessed from the “More” screen. (Figure 35)

Main

Press the “Main” button to return to the “Regulated” or “Manual” menu screen. (Figure 36)

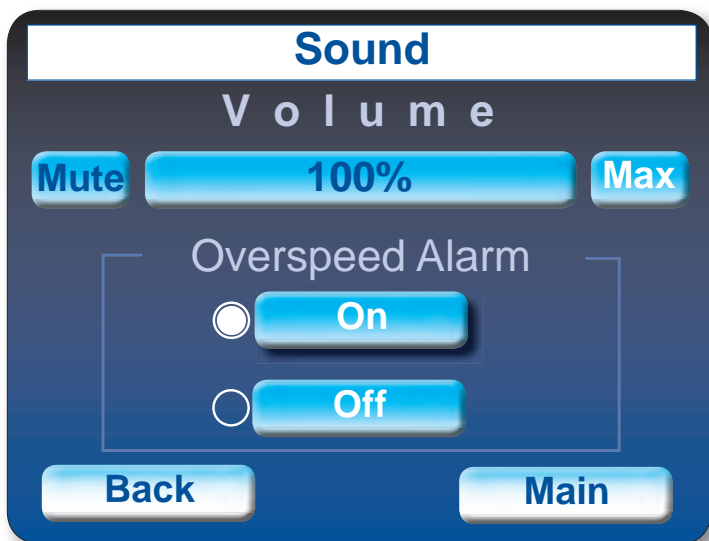


Figure 37

Sound Screen

The “Volume” portion of this screen has two buttons and a sliding control. Pressing on the “Mute” button turns the alarm volume off. Pressing the “Max” button turns the volume to its loudest level. Pressing the sliding control in any position sets the volume to the level indicated in that control. Pressing and moving back and forth across the sliding control will change the volume up as it is moved left to right and down as it is moved from right . The Over-Speed Alarm box allows the user to turn the alarm on and off. (Figure 37)

Press the “Main” button to return to the “Regulated” or “Manual” menu screen or the “Back” button to return to the “More” menu screen.

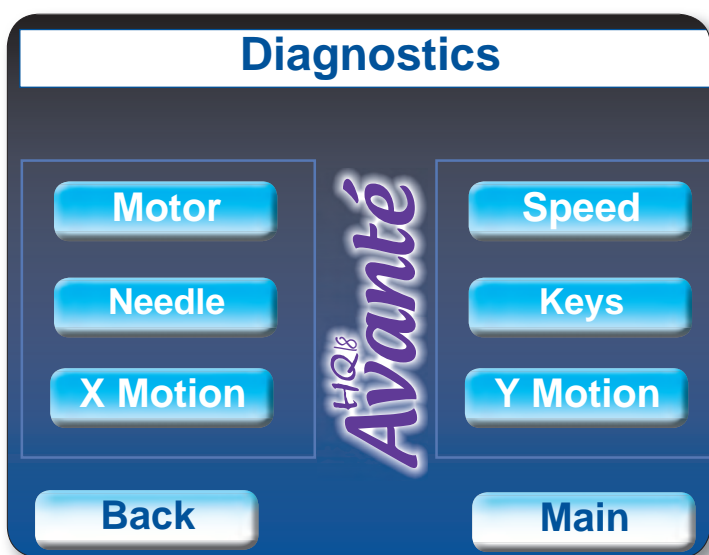


Figure 38

Diagnostics Screen

Six different diagnostics tests can be performed on the machine. These functions test the motion encoders, the motor control functions, the key switches and the internal position sensors. (Figure 38)

Press the “Main” button to return to the “Regulated” or “Manual” menu screen or the “Back” button to return to the “More” menu screen.

Diagnostics Tests

Motor Sensor Test

The “Motor” Sensor test can help you determine whether they may be a problem with the HQ¹⁸ Avanté motor. Slowly rotating the handwheel should result in a pulsing audible “beep.” If you get a constant solid “beep” or no “beep” at all, this indicates a failed test and the machine should be inspected by a qualified Handi Quilter repair technician. (Figure 39)

Press the “Main” button to return to the “Regulated” or “Manual” menu screen or the “Back” button to return to the “More” menu screen.

Needle Sensor Test

The Needle Sensor test will indicate whether the needle position sensor is functioning properly. Rotating the handwheel should result in a “beep” for half of a stitch cycle followed by no “beep” for the other half. (Figure 40 on next page.)



Figure 39



Figure 40

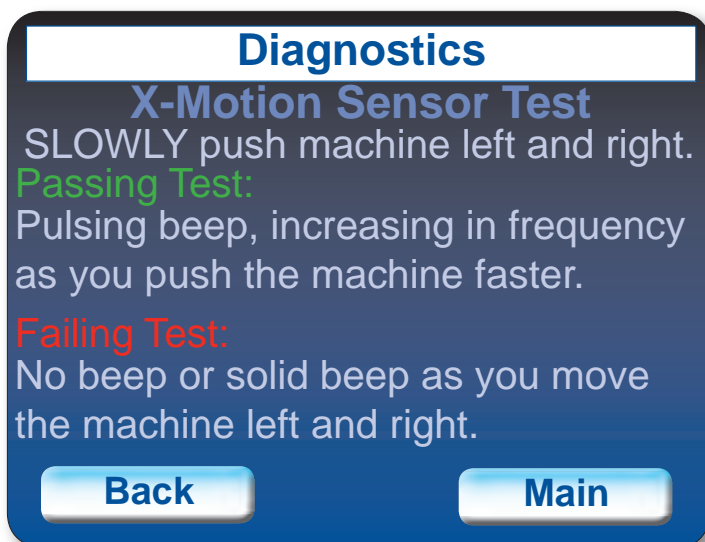


Figure 41

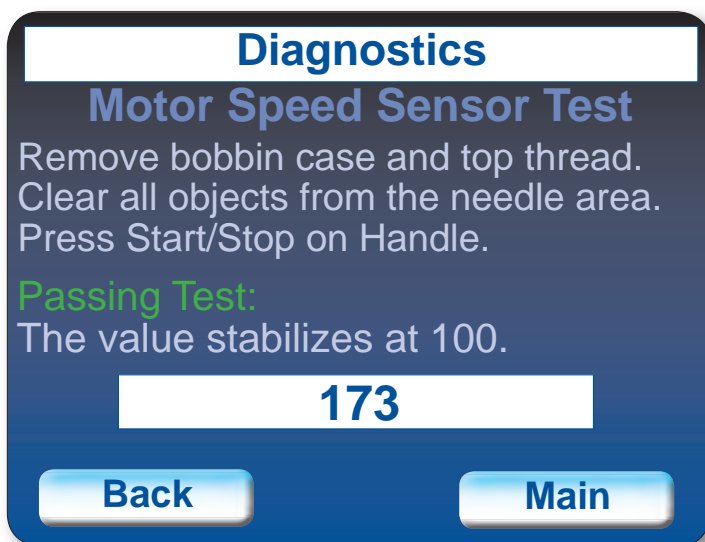


Figure 42

If you hear a constant beep or no beep at all for a full 360° rotation of the handwheel, this indicates a failed test and the machine should be inspected by a qualified Handi Quilter repair technician.

Press the “Main” button to return to the “Regulated” or “Manual” menu screen or the “Back” button to return to the “More” menu screen.

X Motion Sensor Test

Use the X Motion Sensor test to verify functionality of the “X” stitch regulator encoder (the encoder mounted at the rear of the carriage). As you slowly move the carriage left and right you should hear a pulsing “beep” that pulses faster as you move faster. A solid beep, no beep, or periods of irregular beeping (with constant motion) indicate a problem with the “X” encoder. The most likely cause of a problem is a stitch regulator wheel that is not making consistent contact with the track. Check the spring tension on the sensor assembly on the carriage to assure that it will easily return to the fully extended position after being compressed. Also assure that the track is straight with no dips or indentations and that it is clean and free of contamination. Other causes are an unplugged or damaged cable or possibly an issue with the main control board. (Figure 41)

Press the “Main” button to return to the “Regulated” or “Manual” menu screen or the “Back” button to return to the “More” menu screen.

Motor Speed Sensor Test

The “Speed” Sensor test can help you determine whether or not there is a problem with the HQ¹⁸ Avanté speed sensor. Before performing this test, remove the bobbin case and the top thread. Press the “Start” button and the machine will begin slowly rotating. The white box will show a number that should stabilize at 100 if the sensor is functioning properly. Pressing “Start” again will stop the machine. (Figure 42)

Press the “Main” button to return to the “Regulated” or “Manual” menu screen or the “Back” button to return to the “More” menu screen.

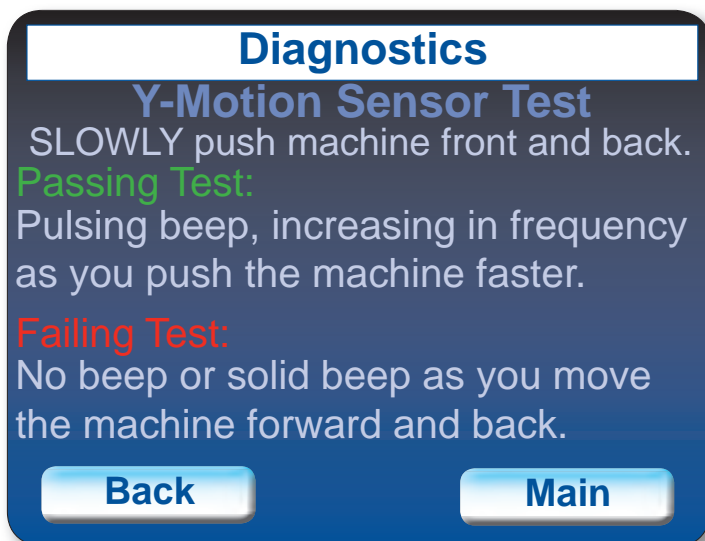


Figure 43

Y Motion Sensor Test

Use the Y Motion Sensor test to verify functionality of the “Y” stitch regulator encoder (the encoder mounted to the rear power pod side machine wheel). As you slowly move the carriage toward and away from you, you should hear a pulsing “beep” that pulses faster as you move faster. A solid beep, no beep, or periods of irregular beeping (with constant motion) indicate a problem with the “Y” encoder.

The most likely cause of a problem is a stitch regulator wheel that is not making consistent contact with the track. Check the spring tension on the sensor assembly on the machine to assure that it will easily return to the fully extended (down) position after being compressed. Also assure that the track is straight with no dips or indentations and that it is clean and free of contamination. Other causes are an unplugged or damaged cable or possibly an issue with the main control board. (Figure 43)

Press the “Main” button to return to the “Regulated” or “Manual” menu screen or the “Back” button to return to the “More” menu screen.

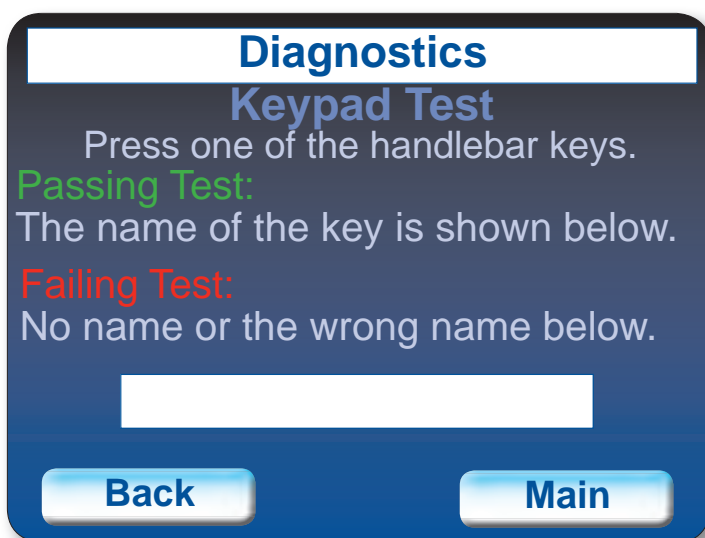


Figure 44

Keypad Test

The Keypad test allows the user to press any of the four keys on the front or back handles to verify that the HQ¹⁸ Avanté is reading the buttons as they are pressed. When a key is pressed the name of the key that is pressed will appear in the white box. When it is released, the name will disappear. Perform this test on the rear display for the rear keys, and the front display for the front keys. (Figure 44)

Press the “Main” button to return to the “Regulated” or “Manual” menu screen or the “Back” button to return to the “More” menu screen.

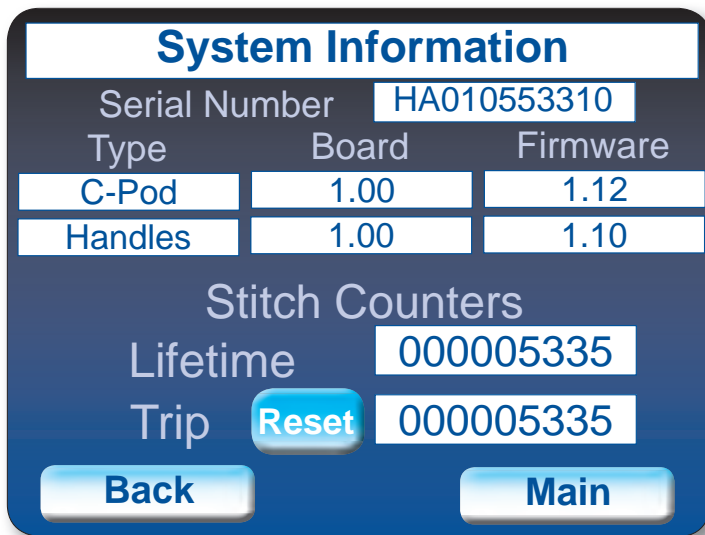


Figure 45

System Information

The serial number of the machine is displayed at the top of the System Information screen. This number matches the one found on the label at the back of the machine under the rear handlebar.

Information contained in the white boxes below the serial number identifies the electronics board revision numbers as well as the firmware revision numbers of the HQ¹⁸ Avanté and its handlebars. The Lifetime and Trip (or project) stitch counters count the number of stitches the machine is performed. The Lifetime count is the total number of stitches made since the machine was built. The Trip Counter can be reset to keep track of the number of stitches made during a given project. To reset this counter, press the blue “Reset” button just to the left of the “Trip” box. The Lifetime counter cannot be reset and should be used as an indicator to determine when general machine maintenance should be performed by an authorized Handi Quilter Representative. (Figure 45)

Press the “Main” button to return to the “Regulated” or “Manual” menu screen or the “Back” button to return to the “More” menu screen.

Calculator

A basic calculator is provided. This function has been found to be especially convenient for customers with machines that have the HQ Pro-Stitcher®. (Figure 46)

Press the “Main” button to return to the “Regulated” or “Manual” menu screen or the “Back” button to return to the “More” menu screen.

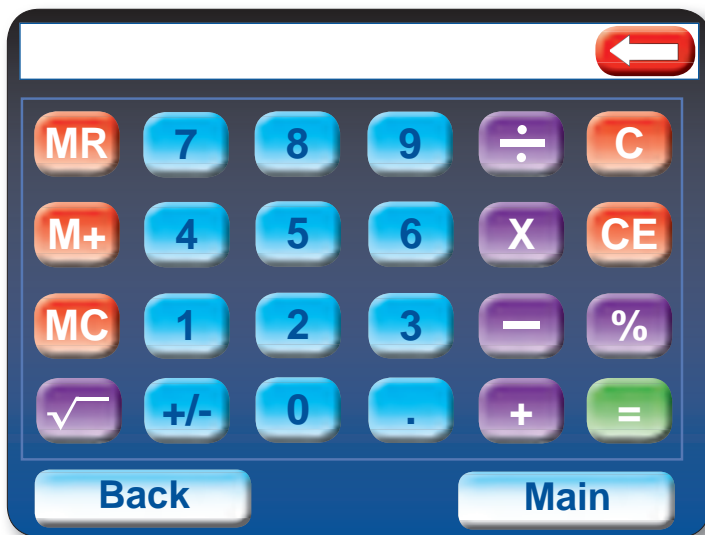


Figure 46

HQ STITCH REGULATOR OPERATION

Choose from Two Types of Stitch Regulation: Cruise or Precision

In regulation mode the status box at the top left of the screen should say “Regulated”. If it says “Manual”, simply press the “Regulated” button on the touch screen to switch from “Manual” mode to “Regulated” mode.

IMPORTANT NOTES ABOUT TURNING STITCH-REGULATION ON OR OFF

You can stop the machine at any time by pushing either the “Start/Stop” or the “Needle Up/Down” key on the handles. In *Cruise Regulation* mode, if you don’t move the machine after 3 or 4 seconds, the machine will stop and position the needle. In *Precision Regulation* mode, the needle pauses when you stop moving the machine and will begin stitching again when you start moving the machine. Press the “Start/Stop” (or “Needle Up/Down”) key in Precision Regulation mode to stop the needle completely and cause the needle to position itself in the Needle Up or Down position.

Cruise Regulation Mode

When in Cruise Regulation mode, the start indicator box in the top center of the “Regulated” screen is red. When you press the “Start/Stop” key to start the machine, the indicator will turn green AND the needle will begin moving up and down.

The minimum speed of the needle is dependent upon the setting you choose (from 3% to 50%). HandiQuilter recommends beginning with a setting of 3%.

When to Use Cruise Regulation Mode

The constant minimum stitching speed featured in the Cruise Regulation mode is used for precise placement of stitching when backtracking (such as along the tops of feathers) or when creating sharp points (such as the point of a star or the bottom of a heart).

Precision Regulation Mode

When in Precision Regulation mode, the start indicator box in the top center of the “Regulated” screen is red. When you press the “Start/Stop” key to start the machine, the indicator will turn green. As you start moving the machine, it will begin stitching. When

you stop moving the machine, the needle pauses (sometimes in mid-stroke.)

When you press the “Start/Stop” (or “Needle Up/Down”) key to stop the machine, the indicator will turn red, showing that the needle will not move when you move the machine.

Always make sure the indicator is RED when you are in Precision Regulation mode prior to working with your hands near the needle (changing the needle, replacing the bobbin, etc.) to avoid unwanted stitching in your quilt or your hands!

If you leave the HQ¹⁸ Avanté in Precision Regulation mode with the start indicator box green and do not move the machine for two minutes, the system will “time-out” and a message box will appear. This indicates that the system has stopped and you will need to press the “Start” button again to resume quilting.

When to Use Precision Regulation Mode

Precision Regulation mode is especially useful for ruler work. Stitch along the length of the ruler for the span of your hand and stop. When you stop moving the machine, the needle pauses. Do not turn off the machine. Move the ruler and commence quilting. The Precision Regulation helps you avoid “bobbles” and uneven stitches.

Quilting Speed While in Stitch-Regulation Mode

It is important not to move the machine too fast, since this will result in an **OVERSPEED CONDITION**, during which, the machine cannot maintain stitch regulation until you slow your motions to an appropriate speed. The Overspeed Alarm will alert you to this condition, giving you the signal to slow down. Stitch regulation is not a license to move the machine as fast as you can. Its purpose is to maintain even stitches while quilting at an appropriate speed.

You can return to manual mode by pushing the “Manual” button below the “Regulated” button on the touch screen display.

Getting Started Quilting

Thread Requirements

Threads have a tendency to dry rot over a period of time. Be sure to choose high quality threads for your valuable heirloom quilts. Most machine quilting threads on the market today are acceptable.

Needle Requirements

For general quilting, a size 16/100 needle will accommodate most threads and fabrics.

Heavier threads, such as top stitch and some decorative threads, require a larger needle such as 18/110 or 20/120. Lofty batts and heavier fabrics such as denim, canvas or densely woven fabric may also require a larger needle.

To Prepare for Quilting

With any quilting machine, it is important to understand the basics of free motion quilting. The HQ¹⁸ Avanté Quilting Machine does not have feed dogs like domestic machines; therefore, the fabric does not automatically feed under the hopping foot. The operator should synchronize the speed as well as the movement of the machine to get an even, consistent stitch.

In order to become comfortable with the free motion of the HQ¹⁸ Avanté, users can begin with a few “beginner” techniques.

In Manual Mode: Set the machine at a medium speed and begin moving it until you become accustomed to the resistance. By moving the machine faster, the stitches begin to elongate. The stitch speed can either be increased or the machine can be moved slower to get the stitches back to the desired length. By moving the machine slower, the stitches get shorter and can build up on top of each other, breaking the thread or making it extremely difficult to unpick. The stitch speed can be decreased, while maintaining a constant motion with the machine to bring the stitches back to the desired length.

In Stitch Regulator Mode: Set the machine to desired stitch length. Begin moving the machine to become accustomed to the resistance. The machine motor will slow down or speed up to maintain a

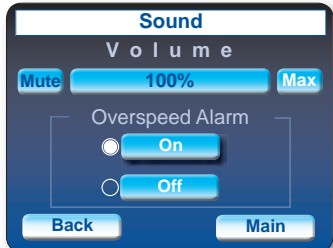
consistent stitch length according to how quickly or slowly you move the machine. Moving the machine too fast or in radical or jerky movements will defeat the stitch regulator function.

In MANUAL or CRUISE REGULATION mode, when pressing the “Start/Stop” key on the front or rear handle bars to begin quilting make certain to begin moving the machine immediately. If the needle stitches in one place too long, the stitches build up on top of each other causing a build-up of thread or thread breakage. When bringing the machine to a complete stop press the “Start/Stop” key at the same moment the machine stops moving. If the machine is still moving when the “Start/Stop” key is pressed, it can cause deflection in the needle, possibly causing it to bend or break.

In PRECISION REGULATION mode, the needle will not begin moving when you press the “Start/Stop” key until you begin moving the machine.

When quilting, relax your hands and maintain a light touch on the handlebars. Gripping the handlebars too tightly may cause body tension resulting in poor quilting quality. The HQ¹⁸ Avanté, combined with the Avanté Frame system will give you a smooth even glide.

Troubleshooting

Stitches are Skipping	Corrective Measure
<ul style="list-style-type: none"> ▶ The needle is damaged, dull, bent, or installed improperly ▶ Incorrect needle size ▶ The needle has not been positioned properly ▶ Fabric is too tight on the frame ▶ Thread tension too tight ▶ Improper threading 	<ul style="list-style-type: none"> ▶ Replace the needle often, normally once or twice per day for continuous quilting or at least once per quilt. Use HQ 18 Avanté™ recommended needles. ▶ Always change the needle if the needle has struck any hard object such as a straight pin, etc. The tip of the needle can become damaged or burred, resulting in fabric damage as well as skipped stitches, thread breakage or shredding. ▶ Always change the needle if it has been hit, bumped or pulled off center while maneuvering the machine about the quilt. A slightly bent needle can be a major cause of skipped stitches. ▶ Check for the proper size of needle for the work and thread being applied to the quilting operation. Some battings and fabrics used in quilting may constrict or impede the thread passing through the front groove of the needle. This diminishes the loop lift required for stitch formation. Typically, a larger needle will solve the problem; however, it has been found that certain smaller sizes of needles as well as the use of ball pointed needles solve some specific problems. ▶ Position the needle properly to the needle bar. Inspect the position of the needle to make sure the needle is at the 6 o'clock position (see Photo 16)—If you stand directly in front of the needle (facing the bobbin case side of the machine), you will see the entire needle eye directly facing you. This is 6 o'clock position. Make sure (1) the needle is installed all the way into the needle bar to the needle stop hole in the needle bar, (2) the long groove in the needle is toward the front (bobbin case side), and (3) the scarf/scooped out part of the needle is toward the handwheel. The needle can sometimes be rotated to 5 o'clock (slightly right) or 7 o'clock (slightly left) in order to adjust for a more positive thread loop pickup by the hook point. ▶ Loosen pole tension on the frame. Fabric that is rolled too tight causes the fibers to separate. This reduces the needle friction on the thread resulting in a smaller thread loop. ▶ Loosen top tension. Re-check top and bobbin tension (see pages 12-13). ▶ Inspect that the thread take-up lever, thread stirrup or tension spring are all threaded correctly.
	
The Needle Breaks	Corrective Measure
<ul style="list-style-type: none"> ▶ The needle is bent or not installed properly ▶ The needle hits the throat plate 	<ul style="list-style-type: none"> ▶ Replace or correctly change the needle. Make sure that the needle is pushed up into the needle bar clamp until it can go no farther (visually check that it is up to the top of the stop/sight hole above the needle bar clamp screw). Failure to do so can cause damage in the bobbin area and throat plate. ▶ Correctly position the needle, throat plate or hopping foot. Replace with a new needle.
Stitches are Puckered	Corrective Measure
<ul style="list-style-type: none"> ▶ The tension is not balanced ▶ Needle too large for material 	<ul style="list-style-type: none"> ▶ Balance the tension of the needle thread after ensuring the bobbin tension is adjusted correctly (see page 12). ▶ Replace the needle with a size better suited for the fabric.
Stitch Quality is Poor	Corrective Measure
<ul style="list-style-type: none"> ▶ The tension is not balanced ▶ Bobbin case is damaged, corroded, dirty, etc ▶ Moving the machine too fast for needle speed selected ▶ Encoder wheels do not consistently touch the track 	<ul style="list-style-type: none"> ▶ Adjust the tension of the needle thread after ensuring the bobbin tension is adjusted correctly (see page 12). ▶ Since thread slides over the surface of the bobbin case at a high speed, make sure the case is free of any lint or foreign matter that could impede thread passage through the machine. ▶ Synchronize machine movement and needle speed to get roughly 8-10 stitches per inch. Elongated stitches are an indication of moving the machine too fast for the current speed. ▶ Clean the track and the rubber wheel on each encoder. Even a tiny speck on the wheel can cause problems with regulation. Check the spring tension on the encoder assemblies. If the retaining nut is even slightly too tight it can prevent the wheel from properly pressing against the track.

Troubleshooting

Tension is Poor	Corrective Measure
<ul style="list-style-type: none"> ▶ “Fuzz” caught under the tension spring in the bobbin ▶ Poorly wound bobbin. 	<ul style="list-style-type: none"> ▶ If using short staple threads, inexpensive or industrial threads or coated threads, lint and other material will build up under the tension leaf spring and begin to lift the spring, reducing the spring’s ability to compress against the thread. By inserting a needle under the spring and clearing out the lint, the bobbin tension will return fairly close to its preset tension. ▶ If the bobbin is wound too tight or too loose, this can lead to poor and inconsistent tension. Make sure when the bobbin is wound that the thread tension is not so tight that the wound bobbin thread feels hard and causes the bobbin to bulge when it is wound. It should also not be so loose that the thread is spongy, causing the thread to tangle as it is wound.
Hand Wheel Won’t Rotate	Corrective Measure
<ul style="list-style-type: none"> ▶ Thread is entangled and caught in the hook 	<ul style="list-style-type: none"> ▶ Turn off the machine and unplug the machine from the electrical outlet. Lubricate the hook, strongly turn the hand wheel clockwise and if necessary counterclockwise several times, and then remove the thread caught in the hook.
Thread Nests Under Quilt	Corrective Measure
<ul style="list-style-type: none"> ▶ Not enough tension on top thread ▶ Improper threading 	<ul style="list-style-type: none"> ▶ Check that the machine is threaded correctly. Make certain that the thread is flossed snugly in place between the two tension discs. If machine is threaded correctly, tighten top tension by rotating the tension knob clockwise. ▶ Refer to threading diagram and threading instructions (page 12).
Hard to Guide Machine	Corrective Measure
<ul style="list-style-type: none"> ▶ Carriage wheels not centered on track ▶ Thread caught in wheels 	<ul style="list-style-type: none"> ▶ Center the carriage wheels on top of the continuous track. Check that the machine carriage has not “jumped” track. ▶ Remove all thread or debris in wheels. Check that the tracks are free of lint and threads.
Motor Fails to Run	Corrective Measure
<ul style="list-style-type: none"> ▶ On/Off switch turned off ▶ Machine not receiving power 	<ul style="list-style-type: none"> ▶ Turn the machine on by using the switch on the back power pod. ▶ Check that the power connector is securely plugged into the back of the machine and the three-prong end is plugged into the power source.
Uneven Quilt Design	Corrective Measure
<ul style="list-style-type: none"> ▶ Take-up rollers may be bowed or bent ▶ Leaders are stretched/worn 	<ul style="list-style-type: none"> ▶ Make certain the fabric is not rolled too tight, causing the poles to bow. Check that poles are inserted completely together with the push pin engaged so bowing won’t occur. ▶ If fabric is beginning to stretch or fray, contact Handi Quilter for replacement leaders.

Troubleshooting

Needle Thread Breaks	Corrective Measure
<ul style="list-style-type: none"> ▶ Thread cones/spools are poor quality or may have severe twisting or thread rot ▶ Top and bobbin tensions not balanced ▶ The machine head has been threaded incorrectly or thread spools are not positioned correctly ▶ Particles in tension discs ▶ Bobbin rotation is not smooth ▶ Needle is burred, bent or dull, or installed incorrectly ▶ Needle not suited for thread ▶ Hesitating too long at one point in pattern ▶ Improper needle/hook relationship ▶ Damage or "Burr" at needle hole of throat plate or other thread handling part ▶ Wrong type of needle ▶ Other possible problems 	<ul style="list-style-type: none"> ▶ Look for severe twisting of threads when approximately 12 to 15 inches has been pulled off, with the ends pinched together. Cotton threads are particularly susceptible to dry rot which makes thread brittle. Do not use poor quality thread, or thread that is rotted or brittle. ▶ Check thread tension in top and bobbin for proper balance. See pages 14-16. ▶ Check that the machine is threaded correctly. ▶ Inspect for accidental double wrapping of thread on thread guides. ▶ Inspect the thread mast, making sure the eyelets of the mast are directly over the spools. ▶ Inspect the vertical positioning of the thread cones. Tipped cones can dramatically affect thread tension and can cause breakage. ▶ Inspect for particles and remove any fuzz or debris. ▶ Change the bobbin. The slightest hesitation of the bobbin rotation can be the cause of dramatic tension change and thread breakage. ▶ Change the needle at least once per quilt. Make sure the needle is installed to the top of the stop hole in the needle bar. ▶ Replace the needle to one better suited for the thread. Use the proper size needle. ▶ Move more quickly so stitches don't overlap or build up. When starting the machine, begin moving immediately. Sewing in one place too long will cause the thread to break. ▶ Timing of the machine is improper. Consult a repair technician. ▶ If thread is shredding at the throat plate, check for burrs or jagged edges. Gently rub with metal cloth to remove the sharp edge. Consult a repair technician to polish any hard to reach or delicate areas, or if the burr is inside the throat. ▶ Use needles recommended by Handi Quilter. Using the wrong needle with a smaller shank diameter causes many problems. For example, a system 1738 or 287WH needle with a shank diameter of 1.64mm will fit loosely into the needle bar clamp. This condition allows the needles to fit into the clamp at an angle which may cause problems including skipped stitches and the needle positioned too far away from the hook point. ▶ Needle too close to hook, causing friction and possible collision of hook point and needle (broken thread). ▶ Needle plate damage ▶ Hook damage ▶ Broken needles or damaged needle bar clamp
No Visible Display	Corrective Measure
<ul style="list-style-type: none"> ▶ Cable unplugged 	<ul style="list-style-type: none"> ▶ Check the communication cable that connects the handlebar to the casing of the machine and make sure that the connections are secure.

* If the troubleshooting above does not eliminate the problem, please consult an authorized HQ¹⁸ Avanté representative.



445 N 700 W
North Salt Lake, UT 84054

Phone: 801-292-7988; 877-697-8458
Fax: 801-294-3011
E-mail: sales@handiquilter.com
www.HandiQuilter.com

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

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

HQ QUILTING MACHINE LIMITED WARRANTY

Handi Quilter, Inc. (hereinafter HQ) offers a limited warranty on the HQ QUILTING MACHINE (hereinafter "Machine") 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) **10 year Limited Manufacturer's Warranty.** HQ warrants the sewing head is free of casting or machining imperfections causing product failure. This warranty does not extend to mechanical or electronic/electrical parts, which are covered under a separate warranty, or consequential damage to the head caused by mechanical or electronic/electrical part failures beyond their warranty period.
- (c) **2 year Mechanical Warranty** For any mechanical failure within this period, manufacturer will provide free replacement parts, customer pays for labor and shipping. See warranty exclusions.
- (d) **1 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 machine 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 machine 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 machine has been misused, abused, neglected, damaged in transit or has been altered from the standard specifications established by HQ, or if proper maintenance and lubrication have not been timely performed.

No warranties extend beyond the express warranty offered. HQ disclaims all other warranties, express or implied, regarding the Products, 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 machine quilting applications using customary fabrics, threads and accessories.
- 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, or (3) use of parts not authorized by HQ.

In no event shall HQ be liable to the purchaser of the Machine 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 for 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 quilting machine, with proof of purchase, to the authorized Representative from whom the machine 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 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

Replace needles every 2-4 hours (1-2 per large quilt) and lubricate bobbin hook every 3-4 hours of use. Periodically check the thread tensioner. Use a small brush to clean out all lint, loose thread or obstructions from the bobbin hook.

Servicing is recommended 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 West
North Salt Lake, Utah 84054

12/17/09

Warranty Registration

12/17/09

Return this registration card within 30 days of purchase or if you prefer, register online at

<http://www.handiquilter.com/warranty>.

MAIL TO: Handi Quilter, Inc.
Warranty Registration
445 N 700 W
North Salt Lake, Utah 84054

WARRANTY REGISTRATION CARD

The HQ Quilting Machine warranty is 10 years manufacturer's warranty on casting and machining of the case, 2 years mechanical, and 1 year electronic/electrical. Check with your local HQ Representative for details on getting service or making warranty claims.

Customer Name: _____

Company/Business Name (if any): _____

Address: _____

City: _____ State: _____ Zip: _____

Day Phone: (____) _____ Evening Phone: (____) _____

Fax: (____) _____ Email: _____

HQ Quilting Machine Model (circle one): HQ18 Avanté HQ24 Fusion HQ Sixteen HQ Sixteen Sit-down

HQ Serial Number: _____ Order Number (5 digits): _____

Purchase Date: _____ Date Machine Received: _____

Location of Purchase: _____ City: _____ State: _____

Type of use intended:

- | | |
|--|--|
| <input type="checkbox"/> Home/Personal | <input type="checkbox"/> Shared w/ Friends |
| <input type="checkbox"/> Some commercial | <input type="checkbox"/> Mostly commercial |
| <input type="checkbox"/> Other _____ | |

Level of machine-quilting skills:

- ☐ Novice
☐ Intermediate
☐ Experienced

Skill adjusting sewing machines:

- ☐ Novice
☐ Intermediate
☐ Experienced

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HQ Quilting Machine Set-up and Training Checklist & Certificate



You are entitled to a free Introductory Training Class on the use of your HQ Quilting Machine as well as free adjustments for 60 days and any repairs covered by the warranty. Present this checklist to your **Authorized HQ Quilting Machine Rep** to receive these free services.

Table

- ☐ Adjusting length (Not applicable for HQ Sweet Sixteen)
- ☐ Adjusting height

Machine Set-up

- ☐ Identify the main parts of the machine and where they are located
- ☐ Ensure machine is properly mounted to the carriage or table
- ☐ Check all cable connections
- ☐ Ensure power outlet is available and does not cause a trip hazard
- ☐ Recommend and explain the importance of a power strip with surge protection for the machine
- ☐ Leveling the table/machine
- ☐ How to wind a bobbin (including adjusting the tensioner and the capacity lever)
- ☐ How to load a quilt

Machine Operation (all machines)

- ☐ How to turn the machine on and
- ☐ How to thread the machine properly
- ☐ Setting the lower tension (bobbin case), teach the drop test
- ☐ Setting the upper tension
- ☐ Using the Menus. Go through each menu and explain.
- ☐ Bringing Up Bobbin Thread
- ☐ How to Tie Off

Machine Operation (HQ¹⁸Avanté, HQ²⁴ Fusion, HQ Sixteen only)

- ☐ Changing from Stitch Regulation to Manual and back
- ☐ Setting the speed in Manual
- ☐ Setting the stitches-per-inch in Stitch Regulated
- ☐ Light settings
- ☐ Cruise Stitch (known as Stitch Regulation in HQ Sixteen)
- ☐ Precision Stitch (not applicable for HQ Sixteen)
- ☐ How to use the front and rear handlebars
- ☐ How to change the needle
- ☐ How to use the Laser Pointer stylus. Use the included Pantograph.

HQ Sweet Sixteen only

- ☐ How to use the foot control.
- ☐ How to use the color touch-screen
- ☐ Explain functions of touch-screen displays
- ☐ How to set Presets and My Speed
- ☐ How to use Needle up/down/tie-off button

Machine Maintenance

- ☐ How to oil the bobbin hook; where, how and when
- ☐ How to clean the bobbin hook area
- ☐ How to clean wheels and tracks (where applicable)

Customer Name _____

Customer Signature _____

Training Date _____

Trainer Name _____

Rep Signature _____

HQ Rep Business Name _____

Business City and State/Province _____

HQ Quilting Machine Model (circle one)

HQ¹⁸ Avanté HQ²⁴ Fusion
HQ Sixteen HQ Sweet Sixteen

Machine Serial Number _____

Representative: To register training services provided, return completed and signed certificate by FAX (1-801-294-3011) or MAIL:

Handi Quilter
445 N 700 W
North Salt Lake, UT 84054

Retain a copy for your records.

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

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Designed by a Quilter, for Quilters.®

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