

AMAYA XTS, XT, AMAYA BRAVO & AMAYA OS V10

AMAYA OS V10 Classroom Notes & Quick Reference Guide



* This document uses the label of "AMAYA" to refer to the AMAYA, AMAYA XT, AMAYA XTS and the AMAYA BRAVO.

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Connecting the AMAYA

Dongles & Levels of AMAYA OS

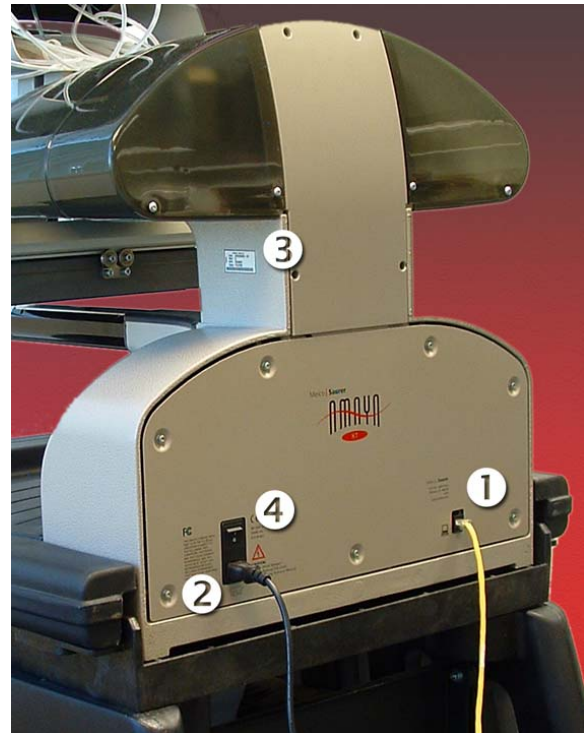
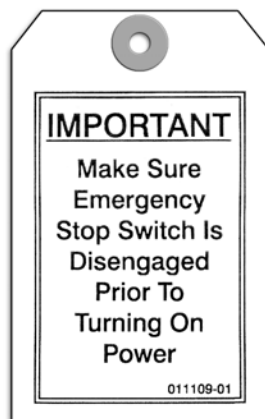
There are three levels of AMAYA OS. They are Lite, SE, and Flex+.

- SE is for a single AMAYA XT and requires a dongle.
- Flex+ is for networking multiple AMAYA XTs and requires a dongle.
- Lite is slightly fewer features, but it requires no dongle to run.

More information on AMAYA OS Levels is available in the help system.

Internet Updates

Internet updates are available for both the OS and the RSA/CSA files. To access these updates, your computer must be connected to the internet. This connection should be made through a separate network card from the AMAYA. To check for updates, click on Tools, and then select "Check for Updates..." or "Check for RSA/CSA Updates..."



Connecting the AMAYA

- (1) Ethernet or Crossover cable
Networking multiple machines is a Flex+ option only
- (2) Power
You may want to consider a line conditioner or uninterruptible power supply
- (3) Serial Number
Located on the side of the machine
- (4) On/Off Switch

Daily Start Up Procedure

The proper start up procedure for the AMAYA is to launch AMAYA OS, wait for the grey screen to come up, then turn on the AMAYA. Oil the Hook!

Bobbin

We recommend continuous filament spun polyester bobbin thread.

Cleaning the bobbin case

Types of bobbins

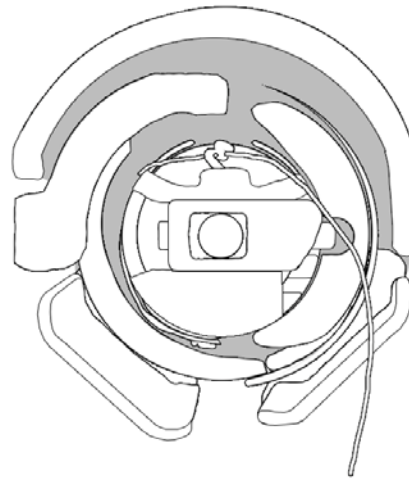
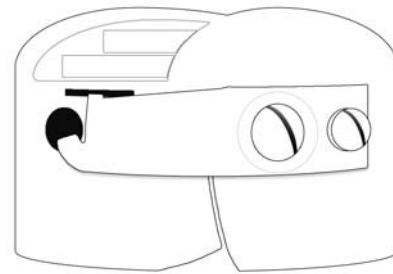
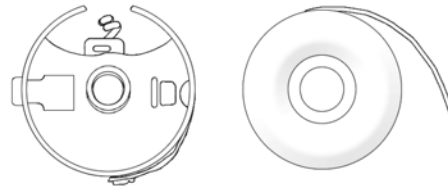
Threading up the bobbin case

Testing the bobbin tension

Adjusting the bobbin tension

Reinserting the bobbin case

Bobbin tail

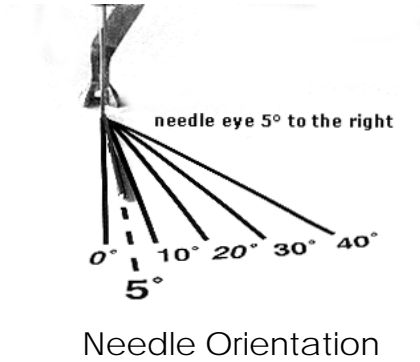


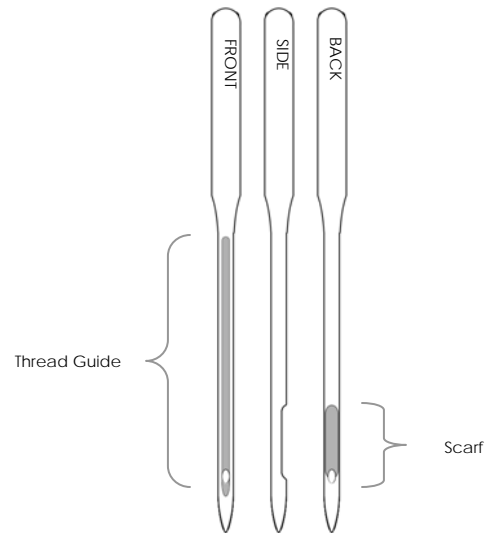
Thread

Types of Thread

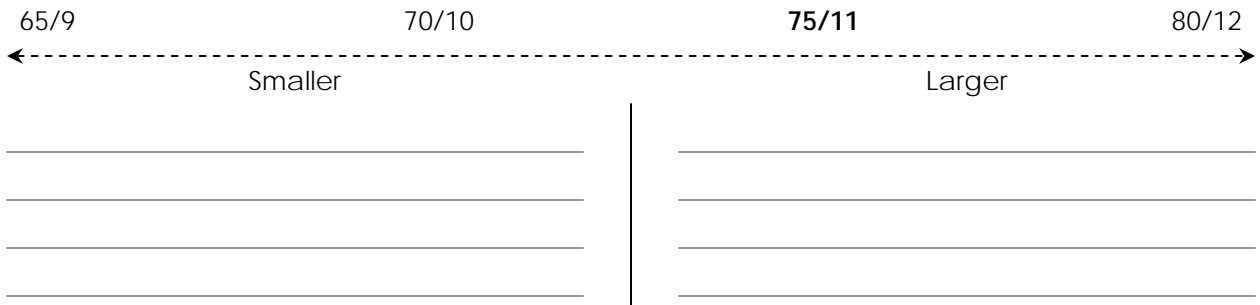
Threading the AMAYA

Needles





Needle Sizes



Needle Points

Sharp

Ball

Needle Coatings

Standard

Titanium

Choosing a Needle

Choosing the appropriate needle for the job being run is extremely important to the success of the embroidery. Different fabrics and threads will determine what needle should be used.

General Guidelines

- Ball Point needles are commonly used on knits. The idea behind this is for the slightly rounded tip of the needle to move the threads of the material out of the way. Common knit garments include T-shirts and sweatshirts.
- Sharp point needles are sharper than ball points and are generally used on tightly woven goods. Some good examples of tighter weaves would include canvas, denim, and twill.
- Titanium coated needles create less friction and heat when moving through a material. They are a good choice for sewing on coated fabrics or embroidering with adhesive backings.
- Smaller needles can clean up the appearance of small lettering and fine details.
- Larger needles create larger holes which can help prevent thread breaks due to friction when sewing an abrasive materials like a cotton duck jacket.

Fabric Type	Needle Size	Needle Type	Coating
Coated Fabrics	80/12	Sharp	Titanium optional
Corduroy	80/12	Sharp	
Cotton Sheeting	70/10 - 80/12	Sharp	
Denim	80/12	Sharp	
Dress Shirt (Woven)	70/10 - 80/12	Sharp	
Golf Shirt	70/10 - 80/12	Ball Point	
Leather	70/10 - 80/12	Ball or Sharp	Titanium optional
Lycra or Spandex	70/10 - 80/12	Ball Point	
Nylon Windbreaker	70/10 - 80/12	Ball Point	
Satin Jacket	70/10 - 80/12	Ball Point	
Sweater (knit)	70/10 - 80/12	Ball Point	
Terry Cloth	75/11 - 80/12	Ball or Sharp	
Delicate Satins or Sheers	65/9 - 70/10	Ball Point	
Twill Caps	75/11 - 80/12	Sharp	

Note: These values are guidelines only, and you may need to adjust your needle usage according to the needs of the individual application.

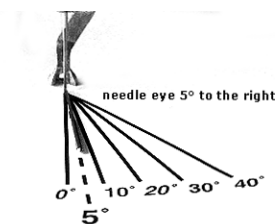
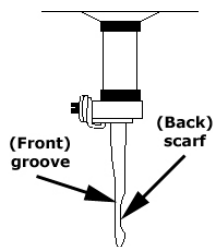
Changing a Needle

It is recommended that you change standard needles every 4 - 8 sewing hours. Titanium needles can last 2 - 3 times that long. The life of a needle depends greatly on the fabric and sewing conditions.

When installing new needles, always use industrial grade needles recommended by Melco for use in the AMAYA BRAVO and AMAYA XT. The needle depth on the AMAYA is set for Organ brand needles. If you use another brand, you may run into issues. If you want to run with another brand, you may need to have the needle depth on your AMAYA adjusted.

How to Change a Needle

1. Make sure the safety grabber blade is in the back position before changing a needle. If it is not, press the Adjustment and Center keys on the AMAYA keypad to move the grabber back.
2. Each needle has a needle clamp set screw that holds it in place.
3. Using a small flat-blade screwdriver, turn the needle clamp set screw counterclockwise about ½ turn, until the needle can slide down and out of the needle bar. Do not loosen too much or remove the set screw. Loosen the screw just enough for the needle to be removed.
4. Embroidery needles have a front and a back side. The needle must be installed correctly or the sewing quality may suffer. If you install the needle incorrectly, you may also get thread breaks. The front of the needle has a long groove (thread guide), while the back has an indented notch (scarf).
5. With the thread guide facing forward and the scarf facing back, slide the needle up and into the needle clamp as far as it will go. The eye of the needle should be turned 5° to the right. (There is an acceptable range of 0° - 20° to the right)
6. Re-tighten the needle clamp set screw to hold the needle in place.



Reasons to Change a Needle

- The needle breaks or is bent.
- The thread will consistently fray - this usually means there is a bur on the needle causing it to fray a part of the thread.
- The needle is dull.
- Sewing conditions change, such as a change in fabric.

Backings and Toppings

Standard Backings

Cut Away

Tear Away

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Specialty Backings

Nylon Mesh

~

Poly Mesh

Water Soluble Toppings and Backings

Other Toppings and Backings

More Backing and Topping Information

Appropriate backing is essential for embroidering most fabrics. Without backing, fabrics can slip even when they are hooped tightly. Using the proper backing is directly linked to the production of consistently high quality embroidery. It is important to understand that many different embroiderers with identical criteria may choose completely different backing and topping formulas and still achieve successful embroidery results. Experimentation and experience are essential in creating consistently high quality embroidery. New products are constantly being developed and introduced. Find the combinations that work best for you.

Tear Away Backing

Tear away backing is a non-woven material that tears easily in any direction and can be easily removed after embroidery. Tear away is extremely simple and fast to use, but the uses are limited because it offers little support to unstable fabrics. Some examples of fabrics suitable for tear away are cotton sheeting, woven dress shirts, denim, terry cloth, hats, and some satins. Be aware that tear away can be a bit scratchy, and use on fabrics that will be worn against skin may want to be avoided.

Cut Away Backing

Cut Away backing is a woven or non-woven material that must be cut from the fabric after the embroidery is complete. This type of backing is used to support the embroidery on the fabric during and after the embroidery process. It also prevents the fabric from stretching during embroidery. Cut Away backings are generally used for unstable goods like knits. Examples of a knit would be a t-shirt, golf shirt, sweater, or a sweatshirt.

Specialty Backings

Specialty backings such as poly mesh and nylon mesh are also options. While they may not be as stable as traditional cut aways, they are much less visible through lighter weight garments. They also tend to be softer than other backings.

Water soluble backing is also available for jobs that require that no backing be left after the completion of the embroidery. Be aware that this would require a fairly stable garment as the backing will be dissolved completely and offer no support once the garment has been laundered.

Toppings

Toppings are used to keep your stitches from falling into the nap of a lofty material like terry cloth or polar fleece. It can also be used to clean up small lettering and the overall appearance of your embroidery. Most toppings are water-soluble and can be easily removed after the embroidery is complete.

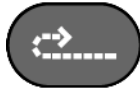
AMAYA Keypad

Single Key Operations

Step Back



Step Forward



Laser



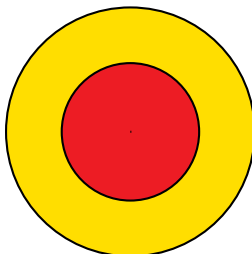
Start



Stop

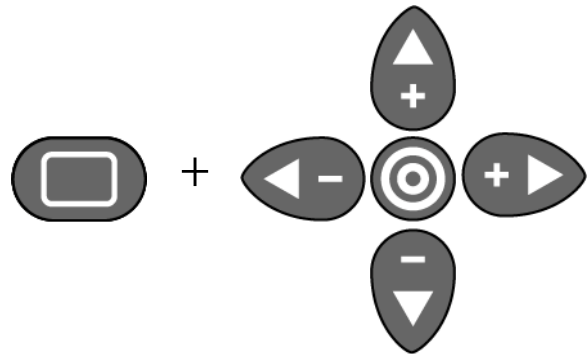


E-Stop

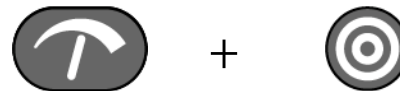


Key Combinations

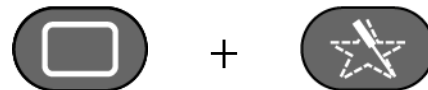
Move the hoop on the machine



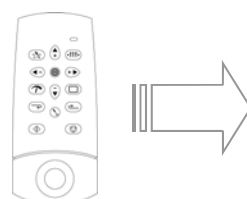
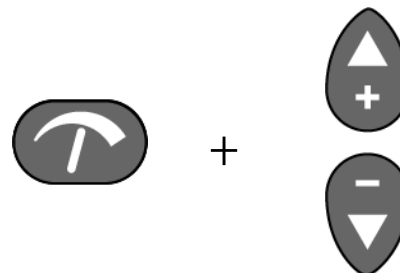
Open/Close the Grabber



Trace the Design Within Selected Hoop




Change Sewing Speed



Slider
Check the slider for
more commands.

Procedure to Run the AMAYA

1. Load Design or Wizard 

SE and Flex+ can use either load function.
AOS Lite must use the Load Design Wizard.
2. Color Sequence

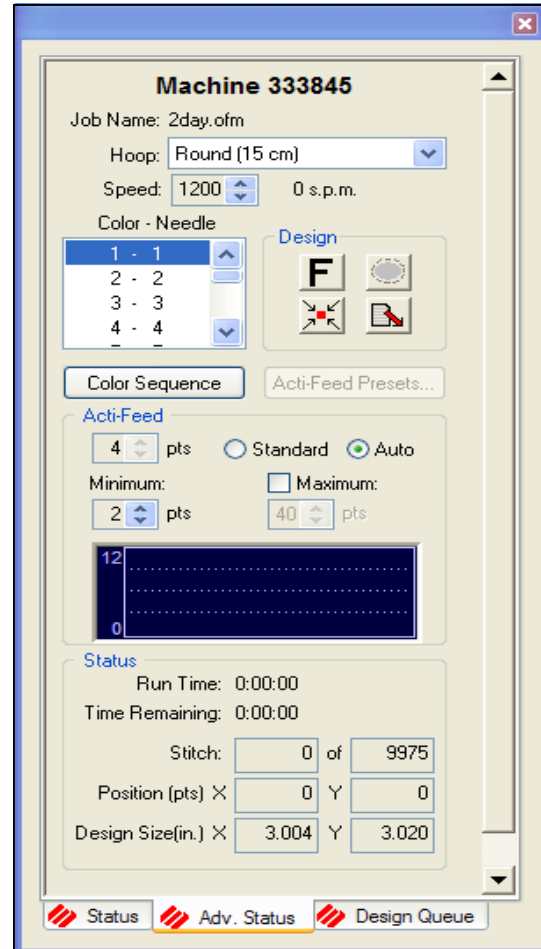
Lite must use the Load Design Wizard to enter or change a color sequence.

3. Select Hoop


Select the hoop that fits as closely as possible to the design without going over the hoop limitations (dotted line).
Lite displays unavailable hoops in grey.
4. Sewing Speed

AMAYA OS Lite maxes out at 1000 s.p.m. and can only be change on the keypad of the machine.
5. Acti-Feed


AMAYA OS SE and Flex+ contain upper and lower limits for Auto-Actifeed.



6. Orientation 

7. Center Design (MAYBE) 

8. Center Hoop 

9. Trace Design 

10. Adjust Presser Foot

Must have a garment loaded

11. Check Pinch Rollers

12. GO!

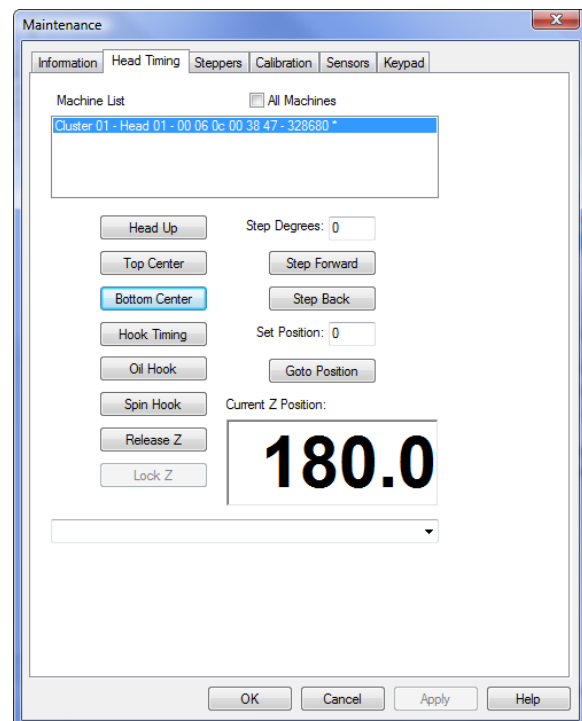
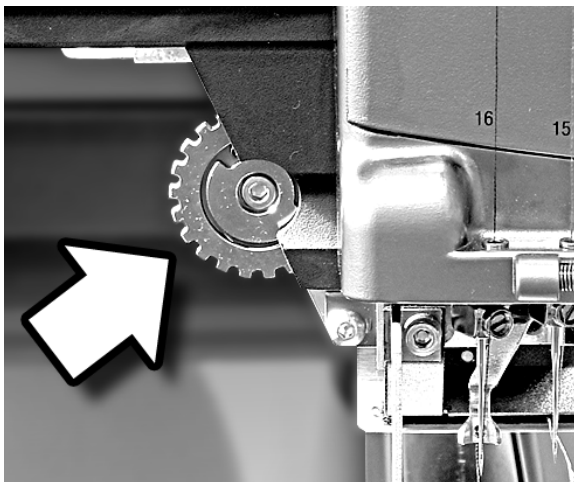
Setting Presser Foot Height

On the AMAYA, you can manually adjust the presser foot height in the range of 0.5mm to 3.5mm above the needle plate. The presser foot height should be changed when the thickness of the material you are sewing changes dramatically. To adjust the presser foot height, AMAYA OS must be open, and your AMAYA must be on. A hoop with the fabric you will be using should be installed.

WARNING: Do not adjust the presser foot height while the machine is sewing. Doing so can result in serious injury.

To Adjust the Presser Foot Height

1. Go to the "Tools" drop-down, then "Maintenance..."
2. In the Maintenance Window, select the Head Timing tab.
3. If multiple AMAYA machines are assigned to the same dongle, check the All Machines box to perform this adjustment for all machines in the cluster. If this box is not checked, you can select a single machine from the Machine list.
4. In the Head Timing tab, click the Bottom Center button. This will place the needle at its lowest needle depth.
5. Locate the presser foot eccentric (gear/knob) behind the needlecase. The eccentric is easiest to access when the needlecase is all the way to the right (the active needle is on #16).



6. Turn the gear with your fingers to adjust the presser foot height up or down as needed.
7. Set the presser foot height over a bare (unsewn) section of the fabric. Set the presser foot so that it is very close to but not touching the fabric. Leave a gap between the fabric and the presser foot that is roughly equal to the thickness of the thread.
8. Click the Head Up button in the Head Timing tab.
9. Click the OK button to close the Maintenance menu.

Hooping

Choosing the appropriate hoop and using it correctly is extremely important for successful embroidery. Here are a few tips to help get the best results. See the Hooping Guide for more detailed information.

- Round hoops give the most even tension of all the hoop shapes.
- Wooden hoops will have registration marks on them. These help maintain the shape and hold of the hoop.
- Many wooden hoops are double-high, meaning their sides are twice as tall as normal hoops. They help grip slick or bulky goods because of the larger surface area and slight tooth the wood provides.
- Choose the smallest hoop that the design will fit in without going over the hoop limitations (the dotted line in AMAYA OS).
- Adjust the hoop tension before hooping the final garment. If you adjust the tension of the hoop while the garment is in it, you will increase your chances of “hoop burn” and create ripples in the garment.

Sewout Troubleshooting

After you complete your first sewout of a design, it is a good idea to examine the quality of the piece and how well it sewed. Reassess the hooping, backing, and machine settings. A few adjustments now can save you from frustrations later on.

Symptom	Possible Solutions
Thread breaks	Slow down AMAYA. Make sure the piece is hooped properly. Adjust presser foot. Check bobbin tension. Check needle orientation. Oil the rotary hook.
Bobbin pulled to top	Check bobbin tension. Slow down AMAYA. Adjust presser foot.
Registration loss	Check hooping tension. Slow down AMAYA.
Fabric is puckering	Avoid stretching or pulling the fabric too much when hooping it.

Color Sequence Settings

Color - Needle: This area displays what needle numbers the colors in the sequence are sewing. For example, the first number in the color sequence is sewing on needle #6

Thread Cone Display: This gives you a visual representation of the thread cones on your machine.

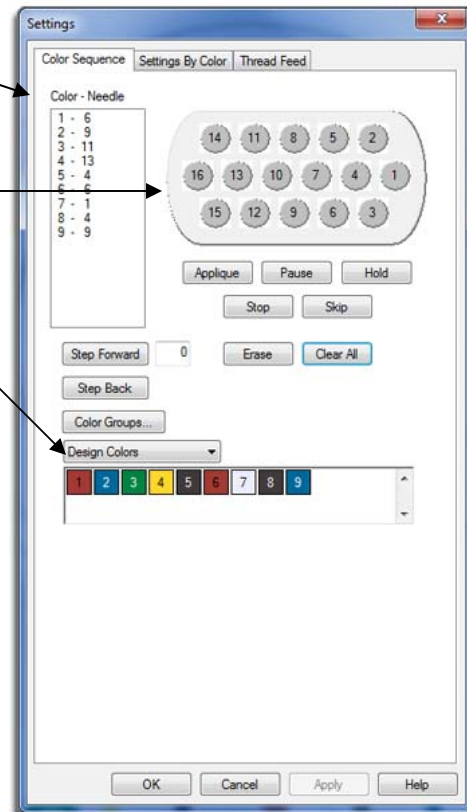
Design Colors: These are the saved design colors in the order of sewing.

To set up the color sequence to sew:

1. Click on the Color Sequence button
2. Click on the "Clear All" button (this clears the last color sequence)
3. If the 1st color in your design is red, click on that color on the thread cone display (6). If the 2nd color in your design is blue, click on that color in the thread cone display (9). And so on...

To help setup your thread cone display, you can use one of the following:

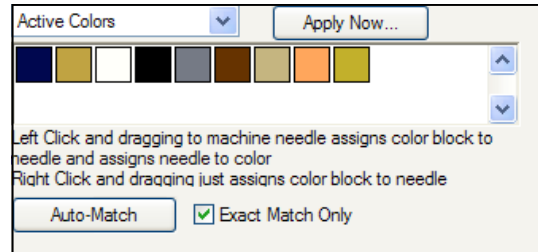
1. Left click and drag the color from the Design Colors and drop on the correct needle on your thread cone display.
2. Right click on color number on the thread cone display and choose the thread chart or color for that exact needle.



Color Sequence Settings Cont.

Color Sequencing

Active Colors: Choosing Active Colors from the drop-down will display each color from the design once. It may be helpful to think of these colors like the cones of thread used in sewing your design. Red may be used several times in a design, but you only require that one cone of that red to be on the machine. Hovering your mouse over one of the color blocks will pop up the suggested thread color for that block. With Active Colors, needles are assigned to each color block. If that color is used more than once in the a design, AOS will use the needle assign to that color block. Color blocks will appear without numbers until a needle is assigned.



To use the Active Colors feature to automatically set up your sew sequence

1. Click on the "Clear All" button.
2. In the Design Colors drop down area select "Active Colors".
3. Left click and drag each color to a needle on the thread cone display. (this will assign the color to the needle). Or, if you want to assign a needle to a color block but do not wish to change the color properties of that needle, you can right click and drag the active color block onto the desired needle.
4. Click on the "Apply Now" button to automatically assign the color sequence for your design colors.

Auto Match: (Automatically assigns needles)

If your thread cone display is populated with thread colors, it may be faster to use **[Auto-Match]**. Auto-Match compares the active colors to the color properties for each of the needles in thread cone display and assign needles to any color blocks that if finds matches for.

1. If "Exact Match Only" is checked and there not a color match on the thread cone display, it will leave the design colors blank and not automatically set the color sequence.
 - If you click on the "Auto-Match" button, and all colors are found, the color sequence will automatically be assigned in the color - needle field.
 - If there is not an exact match on the thread cone display, only the needles with a match will display in the active colors of the design.
2. If "Exact Match Only" is **not** checked and you click on the "Auto Match" button, it will find the closest RGB color value. It will then automatically assign the colors in the Color - Needle field.

Color Sequence Commands (SE & Flex+ Only)

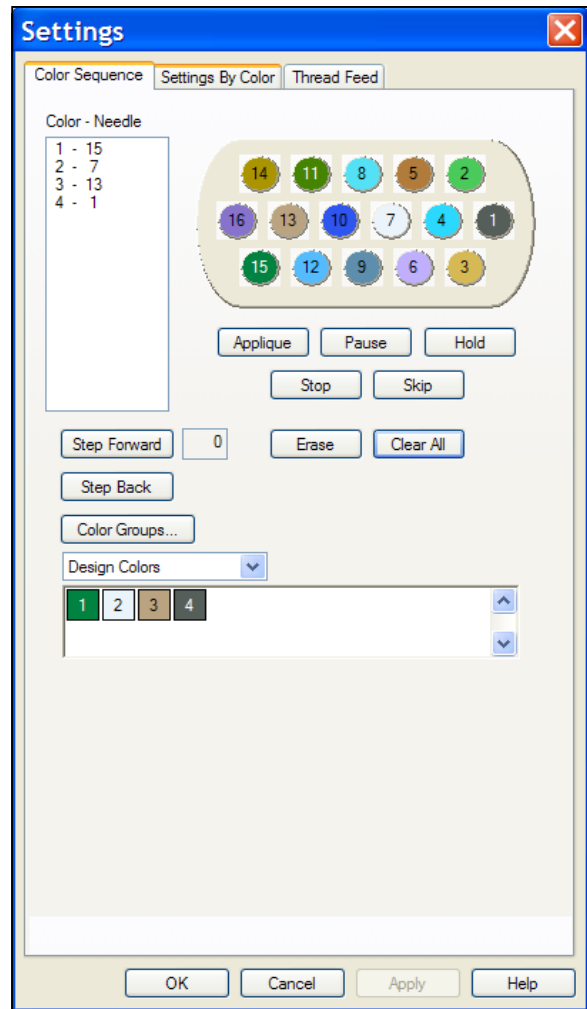
Appliqué Command (AMAYA OS Lite)

Pause

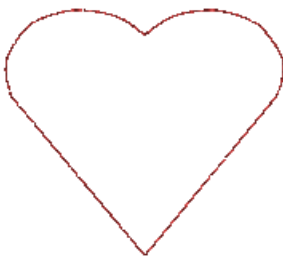
Hold

Stop

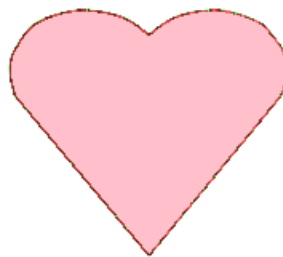
Skip



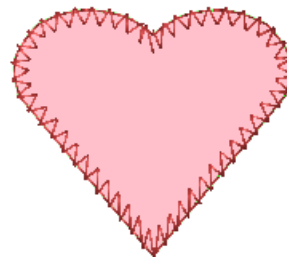
Sequence for Sewing Appliqué



1. Locator Stitch
Color 1



2. Place Appliqué
Appliqué Command



3. Tack-down Stitch



4. Cover Stitch
Color 2

Color Groups (SE & Flex+ Only)

Color Groups allow users to use multiple needles with cones of the same thread color on an AMAYA. If one breaks a thread, it will move to the next needle with that color.

To use Color Groups,

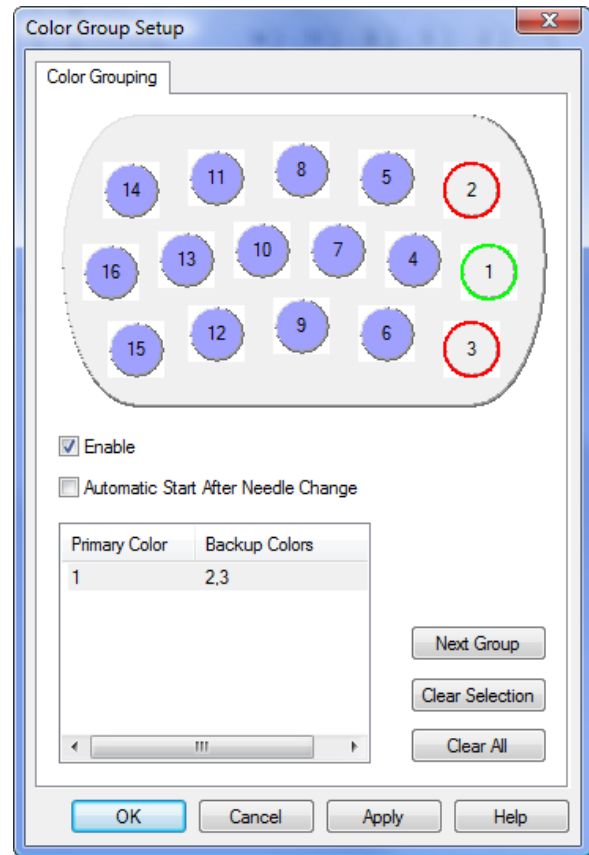
1. Go into the Color Sequence tab
2. Click on Color Groups. This will open the Color Group Setup window
3. Check Enable
4. Check Automatic Start After Needle Change
(If you want the machine to automatically start sewing with the backup needle.)

To set up a Color Group,

1. Click on the needle you want as your primary color. (The primary color will be ringed in green)
2. Click on the needles you want as back up colors (The back up colors will be ringed in red)

Back up colors will be grayed out in the color selection tab.

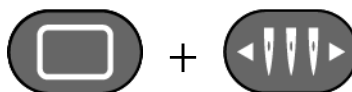
To set up another color group, click the Next Group button.



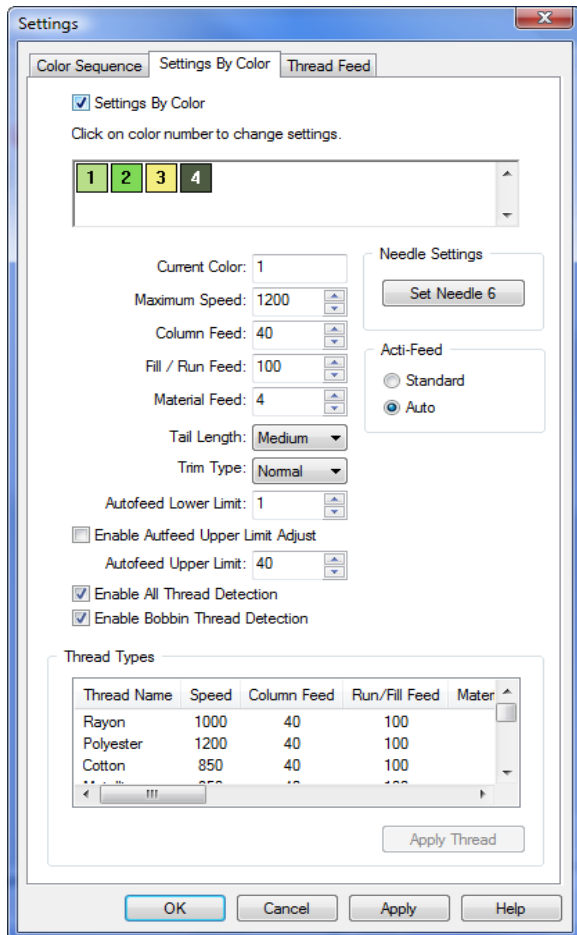
Clear Selection will delete the selected color group, and Clear All will delete all color groups.

When the machine has cycled through all of the designated needles for a color, it will stop. You then need to thread up all the needles of that color and reset the machine by pressing the Needlecase key and the Hoop key on the AMAYA keypad.

Hoop + Needlecase



Settings by Color (SE & Flex+ Only)



Settings by Color allows you to set the design up so that the machine will change settings when it changes colors.

An example of when you might use this would be if you want the machine to slow down to clean up small letters but sew faster through the rest of the design. Set the color of the lettering to sew at a slower speed.

To turn this feature on, check the Settings by Color box in the Settings by Color tab.

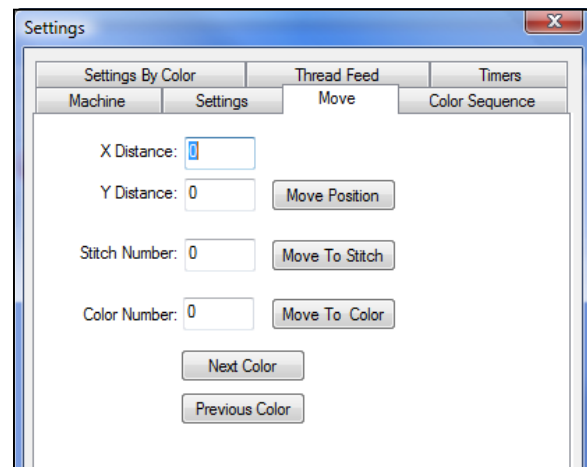
In the design colors box, click on the color that you would like to change the settings for. It will now show as the current color. Make your settings changes and move on to the next color you'd like to make changes to, or click Apply and then OK to exit the window.

Moving Through a Design (SE & Flex+ Only)

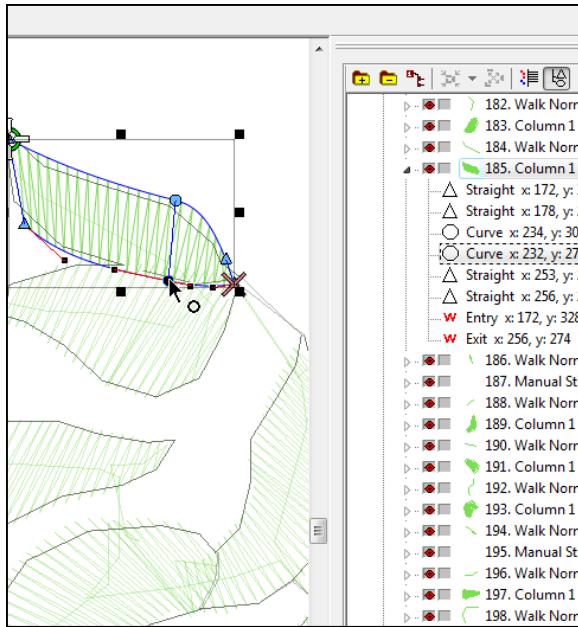
You may need to move through a design without sewing to repair an embroidered piece. An easy way to do this is to use the Move tab located in "Settings" under the Tools drop-down.

In this tab you can move to a specific stitch or the beginning of a specific color by entering the number of the desired stitch or color and clicking the Move To button to the right of the field.

The X and Y fields will move the design in the hoop.



Embroidery File Formats



Wire Frame (Outline) Files

.cnd - older Melco condensed format
 .ofm - DesignShop and AOS native format

cnd & ofm

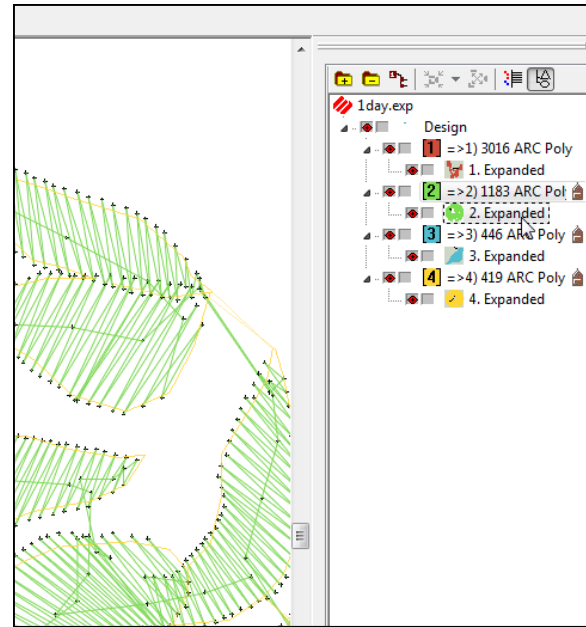
- Elements are outlined shapes that contain element properties like density, stitch length, and stitch direction.
- Shapes can be edited.
- cnd files saved from DSV9 save as a manual stitch

ofm only

- Contains lettering properties. You can change spelling, font, size, or any other property of the lettering.
- Notes are available.
- Color information is available.
- Machine settings can be saved. (SE & Flex+)

Scaling a Wire Frame File

You can usually scale a wire frame file up or down in size about 25%.



Stitch Files

.exp - Melco expanded stitch file
 .dst - Tajima stitch file

Stitch files do not contain properties. They are just plotted out needle penetrations. The colors that show up will be the default colors.

If you open an ofm and see expanded data in the project view, it is plotted stitch information. You can save stitch files as ofms to keep notes and color information, but they will still be expanded data.

Scaling a Stitch File

Stitch files can usually be scaled 10% up or down in size, but with the assistance of the Expanded Stitch Processor, you can push that to about 25%.

Expanded Stitch Processor

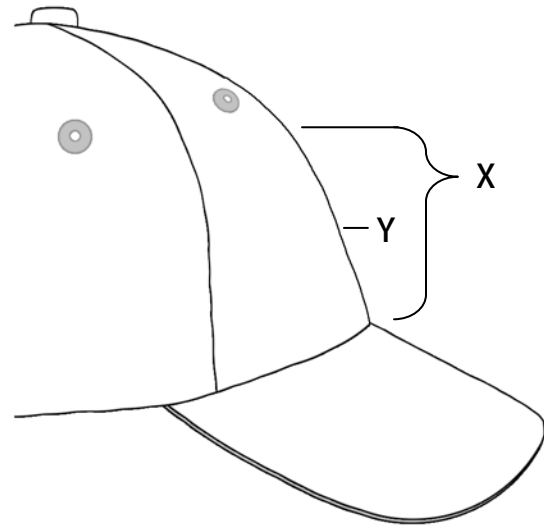
Converts stitch files to wireframe in order to maintain densities when scaled. This may change the fill patterns in some designs.

Sewing Caps

1. Load Design or use Load Wizard
2. Color Sequence
3. Select Hoop
 - XT Extended WACF (AOS SE & Flex+)
 - CCF/WAD (AOS Lite)
4. Sewing Speed
 - Start at 850s.p.m. and adjust from there.
5. Acti-Feed
 - Set the Lower Limit
6. Orientation
 - Flip upside-down for caps.
7. Center Design (MAYBE)
8. Center Cap (Center Hoop won't work)
 - Careful - you may not be able to use the laser to do this. Line up with the needle.

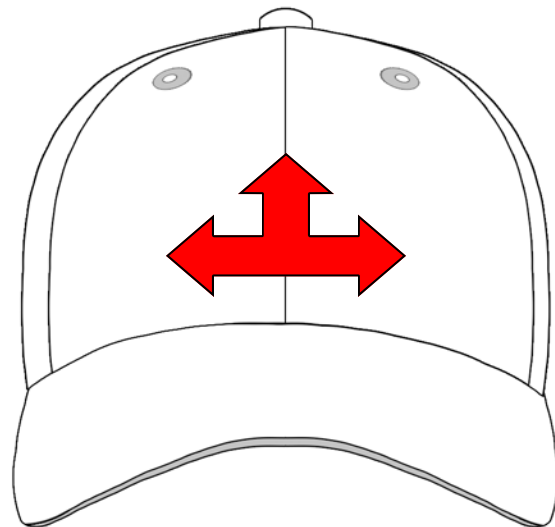
9. Trace Design
10. Adjust Presser Foot
 - For most caps, take the presser foot all the way down and go 2 clicks back up.

11. Check Pinch Rollers
12. GO!



Measurements for Caps

- X = Distance from bill to start of real curve
- Y = Center point for design
- X - 1" = safe zone
- X - 1/2" = actual sew field



Sew Order for Cap Designs

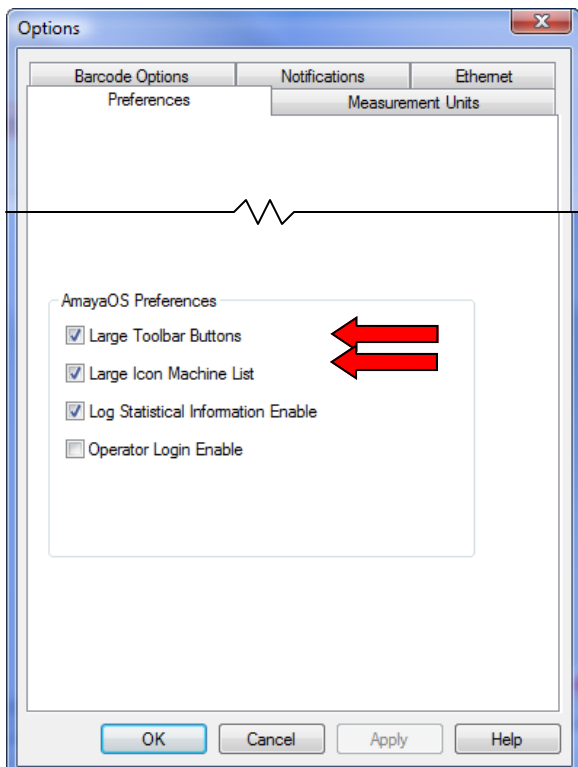
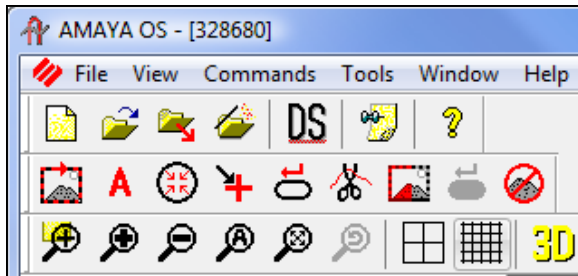
1. Bottom ⇒ Up
2. Center ⇒ Out
3. Finish as you go

More AMAYA OS Settings

Larger Icons

AMAYA OS allows you to change the size of the buttons on the toolbars and the icons in the machine list.

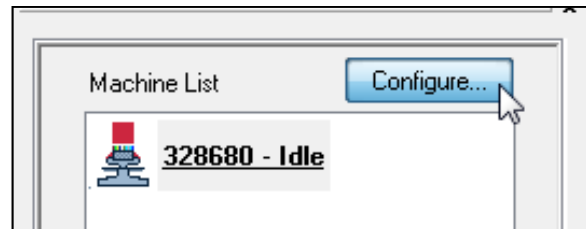
To make the change, go to the Tools drop-down. Select Options, and then go to the Preferences tab. At the bottom of the tab, there are check boxes that affect the size. Check or uncheck the boxes to get the desired size.



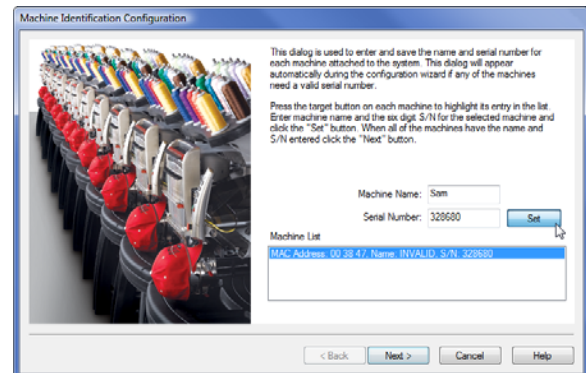
Naming Your AMAYAs (Flex+ Only)

If you're running multiple machines, you have the ability to name your AMAYAs and sequence them in the machine.

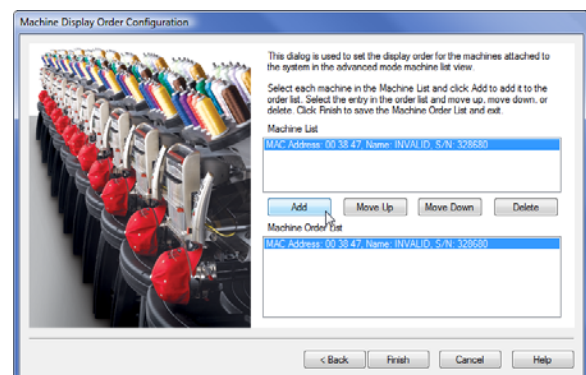
1. Click the Configure button at the top of the machine list.



2. Type a name for the selected machine. Click the Set button. Continue with all the machines. Click Next to proceed.

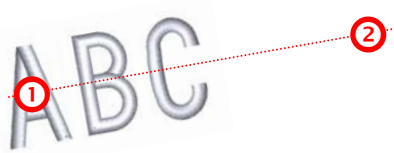








3. Select and Add the machines in the order you want them to appear in the Machine List. Click Next when you are finished.

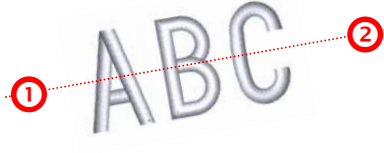


AMAYA Laser Alignment (SE & Flex+ Only)

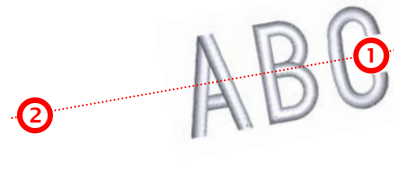
AMAYA has a laser alignment feature. This feature allows you to line up an embroidery design to a mark, such as a stripe, on the garment. To do this, you use the hoop and the arrow keys to move the laser to your first reference point, like the top of stripe on the left side. Press the laser and an arrow key to confirm this point. Move the laser with the hoop and arrow keys to your second reference point. Press the laser and an arrow key to confirm this point. Now, press the laser and the center key. The design will align to the line created by your two reference points. The placement of the design along the line will depend on the arrow keys used to input the reference points. The six variations follow.






1. Laser + Left  + 
2. Laser + Right  + 
3. Laser + Center  + 









1. Laser + Left  + 
2. Laser + Left  + 
3. Laser + Center  + 









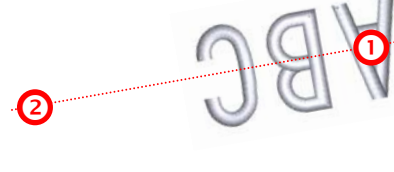
1. Laser + Right  + 
2. Laser + Left  + 
3. Laser + Center  + 








1. Laser + Right  + 
2. Laser + Left  + 
3. Laser + Center  + 



1. Laser + Right  + 
2. Laser + Right  + 
3. Laser + Center  + 



1. Laser + Left  + 
2. Laser + Right  + 
3. Laser + Center  + 