

# **HIGHLAND** Embroidery Machines

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## **LCD Highland Compact Machine Quick Start Guide**

**Important notice** Hard or sharp objects can damage the touch screen.

Generally speaking, the basic steps for preparing a design for embroidery are as follows:

- 1. Loading the design into the "confirmed" memory of the machine,**  
(instructions for this are either "Load a Design Using USB" or "Load a Design From Machine Memory" found in the next two sections.)
- 2. Setting the color sewing sequence of the design,**  
(instructions for this are found in the "Setting Color Sequence for Embroidery" section.)
- 3. Setting or confirming the sewing direction of the design,**  
(Instructions for this are found in the "Setting Design Parameters for Embroidery on a Hat. The default direction is for embroidery on most other products like shirts and jackets and does not need to be changed unless sewing on a hat or for other particular purposes.)
- 4. Ensuring that the hoop is the proper size and position for the design,**  
(Instructions for this are found in the "Trace the Design" section.)
- 5. Ensuring that the design is in the "Confirmed" status, that the machine is in the "Run" mode, and in the "Automatic Color Change, Automatic Start" mode.**

These modes are displayed in the main display at the bottom of the touch screen. Design is in

the "Confirmed" status when the  icon is displayed. Machine is in "Run" mode when

 icon is displayed, and the machine is "Automatic Color Change, Automatic Start" mode

when the  icon is displayed. In the display the will look like this:   

### **Load a Design Using USB**

1. Insert USB Drive (machine can read Tajima, Barudan, and ZSK files).

2. If there is a confirmed design indicated by  in the lower left of the display, touch the icon



to "release" the confirmed design

then touch . Embroidery

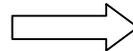
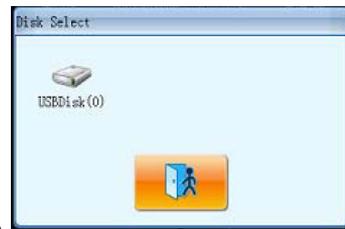
status will change to "ready" indicated by



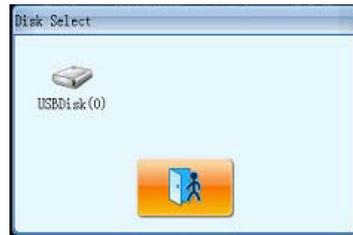
3. Touch the  icon until the  icon is visible.



4. Touch the  icon to open the disk management menu. A "disc select" menu will appear.



5. Touch the disc icon in menu to display the files on USB.



6. Touch the desired file to select it.



7. Touch the  icon to import the selected design to the memory of the machine.

8. Display will prompt to enter memory number and name of design to be input. User can use the

default memory number and name by touching . User may enter a different memory number and custom name from this menu before touching .

9. Display will return to the disk select menu, and user can now select another design to import to memory or exit this menu by touching .

10. Touch  until  is visible, then touch it to enter Design Management menu.

11. Display will now show designs which are in the memory of the machine. If the design just input is not visible, use the up or down scroll icons to scroll until desired design is visible. Select the design by touching it to select it. Scroll through the lower display using the  "Design Set"

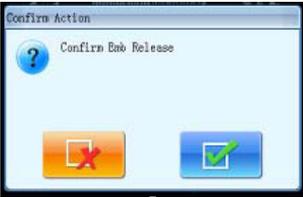
 icon is visible, then touch it. Display will return to the embroidery design screen, but it

will be blank, and the  "Embroidery Ready" icon will be displayed. Touch the "Embroidery Ready" icon to "Confirm" the design selected for embroidery. Display will prompt

"Embroidery Confirm." Touch . The machine will process the design and then display it all in grey.

### **Load a Design From the Machine Memory**

1. If there is a confirmed design indicated by  in the lower left of the display, touch the icon to

"release" the confirmed design  then touch . Embroidery status will

change to "ready" indicated by .

2. Touch  or  scroll icons until  is visible, then touch it to enter Design Management

menu.

3. Display will now show designs which are in the memory of the machine. If desired design is not visible, use the up or down scroll icons to scroll until desired design is visible. Select the design

by touching it to select it. Touch the "Design Set" . Display will return to the embroidery

design screen, but it will be blank, and the  "Embroidery Ready" icon will be displayed.

Touch the "Embroidery Ready" icon to "Confirm" the design selected for embroidery. Display will

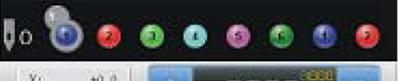
prompt "Embroidery Confirm." Touch . The machine will process the design and then display it all in grey.

### **Setting the Color Sequence for Embroidery**

1. Touch the  "Parameter Settings" icon, then the  "Color Settings" icon. The "Color Settings" display will open and show a preview of the design as well as pallet of colors representing the 15 needles on the machine. The first 5 colors of the design will be displayed listing the color numbers across from a default needle number.
2. Touch the needle number from bottom of display to attach it to the corresponding color number desired. Continue until all colors are programmed. As the needle numbers are touched, the preview of the design at the top of the display will reflect the color assigned to the needle number in the pallet.

3. When finished, touch the  icon to set the programmed colors and exit the "Color Settings" menu.

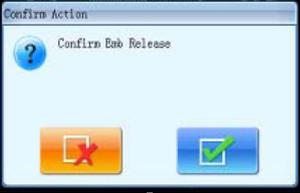
4. Touch the  icon to exit the "Parameter Settings" menu. Display will return to the main screen displaying the design and the color sequence will be reflected at the bottom of the

display .

## Setting Design Parameters for Embroidery on a Hat

- Embroidery on a hat requires setting the design parameters so that the design will sew in the correct orientation.

- If there is a confirmed design indicated by  in the lower left of the display, touch the icon

to "release" the confirmed design  then touch . Embroidery

status will change to "ready" indicated by .

- Touch the Touch  or  scroll icons until  "Design Parameters" icon is visible.



- Touch the  icon to open the "Design Parameters" menu.
- Touch the "Direction" option bar.

- Use the   icons to cause the **P** to look like a **d**. This will cause the embroidery machine to embroidery the logo in the correct orientation for hats.

- Touch  to confirm change or  to cancel the change. Machine will beep and return to the "Design Parameters" menu and update to show the new direction of the design.

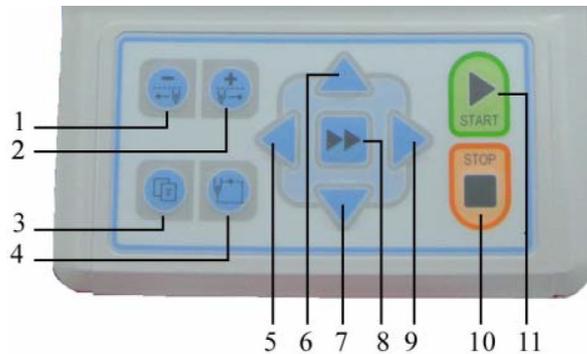
- Touch the  escape icon to return to main display.

- Touch the  "Embroidery Ready" icon to "Confirm" the design selected for embroidery.

Display will prompt "Embroidery Confirm." Touch . The machine will process the design and then display it all in grey and in the updated orientation/direction.

## Trace the Design

1. Once the design is loaded, it is necessary to trace the design to make sure it will fit in the hoop. **important caution: Use great care when machine is configured for hats as the machine has a greatly reduced field of physical movement in that configuration.**



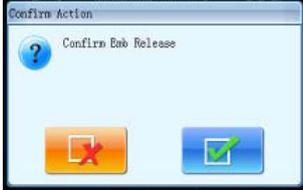
2. On the lower section of the Control Panel press key number 4 in above illustration.
3. Display will prompt "Confirm Move Frame Along Design Border?"
4. Touch the  icon. If you do NOT want to trace the design, touch the  cancel icon.
5. Machine will move frame along the range of the design, tracing its size in the shape of a box

**NOTE:** Turning on the laser pointer when tracing the design will show the placement of the design in the hoop. Mesa recommends a margin of 3/8" clearance all the way around the design for hoop clearance.

6. If the design centering is okay, **AND** there is proper clearance in the hoop, design is ready to sew.
7. Press the START key to sew the design.
8. If the design needs to be re-centered, use the arrow buttons 5, 6, 7, and 9 in above illustration to adjust the design location in the hoop, then repeat #2 through #5.
9. Press START to sew the design

## Delete a Design From Machine Memory

1. If there is a confirmed design indicated by  in the lower left of the display, touch the icon

to "release" the confirmed design  then touch . Embroidery status will change to "ready" indicated by .

2. Touch the  "Design Management icon, then use the  scroll icon to get to the  icon and touch it to open the "Design Operation" menu and touch the "Delete Design In Memory" bar. Display will open the "Design Management" menu and designs in machine memory will be displayed.

3. Touch the design to be deleted to select it, then touch the  icon.

4. Display will prompt "Do you confirm delete?" Touch the  icon to accept deleting the selected design from memory. Touch the  Cancel icon if you do NOT want to delete the selected design from memory.

5. Touch the  escape icon to return to Design Management menu.

6. Touch the  escape icon again to return to the main display.

**NOTE:** To delete all the designs in the memory at once, see the steps below for clearing all the designs from memory.

### **Delete ALL Designs From the Machine Memory**

1. If there is a confirmed design indicated by  in the lower left of the display, touch the icon

to "release" the confirmed design



then touch . Embroidery

status will change to "ready" indicated by .

2. Touch the  "Design Management icon, then use the  scroll icon to get to the



icon and touch it to open the "Design Operation" menu. Touch the scroll right icon until the display shows "Clear All Designs" as one of the options and touch that bar. Display

will prompt "Are you confirm clear?" Touch the  icon to accept deleting all designs

from memory. Touch the  "Cancel" icon if you do NOT want to delete all designs from memory.

3. Touch the  escape icon to return to Design Management menu.

4. Touch the  escape icon again to return to the main display.

### **Manual Thread Trimming**

1. Stop the machine.

2. Touch the Touch  or  scroll icons until  "Manual Trim" icon is appears.

3. Touch the  icon. The display will prompt  Touch the type of trim desired, most usually "Trim Upper&Bottom Thread" option. Touch the  escape icon if trimming is not desired.
4. The machine will immediately execute a trim.

### Using the Float function

1. Stop the machine by pressing the  STOP key.
2. To float **backward** in the design one stitch at a time, press and release the  STOP key for each stitch. If the STOP key is pressed and held continuously for about 10 – 20 stitches, the machine will continue going backwards one stitch at a time through the design until the  STOP key is pressed again.
3. To float **forward** in the design slowly and one stitch at a time, touch the  "Embroidery Status" icon until the icon displays  "slow float" mode, then press the  START key. Machine will start moving the frame and design one stitch at time forward through the design. Progress is displayed and can be monitored on the main screen. Press the STOP key at desired stitch to resume sewing. This mode can also be used to float **backward** in the design in the manner described in step 2 of this section.
4. To begin sewing again, the machine must be returned to "run" status by touching the 

"Embroidery Status" icon until it displays  "Run" mode. Press the  START key to resume embroidery.

5. To float **rapidly** through the design, **either forward or backward**, touch the 

"Embroidery Status" icon until the icon displays  "Fast Float." Press the



START key to begin moving rapidly **forward** in the design. Progress is displayed and

can be monitored on the main screen, **but the frame does not move**. Press the  STOP

key at desired stitch to resume sewing. When the  STOP key is pressed, the frame will then move to the physical location of the current stitch. To begin sewing again, the machine

must be returned to "run" status by touching the  "Embroidery Status" icon until it

displays  "Run" mode. Press the  START key to resume embroidery.

6. Pressing the  STOP key while in the  "Fast Float" will cause the machine to begin moving rapidly **backward** in the design. Progress is displayed and can be monitored on the

main screen, **but the frame does not move**. Press the  STOP key at desired stitch to

resume sewing. When the  STOP key is pressed, the frame will then move to the physical location of the current stitch. To begin sewing again, the machine must be returned to

"run" status by touching the  "Embroidery Status" icon until it displays  "Run"

mode. Press the  START key to resume embroidery.

7. To float **forward** by color, Touch the  or  scroll icons until  "Assistant Operation" icon is displayed, then touch it to open the menu. Touch the  scroll icon once to get to the menu that includes "Go to Next Color" action bar, and select it. Display will prompt "Go To Next Color Change?" Touch the  "confirm" icon. The panel will return to the main display, then press the  START key to complete the action. Display will reflect movement to the next color change and then the frame will move to the matching physical location. These steps can be repeated until the end of the design is reached.

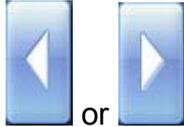
8. To float **backward** by color, Touch the  or  scroll icons until  "Assistant Operation" icon is displayed, then touch it to open the menu. Touch the  scroll icon once to get to the menu that includes "Go to Prev Color" action bar, and select it. Display will prompt "Go To Prev Color?" Touch the  "confirm" icon. The panel will return to the main display, then press the  STOP key to complete the action. Display will reflect movement to the previous color change and the frame will move to the matching physical location. These steps can be repeated until the beginning of the design is reached.

### To Back Up After a Thread Break

Press and release the  STOP key to back up one stitch at a time. If the  STOP button is pressed and held continuously for about 10 – 20 stitches, the machine will automatically continue going backwards one stitch at a time through the design until the  STOP key is pressed again.

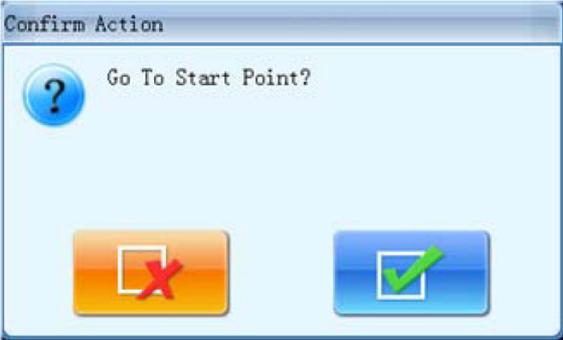
## To Return to the Design Origin

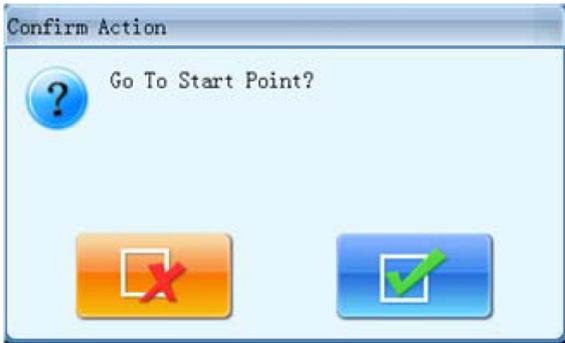
1. Stop the machine.



2. Touch the Touch  or  scroll icons until  "Back to Origin" icon is appears, then touch it.



3.  will be displayed.



4. Touch the  "confirm" icon. Machine will immediately move the frame to the previous start position of the design and return to stitch number one of the design. Touch the  "Cancel" icon if you do NOT want to complete the action.



# Embroidery Machines Support

## How to Hoop a Cap Using the 270 Degree Wide Cap Frame

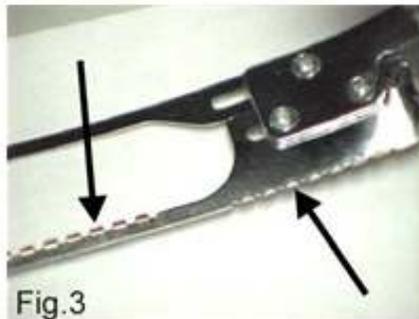
Using the wide cap frames for the embroidery machine is not a difficult task. With practice, you can learn to frame caps quickly and easily, delivering high quality embroidery. Many of the problems experienced by embroiderers sewing on caps can be traced to the way in which the caps were hooped in the cap frames. The following document illustrates the key points to look for when hooping a cap. These instructions are not necessarily the only way in which to perform this task, but merely a way of pointing out what to look for. As you become more proficient at this, you may discover ways that are easier for you.

For our example, we have chosen a low profile, unstructured cap. This seems to be the popular type of cap at this time. However, regardless of the type of cap to be embroidered, these steps and key points remain the same.

In Figure 1, we have unbuckled the strap for easier handling. For caps with leather straps, this is especially helpful. By undoing the strap, it allows for a larger opening which will make it easier to place the cap on the frame. Even caps with plastic straps will benefit from loosening the strap.



Before we place the cap in the frame, let us first examine the cap frame itself. The cap frame is composed of two pieces. First is the round part called the cap frame base. Around the edge of the base you will notice some small teeth (see Fig.2). The inside edge of the seam joining the sweatband to the crown will line up with these teeth. Attached to the base on a hinge is the second part of the cap frame called the strap. Here too you will notice the same type of small teeth as on the cap frame base (see Fig.3).



The function of these teeth is to grip the outside of the seam that joins the sweatband to the crown. Lining up these teeth on the inside and outside of the cap is probably the most critical point in framing a cap. This will be illustrated later in this document.

Next, because we are using an unstructured cap, it is necessary to use a backing. Without backing, your design has a very poor chance of sewing out correctly. You will probably experience poor quality in lettering and almost certainly have registration (shifting) problems. Structured caps have a fused backing already in place. These types of caps may not require backing except in the case of side embroideries, in which case you should cut one long piece instead of trying to insert individual pieces for the sides. In our example, we are using a heavy cut away backing that is available in a 4 wide roll that can be cut to any length you need.

After placing the cap frame on the framing gauge, lay the backing in place on top of the frame as seen in Figure 4. Be sure to slide the backing underneath the alignment bracket. This is the small tab with the thin red line marked on the top. (This is for centering the cap left and right in the cap frame.) Now roll out the sweatband and slide the cap over the backing and all the way up so that the sweatband goes underneath the bracket also (see Figures 5 and 6). Also, make sure as you place the cap on the frame that the two posts at the bottom of the base go inside the cap (see Figure 4 again). These posts are used to clamp the sides of the cap with



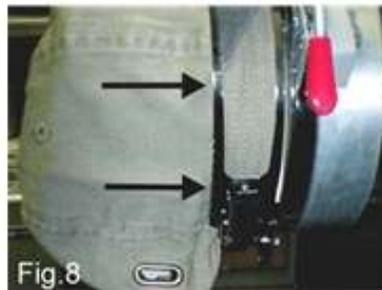
## Embroidery Machines Support

### How to Hoop a Cap Using the 270 Degree Wide Cap Frame

the cap frame clips later. The issue here is to try and keep the sweatband rolled out and flat as far around the cap frame base as possible. Before pulling the strap over, try to make sure the seam for the sweatband is lined up along the teeth of the base that were shown in Figure 2.



Once you have the seam lined up on the teeth of the base, bring the strap up and over the bill. As you bring it over and around the cap, line the teeth of the strap up with the seam. When the strap is lined up on the seam, continue around the cap until you can connect the catch to the hook of the base. Do not close the latch completely until you have the seams aligned on both sides and the cap is centered. Use the red line on the alignment bracket as the reference for centering. In Figures 7 and 8, the strap is shown in the correct position on the left and right sides of the cap.



As mentioned before, this step is probably the most critical in framing a cap. If you do not keep the seams aligned with the teeth of the base and strap, your side embroideries will not sew out straight. That is, they will tilt at an angle to the seam of the cap. Figure 9 shows the seam and strap incorrectly aligned.

Now that you have the cap in the frame and correctly aligned, you will need to clip the side panels to smooth out any wrinkles on either side. The important thing to remember here is to smooth the side with a minimum of stretching. If you stretch the sides too tight, the clips may pop off during the side embroidery. This would allow the cap to shift during sewing and cause poor embroidery. This can happen too fast for you to react and stop the machine.

With this cap, we have a metal grommet for the leather strap to work around (see Figure 10). This means that we can probably only use one clip on this side (see Figure 11). This is acceptable, but it may cause some difficulty in smoothing out this side of the cap. Remember the goal on the sides is smoothing out the wrinkles, not stretching the fabric.



## Embroidery Machines Support How to Hoop a Cap Using the 270 Degree Wide Cap Frame

In Figure 12, the left side of the cap is shown with the clips in place. Without the grommet, two clips can be used. Whether you use one or two clips is not important. What is important is that the sides are smooth. While it may be impossible to get the sides absolutely smooth, the fewer wrinkles you have, the better your embroidery will turn out.



Fig. 12

Finally, in Figures 13 and 14, we show the framed cap, ready to be placed on the machine for embroidering.



Fig. 13



Fig. 14