



Training:

HAPPY HCD2-1501 Operations & Maintenance

The cap system for the HCD2-1501 can produce quality embroidery on finished ballcaps, covering a max area of 80mm (over 3inches) tall x 360mm (14.1 inches) wide. The system allows swapping from normal (tubular) sewing to the cap sewing system quickly and without any tools.

Chapter 5: Sewing on Finished Caps

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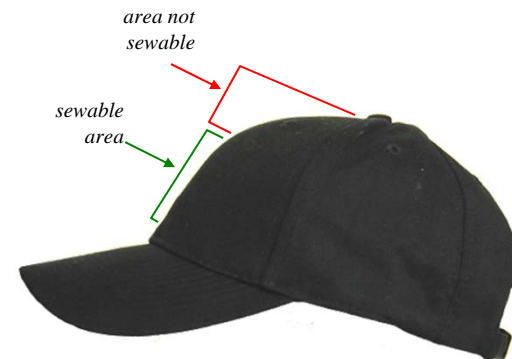
Updated August, 2013.

Cap Sewing with HCD2-1501

Important physical differences between caps and other garments with respect to embroidery.

- **Understanding the cap itself**

1. **Available sewing area:** (for low profile hats especially) Even though your machine allows a 80mm (3") high area, the true usable sewing height depends on the cap itself. Generally the bottom 2/3 of the cap's riser is sewable, since the upper 1/3 curves significantly away from the plane of the sewing (needle) plate (see photo on the right). The width of the sewing area is 14.1" (so, 7" from the center seam to either side) *Be sure that the design is sized for your cap's sewing area based on these guidelines.*



2. **Construction:** The quality of the hat can directly affect the quality of the embroidery and your technique. If you're sewing on a "constructed" hat, the inside of the front 2 panels will have a reinforced inner lining called "buckram", shown on the right. Additionally, better quality material (heavier or more "solid") provides a stable sewing surface that shifts less as the hat sews, resulting in better-quality stitching. (Regardless of hat quality, however, always use at least a single sheet of cutaway backing to maximize the chances of a quality sew-out).



View of cap from underneath



Cap Sewing with HAPPY's HCD2-1501

To best ensure a quality sewout, it's best that the design is digitized specifically for sewing on caps. Check any design to make sure they meet the criteria on this page:

- **Digitizing for caps: center-out:**

Cap digitizing doesn't require any tricky settings in digitizing – light underlay, standard density and standard pull compensation settings should result in good-quality fills and satins. However, the **sequence** in which everything sews is very important:

1. **Every part of the design must finish completely before the next area sews.** For example, on lettering with a different-colored border, each letter must sew first the interior color, then its satin border before the next letter is sewn (vs. normal digitizing where all of 1 color may normally finish before sewing the next color). This takes more time to sew because of the additional color changes, but avoids registration problems.
2. **Every part of the design must sew from the center towards the sides.** In the same example of lettering, any letters to the right of the center seam should sew from the center to the right. Any remaining letters to the left of the center seam should sew from the center towards the left.

- **Digitizing for stretchy or unconstructed caps**

There is an increasing popularity in stretchy material (Flexfit) hats and non-constructed hats. For these types, try these techniques:

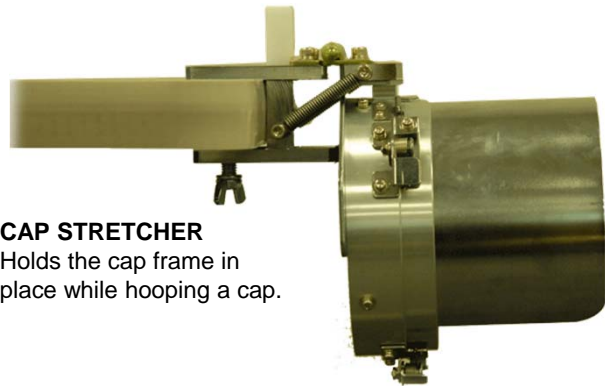
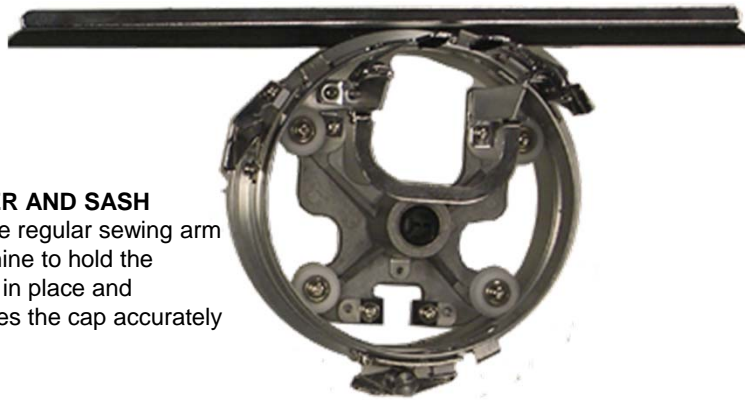
1. **Digitize a running stitch that follows the complete outline of the design.** Sequence it to sew first so it's covered up by the final stitching, and make sure that it sews just inside the edges of any fills or satin stitching.
2. **Don't forget backing!** The purpose of the running stitch in step 1 is to anchor the cap to the backing so it doesn't shift. So basically, you're depending on the stiffness of the backing, which will not shift.

Cap Sewing with HAPPY's HCD2-1501

Shown below are the parts of the cap sewing kit that come with your HCD2-1501 machine.

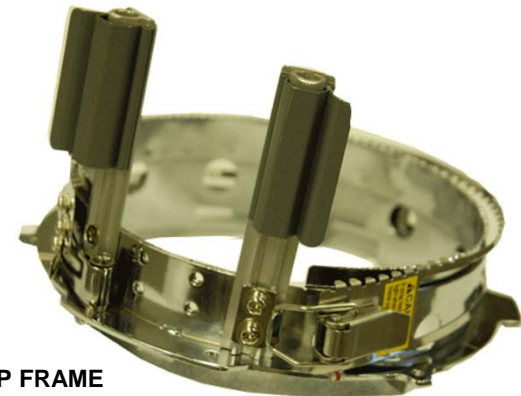
CAP DRIVER AND SASH

Replaces the regular sewing arm on the machine to hold the hooped cap in place and rotates/moves the cap accurately as it sews.



CAP STRETCHER

Holds the cap frame in place while hooping a cap.



2 each WIDE CAP FRAME

Allows a max sewing field of 3in H x 14.1 in W, allowing front and sides to be sewn in 1 hooping.

Cap Sewing with HAPPY's HCD2-1501

Preparing for Cap Sewing: Follow the steps on this page and the next to prepare the machine for cap sewing and install the cap driver.

1. With the machine powered on, select cap sewing mode by pressing these buttons:



- Press the Frame Select/ Position Adjust button in the main drive screen



- In the screen that appears, press the frame select button at the top.



- Choose cap sewing mode by pressing this button, then choosing the wide cap option. (HCD2 comes standard with the wide cap frames.)

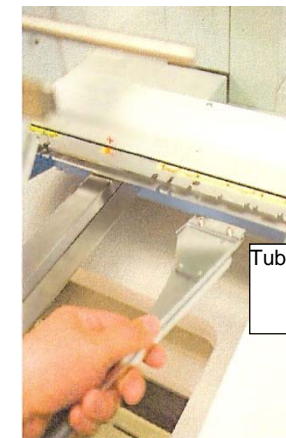
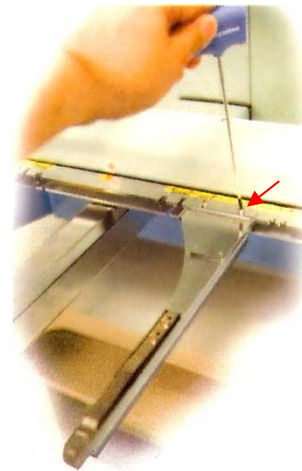


- press the HOME or ESC key to exit the frame select screen. Then, center the design and pantograph to the cap sewing area by pressing this button.



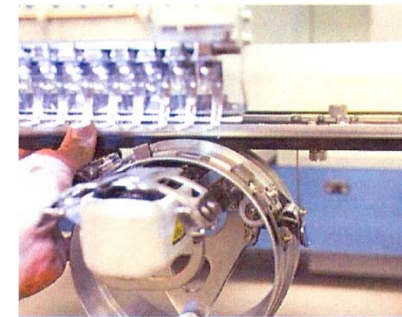
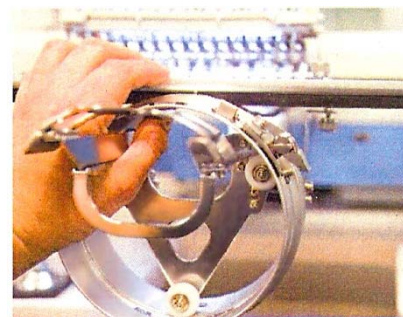
- press the HOME or ESC key one more time to exit back out to the main Drive/Sewing screen.

2. Remove the 2 tubular arms by loosening the 4 screws (2 per arm) that hold each of the arms to the machine, using the 3mm hex wrench included in your toolkit.



Tubular arm being removed

3. Slide the cap driver onto the machine over the bobbin (rotary hook) arm as shown below.



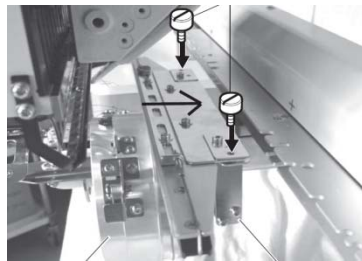
Cap Sewing with HAPPY's HCD2-1501

Preparing for Cap Sewing *continued*

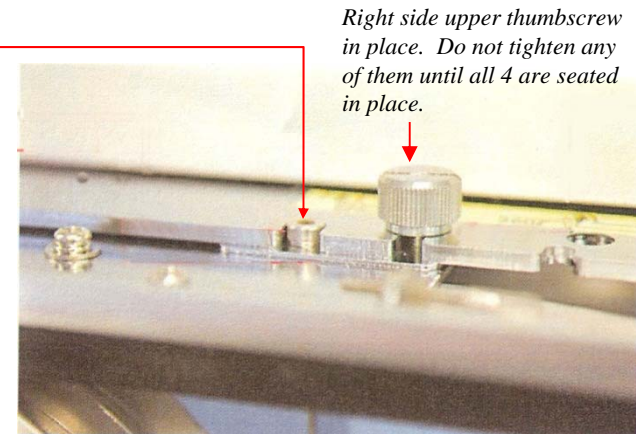
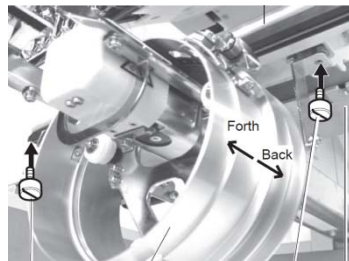
4. Align the driver so that these screws slide into this slot on either side.

Then, insert the 4 included thumbscrews as shown below and on the right. Do not tighten any until all 4 are seated according to the photos below and on the right.

Insert the upper thumbscrews...

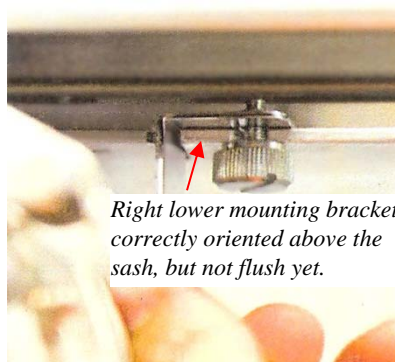


Insert the lower thumbscrews.

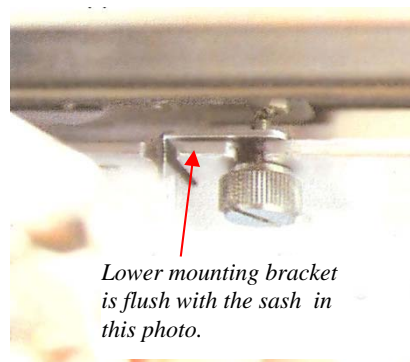


Right side upper thumbscrew in place. Do not tighten any of them until all 4 are seated in place.

5. Ensure that the lower plates install above the sash, and align flush as shown below. THIS IS VERY IMPORTANT! When properly aligned, tighten down all 4 thumbscrews.

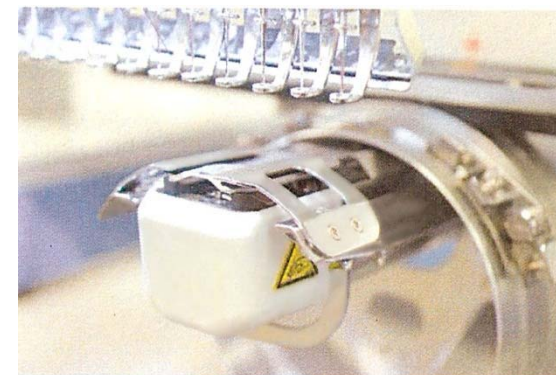


Right lower mounting bracket correctly oriented above the sash, but not flush yet.



Lower mounting bracket is flush with the sash in this photo.

6. When finished and centered properly, driver & guide plates should appear as shown below.



Cap Sewing with HAPPY's HCD2-1501

Follow the steps on these pages to hoop a cap on the wide cap frame.

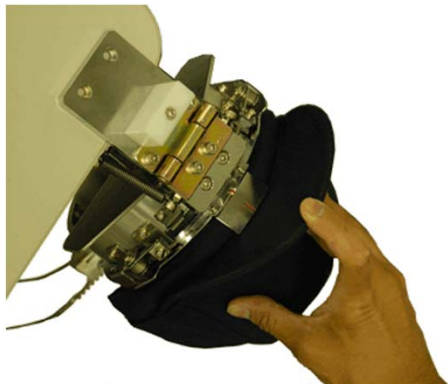
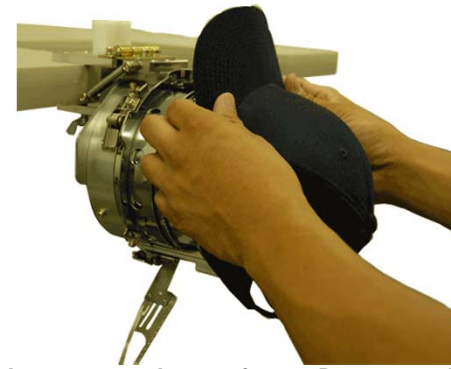
1. **Secure the cap stretcher to the edge of a thick enough table surface** to accommodate the clamp screw.
Tighten with the included wing nut.



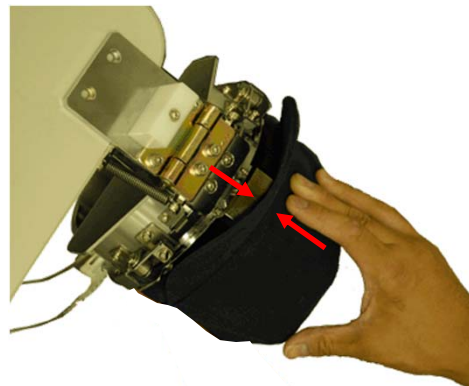
1. **Mount the cap frame on the cap stretcher.**
Be sure the pegs from the clamps on the stretcher meet the holes on the cap frame.



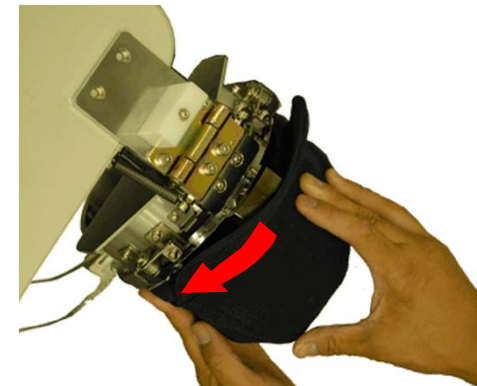
2. **Open the strap on the cap frame and place the cap onto the cap frame.** Be sure to also remove the clips at the rear.



4. **Ensure the sweat band slides under the centering tab.**



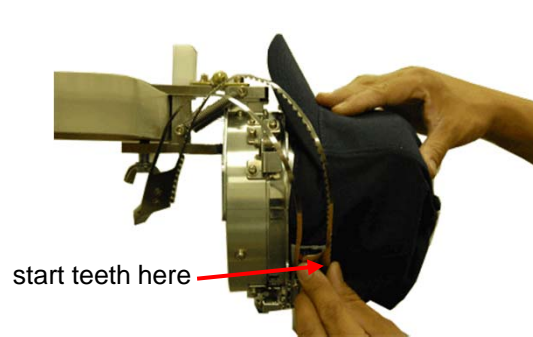
5. **Ensure the cap's center seam is aligned exactly with the red center mark.**



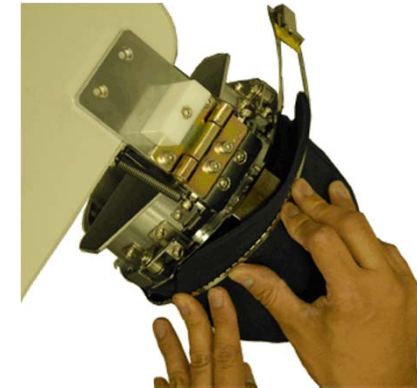
6. **Hold the cap at the center seam and with your left hand, smooth any left-side wrinkles or slack away from the center.**

Cap Sewing with HAPPY's HCD2-1501

Follow the steps on these pages to hoop a cap on the wide cap frame.



7. Start placing the strap along the left side of the cap. Ensure the teeth fall directly over the seam at all points as you continue placing the strap clockwise around the cap.



8. Make sure the teeth also grip the seam where the cap's bill meets the riser.



9. While keeping the strap's teeth tightly in place, check center alignment once more before fastening the buckle on the right side.



10. Fasten buckle.



11. Smooth any remaining slack around the sides, pushing towards the back of the cap and apply the 2 clips.