EARLY MODEL HCM CONTROL PANELS

CONTROL PANEL FUNCTIONS

There are 8 buttons on the control panel:

1. **'POSI'** key   - When the machine is stopped and the frame move key is used, pressing this button will move the frame to its original positions.

2. **'JUMP'** key   - This button will cause all heads to go into jump mode (meaning that all heads will not saw).

3. **'TOP'** key   - When you stop the machine and press this button, the machine will go back to the start of the start of the design.
The machine will use the stop point as the origin for the starts of the design. This will allow you to start the design again with one key-stroke.

4. **'DISP'** key   - This key will allow you to select the information shown on the display (see 'DISPLAY').

5. **'DRIVE'** key   - Pressing this button will select among the 4 drive modes
   1. **'MEMORY'** –To sew a pattern in memory.
   2. **'READ'** – Load a design into memory.
   3. **'TAPE'** – Sew directly form tape.
   4. **'FRM RST'** – Position memory and power failure return.
        Note: Press **'ORIG'** after selecting a drive mode.

6. **'ORIG'** key - This button has 3 functions:
   1. Cleaning error codes from the display panel.
   2. Entering a drive mode selected with the **'DRIVE'** key.
   3. Pressing the **'ORIG'** key while simultaneously pressing any of the **'FRAME MOVE'** keys return the frame to the origin and starts the design over.

7. **'FRAME MOVE'** keys   - These four keys allow you to move the frame.
Each press of a key will move the frame 0.1mm. Holding a key down will move the frame faster.

8. **'NEEDLE MOVE'** keys   - These two keys will change the active needle.

'DISP' KEY FUNCTION

The display consists of 3 display areas: ##, ###, ####.   Pressing the **'DISP'** key will cycle between 6 modes.

1st ##	= Pattern to be sewn
###	= Needle bar number
####	= Total number of stitches sewn from the current pattern

2nd ##	= BLANK
###	= 'ALL'
#####	= Total of all stitches sewn since resetting this number (press '1' key to reset)

3rd ##	= BLANK
###	= Active needle bar number
#####	= Sewing speed of machine

The information displayed in the 4th and 5th display depends of the setting of internal switch 2-4.

If 2-4 is **'OFF'** the following are displayed:

4th ##	= 'H'
###	= 'POS'
#####	= Distance frame has moved from stop point (x-axis)

5th ##	= 'Y'
###	= 'POS'
#####	= Distance frame has moved from stop point (y-axis)

If 2-4 is **'ON'** the following are displayed:

4th ##	= 'H'
###	= 'DIS'
#####	= Distance frame has moved from origin (x-axis)

5th ##	= 'Y'
###	= 'DIS'
#####	= Distance frame has moved from origin (y-axis)

6th ##	= BLANK
###	= BLANK
#####	= BLANK

STARTS/STOP BUTTONS

1. The red buttons located between the heads have the same functions as moving the bar switch to the left.
2. The green buttons located between the heads have the same function as moving the bar switch to the right.

    Note: These buttons will not activate the frame trace mode. Use the bar switch to activate this function.

EMERGENCY STOP BUTTONS

The red emergency stop buttons located between the heads remove power from the machine immediately. Use these buttons in case of emergency only. Do not use these buttons for normal stopping of the machine. Use the read stop buttons, or the bar switch instead.

MACHINE BAR SWITCH

1. Push bar switch right to start sewing.
2. Push bar switch left to stop sewing and move the frame back one stitch.
    a. Pushing bar switch left after machine stops will move the frame back one stitch.
    b. Holding bar switch left for 20 stitches will cause frame to move back through design at a faster speed without the operator needing to hold the bar switch. Move the bar switch left to stop the frame.

FRAME TRACE MODE

1. If machine is stopped, rotating rod toward you will cause the **'BAR SWITCH'** light to come on. This puts the machine in Frame Trace Mode.
2. Pushing the bar switch to the right will move the frame forward through the design. After 20 stitches (or 10 steps) frame will continue to move without having to hold the bar switch to the right Push the bar switch to the left to stop the forward movement.
3. Pushing the bar switch to the left will cause frame to move backward through the design. Holding the bar switch to the left for more than 10 stitches will cause the frame to move backward without having to hold the bar switch to the left. Push the bar switch to left to stop the backward movement.
4. Rotate the bar toward you to cancel Frame Trace Mode. – This will cause the **'BAR SWITCH'** light to go out.

    Note: after moving frame backwards, you must press the mending button (white button) on the heads you want to sew if the thread brad lamp for the head is not lit.

THREAD CUT SWITCH

Pressing the thread cut switch will cause the machine to sew one stitch and trim the upper and lower threads.

Note: If the **'JUMP'** lamp on control box is illuminated, only the lower thread is cut.

THREAD BREAK DETECTING UNIT

Switch-Over Switch
This switch turns the head on or off and disables the thread break detector.

1. Upper –[Thread break detection 'ON']
   When there is a thread bread, the thread break indication lamp lights and the machine stops. The machine will move backwards 4 stitches.
2. Middle –[Thread break detection 'OFF']
3. Lower –[Individual jump]
   When the switch is set in this position, this head will be in jump mode.
   (Head will not sew).

Mending Switch
When the machine is backed up using the bar switch, press this button on any heads which do not have a thread break lamp lit but mush be sewn.

Thread Break Lamp
This lamp will identify the sewing head(s) that have thread breaks.
Flashing light – machine sensed a thread break.
Steady light – operator has pressed the mending switch.

SETTING LIMIT SWITCHES

The machine limit switches are designed to prevent the machine frame from moving outside a desired area. These are especially important for machines with special attachments which may be damaged by movement beyond a specified range.

1. Move frame to the uppermost limit desired.
2. Move upper limit switch so that the switch is closed by contact with the frame carriage.
3. Move frame to the lower most limit desired.
4. Move upper limit switch so that the switch is closed by contact with the frame carriage.
   This switch is located under the table, behind the machine.
5. Move frame to the left-most limit desired.
6. Move left limit switch so that the switch is closed by contact with the frame carriage.
   This switch is located below the table in the front right of the machine.
7. Move frame to the right-most limit desired.
8. Move right limit switch so that the switch is closed by contact with the frame carriage.
   This switch is located below that table in the front right of the machine.
   Note:
   1. Changing the limit switches will affect the frame-reset position, as its position is

determined by the position of the limit switches.

2. If you accidentally leave the limit switches in a smaller size than the design you are dewing the design may lose registration if the frame limits are reached.

DATA INPUT – FROM INTERNAL DISK DRIVE

1. Turn disk drive unit **'ON'**.

2. Insert data disk.

3. Press the **'Drive'** key until **'READ'** lights.

4. Press the **'ORIG'** key. The display will indicate the following:
   (1) Memory number being loaded.
      Note: you may want to record the design number future use.
   (2) Number of stitches available in memory.

5. Press the **'CURSOR'** key until **'OUTPUT'** is selected.

6. Press the **'SET'** key.

7. Press the **'CURSOR'** key until desired disk format is selected.

8. Press the **'SET'** key.

9. Use the **'CURSOR'** key to select the design you want to read.

10. Press the **'SET'** key. The display will indicate, "Are you sure?"

11. Press the **'SET'** key.

12. Machine will pause for a moment.

13. Machine will beep twice.

14. Machine will load the design counting stitches.

15. Machine will stop counting and beep twice.

16. Press **'DRIVE'** key until **'MEMORY'** lights.

17. Press the **'ORIG'** key.

18. Remove disk.

SETTING ORIGIN FOR FRAME RESET

1. Move the frame to the desired origin.
   Note: If you are using the 'offset' feature, do it first.

2. Press **'DRIVE'** key until **'FRM RST'** lights.

3. Press **'ORIG'** key.

CAUTION!
The frame will move quickly to the front bottom position and return to origin.
Be sure that no loose objects are on the table.
Be sure that the presser feet are _not_ lowered, as they may strike the frame and cause damage!
Do not use this feature if tubular <u>flames</u> or arms are installed!
Do not use this feature if cap drives are attached to the machine unless the limit switches are set for cap frame use!

4. Press **'0'** key.

5. Press **'DRIVE'** key until **'MEMORY'** lights.

6. Press **'ORIG'** key.

RESUMING AFTER POWER FAILURE

1. Turn main shaft to **'C'** position.

2. Turn machine power on.

3. Machine will display'E-2'

4. Press the **'ORIG'** key.

5. Press the '**DRIVE'** key until **'FRM RST'** lights.

6. Press the **'ORIG'** key.

CAUTION!
The frame will move quickly to the front bottom position and return to origin.
Be sure that no loose objects are on the table.
Be sure that the presser feet are _not_ lowered, as they may strike the frame and cause damage!
Do not use this feature if tubular _flames_ or arms are installed!
Do not use this feature if cap drives are attached to the machine unless the limit
switches are set for cap frame use!

If you want the machine to return to the design origin:

> 1. Press the **'TOP'** key.
>
> 2. Press the **'DRIVE'** key until **'MEMORY'** lights.
>
> 3. Press the **'ORIG'** key.

If you want the machine to return to the last stitch sewn:

> 1. Press the **'POSI'** key.
>
> 2. Press the **'DRIVE'** key until **'MEMORY'** lights.
>
> 3. Press the **'ORIG'** key.

SELECTING A PATTERN

1. Press the **mode** key until **pattern** lights up.

2. Press the **call** key.

3. Enter the number of the pattern.

4. Press the **Data/Set** key.

5. Press the **drive** key.

Note: Steps 2 – 4 can also be accomplished by using the next key. This key will advance the display one pattern each time the key is pressed.

ERASING PATTERNS

1. Press the **mode** key until **pattern** lights up.

2. Press the **call** key.

3. Enter the number of the pattern.

4. Press the **Data/Set** key.

5. Press the **shift** key and the **0** at the same time. Wait for the display to stop flashing.

6. Press the **drive** key.

PATTERN WRITE ENABLE / PROTECT

1. Press **Mode** key until **Pattern** lights up.

2. Press the **Call** Key.

3. Enter the number of the pattern.

4. Press the **shift** and **mode** key at the same time.

5. Press the **set** key.

6. Press the **Call** Key.

7. Press the **2** Key.

8. Press the **Data/Set** Key.

SETTING AUTOMATIC COLOR CHANGE SEQUENCE

1. Press the **mode** key until **change** lights up.

2. Press the **Data** key.

3. Enter the needle number you wish to use.
    Entering **0** will cause the machine to stop at each color change.
    Entering **1 – 8** will cause the machine to change to the corresponding needle.

4. Press the **+/-** key to enter a stop command.

5. Press the **Next** key.

    Repeat steps **3 – 5** as needed to choose a needle for each color change.
    After the last color change, the machine will beep **E** will appear

6. Press **Drive** to return to **memory** or **mode** to select other functions.

SETTING OFFSET BY TEACHING

1. Move the frame to the origin point.

2. Press the **Q** Key.

3. Move the Frame Offset position.

4. Press the **8** Key

5. Press **Auto-Origin** key if the key is not lighted

    Note: 1. Once offset is set, it will always be used
          2. If you want to use the frame-reset, do offset first.
          3. There is no visual indication of offset.

CLEARING OFFSET

1. Press the **mode** key until **adjust** lights up.

2. Press the **Data/Set** key.

3. Press the **O** key.

4. Press the **next** key.

5. Press the **O** key.

6. Press the **drive** key.

SETTING PATTERN SCALE

1. Press the **mode** key until adjust lights up.

2. Press the **Data/Set** key. The display will indicate H representing the x axis.

3. Enter the x-axis scale (50% - 100%)

4. Press the **Next** key.

5. Enter the y-axis scale (50% - 100%)

6. Press the **drive** Key

7. Press the scale key.
   *Note: This function is active only when the **scale** key is illuminated.*

SETTING ROTATION ANGLE

1. Press the **mode** key until the **adjust** lights up.

2. Press the **call** key.

3. Press the **3** key.

4. Press the **data/set** key.

5. Enter a number from 0 –359 degrees. This is the rotation angle.

6. Press the **Drive** Key.

7. Press the angle key to activate the function. The button will light up.
   Note: *This function is active only when the angle key is illuminated.*

SETTING STITCH WIDTH

1. Press the **mode** key until **Adjust** lights up.

2. Press the **call** key.

3. Press the **4 key**.

4. Press the **Data/Set** key

5. Enter a number from **0 – 4.**
   This is the increase in stitch width.
   0 = +0.0mm. / 4 = +0.4mm.

6. Press the **drive** Key.

7. Press the **width** key to activate the function.
   Note: *This function is active only when the width key is illuminated.*

REPEAT SEWING

1. Press the **mode** key until the **repeat** lights up.

2. Press the **data/set** key.

3. Press either:
   a. 0 for horizontal.
   b. 1 for vertical.
4. Press the **next** key.

5. Enter the number of pieces horizontally.(1 – 10)

6. Press the **next** key

7. Enter the number of pieces vertically.(1 – 15)

8. Press the **next** key

9. Enter the horizontal distance from the end point of one design to the start point of the next.
   a. Positive numbers move the design to the right.
   b. Negative numbers move the design to the left.

10. Press the **next** key.

11. Enter the vertical distance from the end point of one design to the start point of the next.
    a. Positive numbers move the design to the up.
    b. Negative numbers move the design to the down.

12. Press the drive key.

13. Press the **repeat** key to activate the function. The button will light up.
    Note: This function is active only when the repeat key is illuminated.

PATTERN EDITING - #1 PATTERN COMBINATION

1. Press the **mode** key until **edit** lights up.

2. Press the **call** key.

3. Press the **1** Key.

4. Press the **data/set** key.

5. Press the **0** key.

6. Enter the **pattern number** you want the combined designs to be.

7. Press the **next** key.

8. Press either:
     a. 0 to ignore the adjustments.
     b. 1 to use the adjustments set with each design.

9. Press the **next** key.

10. Press either:
     a. 0 to ignore the adjustments.
     b. 1 to use the adjustments set with each design.

11. Press the **next** key.

12. Enter the jump stitch length (0.1 – 12.1 mm.)

13. Press the **next** key.

14. Enter the number of the first pattern to be joined.

15. Press the **next** key.

16. Enter the number of the second pattern to be joined.

17. Press the **next** key. Repeat the last two steps for as moany design as you want to join together.(max of 9)

18. Press the **data/set** key and the shift key at the same time.

19. Press the **drive** key.

PATTERN EDITITING # 2 COLOR EXTRACTION

1. Press the **mode** key until **edit** lights up.

2. Press the **call** key.

3. Press the **1** key.

4. Press the **data/set** key.

5. Press the **1** key.

6. Enter the pattern number you want to extracted design to be.

7. Press the **next** key.

8. Press the **next** key.

9. Press the **next** key.

10. Press the **next** key.

11. Enter the number of the color change to start the extraction from.

12. Press the **next** key.

13. Enter the number of the color change to stop the extraction at.

14. Press the **data/set** key and shift key at the same time.

15. Press the **drive** key.

PATTERN EDITING #3 COLOR DELETION

1. Press the **mode** key until **edit** lights up.

2. Press the **call** key.

3. Press the **1** key.

4. Press the **data/set** key.

5. Press the **2** key.

6. Enter the pattern number you want the extraction to be.

7. Press the **next** key.

8. Press the **next** key.

9. Press the **next** key.

10. Press the **next** key.

11. Enter the number of the color change to start deleting from.

12. Press the **next** key.

13. Enter the number of the color change you want to stop deleting at.

14. Press the **data/set** key and the **shift** key at the same time.

15. Press the **drive** key.

TEACHING - ADDING COMMANDS

1. Sew the design or use the frame trace to move the pattern to the position where the additional command is needed.

2. Press the **mode** key until **teach** lights up.

3. Press the **call** key.

4. Press the **1** key.

5. Press the **data/set** key.

6. Press either:
   a. **1** key for thread trim.
   b. **2** key for thread trim and stop machine.
   c. **3** key for a slow speed command.
   d. **4** key for a return to normal speed.

7. Press the **drive** key.

TEACHING – REMOVING COMMANDS

1. Press the **mode** key until **teach** lights up.

2. Press the **call** key.

3. Press the **1** key.

4. Press the **data/set** key.

5. Press the **nex**t key until the command appears in the display. To verify that the correct command has been chosen press the +/- key. The stitch number at which the command was entered will be displayed briefly.

6. Press the **0** key.

7. Press the **drive** key.

SETTING FRAME - OUT BY TEACHING

1. Insert a stop with the **+/-** key at each color change where a frame-out is needed. *(See Auto Color change section.)*

2. Start to sew the design. The machine will stop at each color change with a stop added to it.

3. Use **frame keys** to position frame at the desired frame-out location.

4. Press the **9 key**. Frame will return to its previous position.

5. Continue Sewing.

    Repeat steps 2 – 5 for each color stop.

    Note: *After the design is complete, the frame out locations will be stored in the design memory. This function is active only when the frame-out key is illuminated.*

MAGNETIC THREAD HOLDER

Each sewing head has a magnetized rubber thread holder for it. The purpose of these holders is to prevent the take-up levers on unused heads from unthreading the needles.

If a sewing head will not be used, the thread holder should be placed over the head cover plate preventing the threads from being pulled out of the needles. Remember to remove them utilizing the head.

Note: After a long period of placement, the constant flexing will cause the threads to break at the point where they meet the thread holders.

INTERNAL SWITCHES

This section describes the meaning and use of the switches on the righ side of the control panel. When changing a switch setting, do so gently. After changing any switch in the first section turn the machine off and then on for the new selection to take affect. Changing a switch in the second section will cause the change to take affect without restarting the machine.

Section 1

1-8 Priority on thread cut.

If a color change after a jump stitch this switch will choose if a trim is made.
This switch is normally set to **OFF** (no Trim)

1-7 Length of upper thread trim.

Set this witch to on if a longer top thread is desired after trimming.
This switch is normally set to **OFF** (standard length)

1-6 Empty read stitch.

Set this switch to on if there are too many empty stitches in a design.
This switch is normally set to **OFF** (read)

1-5 Combine of jump.

Set this switch to on to combine short jump stitches into long jump stitches.
This switch is normally set to **OFF** (no conversion)

1-4 Slow Start after thread cut.

This chooses how many stitches are made at slow speed after a trim.
This switch is normally set to **OFF** (5 stitches)

1-3 Automatic thread cut.

This switch turns the automatic thread trimmers on and off.
This switch is normally set to **ON** (trim)

1-2 Maximum width.

This switch will set the maximum stitch length before jump stitches are made.
Off = 12.1mm.   On = 4.00mm.
This switch is normally set to **OFF** (12.1mm.)

1-1 Revolution Mode

This switch will select between standard and high speed. With high speed, the machine will vary speed according to stitch length. With standard speed, machine will sew at one speed. Maximum speed is less in standard mode.
This switch is normally set to **OFF** (high speed)

2-8 Tape format.
In addition to being able to read Happy and Tajima tapes, the machine can also read ZSK and Barudan, but the operator must choose between them.
OFF = ZSK / **ON** = Barudan This switch is normally set to **ON** (Barudan)

2-7 Frame trace.
When using fram trace features the frame move in steps of 1 or 10
OFF = 1 / **ON** = 10 This switch is normally set to **OFF** (1)

2-6 Mending.
When the machine detects a thread break it will move back through the design 4 stitches. When it is started again the heads which had a thread break will start to sew, until they reach the point the thread broke. All of the heads will then engage and continue to sew. Setting this switch to on will eliminate this and start all the heads to sew. This switch is normally set to **OFF**

2-5 Moving Back at the time of the thread break.
This switch sets the number of stitches the machine will move back after thread break. **OFF** = 4 Stitches / **ON** = 0 Stitches
This switch is normally set **OFF** (4 Stitches)

2-4 Indication of moving distance.
This function affects the position display. Set this switch to OFF to display the frame position in relation to the stop point. Set this switch to ON to display the position in relation to the design origin.
This switch is normally set to **OFF**.

2-3 Thread trim at empty Jump
If a design has an empty jump followed by additional jumps. Setting the switch to ON will cause the machine to trim. Setting the machine to OFF will cause the machine not to trim.
This switch is normally set to **OFF.**

2-2/2-1 Thread cut at continuos jump. These switched work together to make the machine trim after a series of consecutive jumps.

2-2	2-1	Result
OFF	OFF	NO Trim
OFF	ON	Trim after 3 jumps.
ON	OFF	Trim after 5 jumps.
ON	ON	Trim after 7 jumps.