

B E V T

Instruction Manual



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Trade Marks

- 1)  and CompactFlash™ are the trade marks of SanDisk Corporation.
- 2) Ethernet is the trademark of the Fuji Xerox Inc.
- 3) WINDOWS™ is the trade mark of the Microsoft Inc.

Chapter 1. Safety Instructions

This chapter contains information on the following.

1. Safety Instructions
2. Grounding Instructions
3. Warning Labels

1. Safety Instructions

Before using the machine make sure to read this manual thoroughly and follow all instructions.

The icons in the manual show the importance of the contents.
Acknowledge the following descriptions beforehand.

Icons



Safety information about
Protecting yourself.



Important information about
protecting the machine.

Warning

This machine is made for an industrial use.
This is an embroidery machine. Do not use for other applications.

Read the instruction manual throughly and acknowledge the operaion before using the machine.

Only those that know how to operate the machine should run the machine. Do not let other personel operate the machine.

Operate the machine only from the front. Do not load work to the machine from the back side.

Keep hands and face away from needles, take-up lever, trimmer, shafts, pulley, belts, gears,etc. Do not operate the machine without the protective covers for the shaft, pulley, belt and gear in place.

Keep long, necklaces, and bracelets away from the machine while operating.

Only one person should operate the machin.
One operator can start the machine while another operator is working on the machine accidentally.
Be sure nobody is working on the machine before starting it.
Close attention is necessary when the embroidery machine is used by or near children.

Follow the electrical specifications instructed.

Do not modify or dismantle the machine.
It can cause fire or malfunction.

Connect this embroidery machine to a properly grounded outlet only.

Connect the power plug firmly. Incorrect contact to the power plug may cause electrical shock.

Do not use the machine in the humidiated atomosphere. It can cause a fire or electrical shock.

Do not damage, modify, pull or twist the power cable. Heating or heavy load to the cable damages the cable and it can cause fire or electrical shock.
Call for a service technician to fix the cable.

Keep water or chemical substances away from the controller.
Disconnect the power to the machine and call a service technician.

 **Warning**

Keep metal and foreign objects away from the controller, to avoid a short to the circuit, fire or electrical shock.

Disconnect the power to the machine and call a service technician if any foreign objects go into the controller.

 **Caution** Adjustment of the machine

Stop the machine before threading the machine or checking the embroidery in process.

Disconnect the power to the machine before turning any shafts by hand.

Disconnect the power to the machine or turn OFF the machine power before opening the controller.

Caution

Avoid direct sunlight, heaters, boilers or any sources of heat from the machine.
Do not use the machine outdoors.

Do not use the machine near heat. It may cause fire.

Clean the ventilation opening once a week.
Use vacume to claen the controller.
Poor ventilation can cause fire or damage of the machine.
Poor ventilation can cause an overheating error.

Unplug the power cable before servicing the controller.
Residual power may cause electric shock. Wait for 4 minutes before opening the cover.
Some parts in the controller can be very hot. Be sure not to burn your hands.

Use only attachments and parts recommeneded by Barudan.
Wrong parts can damage the machine.

Do not use bent or wrong sized needles.
It can break the needle or damage the fabric.

Do not force the fabric while sewing. It can cause the needle to break or bend.

Turn OFF all power switches and unplug the power cable after use.

*Follow the lubrication instruction on the machine.

2. Grounding Instructions

- 1) Apply grounding to the machine.

Grounding avoids electric shocks.

Power cable on the machine has plug with a grounding terminal.

Use appropriate plugs or outlet which conform to the requirements of the power company or the law.

Danger! : Not grounding the machine may cause electrical shock.

- 2) Ask for a service call if the power connection is not clearly understood.

- 3) Do not use adaptor to the power plug.

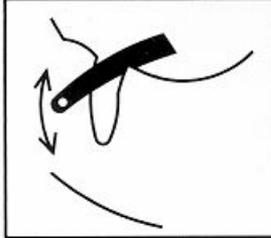
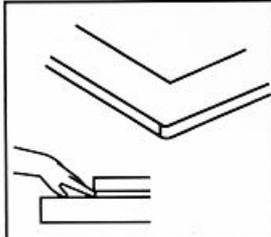
Ask for a service call to connect the machine to another power source.

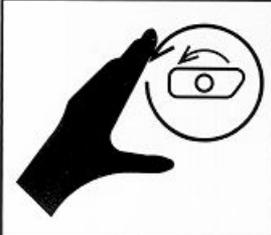
- 4) Ask for a service call from the power company to check the connection from the ground to the power outlet.

*Check the voltage and capacity of the power source before plugging the power cable.

3.Warning Labels

GPay attention during operation to the parts labeled.

Warning Labels	Contents
 <div data-bbox="480 600 954 837"> <p>⚠ WARNING</p> <p>Pointed needle will cause severe injury. Keep hand away from sewing head while operating.</p> </div>	Needle Hazard Warning Lable
 <div data-bbox="480 952 954 1189"> <p>⚠ WARNING</p> <p>KEEP COVER CLOSED. Moving part can catch hair, finger, hand or clothes and will cause severe injury. Turn off power before servicing machine.</p> </div>	Hair Warning Label
 <div data-bbox="480 1303 954 1541"> <p>⚠ WARNING</p> <p>Moving part can cause injury. Keep hand away from sewing head while operating.</p> </div>	Take-Up Lever Warning Label
 <div data-bbox="480 1655 954 1892"> <p>⚠ WARNING</p> <p>Moving frame can cause severe injury. Keep hand away from table top while operating.</p> </div>	Frame Warning Label

Warning Labels	Content
 <p data-bbox="494 347 965 582"> ⚠ WARNING Rotating hook can cause severe injury. Keep hand away from rotating hook while operating. </p>	<p data-bbox="1077 448 1332 481">Hook Warning Label</p>
 <p data-bbox="494 705 965 940"> ⚠ WARNING KEEP COVER CLOSED. Nip point will catch hair, finger, hand or clothes, and will cause severe injury. Turn off power before servicing machine. </p>	<p data-bbox="1077 784 1332 817">Belt Warning Label</p>

Chapter 2. Introduction

This chapter contains the following information.

1. Specification
2. Advantage

1. Specification

- 1) Design Capacity/Stitch Capacity : 30 designs /10 million stitches
- 2) Display : LCD 320 x 240 16bit Color LCD
- 3) Power Source : AC100V Single
AC200V Single
(+/-10%, 50/60Hz)
- 4) Power Consumption : 1KVA /Varies for each model
- 5) Temperature : 5 - 45 Degree Centigrade (Active)
-20 - 60 Degree Centigrade (Storage)
- 6) Humidity : 20 - 80 %RH, No condensation allowed
- 7) Grounding : Grounding resistance to be less than 1000hm
(Type 3 grounding)
- 8) Main Motor : 3 Phase 200V 90W Motor Inverter Drive
- 9) Pantograph Drive Motor : Micro Step 5 Phase Motor
- 10) Head Number : 1
- 11) Speed : 200 - 1200rpm
(Max Speed is defined for each model)
- 12) Needle Number : Max.15 (Sliding Head)
- 13) CF Card Slot : X 1
- 14) Trimmer Compatible : Mark 5
- 15) Thread Break Detection
- 16) USB Port : USB1.1 (USB Board required)
- 17) Networking System : Ethernet (Ethernet Board required)
- 18) COM Port : 9600 - 115200bps (COM Board required)
- 19) Capable to drive Cap Frames (Cylinder Bed Model)
- 20) Capable to drive borer
- 21) Compatible to Sequin Device (Factory Option)
- 22) Compatible to a Barcode Reader (Option)
- 23) Emergency Stop Switch (Factory Option)

2 . Advantage

1) Easy Operation

The controller has a microcomputer and is designed for an embroidery machine.
More reliable than multipurpose control system.
Graphic User Interface with icons makes operating the machine easy.

2) High Speed Drive

The microcomputer chooses most efficient speed automatically(200-1200rpm).
*Max. Speed may vary for each model.

3) Quiet Drive

Inverter driven main motor allows powerful and quiet drive.
It also allows accurate speed control and stop position.
5 Phase Pulse Motor drives the pantograph at high speeds quietly.

4) Memory Capacity

The memory capacity is 10 million stitches and in 30 memory locations.

5) Design Information

Design Information such as total number of stitches, quantity produced, size,
Thumbnail of the design can be seen on the screen.

6) Networking

Optional Ethernet board allows the LAN networking of the machines.
Networked machines can share designs and monitored in real-time.

7) USB Port

Optional USB board allows a direct connection to the PC, receiving designs from a
PC.

8) CF (Compact Flash Memory) Card Slot

Read/load designs from the CF card. Compact Flash cards hold more designs and
stitches than a floppy disk.

9) Rotation, Mirror, Scale of the design

The controller can rotate the design 90degrees/in 1degree steps and can create mirror image of the design.

It also can scale the design length / width individually.

10) Automatic Origin Return

When a design is finished sewing, the pantograph returns to the start position of the design automatically. Allowing repeat work to be efficient.

11) Automatic Appliqué Position

The pantograph moves out to the programmed position, making it easier to lay the appliqué fabric correctly on the product. Can also be used to replace frames.

12) Other Functions

a. The controller allows cycle embroidery 1-200 or infinite (Setting : 201)

b. Automatic design conversion for socks.

c. Automatic layout for the Matrix embroidery

Creates a pattern arrangement controlling the number of times a pattern will sew horizontally and vertically and amount of space between each.

d. The colors (Needle No.) in a design can be easily changed and saved.

13) Start position

The start position of a pattern is saved.

14) Trace

The area to be sewn is shown on the screen and traced out by the pantograph.

15) Stitch Back Feature

Repairs stitches using the Stop key, stop the machine using the stop key, hold down the stop key till the pantograph reaches the desired position, and then let go.

Press it again to stop the pantograph.

16) Automatic speed control, Jump

The controller varies the speed of the machine automatically depending on the setting and stitch length to have better stitch quality. The controller gives automatic Jump Stitches as the stitch length reaches to set value. It also creates higher stitch quality.

17) Float

The pantograph can be moved without sewing to have the designated position to start sewing.

It also can move the pantograph directly to the designated position by typing in the stitch count.

18) Error Code

Errors are displayed on the screen in icon form.

19) Stand-By(Resume)

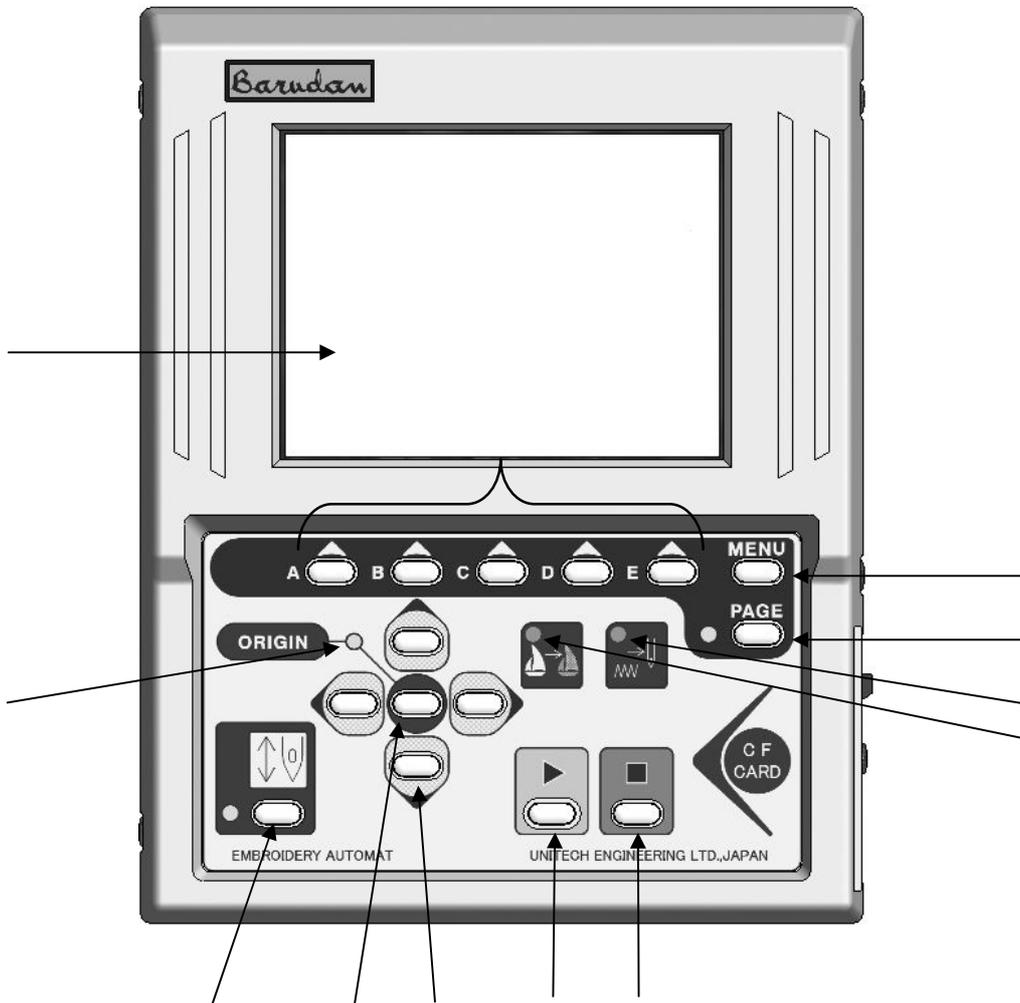
The machine can be turned OFF in the middle of a design. The machine resumes in the position where embroidery is stopped.

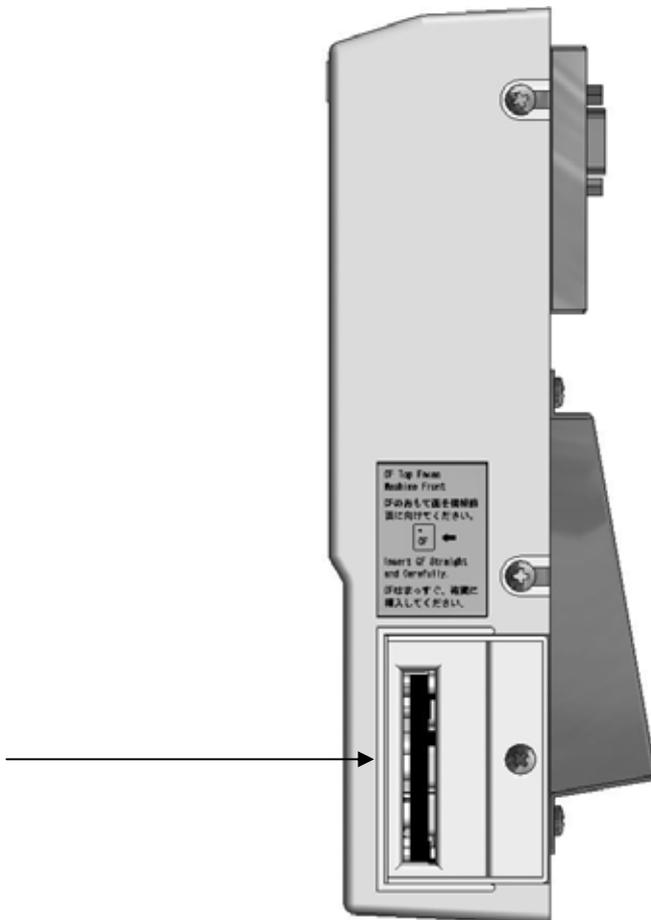
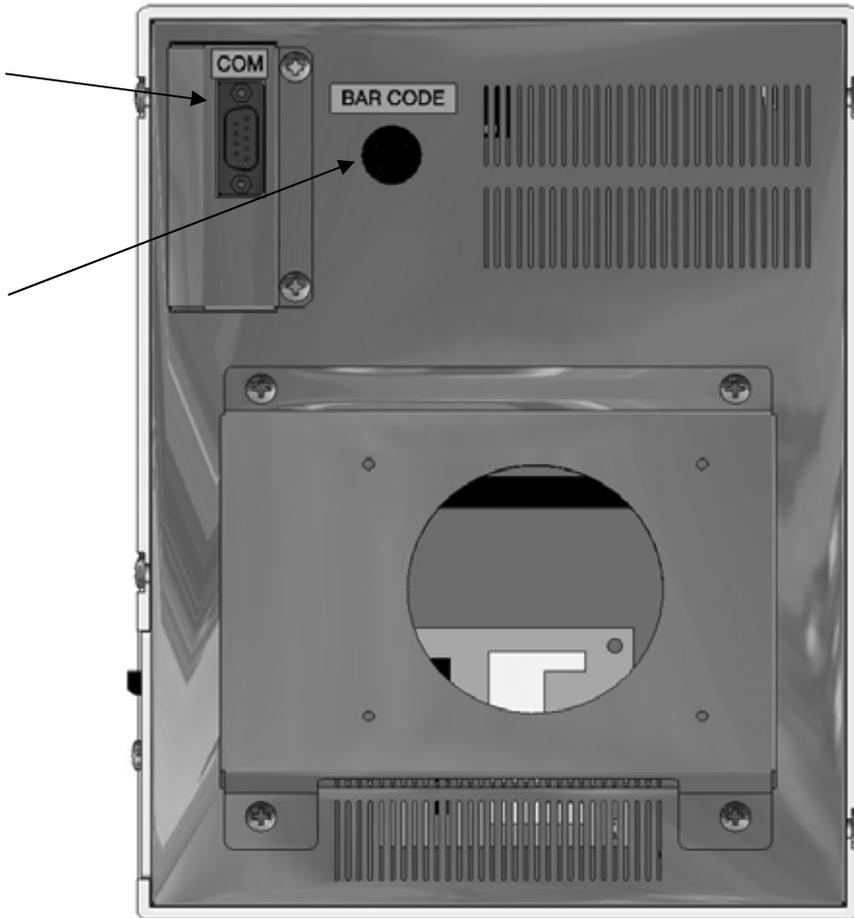
Chapter 3. Before Use

This chapter includes information on the following topics.

1. Automat
2. Turning ON /OFF the Machine
3. Origin Setting
4. Stand-by and Drive State
5. Switching Menu Icon Keys
6. Switching Screens
7. The Information on the Screen
8. The Information on the Extension Screen
9. Messages
10. Message to Start the Machine
11. Color Setting of the Display

1. Automat





1. LCD Display

Shows machine status, icons, design information

*Refer to “ Contents on the display ”

2. Icon key - the A, B, C, D, E-keys

The operation buttons assigned to functions displayed by icons.

3. Origin LED

When lit the pantograph is located at the origin.

Blinks when the Jog Keys are assigned to other functions.

4. Origin Key

Moves the pantograph to the origin.

When the pantograph is located at the origin, it moves the pantograph to the previous position in stand-by state, the position of the last stitch in Drive mode.

5. Jog Keys

Moves pantograph. Single stroke gives 0.1mm movement. Holding the button moves The pantograph in a continuous movement and the speed gradually increases.

Used to move the cursor for selecting.

6. Page Key

Switches screen

*Refer to “ Paging Screen ”

7. Menu Key

Switches the Menu Icon Keys

*Refer to switching the Menu Icon Keys

8. Drive Key

Places the machine in Drive mode, ready to sew.

9. Start Key

The machine starts sewing.

10. Stop Key

The machine stops sewing.

11. Float LED

Lit when the pantograph is moving through a pattern without sewing.

12. Teach LED

Lit when locating/changing existing function codes in a pattern.

13. COM (Serial) Port

This is to connect with RS-232 Cable.

This can be exchanged to LAN Card or USB Port.

14. PS / 2 Port

The PS/2 port for optional barcode reader.

Using barcode can skip some operations.

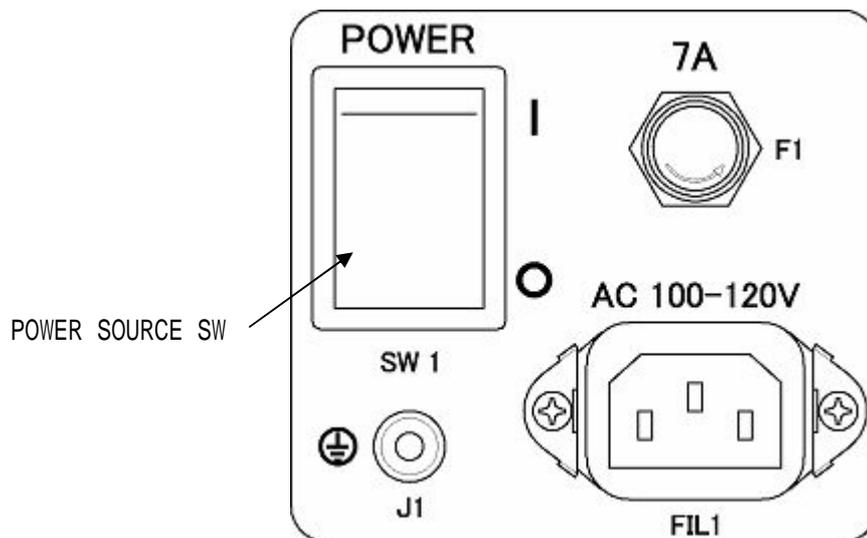
15. CF (Compact Flash Memory) Card Slot

The CF Card slot

Designs are loaded/saved onto the CF card. It also loads the system Software for the automat.

2. Turning the machine ON/OFF

2-1. Elite 2 (Pro / Junior)



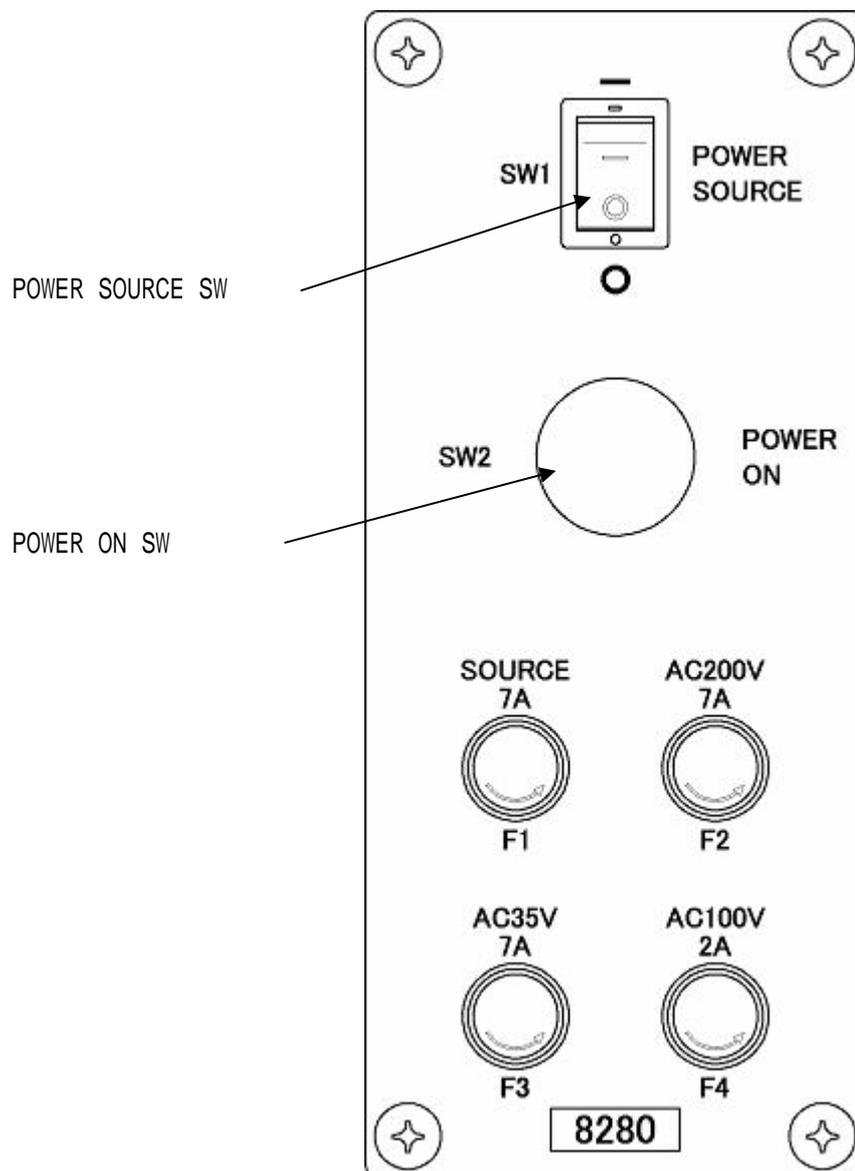
Turning the machine ON

Press POWER ON Switch.

Turning the machine OFF

Press POWER ON Switch to turn OFF.

2-2 . BEVT(CB)



Turning the machine ON

- 1) Press POWER SOURCE SW.
- 2) Press POWER ON SW.

Turning the machine OFF

Press POWER SOURCE SW to turn OFF.

3. Origin Set

When the machine is initially turned on the origin must be set.

- 1) Refer to "Turning ON/OFF the machine, turn ON the machine.
- 2) The display shows the screen below after showing BARUDAN logo.

Press the E-Key to move back the pantograph to the origin.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

*No operation would be allowed until origin setting finishes.

4. Stand-By and Drive Mode

The machine has two mode Stand-By, when it is not in a sewing mode but turned on and the Drive mode, ready to begin sewing.

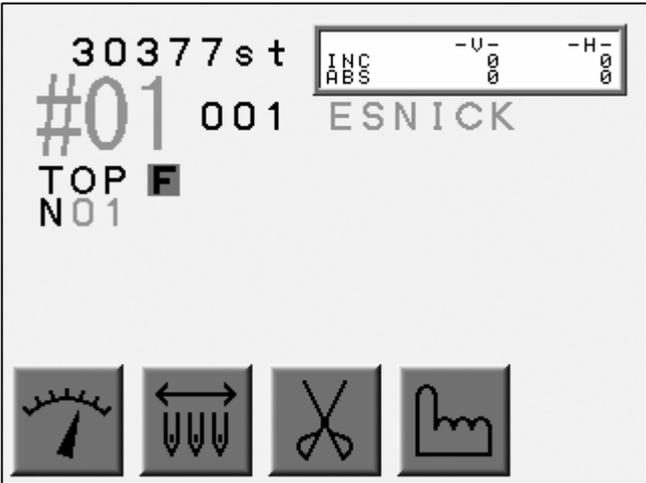
Refer to “Drive” in “Start Sewing” .

1) Stand-By mode : Usually machine is in the stand-by state when it is turned ON.

It is the state when sewing preparation takes place.

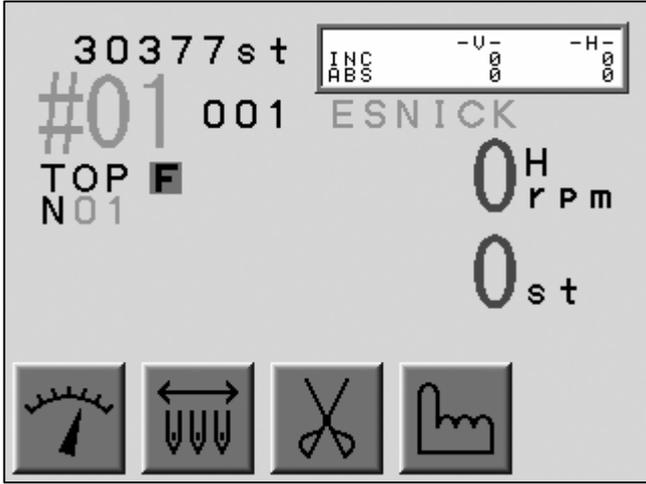
In this state, the design data can be selected and loaded.

Typical appearance of the stand-by state



2) Drive Mode : A design is chosen and it is ready to sew.

Typical appearance of the drive mode.



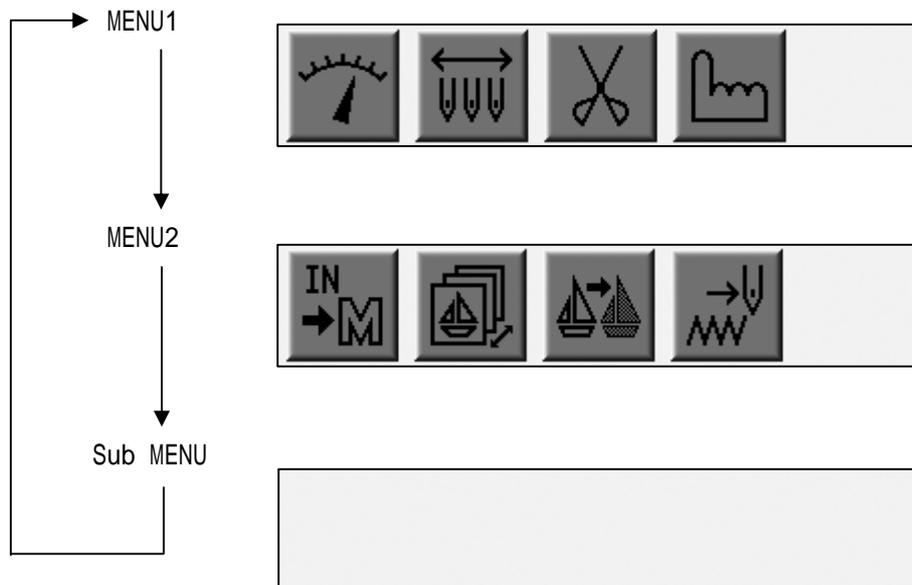
5 . Menu Keys

5 - 1 . Switching Menus

Menu keys (A - E) correspond to the icon commands directly above them on the LCD. The Menu key moves to the next set of commands. The icons change accordingly, while advancing through the various functions.

Press the menu key, to display the next set of commands (Menu 1 and Menu 2) are displayed as shown below.

Note: If you selected one of the Menu Icon Keys and you want to quit it, pressing the menu key exits the menu.

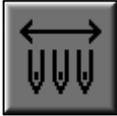


When "Network" is being set in the machine,



5-2 Menu Icon Keys

This explains all the Menu Icon Keys as shown below.

- 1)  Speed Key
Changes the machine speed.
- 2)  Needle Change Key
Manually changes the needle (Color).
- 3)  Trimming Key
Manually trims thread.
- 4)  Manual Key
Shows manual operation menu and parameter setting icon.
- 5)  Memory In Key
Reads a Pattern in to the machine memory through the COM Connection.
- 6)  Memory Key
Shows designs in the memory and CF card. Outputs the design.
Shows drive mode.
- 7)  Teach Key
Lists the color change codes in the design and allows them to be changed.
- 8)  Float Key
Moves the pantograph through the design with stitch it.
- 9)  Network Key
Reads design data from the server.

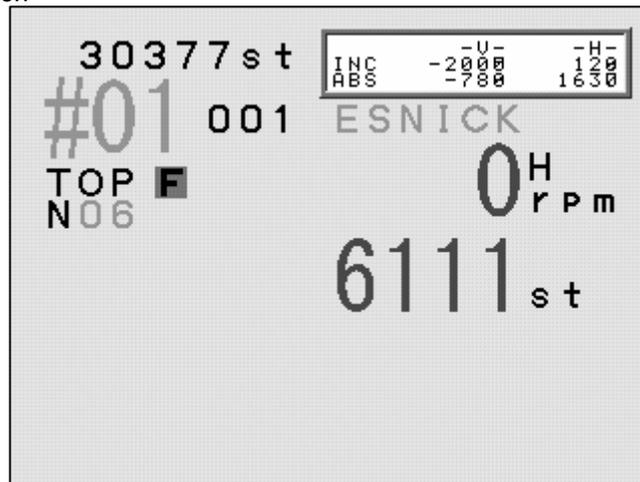
6.Switching the Screens

Press the Page Key to change screens.

When NOT in Drive Mode:	Basic Screen	Extension Screen 1	Basic Screen
While IN Drive Mode:	Basic Screen	Extension Screen 1	Extension Screen 2
	Basic Screen		

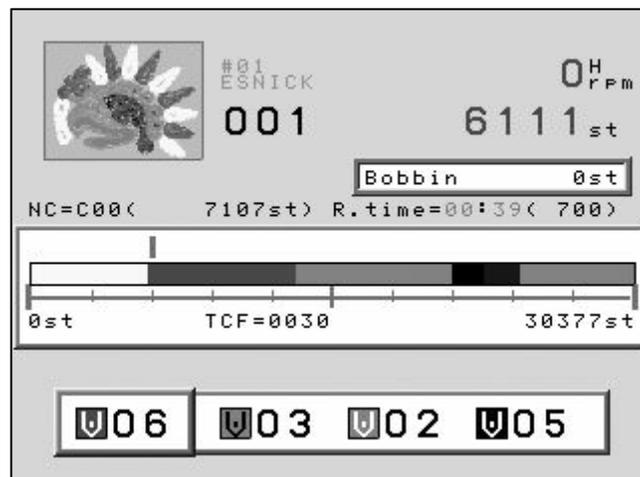
Refer to “Screen Information” for screen contents.

1) Basic Screen



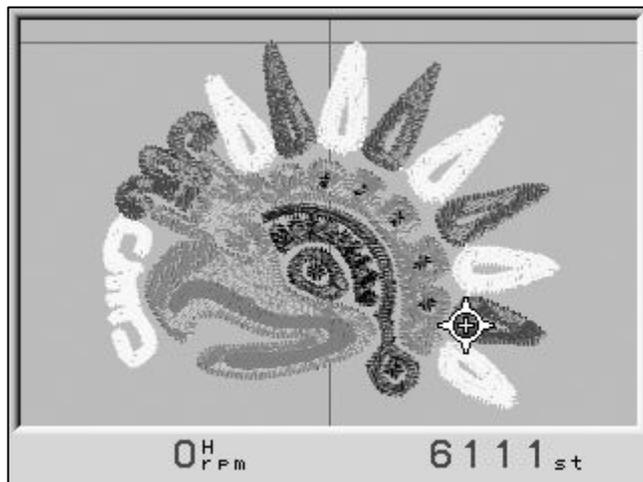
2) Extension Screen 1

Design Information such as total stitch count, next color change, estimated run time.



3) Extension Screen 2

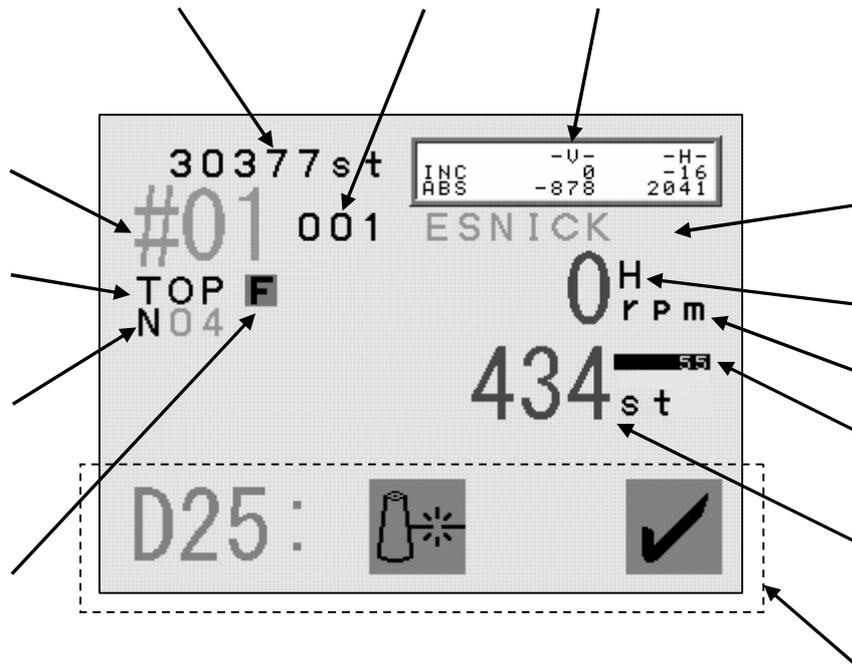
Press Page Key twice to show the extension page 2. It shows the design and current needle location as it is sewing, the machine speed, and the total stitch count.



The Page Key shows the Basic Screen. Going back to the Stand-By mode automatically switches the screen to the Basic Screen.

7.Screen Information

Basic Screen Information



*The screen shows design information for the currently selected design.

1. The Memory Location of the Design

The number blinks when there is no design in that memory location.

The number would be highlighted when the design is rotated, scaled or mirrored.

2. Design Name.

3. Programmed Rotation. (Can be changed in the Drive Condition Menu)

4. Programmed Repeats set in the Drive Condition.

5. Indicates the correct stop position when it shows "TOP".

6. Indicates the needle No.

Shows "NO" when the position of the needle is incorrect.

7. It shows the distance the pantograph moved.

INC : The distance from the last stitch.

ABS : The distance from the start position.

8. Shows the speed of the machine when it is running.

9. Shows whether the data has High or Low speed Function.

10. Shows the current stitch count when in the Drive mode.

11. Total stitch count available in memory.

12. Shows the number of stitches backtracked.

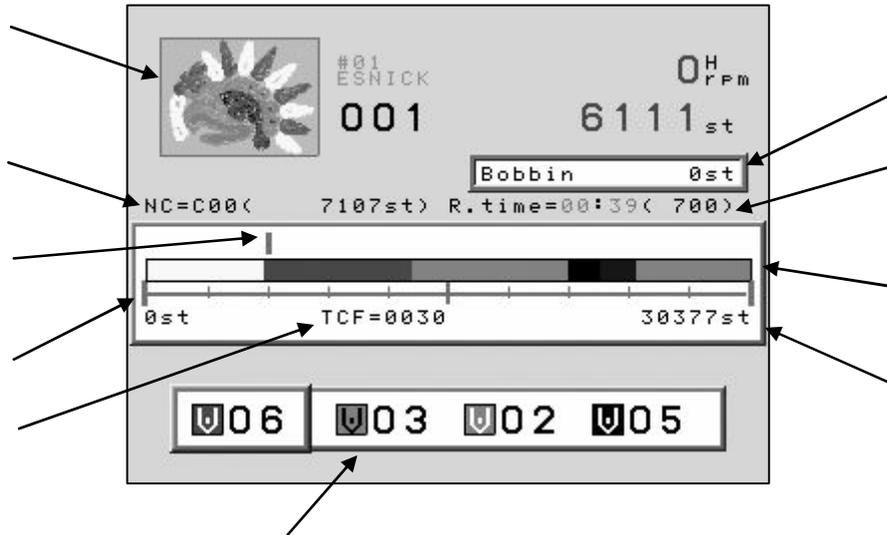
Shows the amount stitches backtracked with thread break detection, Stitch Back and Automending.

13. Displays menu icon or error messages.

8. Extension Screen Information

1) Extension Screen 1 information.

The Memory location, total number of stitches and the number of repetition are shown same as on the basic screen.



*Shows information on the currently selected design.

*In the Stand-By mode, the speed and current stitch count are not shown.

1. Shows the stitch count where the next color change exists and the needle No.

2. Shows estimated run time and max. speed.

The run time is calculated from the remaining stitches and the sewing speed.
This is an estimated run time.

3. The progress scale.

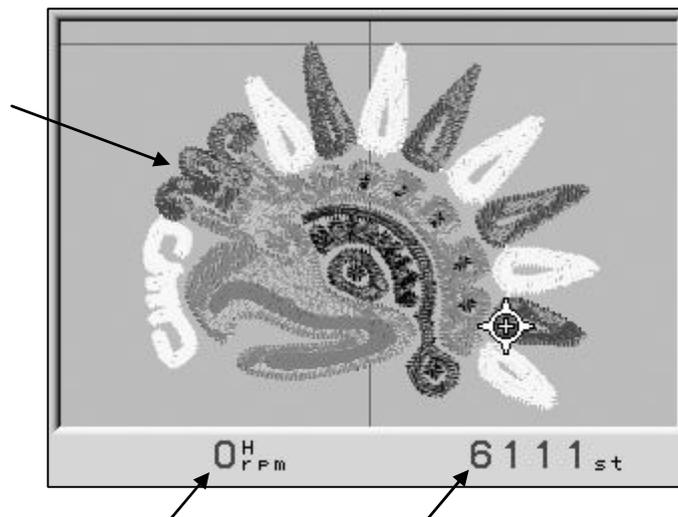
4. Stitch Progress

5. Color change marker

6. Total stitch count.

7. Total number of color changes.
8. The remaining number of stitches before the machine will stop to change bobbin.
The Bobbin Counter feature must be turned on.
9. Thumbnail of the selected design.
The thumbnail reflects rotation and scale if programmed to the design.
10. Shows the next 3 color changes.

2) Extension screen 2 information

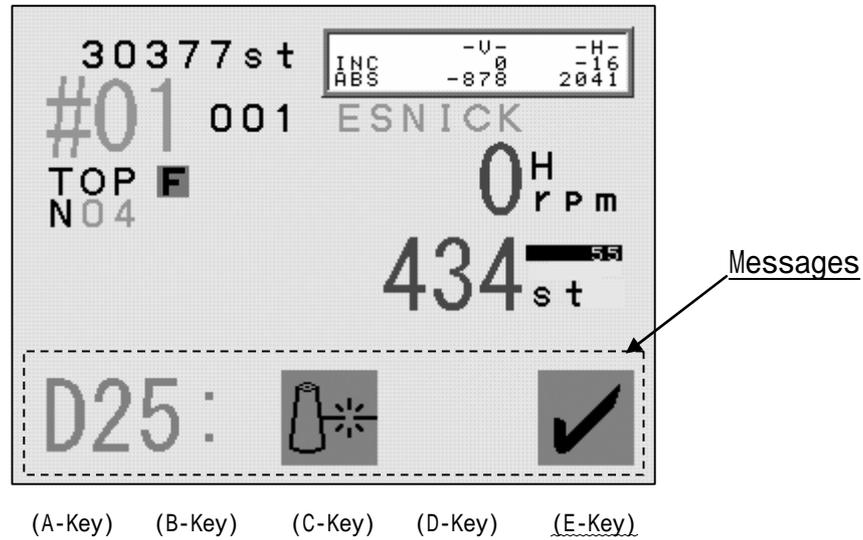


1. 3D thumbnail of the design.
The rotation, scale, satin stitch, sequin position are shown in the thumbnail.
2. Shows current speed.
3. The current stitch count.

9. Messages

Error messages display during operation display at the bottom of the basic screen.

For example, the figure below shows the error message for a thread break.



Clearing the message

Press the E-Key or the Page Key to clear the message.

The A to D-Key are not available while a message appears on the screen.

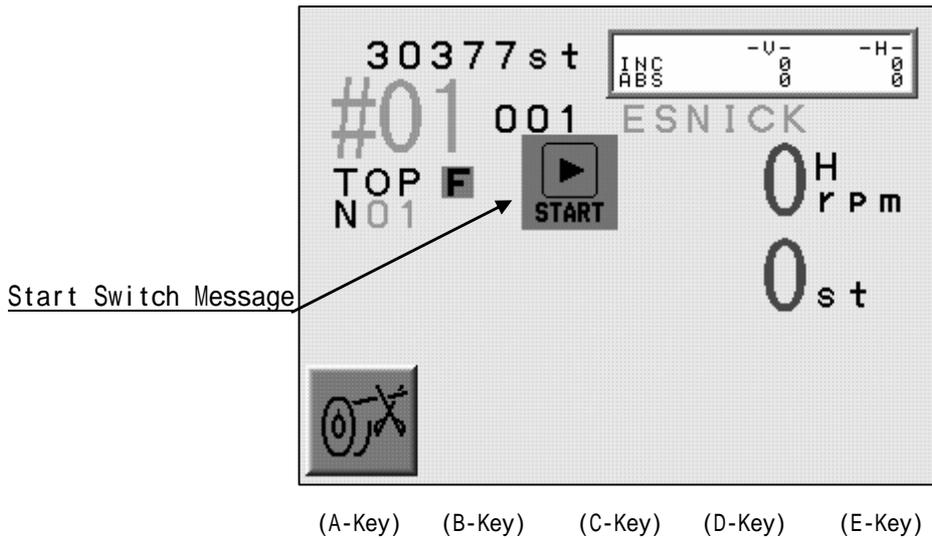
First clear the message, before execute other functions.

10. Message to Start the Machine

The icon for the Start Switch is shown below.

A little above from the center of the screen the icon for the Stop Switch appears.

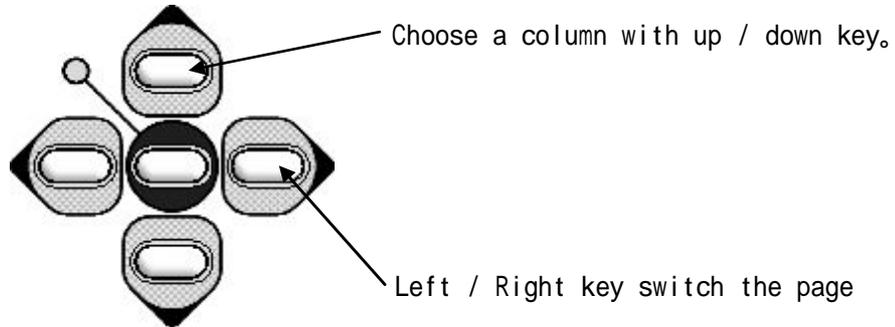
Example : The Start Switch message for a manual trimming.



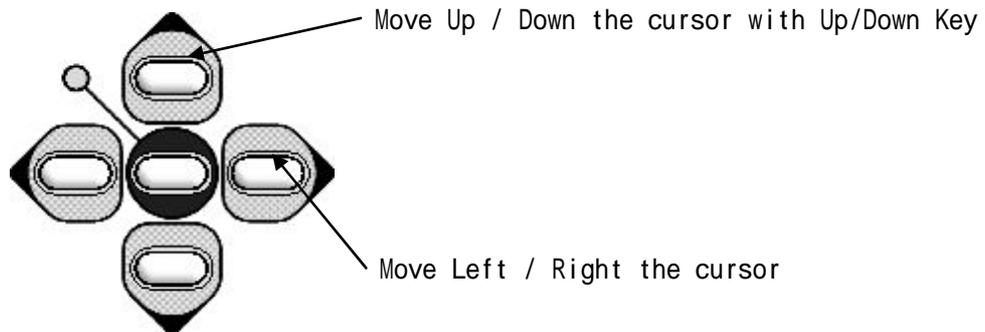
11. Setting Colors on the Display

11-1. Jog Key operation

The Jog Keys move the cursor through the list.



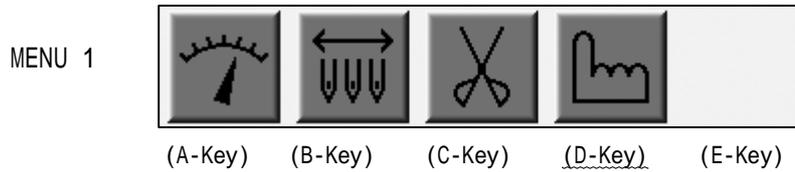
The Jog Key chooses the color on the display.



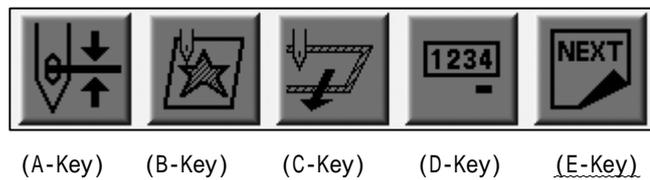
11-2. Changing the Display Color

1) Press the Menu Key to display “ Menu 1 ” as below.

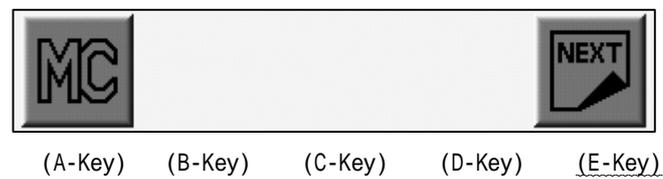
2) Press the D-Key.



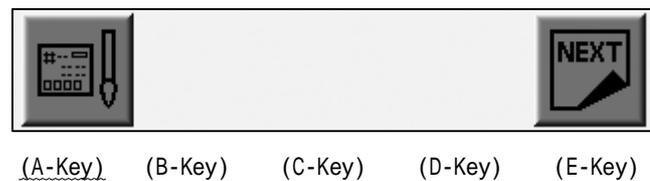
3) Press the E-Key.



4) Press the E-Key.



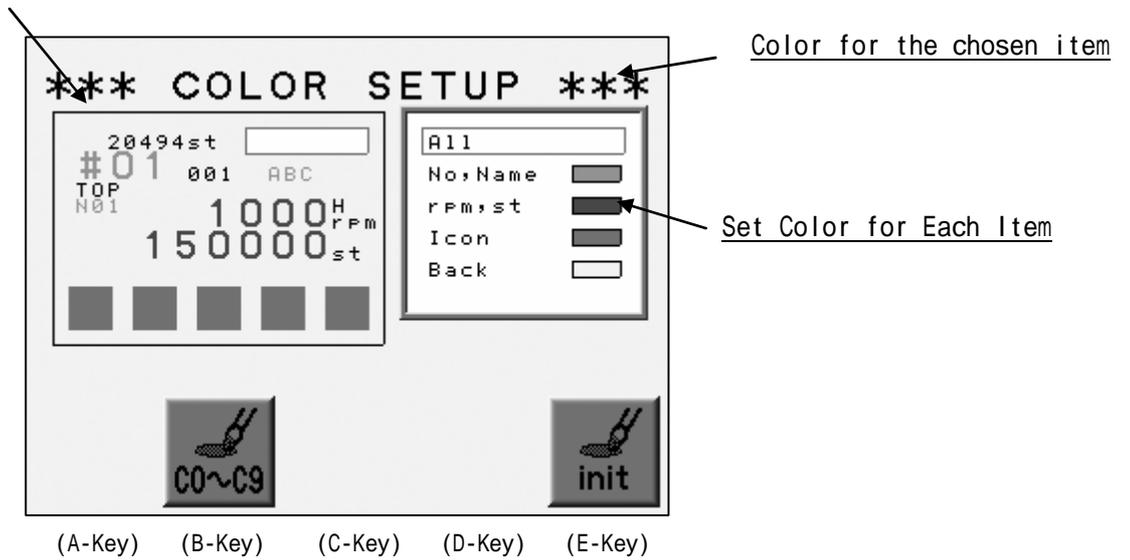
5) Press the A-Key.



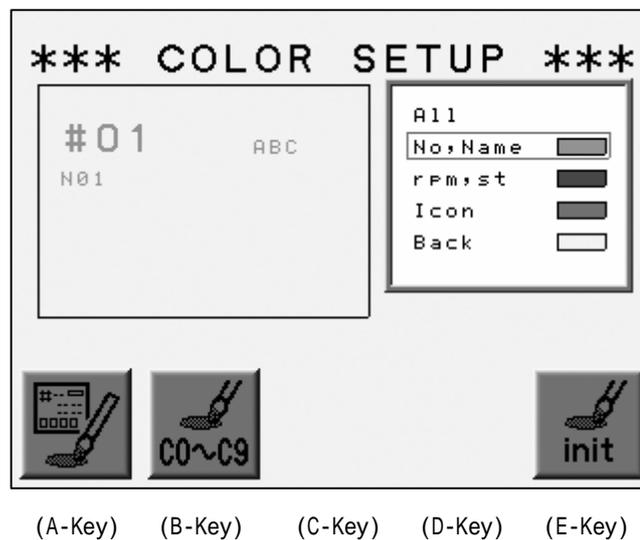
6) The Color Set-Up Menu displays.

Use the Jog Keys to select a color.

The screen thumbnail



7) Choose the item.

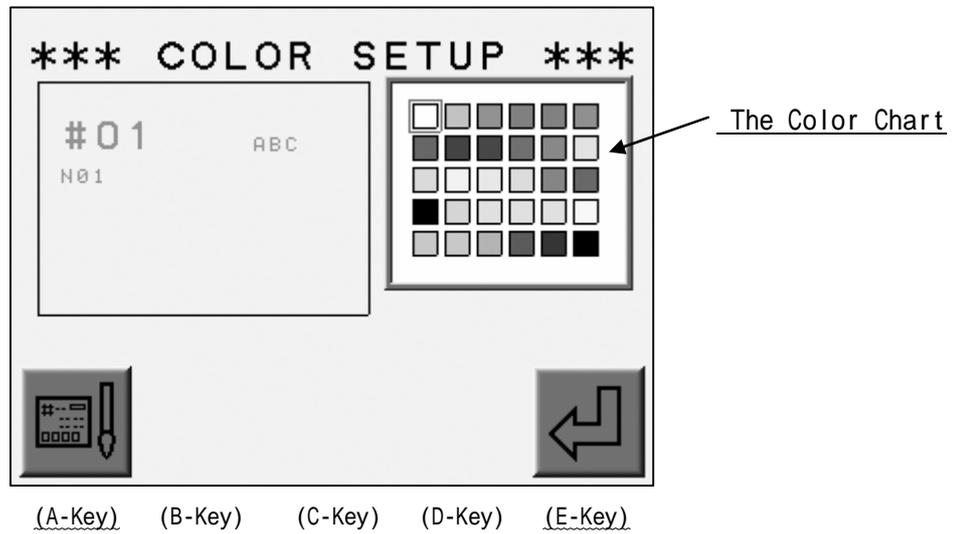


8) Press the A-Key.



9) The color chart displays.

Use the Jog Keys to select a color.

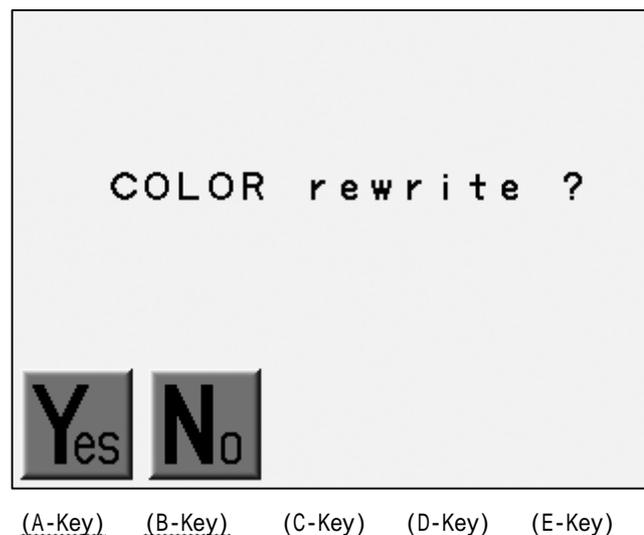


A-Key to goes back to previous screen.

Press the E-Key to save the change and go back to previous screen.

10) Press the MENU Key to go out from the Color Set-Up Menu.

11) Press the A-Key to Save changes.

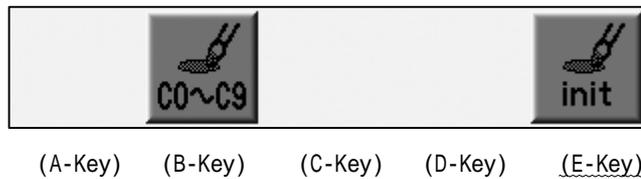


Press the B-Key to cancel the changes.

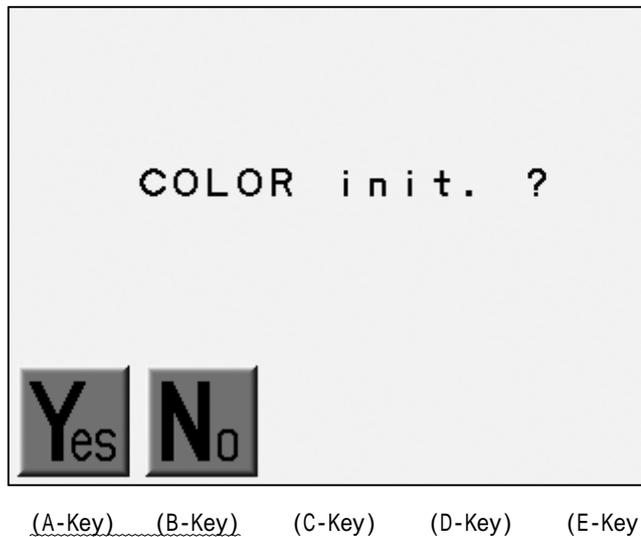
11-3. Initializing the Color

Initializing the color display.

- 1) refer to “ Changing the Color in the Display ” and find the Color Set-Up Menu.
- 2) Press and hold the E-Key for 2 short beeps.



- 3) Press the A-Key to start initialization.



Press the B-Key to Cancel the initialization.

1 1 - 4 . 項目一覽

Item	Description	Default Color
A l l	Shows all the items in the thumb nail in set color	
N o , N a m e	Memory Location, Design file name, Needle No.	
r p m , s t	Speed and Stitch Count	
I c o n	Icon	
B a c k	Background	
(V i s u a l)	The background color of design thumbnail	
(D r i v e)	The back ground color for Drive Mode	
(F l o a t)	The background color for Float	
(N E T A B)	The back ground color for Time-Out in the Network System	

11-5. Thumbnail Color

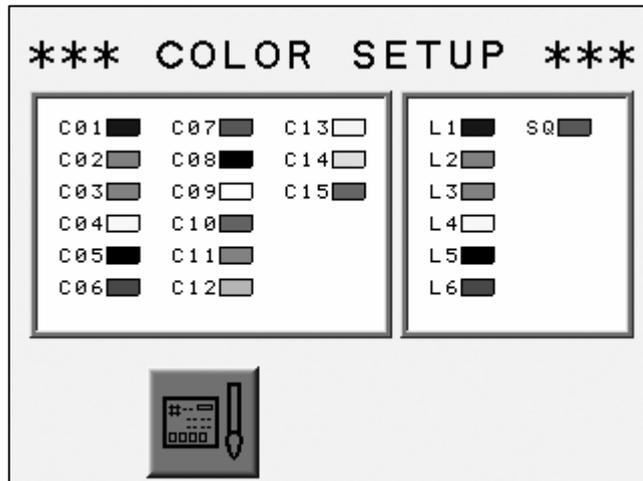
Lists the color for the each code.

- 1) Refer to “Changing the color in the display” and find the Color Set-Up Menu.
- 2) Press the B-Key.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

- 3) The color list for each code appears.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

Press the B-Key for the previous screen.

Chapter 4. Manual Operations

This chapter contains information on the machines manual operations.

1. Color (Needle) Change
2. Trimmer
3. Thread Clamp
4. Appliqué
5. Frame Change
6. Bobbin Counter
7. Holding The Needle at the Dead Bottom Center
8. Sequin

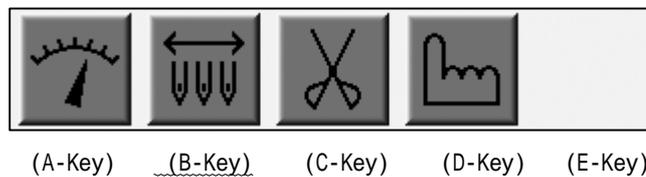
1. Color (Needle) Change

1-1. Manual Color Change

Changing the color (Needle) manually.

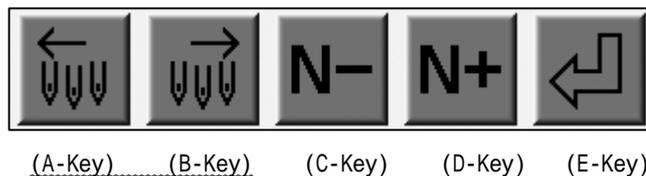
1) Press the Menu Key to display “Menu 1” as below.

2) Press the B-Key



3) Press the A-Key for the needle with smaller No.

Press the B-Key to the needle with larger No.



*When the machine is first powered on, the machine must be oriented to the correct Position. After following the steps above, the D14 message displays. Press the The

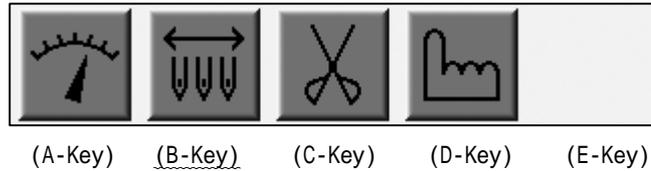
Start Key  to orient the machine

1-2. Color Change by Direct Needle.

Selecting a specific needle.

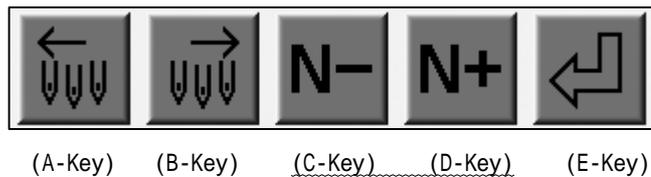
1) Press the Menu Key to display “ Menu 1 ” as below.

2) Press the B-Key.

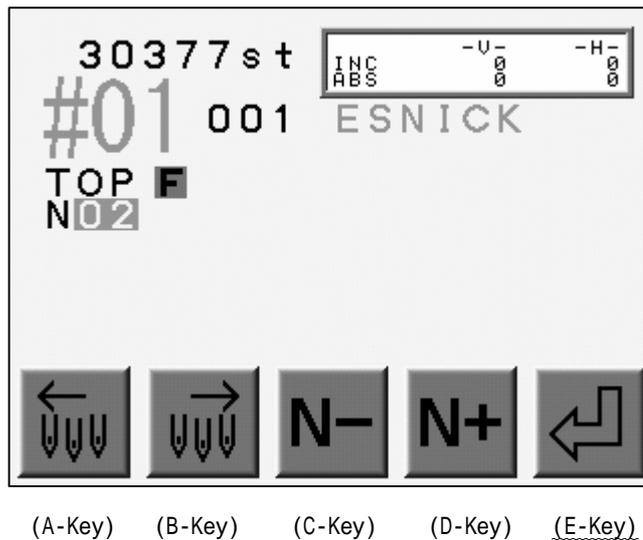


3) Press the C-Key for the needle with smaller No.

Press the D-Key for the needle with larger No.



4) Press the E-Key to change the needle.



*When the machine is first powered on, the machine must be oriented to the correct Position. After following the steps above, the D14 message displays. Press the The

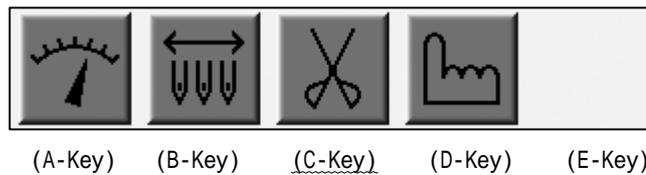
Start Key  to orient the machine

2.Thread Thrim

2-1. Thread trim operates the trimmer.

Manual trimming for both top and bottom thread.

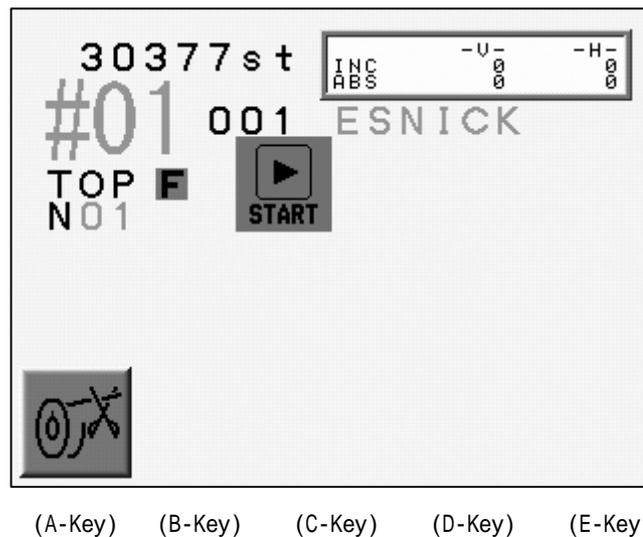
- 1) Press the Menu Key to display “ Menu 1 ” as below.
- 2) Press the C-Key



- 3) The Start Switch message displays.



Press the Start-Key to execute the trimming.



*The ON/OFF switch on each tension box (Head Switch) can also activate the trimmer.

Turn the Head Switch OFF then ON. The green LED on the Tension Box blinks. Push the Start Switch to execute the trimmer.



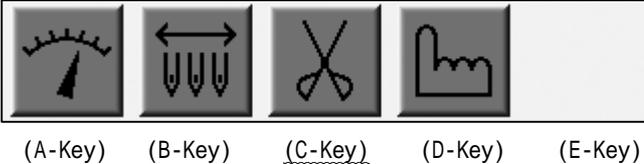
Press the Start-Key while the Green LED on the Tension Box blinks)

2-2. Bobbin Trimming

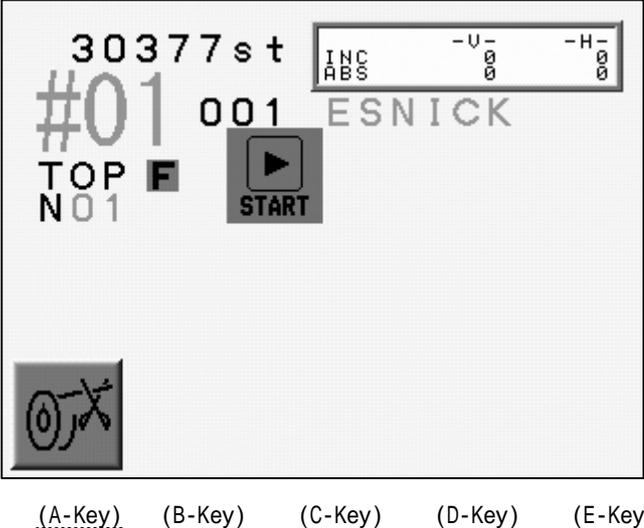
Instructions for trimming the bobbin.

1) Press the Menu Key to display "Menu 1" as below.

2) Press the C-Key



3) Press the A-Key to trim the bobbin.

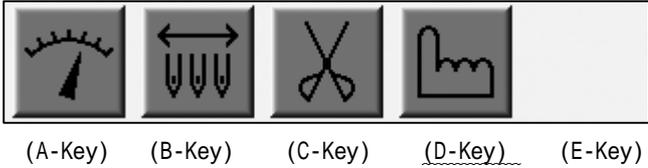


3. Thread Clamp

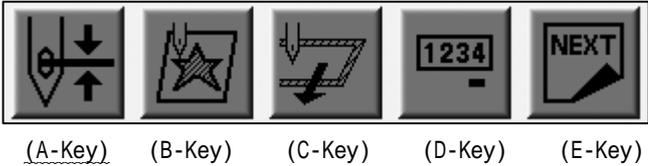
Instruction for releasing the thread clamp for easy threading.

1) Press the Menu Key to display “ Menu 1 ” as below.

2) Press the D-Key



3) Press the A-Key to Open / Close the Clamp.

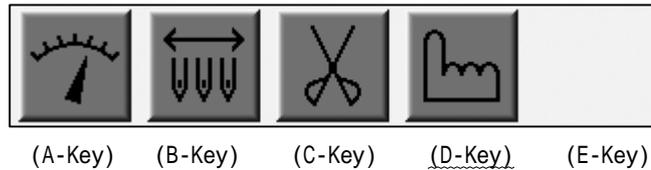


4. Appliqué

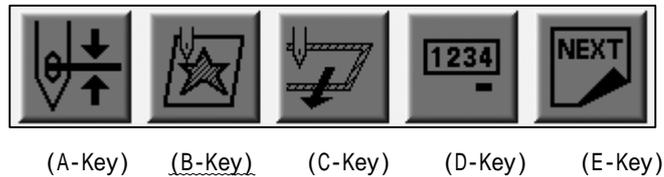
Appliqué rotates the main motor so that the presser foot can be pressed down manually to accurately position the frame or appliqué fabric.

1) Press the Menu Key to display “Menu 1” as below.

2) Press the D-Key.



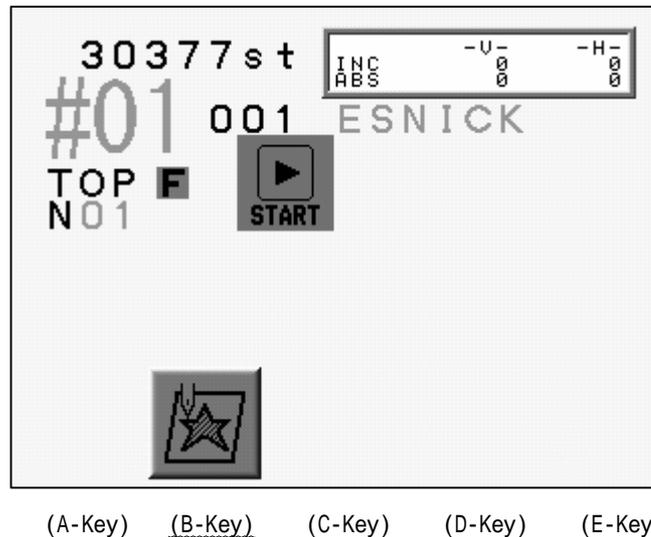
3) Press the B-Key.



4) The Start Switch message appears.



Press the Start-Key



Press the B-Key for previous screen.

5) Push the presser foot down by hand closer to the fabric.

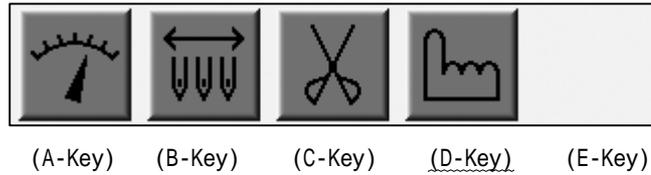
*Repeat the operation 1) to 4) to retrieve the needle bar.

5. Frame Change

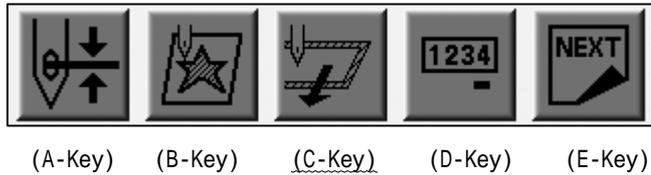
Frame Change moves the pantograph forward to allow framing or positioning of an appliqué.

1) Press the Menu Key to display “Menu 1” as below.

2) Press the D-Key.



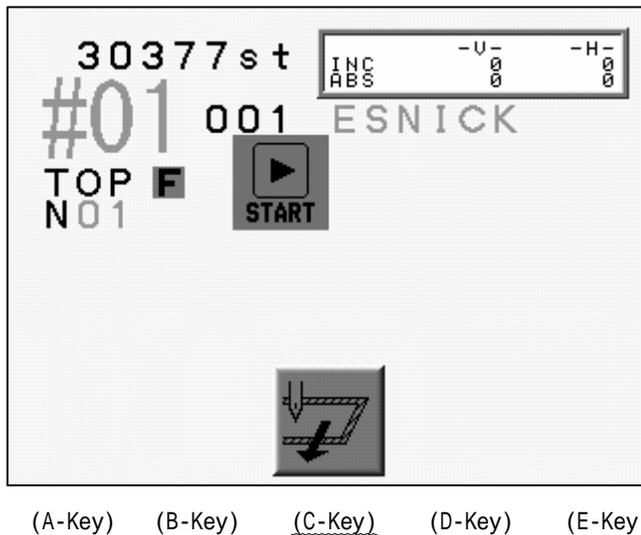
3) Press the C-Key.



4) The Start Switch message appears.

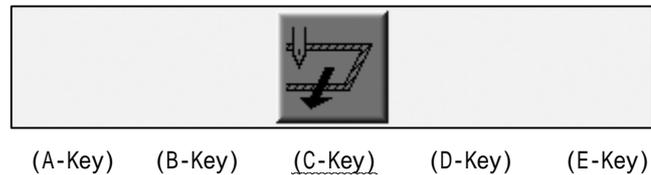


Press the Start-Key to move the pantograph to the position pre-set.



Press the C-Key to go back to previous screen

5) Press the C-Key to go back to previous screen without moving the pantograph.



6. Bobbin Counter

Bobbin Counter stops the machine when a preset number of stitches is reached.

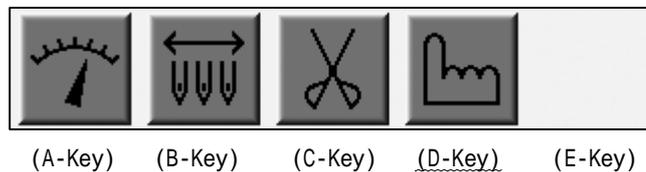
By setting the number of stitches where a particular design normally runs out of bobbin, Bobbin can be replaced, avoiding missed stitches in a production piece.

When the machine stops for the bobbin, it shows the message and the green LED on the Tension Box is lit.

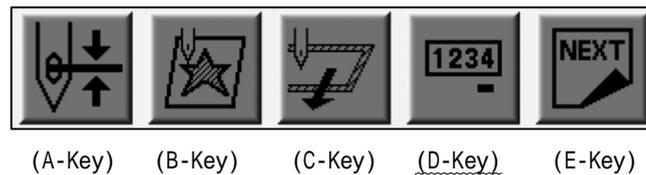
Note : Set the counter at 0 to cancel the Bobbin Counter feature.

1) Press the Menu Key to display “ Menu 1 ” as below.

2) Press the D-Key.

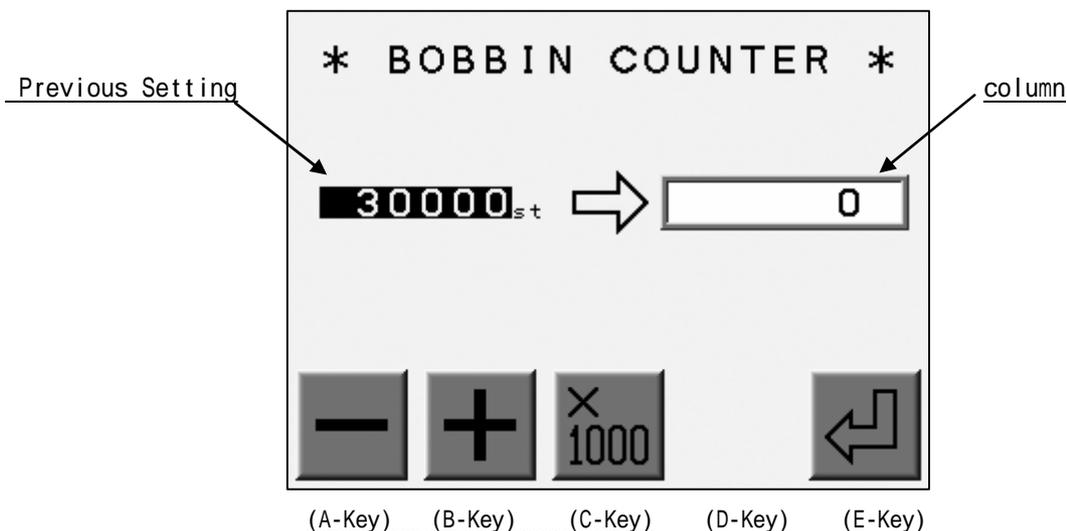


3) Press the D-Key.



4) Set the stitch count where the machine should stop.

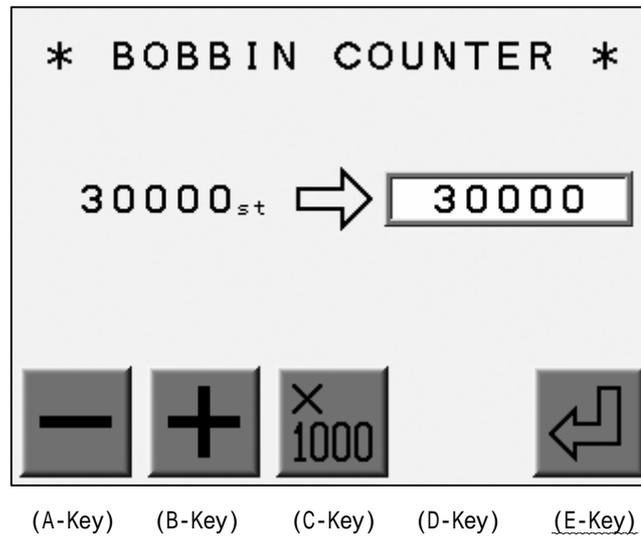
The previous setting appears on the screen.



Press the A or B-Key to increase / decrease the count by 100/stroke.

Press and hold the C-Key then press the A or B-Key for increment of 1000 stitches.

5) Press the E-Key for 2 short beeps to save the count.



Press the Manual Key to return to the Basic screen.

*Press the Page Key for the extension screen to find the estimated bobbin count.

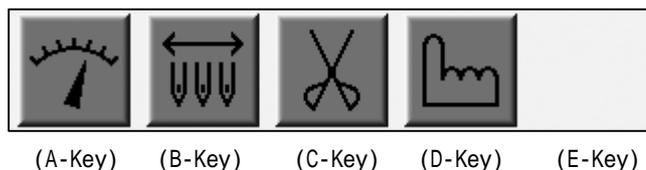
Refer to "Switching Screens".

7. Holding the Needle at the Dead Bottom Center

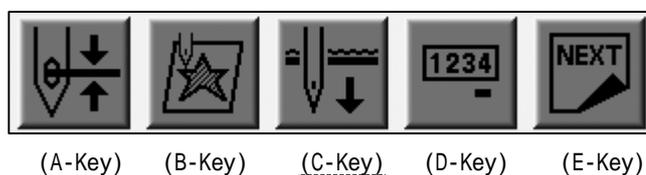
This feature is only available for the Roll-to-Roll models.

1) Press the Menu Key to display “ Menu 1 ” as below.

2) Press the D-Key.



3) Press the C-Key.

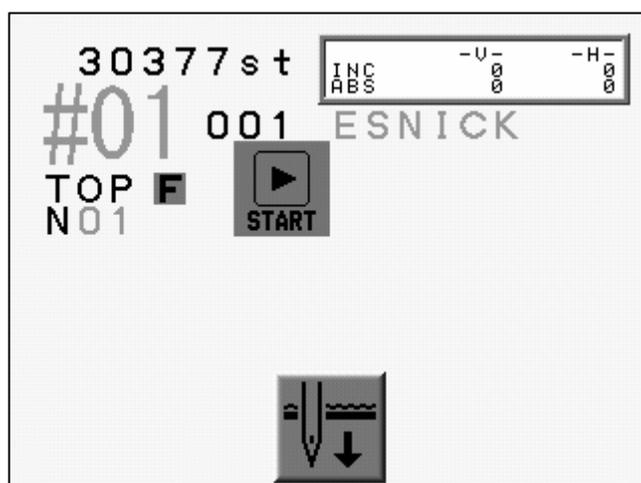


4) The machine requires a Start Switch.



Press the Start-Key.

The machine stops as the needles penetrate the fabric.



Press the C-Key to go back to previous screen

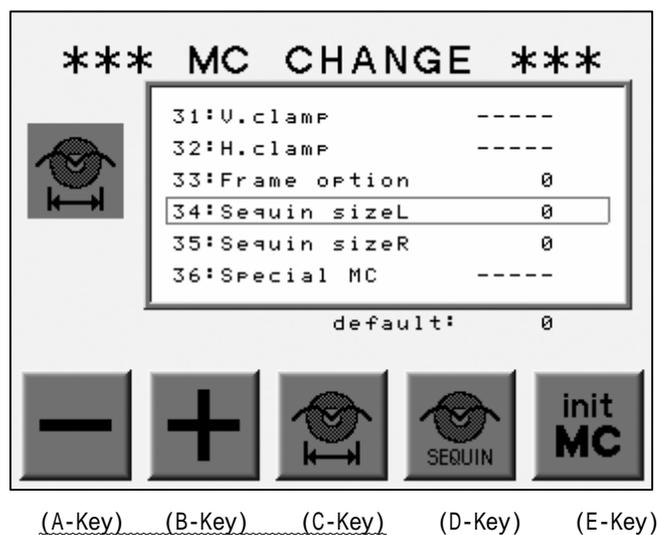
5) Repeat the operation 1) - 3) to return to the standard stop position.

8. Sequin

8-1 Sequin Setting Menu

The function only works with machines equipped with the sequin device.

- 1) Refer to “MC Parameter” and find MC parameter list.
- 2) Choose “Sequin Size L” or “Sequin Size R” for the right / left hand sequin device.
- 3) Press and hold the Origin Key for the 2 short beeps. The Sequin Setting Menu appears.



Press the C and the A-Key at the same time to retrieve all the sequin head.

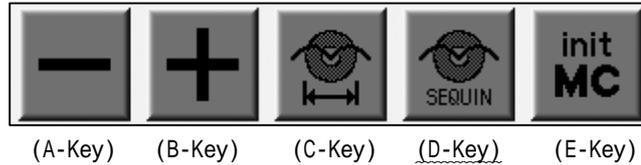
Press the C and the B-Key at the same time to feed a sequin on all sequin devices.

*It works while sequin device are at the bottom. (Ready to feed sequins)

- 4) Press the Manual Key to go out from the Sequin Setting Menu.

8-2. Head Adjustments

- 1) Refer to “ Sequin Setting Menu ” , find the menu.
- 2) Press D-Key to adjustment of the head.



The ON/OFF switch on the Tension Box(Head Switch) activate the Feeder on the all Sequin Devices for the maintenance.

Head Switch ON : Feed

Head Switch OFF : Return

*It works even the Sequin Head is at top or bottom position.

Pushing the Switch to ON/OFF drives the Sequin Head Dwn/Up.



Press the Start-Key : The Sequin Heads Goes Down



Press the Stop-Key : The Sequin Heads Goes Up

*It only works for the sewing head with the Head Switch ON.

- 3) Press the D-Key to go out from the adjustment.



- 4) Press the MENU Key to return to the Basic Screen.

Chapter 5. Loading Designs

This chapter explains how to load designs to the machines memory.

1. Before Loading Designs
2. ABC Drive
3. Loading from PC
4. Saving to PC (COM)
5. Adding Stitches

1. Before Loading

Operations to be executed before loading a design.

Loading by ABC and COM are not available with the LAN port connection.

1) Selecting the device to load from

Press the A-Key to choose a device.



The icon above A-Key shows the selected device.

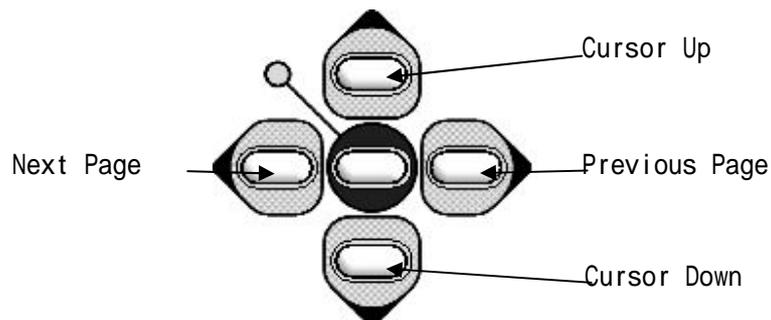
The selected device is shown in the upper left hand corner of the screen.

2) Choosing a design

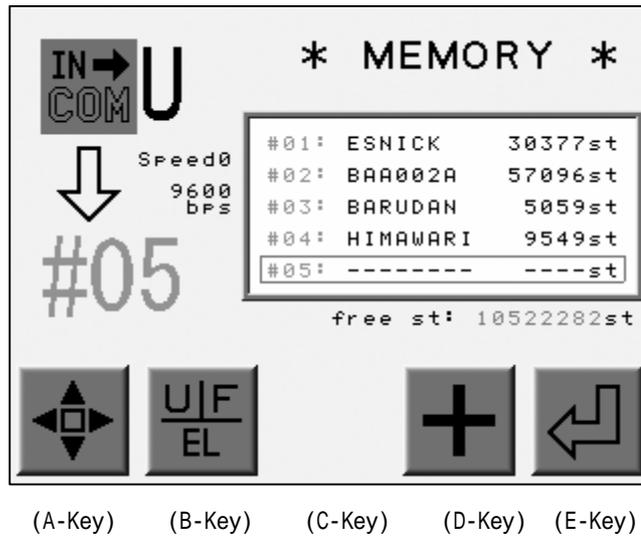
*Same procedure as saving design.

The list of the designs on the FD or on the machines Memory displays during this operation.

Use the Jog Keys to select the design.



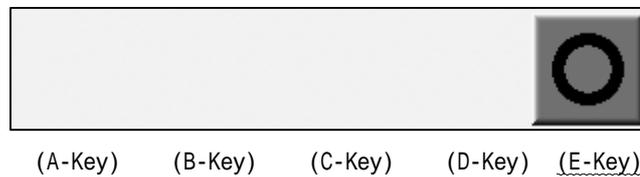
Designs in Memory



3) Pause, Cancel Same procedure as when saving designs.

The loading can be paused or canceled.

a) Press the E-Key during the loading to pause it.



*Hold the E-Key if it does not pause.

b) Press the D-Key during the pause to cancel the loading.

Press the E-Key to restart the loading.



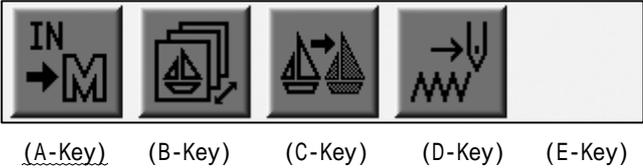
2. ABC Drive

Transfers designs from an outside source to a temporary memory location to sew multiple designs quickly. Great for name dropping and quick jobs from a digitizing or editing system, uses a Memory location, therefore an empty memory location must be available.

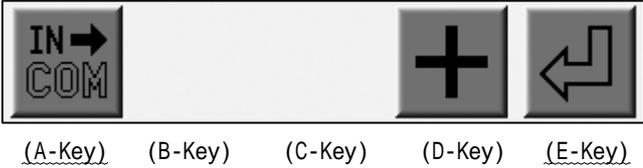
ABC Drive will not work when machine is in Drive mode.

Refer to “Loading from PC” for the connection.

- 1) Prepare the device sending the design.
- 2) Press the Menu Key to display “Menu 2” as below.
- 3) Press the A-Key



- 4) Press the A-Key to toggle the Device icon. Choose the ABC icon.



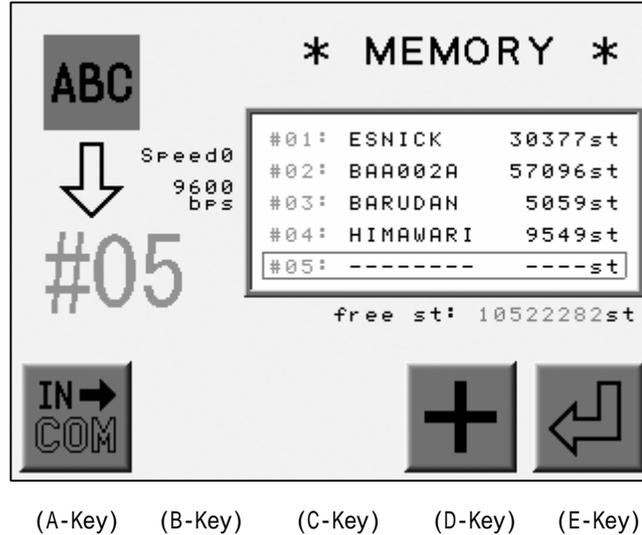
*The icon at the upper left corner of the screen should be



5) Display the designs in memory.

Use the Jog keys to select a design.

The Memory Slot for ABC Drive is automatically chosen. *1

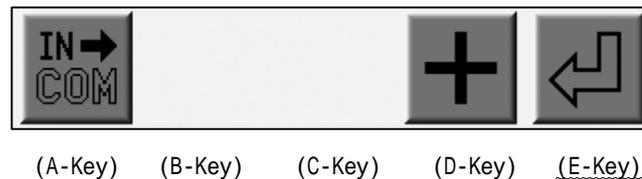


*  icon will not display if the ABC Drive is already chosen for the slot.

6) Press the D-Key to set the data transmission speed. *2



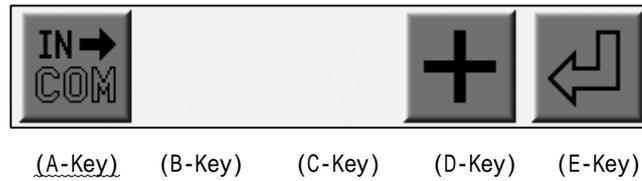
7) Press the E-Key to start the ABC Drive.*3



8) When the machine receives the ABC Drive Design, it automatically over writes the Memory Slot.

*Proceed 2) again at first to cancel the ABC Drive.

Then press the A-Key to delete the ABC Drive Design and exit ABC Drive.



*1 A blank Memory location will automatically be chosen for ABC Drive.

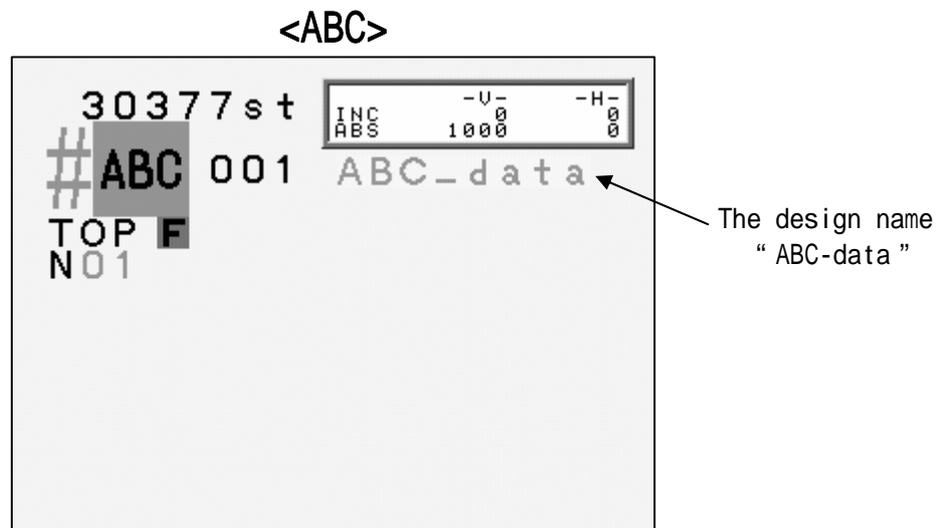
If the occupied location is chosen manually, the design in the location will be overwritten.

*2 Refer to “Loading from PC” for the data transmission speed.

*3 While in ABC Drive, the other Memory locations will be inactive.

*4 ABC Drive is only available with U Code (BARUDAN format).

The design name for the ABC Drive Design will be “ABC_data”.



3. Loading from PC

Designs can be loaded to the machines memory from a PC via the COM port.

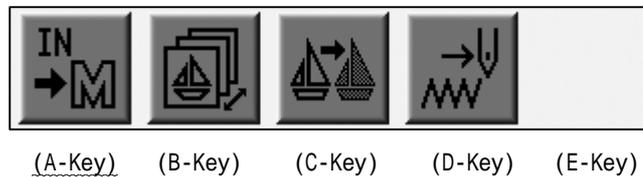
The PC needs to have an RS-232C serial port.

The cable should be “Cross” or “Reverse” (null-modem cable).

3-1. Loading Designs from PC (COM)

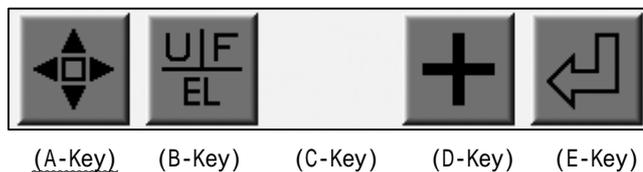
Designs can be loaded to the machine memory from a PC using the COM port.

- 1) Prepare the device sending the design.
- 2) Press the Menu Key to display “Menu 2” as below.
- 3) Press the A-Key.



- 4) Press the A-Key to toggle the Device icons. Choose the COM icon.

Refer to “Before Loading” .



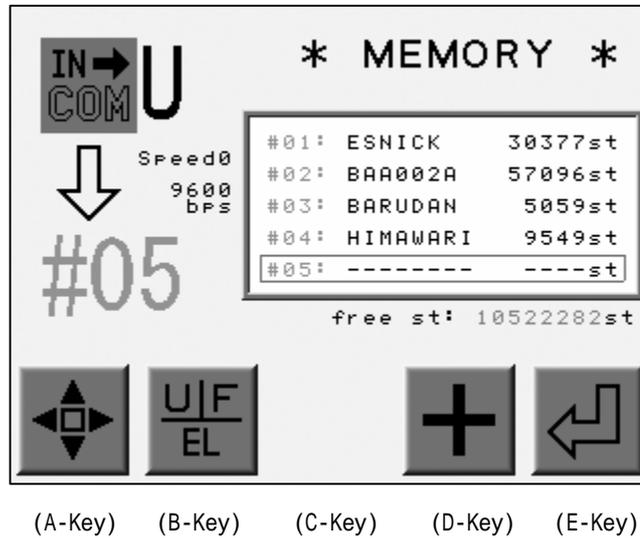
*The icon at the upper left hand corner of the screen should be



5) Display the designs in memory.

Using the Jog Keys, select an empty Memory location.

The automat automatically chooses a blank memory location. *1



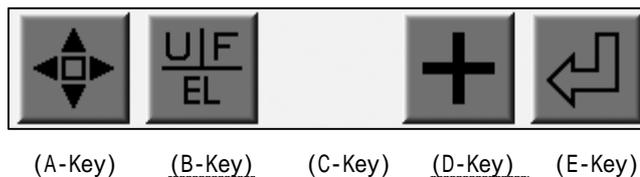
*When an occupied location is selected, the



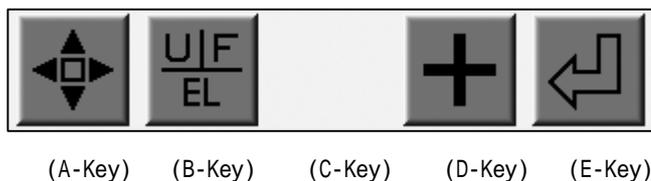
icon does not display and it is not possible to load a design.

6) The B-Key toggles the Tape Code. *2

The D-Key toggles the data transmission speed. *3



7) Press the E-Key to start loading.



8) Check if the device loading the design is ready.

*1 The automat chooses an empty Memory location automatically.

Delete a design to create an empty location if the Memory is full.

*2 The B-Key toggles the Tape Code as U → F → EL. Other codes are not valid.

*3 the data transmission speed is chosen from the chart below.

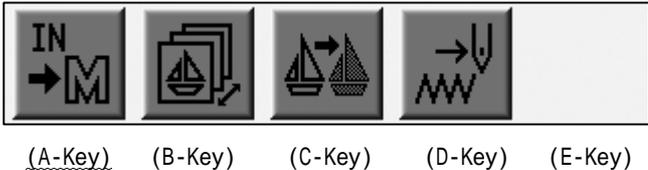
The D-Key toggles the No. assigned to the speed.

No.	Speed (bps)	
0	9 6 0 0	× 1
1	1 4 4 0 0	× 1 . 5
2	1 9 2 0 0	× 2
3	2 8 8 0 0	× 3
4	3 8 4 0 0	× 4
5	5 7 6 0 0	× 6
6	7 6 8 0 0	× 8
7	1 1 5 2 0 0	× 1 2

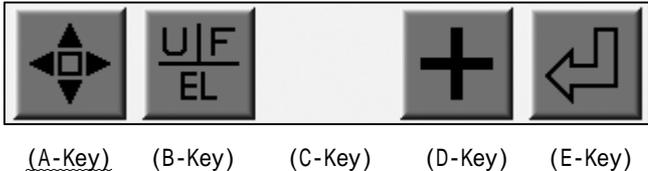
4-2. Merging a Design (COM)

Merging designs via the COM port.

- 1) Prepare the device sending the design.
- 2) Press the Menu Key to display “Menu 2” as below.
- 3) Press the A-Key.



- 4) Press the A-Key to toggle the Device icons. Choose the COM icon.

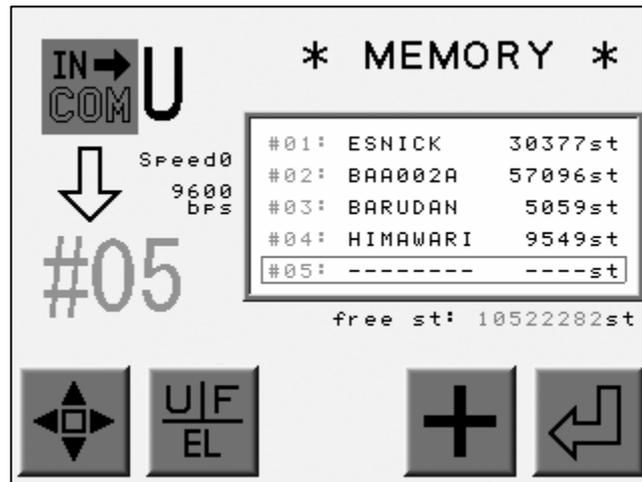


*The icon at the upper left hand corner of the screen should be



5) Display the designs in Memory.

Use the Jog keys to select a design.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

When an occupied Memory location is chosen, the icon above the C-Key will be



6) Press the C-Key to merge the design.

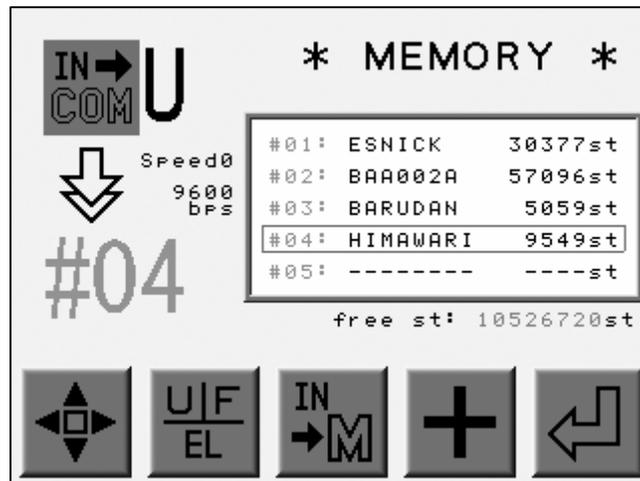


(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

Press the C-Key again to cancel the merge.

7) Press the B-Key to toggle the Tape Code. *1

Press the D-Key to choose the data transmission speed. *2



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

8) Press the E-Key to start merging.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

9) Check that the device sending the design is ready to transfer.

*1 Refer to "Loading Design from PC" for the data transmission speed.

3. Saving to PC (COM)

Loading designs from PC is available through the COM port.

The PC needs to have RS-232C serial port.

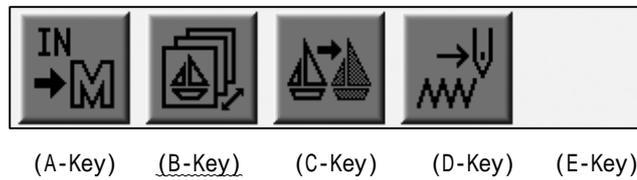
The cable should be “Cross” or “Reverse” (null modem).

The machines with the LAN port cannot use the COM connection.

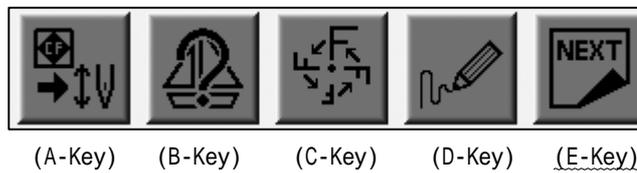
1) Prepare the device receiving the design.

2) Press the Menu Key to display “Menu 2” as below.

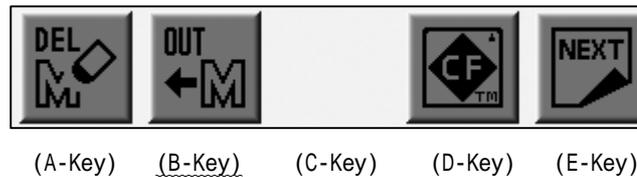
3) Press the B-Key.



4) Press the E-Key.

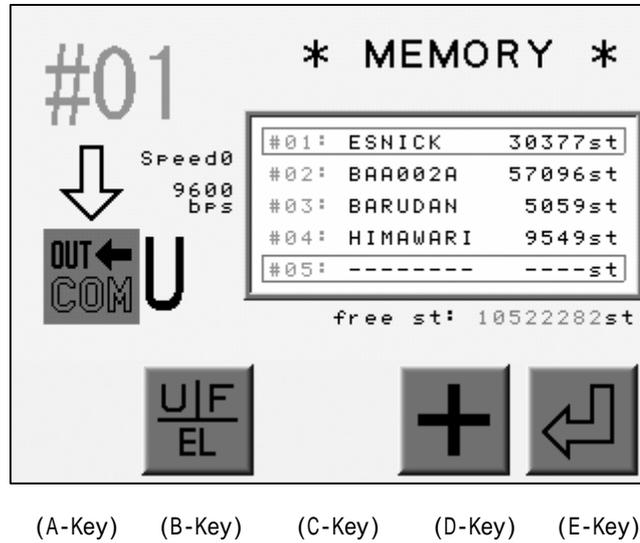


5) Press the B-Key.



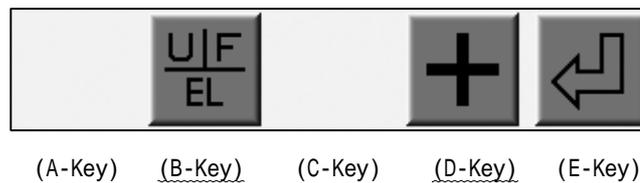
6) Display the designs in Memory.

Use the Jog Keys to select the desing to be transferred. *1



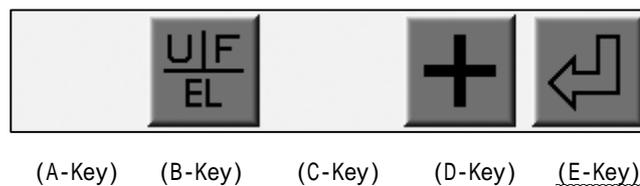
7) Press the B-Key to choose a Code. *2

Press the D-Key to choose the data transmission speed. *3



8) Check that the device receiving the data is ready.

9) Press the E-Key to start saving to the PC (COM). *4



*1 The controller automatically selects an empty Memory location.

Delete a design and create an empty location if the memory is full.

*2 The B-Key toggles the Tape Code as U → F → EL. Other codes are not valid.

*3 the data transmission speed is chosen from the chart below.

The D-Key toggles the No. assigned to the speed.

No,	Speed (bps)	
0	9 6 0 0	× 1
1	1 4 4 0 0	× 1 . 5
2	1 9 2 0 0	× 2
3	2 8 8 0 0	× 3
4	3 8 4 0 0	× 4
5	5 7 6 0 0	× 6
6	7 6 8 0 0	× 8
7	1 1 5 2 0 0	× 1 2

*4 Cancelling the operation operation may take 10 seconds before it actually is canceled.

5. Adding Stitches

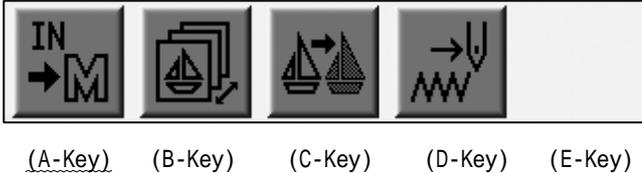
The machine must be out of Drive mode in order to add stitches.

5-1. Adding Walk Stitches using the Jog Keys

Walk stitches can be added with the Jog Keys. The Pantograph actually moves as the Jog Keys are operated.

1) Press the Menu Key to display " Menu 2 " as below.

2) Press the A-Key.



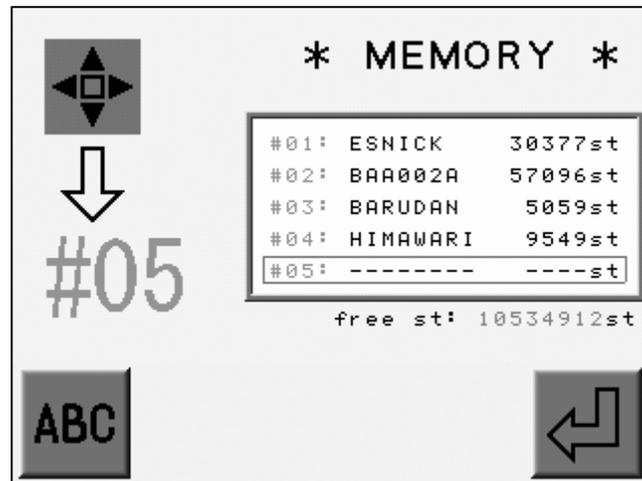
3) Press the A-Key to toggle the Device icons. Choose the Jog icon.



*The icon at the upper left hand corner of the screen should be .

4) The designs in memory display.

Choose a Memory location to save the jog movement.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

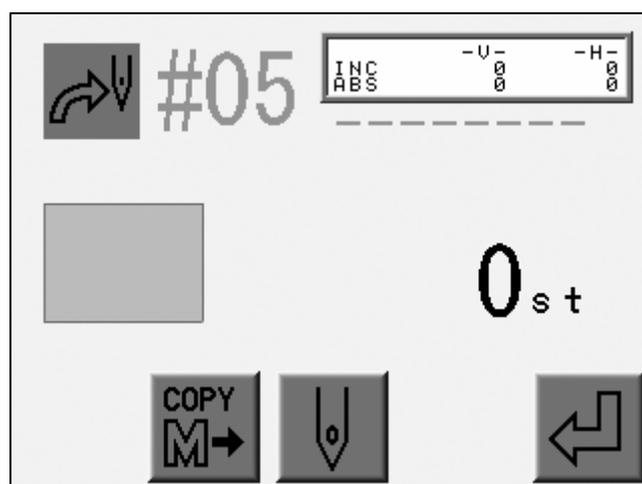
5) Press the E-Key to add the stitches.



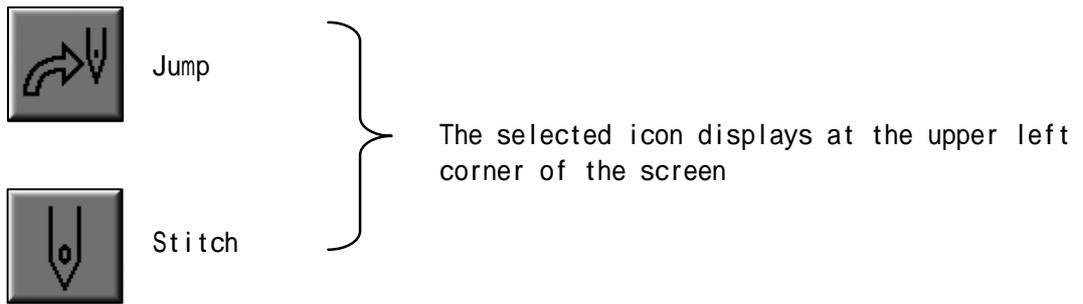
(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

6) Press the C-Key to toggle between the Jump and Stitch icons.*1

*The default setting is Jump.

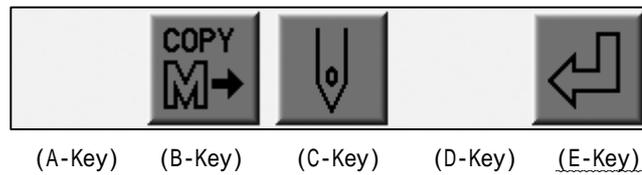


(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)



7) Use the Jog Keys to move the pantograph to the desired location.

8) Press and hold the E-Key until you hear a short beep to write a Jump/Stitch to the memory. *2



*1 Choose a Jump or a Stitch to save to the memory.

*2 The scale, rotation will effect the added stitches.

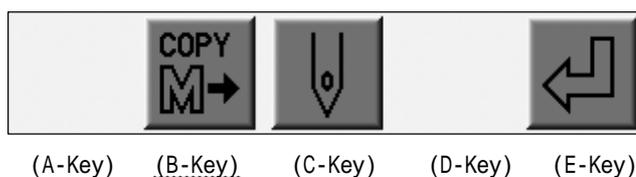
5-2. Copying Design

Instructions on how to copy a design and merge it to another.

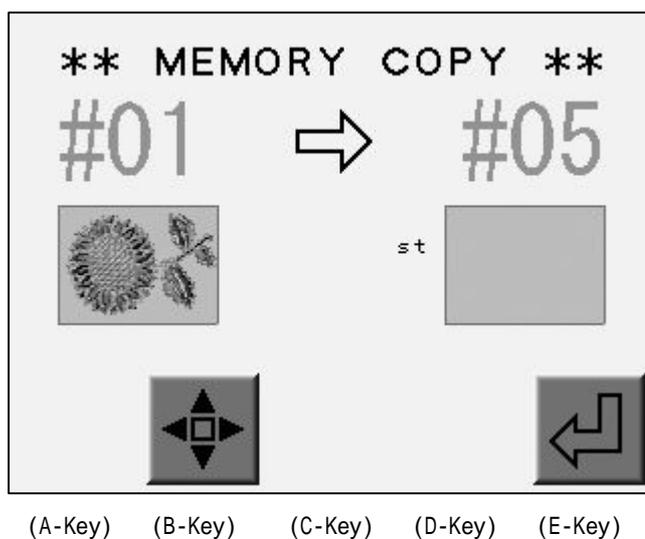
1) Refer to "Adding Stitches" 1) - 5) , find the Jog Menu below.

2) Press the B-Key to merge another design to the selected design.

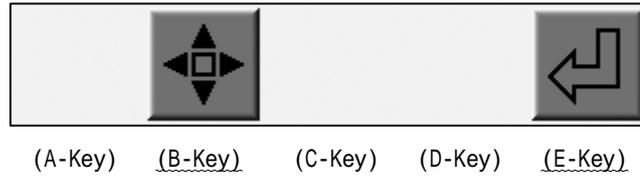
The design to be merged must exist in another Memory location.



3) Use the Jog Keys to select the design to be copied. *1



4) Press the E-Key to start the Copy. *2



Press the B-Key to go to the Jog menu.

*1 The scale and rotation of the original design effects the copied design.

The Jog stitches and the copied design can be added to a design.

*2 The designs are added in order of the operation.

Chapter 6. Compact Flash Card (CF Card)

This chapter includes instruction on how to use the CF Card.

1. Before Using CF Card
2. Files on the CF Card
3. Creating Folders on the CF Card
4. Saving to the CF Card
5. Loading from the CF Card
6. Memory Back-Up
7. Loading the Back-Up Design
8. Deleting Designs on the CF Card
9. Deleting Folders on the CF Card
10. Saving Multiple Designs at a Time
11. Loading Multiple Designs at a Time

Refer to “System” to use the CF Card as a System Disk.

1. Before Using the CF Card

1) Functions

CF Cards have a large capacity and send/receive data much faster than Floppy Disks.

CF Cards have the following uses on the embroidery machine.

a. Store design files

Saves/loads design files in FDR format.

Saves/loads design files in Network format (PRJ).*

Stores design files in TFD format. *

Have a bitmap image data for each design file.
The image can be viewed on PCs.

Back-Up all design files stored on the machine.

b. System software update

The CF Card updates the system software quickly.

CF Cards can store multiple system softwares.

c. Editing

The design files on the CF Card can be edited on PC.

PRJ format files also can be edited with SFC Software.

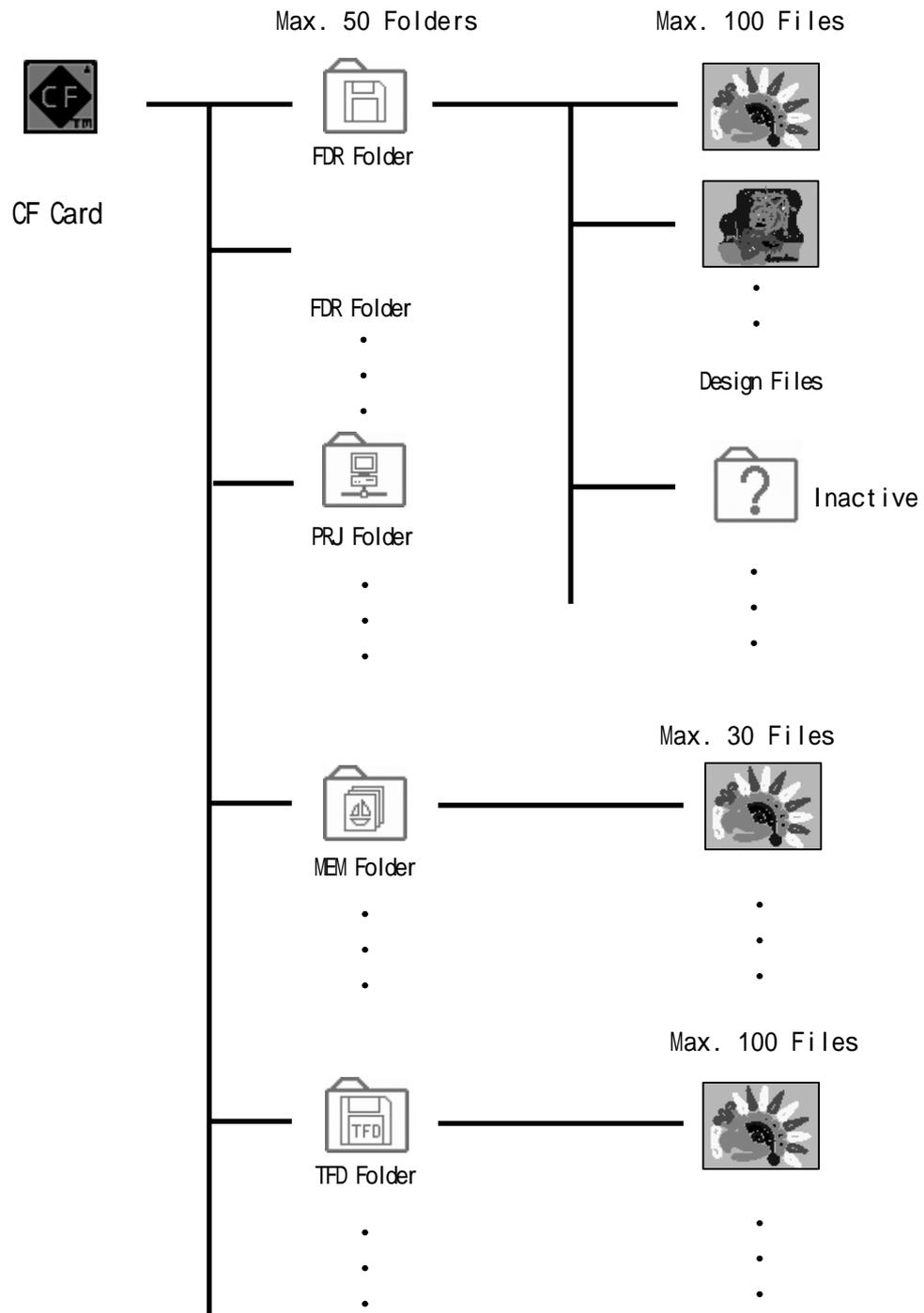
*A PRJ Format consists of a Design File, Program Parameters and a Bitmap Image File.

*The Automat cannot save the TFD format file on CF Card. Use PC to save the TFD format file on the CF Card.

2) CF Card Basics

The CF Card needs to have folders to store files.

A CF Card can have Folders up to 50.



2) The CF Card can handle 4 kinds of the folders.

1.  FDR Folder
Stores FDR format design files
A FDR folder can store up to 100 FDR files.
2.  PRJ Folder
Stores Network format (PRJ) files.
A PRJ folder can store up to 100 PRJ files.
3.  MEM Folder
Backs up the machines memory.
Merging is not allowed.
4.  TFD Folder
Stores TFD format design files
Created only on PC.
5.  Files not able to be handled
The Automat cannot handle folders saved into another folder.

*Add extension behind of the folder name when creating folders on a PC.

Example : "ABC.fdr" for a FDR Folder

"ABC.prj" for a PRJ Folder

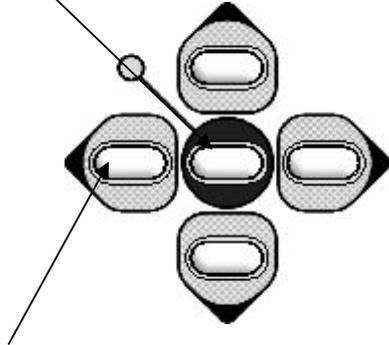
"ABC.mem" for a MEM Folder

"ABC.TFD" for a TFD Folder

*Do not edit the "System" folder in the CF Card. It may damage the system software.

3) Basic Operations

Origin Key : Switches screens for Design and Folders.



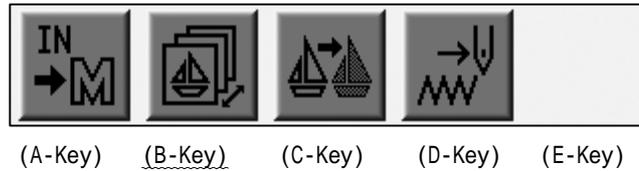
Jog Keys : Moves the cursor.

2. CF Card Screen

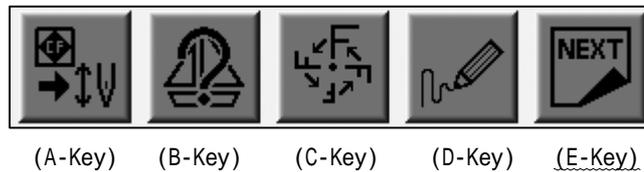
The operations to view and edit the folders/designs in the CF.

1) Press the Menu Key to display " Menu 2 " as below.

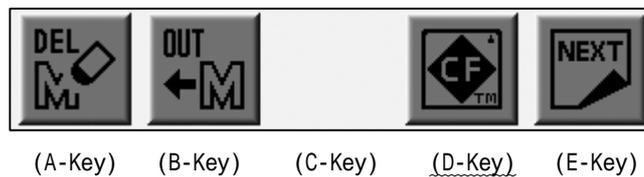
2) Press the B-Key.



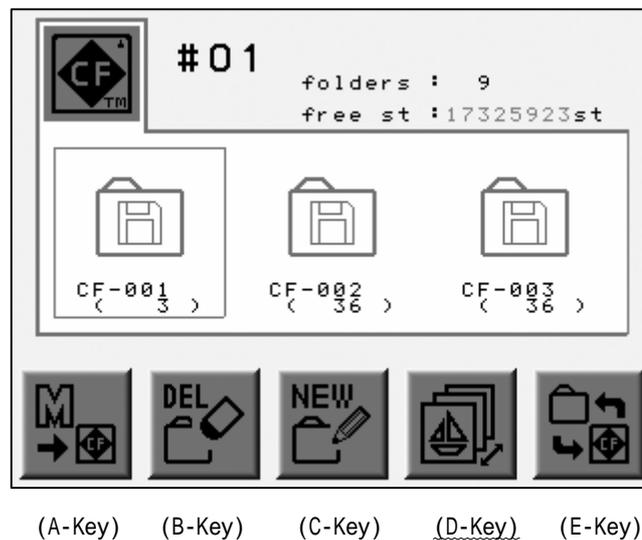
3) Press the E-Key..



4) Press the D-Key.



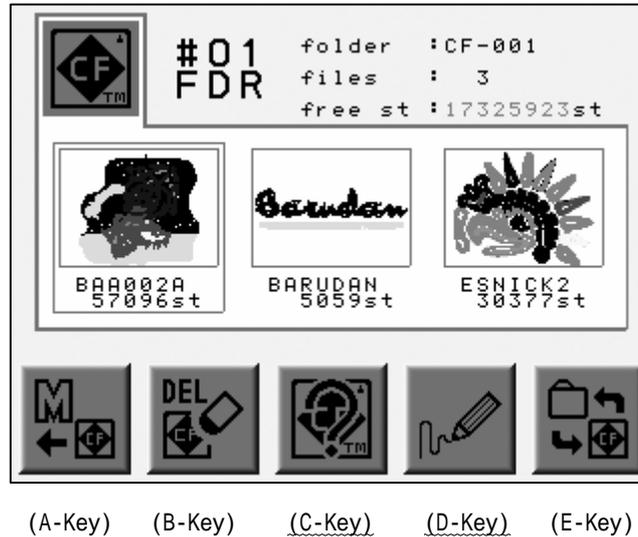
5) The folders in the CF appear on the screen.



*The folders appear in the alphabetic order in each category.

*FDR Folders appear first and PRJ, MEM, TFD follow in order.

6) Press the Origin Key or the E-Key to view the files in the folder.



Press the C-Key to view design property.

Press the D-Key to view the enlarged thumbnail.

*The design files in the FDR, PRJ, TFD folders are sorted in alphabetic order.

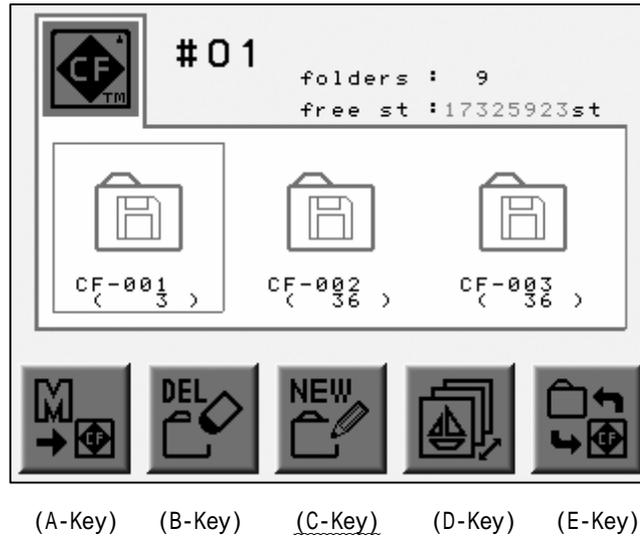
3. Creating a Folder

Instructions for creating folders on a CF Card. (FDR, PRJ, MEM Folders)

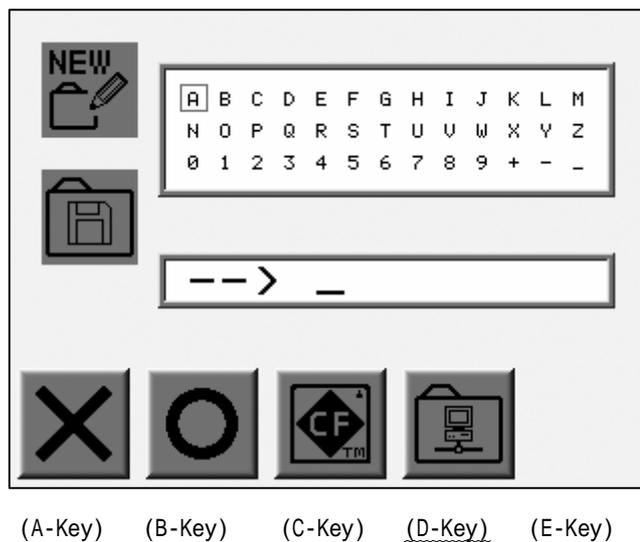
Refer to "Before Using the CF Card" for the folder format.

1) Refer to the "CF Card Screen" and find it.

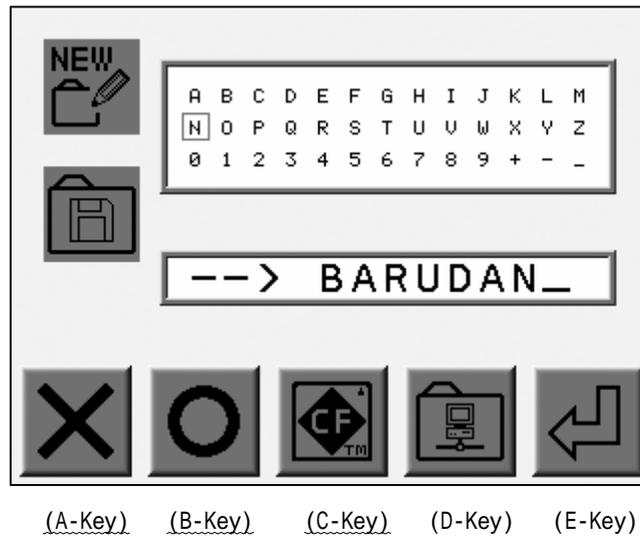
2) Press the C-Key.



3) Press the D-Key to choose a folder format.



4) Type in the folder name using the Jog keys and the origin key.



Use the Jog keys to select a letter.

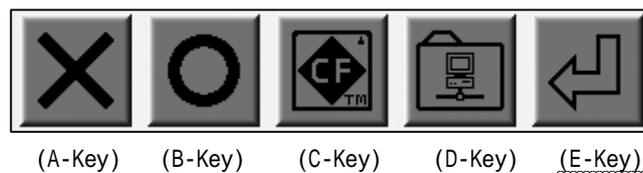
Press the Origin Key or the B-Key to enter the letter.

Press the A-Key to delete the last letter.

Press the C-Key to cancel creating a folder and exit.

*A folders name can have 8 letters.

5) Press the E-Key to create the folder.

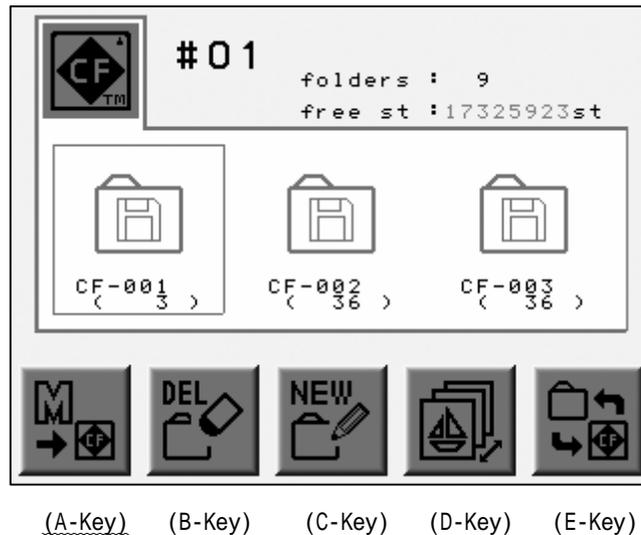


4. Saving to the CF Card

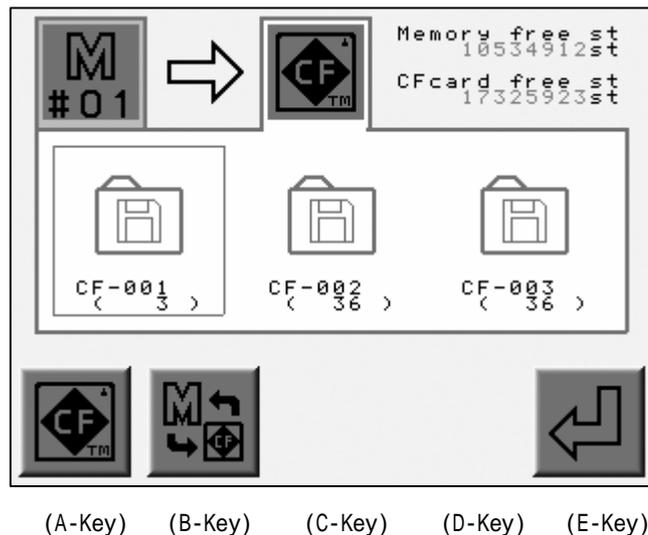
Instructions to save the design files to FDR or PRJ folders.

*PRJ folders cannot store files in same name.

- 1) Refer to the "CF Card Screen" and find it.
- 2) Press the A-Key.

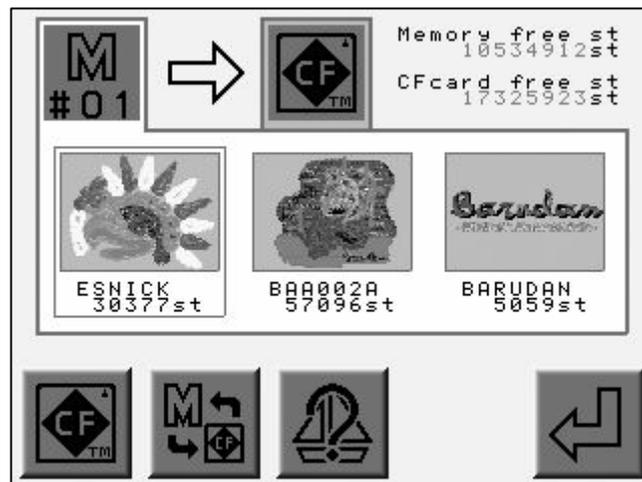


- 3) Use the Jog keys to select the destination folder.



4) Press the B-Key to view the designs in the Folder.

Use the Jog keys to select a design file to save.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

Press the A-Key for the previous screen.

Press the B-Key to toggle the CF Card and Memory screen.

Press the C-Key to view the design property.

5) Press the E-Key to start saving.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

*The design appears in alphabetical order.

*Each folder (FDR, PRJ, MEM) stores the design in a different format.

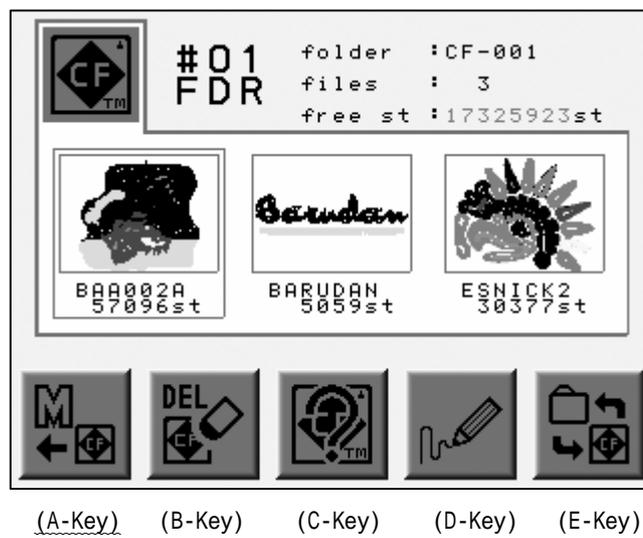
Refer to “ Before Using the CF Card ” for the differences between each folder.

5. Loading from the CF Card

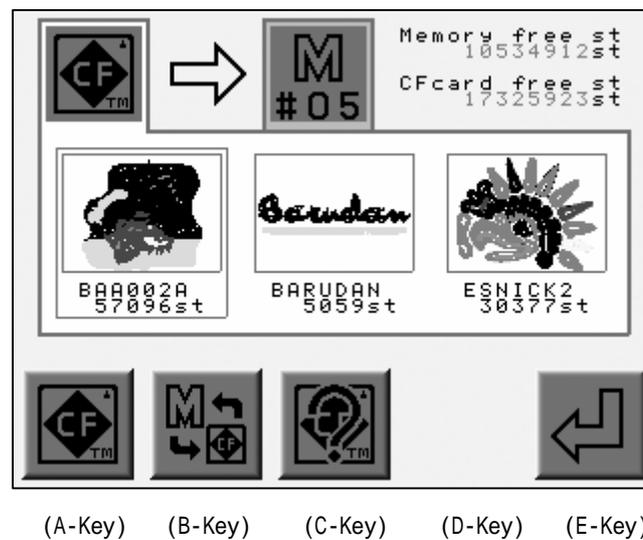
Instructions for loading designs stored in FDR, PRJ, TFD folders on a CF Card.

5-1. Loading from the CF Card

- 1) Refer to the “ CF Card Screen ” and find it.
- 2) Press the A-Key.

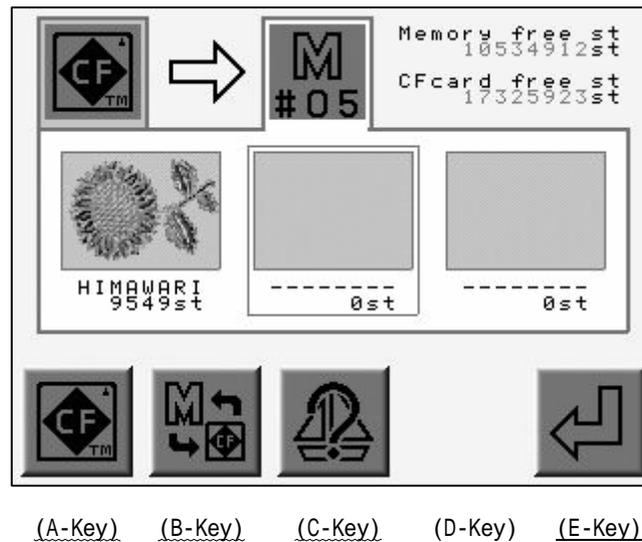


- 3) Use the Jog keys to select a design.



4) Press the B-Key.

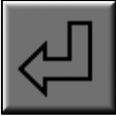
Use the Jog keys to select an empty Memory location. *1



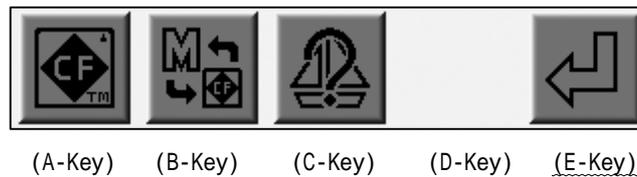
Press the A-Key for the previous screen.

Press the B-Key to toggle the CF and Memory screen.

Press the C-Key to view the design properties.

*The Enter icon  will not display and loading a design will not be possible.

5) Press the E-Key to start loading the design to the memory.

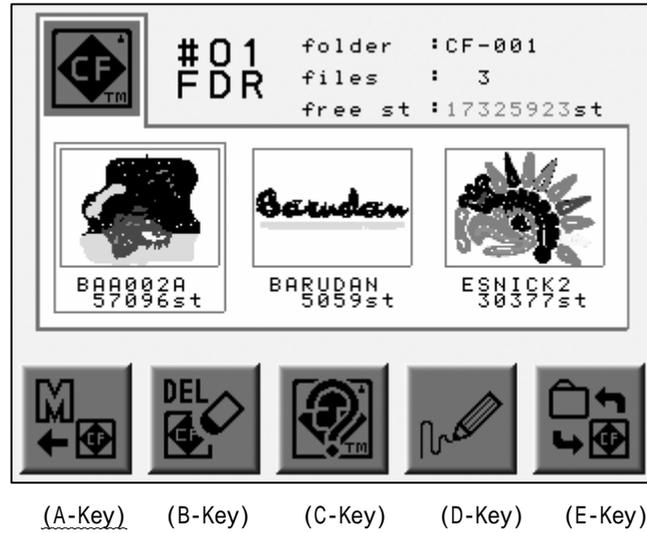


*1 The controller automatically chooses an empty memory location.

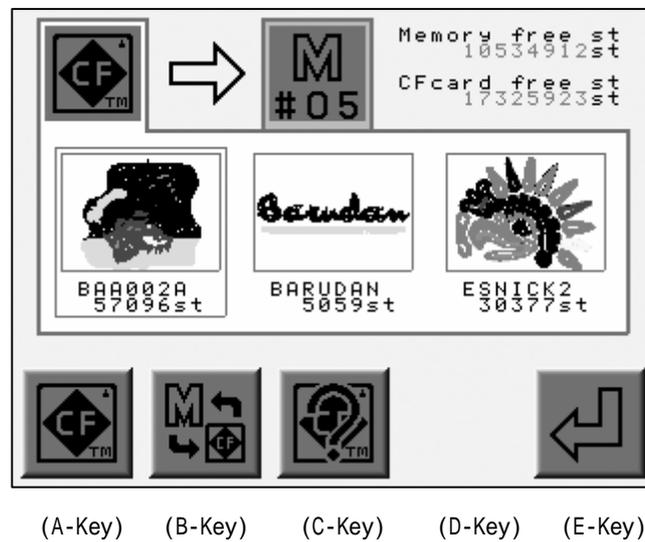
Delete designs to create an empty Memory location when all Slots are occupied.

5-2. Merging

- 1) Refer to the "CF Card Screen" and display it.
- 2) Press the A-Key.

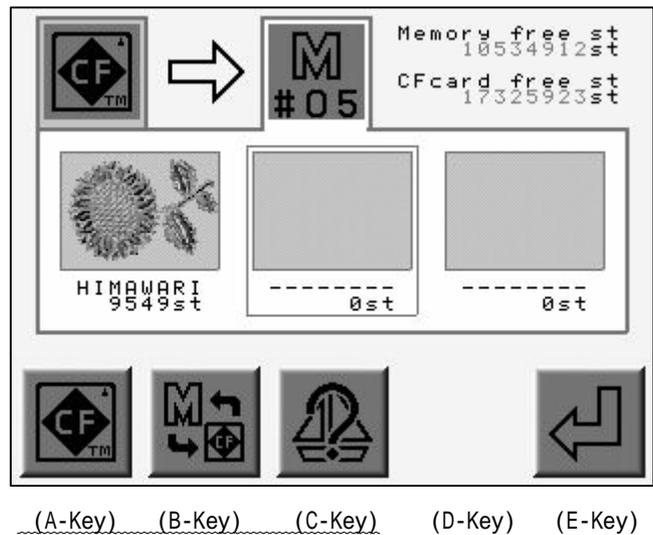


- 3) Use the Jog Keys to select a design file.



4) Press the B-Key to view the designs in the Memory.

Use the jog keys to select a design to merge.



Press the A-Key for the previous screen.

Press the B-Key to toggle the CF and Memory screen.

Press the C-Key to view the design property.

The icon above the D-Key turns into the Merging Icon

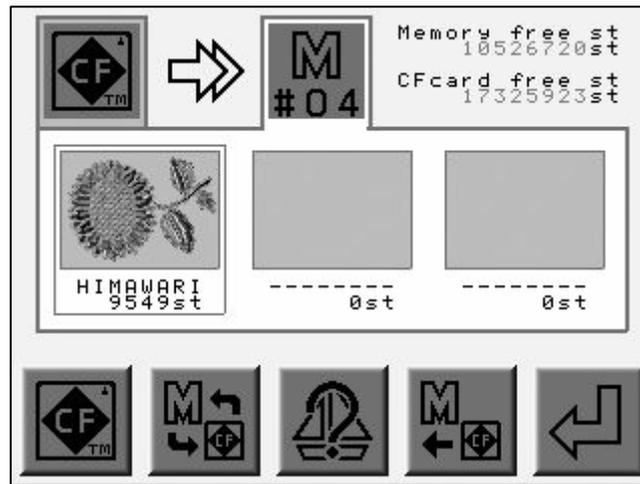


5) Press the D-Key to merge the design.



Press the D-Key again for the previous screen.

6) Press the E-Key again to start the Merging.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

6. Memory Back-Up

Instructions on how to back up the designs in the Memory.

Merging is not allowed.

This operation is not allowed in the Stand-By State.

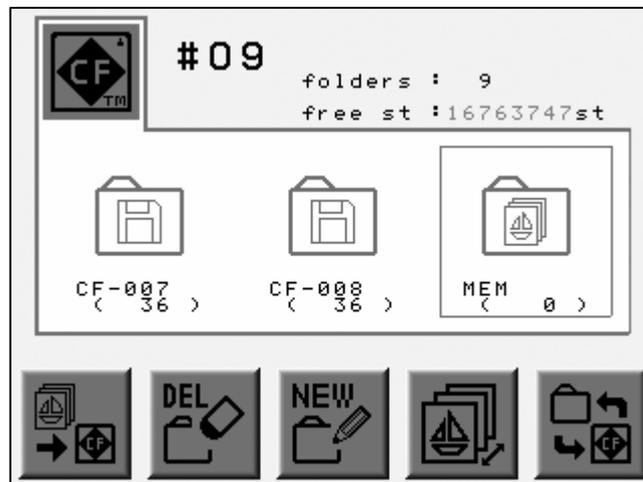
- 1) Refer to “Creating a Folder ” and create a MEM Folder.

The icon above the A-Key will be



when a MEM folder is chosen.

- 2) Press the A-Key.



(A-Key)

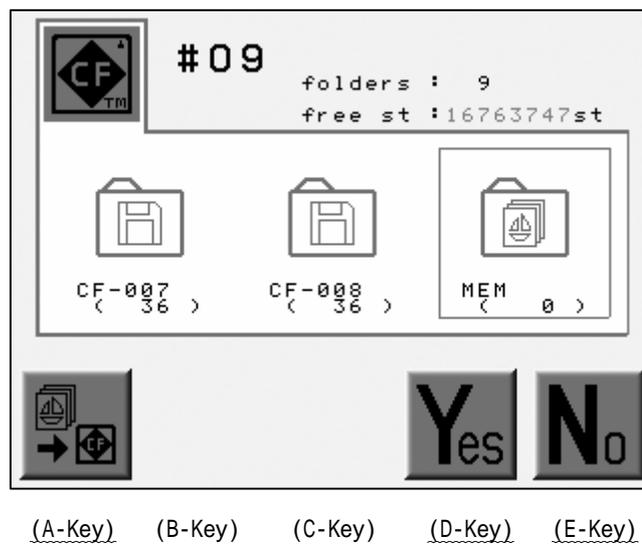
(B-Key)

(C-Key)

(D-Key)

(E-Key)

3) Press the D-Key to start the Back-Up.

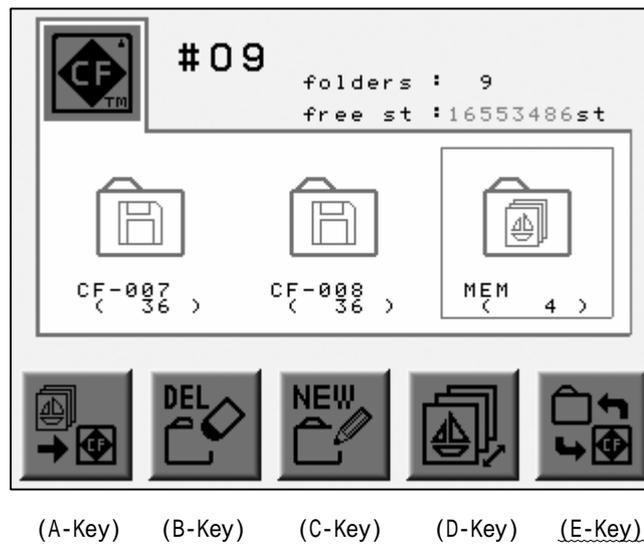


Press the A-Key or E-Key to cancel the Back-Up and go out from the menu.

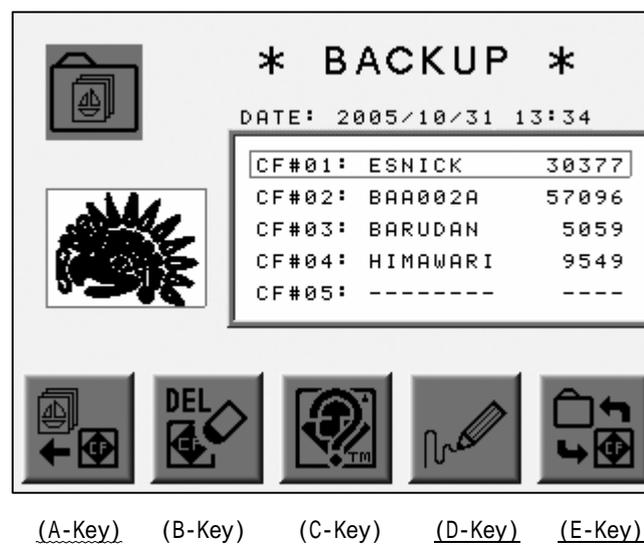
7. Loading Design Back-Up

Instructions on how to load the design back-up into the machines memory..

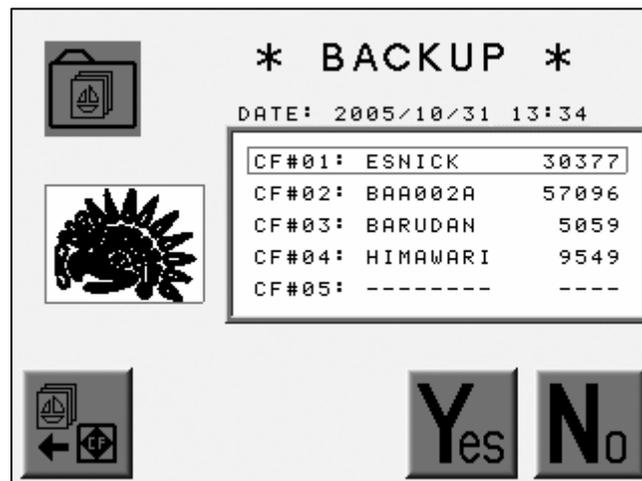
- 1) Refer to the “ CF Card Menu ” and display it.
- 2) Choose a MEM folder to load.
- 3) Press the Origin or the E-Key.



- 4) Press the A-Key.



5) Press the D-Key to start loading the Back-Up Files.



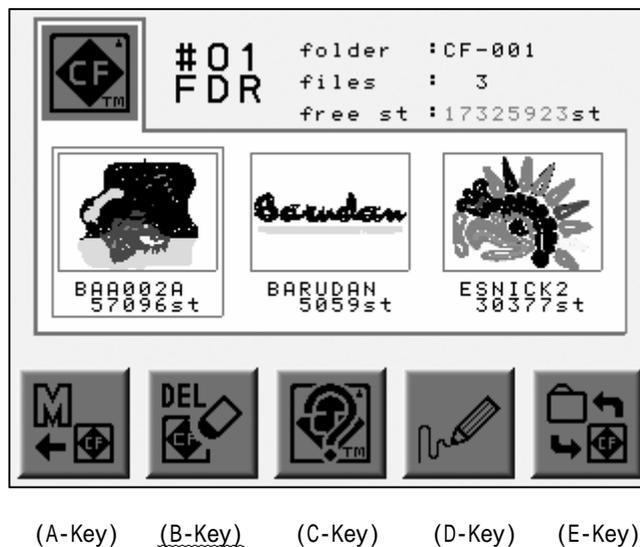
(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

Press the A or E-Key to cancel loading and exit.

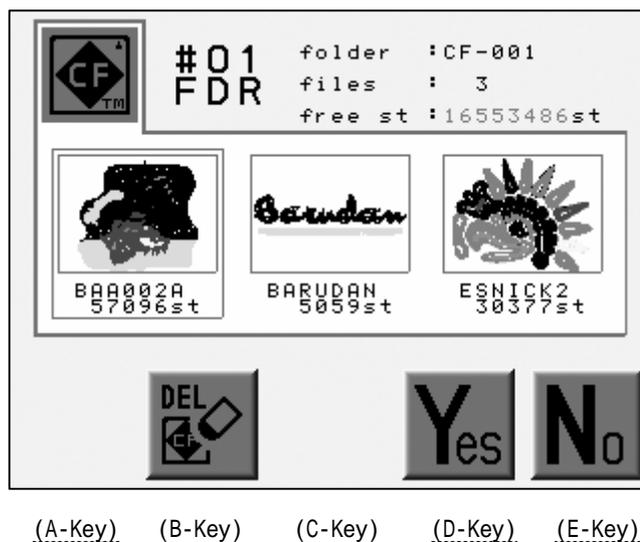
8. Deleting Designs on the CF Card

Instructions on how to delete files from a CF card.

- 1) Refer to the " CF Card Menu " and display it.
- 2) Use the jog keys to select the design to delete.
- 3) Press the B-Key.



- 4) Press the D-Key to delete the design.



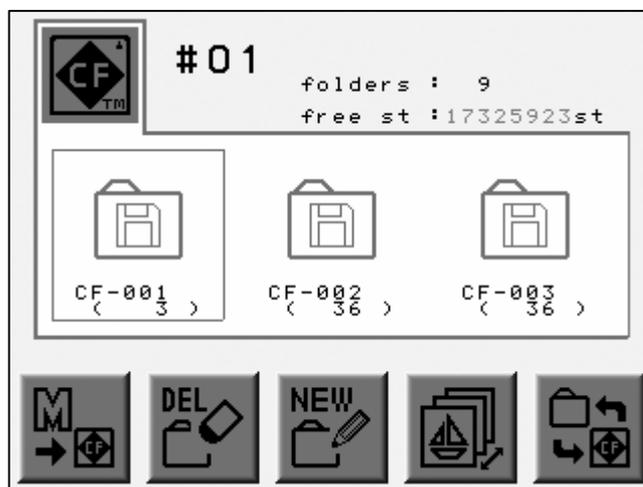
Press the B or E-Key to cancel the deleting and exit.

9. Deleting a Folder

Instructions on deleting a folder from the CF card.

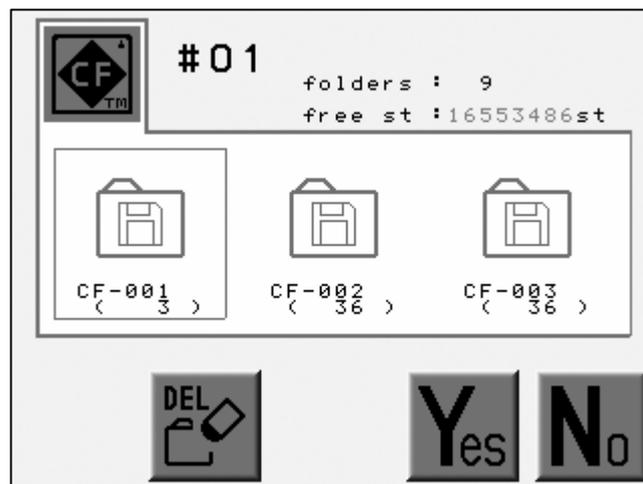
*When the folder is deleted all designs in the folder will be deleted as well.

- 1) Refer to “ CF Card Menu ” and display it.
- 2) Use the jog keys to select the folder to delete.
- 3) Press the B-Key.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

- 4) Press the D-Key to delete the folder.



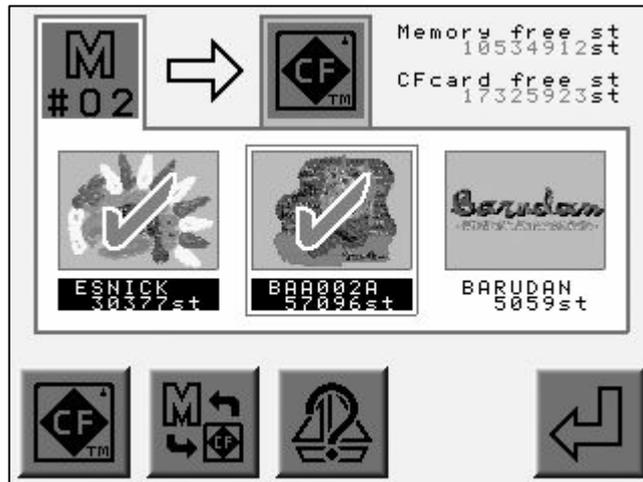
(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

Press the B or E-Key to cancel the deletion and go out from the menu.

10. Saving Multiple Designs at the same Time

- 1) Refer to "Saving to the CF Card", and display the screen.
- 2) Press the Origin Key to choose a design. A check mark appears.

Press and hold the Origin Key to check the chosen and all following designs.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

Choose a checked design and press the Origin Key to retrieve it.

- 3) Press the E-Key to start saving the designs.

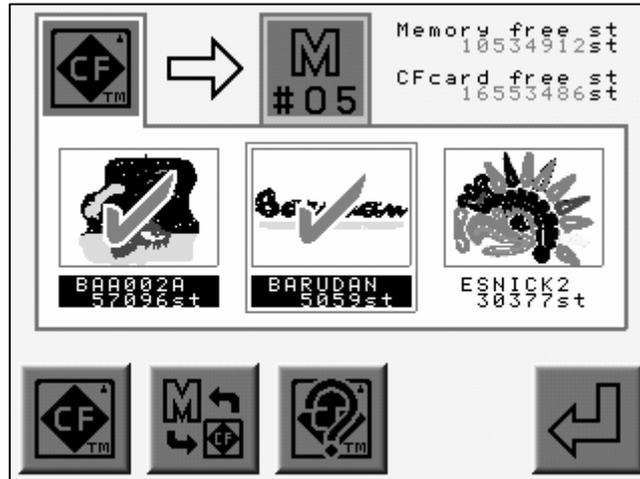


(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

11. Loading Multiple Designs at the same Time

- 1) Refer to “ Loading from the CF Card ” .
- 2) Press the Origin Key to display the folder contents.

Press and hold the Origin Key to check the chosen and all following designs.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

Choose the checked design with the Jog Keys and press the Origin Key to retrieve it.

- 3) Press the E-Key to start loading designs.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

Chapter 7. Memory

This chapter contains information on the following Memory functions.

1. Switching Designs
2. Design Information
3. Design Thumbnail
4. Production
5. Renaming the Design
6. Color Change Function Code
7. Thread Consumption
8. Deleting the Design
9. CF Direct Drive

The machines memory capacity is 10 million stitches and 30 memory locations.

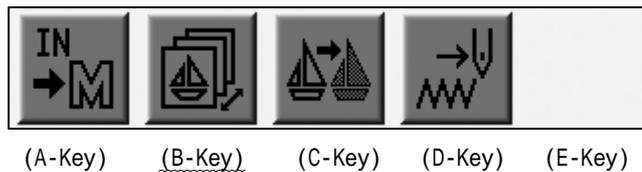
1. Switching Designs

Select a design from Memory.

The machine must be out of Drive mode.

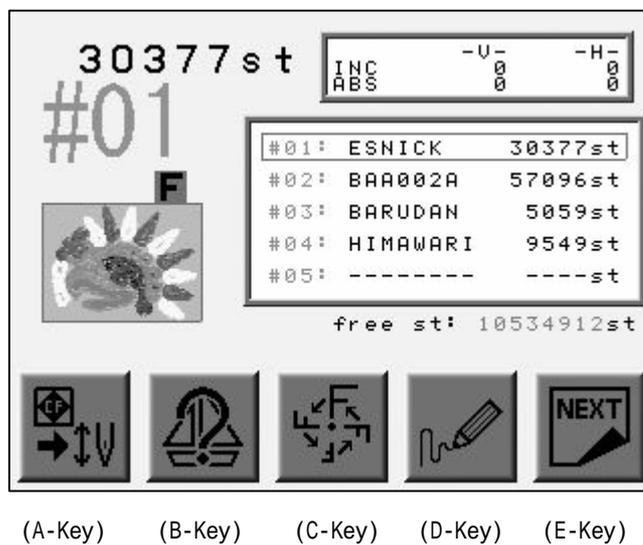
1) Press the Menu Key to display “ Menu 2 ” as below.

2) Press the B-Key.



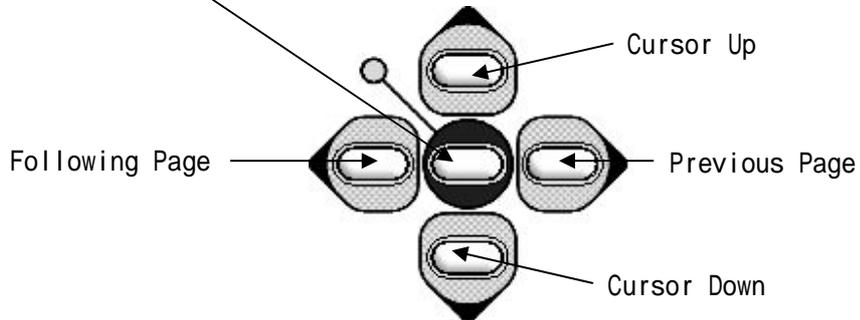
3) The screen shows the list of designs in the memory and displays, memory location, design name, and stitch count.

When a location is empty it is shown with “ --- ”.



4) Use the jog keys to select a design.

Press the Origin Key to move the Pantograph to the Start Point of the design. *1



*1 Refer to "The Start Point" to place the pantograph where the design should start.

2. Design Information

Viewing design information.

The Design Information Screen has following contents.

Design No.	: The memory location of the design.
Stitch Count	: The stitch count of the design.
Pass	: Distance between the start and end points, shown as horizontal and vertical values, measured in tenths of millimeters.
Size	: Distance between the overall dimensions of the design measured in tenths of millimeters.
P1	: Distance from the start point to the bottom left corner of the design, measured in tenths of millimeters.
P2	: Distance between the start point and top right corner of the pattern measured in tenths of millimeters.
Free St	: Total number of stitches available in memory.

*The unit for the PASS, SIZE, P1 and P2 is 1/10mm.

* The screen shows " --- " for the blank slot except the Design No.

1) Press the Menu Key to display " Menu 2 " as below.

2) Press the B-Key.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

3) Press the B-Key.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

4) The Design Information Screen displays.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

Press the B-Key for the previous screen.

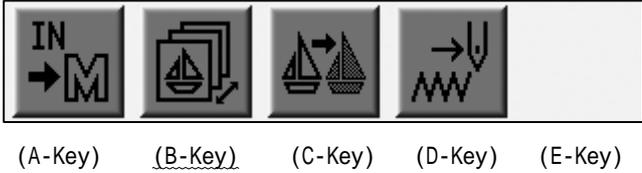
*In the Stand-By mode, the Jog Keys toggle the Design Information Screen for all designs in memory location.

3. Design Thumbnail

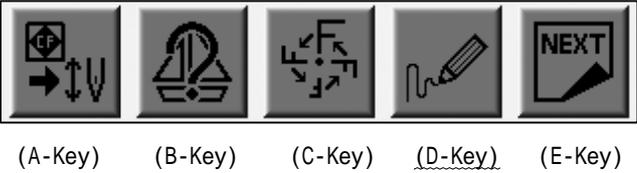
Instructions for viewing the design thumbnail.

1) Press the Menu Key to display “ Menu 2 ” as below.

2) Press the B-Key.

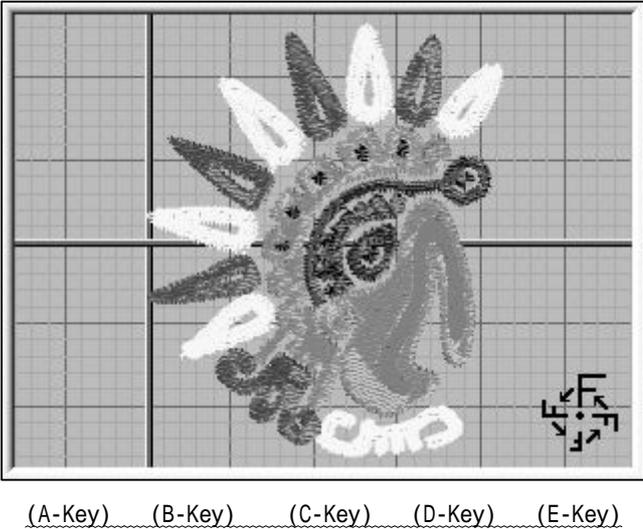


3) Press the D-Key.



4) The Thumbnail appears.

Thumbnail of design, with Program parameters changed.

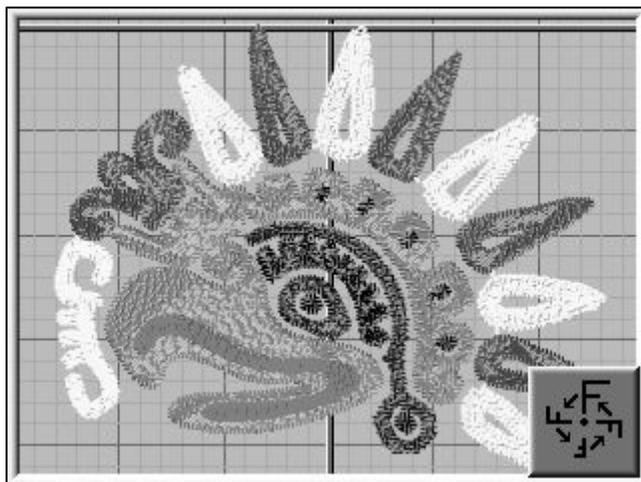


Press either A - D Key to go back to the previous screen.

5) Press the E-Key to view the thumbnail of the Original Design.

When program parameters have NOT been changed, this feature is not available.

The Thumbnail of the Original Design



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

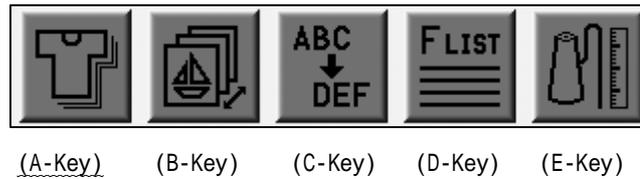
Press the either A - D Key to go back to the previous screen.

Press the E-Key for the previous screen.

4. Production

Instructions for displaying Production Statistics for patterns in memory.

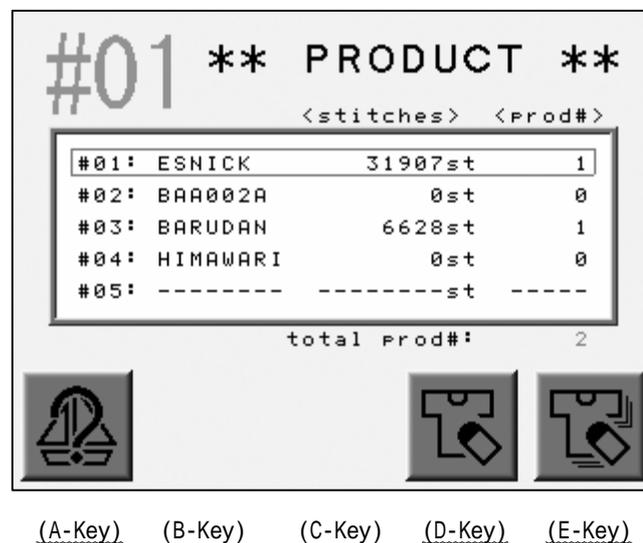
- 1) Refer to the "Design Information" and display the pattern.
- 2) Press the A-Key.



- 3) Shows information on each pattern in memory. Tracks how many times each was sewn, Total stitches sewn for each pattern, and total number of times all patterns in the memory (combined) have been sewn.

Press the D-Key until a long beep is heard, to reset the Stitch count and piece Count for the selected design.

Press the E-Key until a long beep is heard to reset the Stitch count and Piece count for all designs in memory.



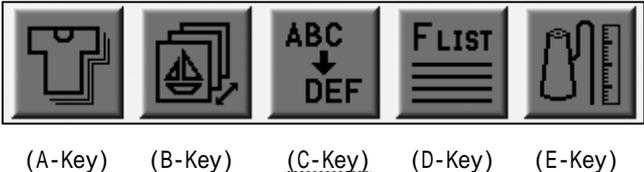
Press the A-Key for the previous screen.

5. Re-naming the design

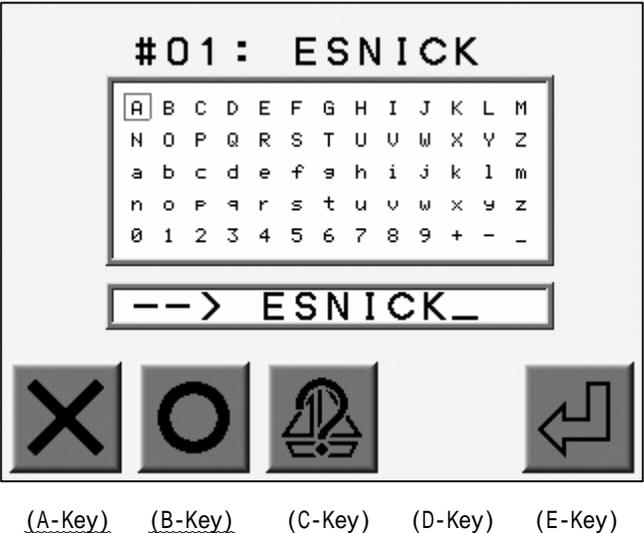
Instructions on renaming designs in memory.

The machine must be out of drive mode in order to rename a design.

- 1) Refer to the "Design Information" and find it.
- 2) Press the C-Key.



- 3) The Rename Screen displays.

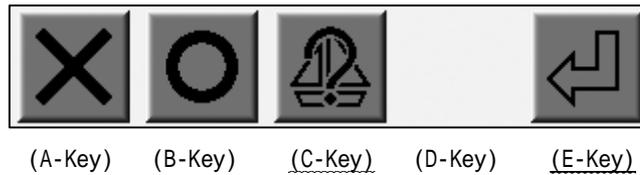


Use the jog keys to select a letter.

Press the Origin Key or the B-Key to enter the letter. *1

Press the A-Key to delete the last letter.

4) Press the E-Key to save the new design name and go out from the menu. *2



Press the C-Key for the previous screen.

*1 The design name can contain a maximum of 8 characters.

The first letter must be one an alpha character.

Saving the design to a floppy disk or CompactFlash Card converts the alpha characters to capital letters.

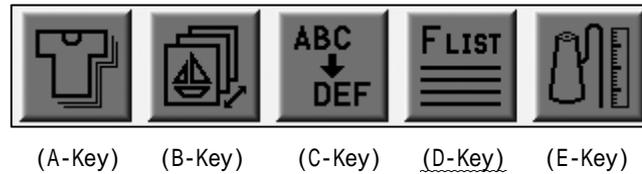
Memory Back-Up does not convert the letters.

*2 Press the MENU Key to cancel the name change and exit the Rename menu.

6. Changing the Color Codes of a Design

Instruction on changing the color codes of the design using F-List.

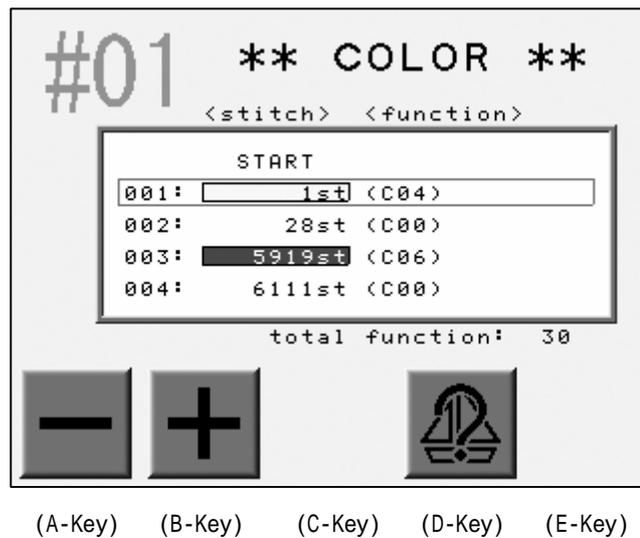
- 1) Refer to the “Design Information” and display it.
- 2) Press the D-Key.



- 3) The list of color changes displays.

The list displays the total color change functions.

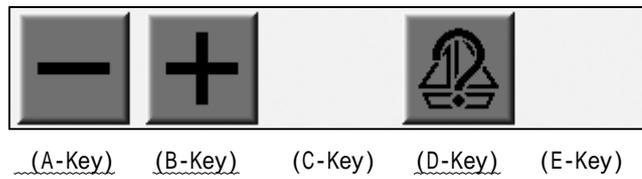
Use the jog keys to select a code.



Refer to the “Changing the Colors in the Display” to change the color.

4) Press the A or B-Key to change the code.

*The modified code will be highlighted.



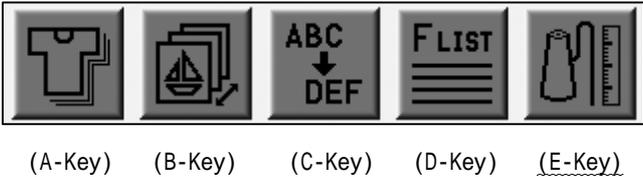
Press the D-Key for the previous screen.

*A design can have up to 400 Color Change Codes.

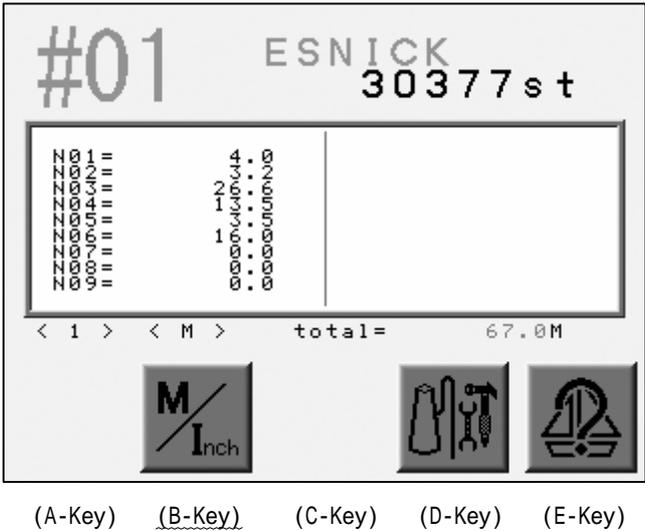
7. Thread Consumption

Instructions on simulating thread consumption.

- 1) Refer to the "Design Information" and find it.
- 2) Press the E-Key.



- 3) Simulates thread consumption for each needle.



Press the B-Key to see the result in inches.

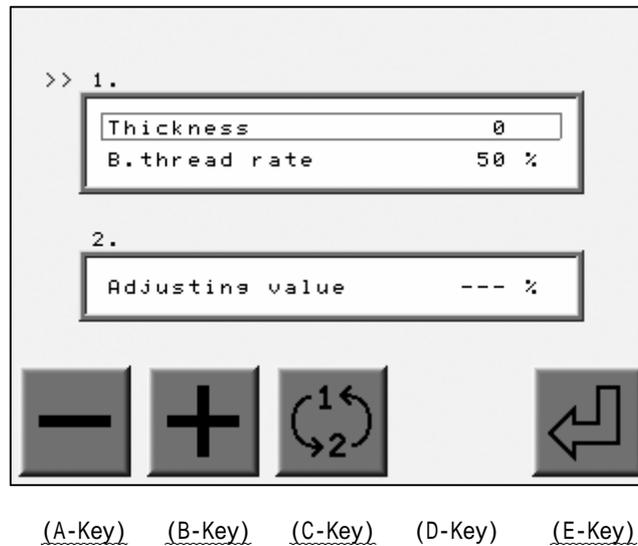
Press the E-Key for previous screen.

4) Press the D-Key.



5) The screen for configuring the simulation displays.

Use the jog keys to select a column.



Press the A-Key to decrease the value.

Press the B-Key to increase the value.

Press the C-Key to change the set-Up method. *1

Press the E-Key to enter the value and go back to previous screen.

*1 2 Methods are available. The first is setting the fabric thickness and percentage of the bobbin thread against the top thread. The second is to change the ratio of the calibration.

Item	Function	Range	Default
Thickness	The thickness of the fabric measured in millimeters.	0.0 - 9.9mm	0.0mm
B. Thread Rate	The ratio of the bobbin thread against the top thread in satin stitches.	0 - 100%	50%
Adjusting Value	The calibration ratio of thread consumption.	100 - 200%	100%

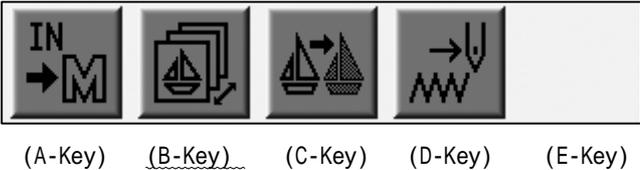
8. Deleting a Design

Instructions on deleting a design from memory.

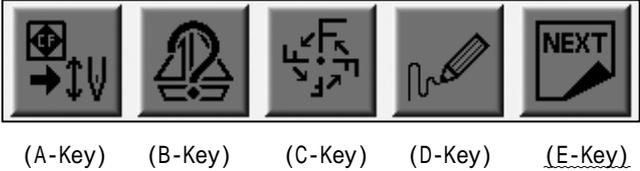
*The machine must be out of Drive mode to delete designs.

1) Press the Menu Key to display " Menu 2 " as below.

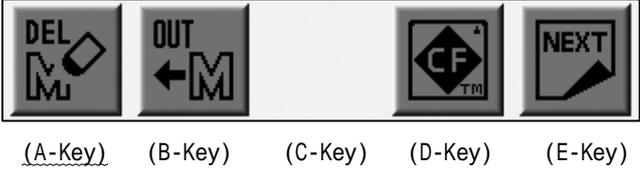
2) Press the B-Key.



3) Press the E-Key..

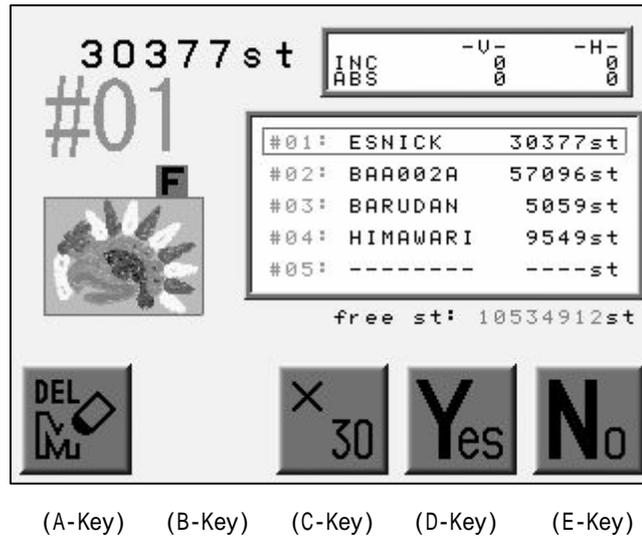


4) Press the A-Key..

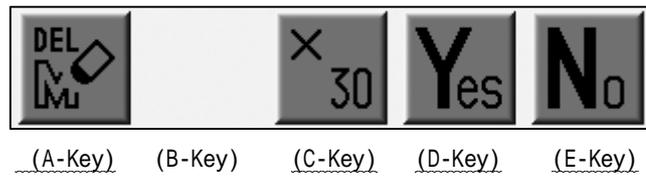


5) Refer to “Switching Designs” and find the menu.

Use the jog keys to select a design.



6) Press the D-Key to delete the design file.



Delete all designs in memory by pressing the D-Key while the C-Key is held.

Press the A or E-Key to cancel deleting and go back to the previous screen.

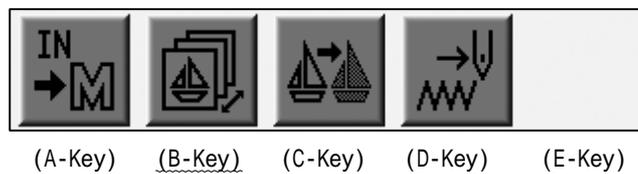
9. CF Direct Drive

9-1. CF Direct Drive

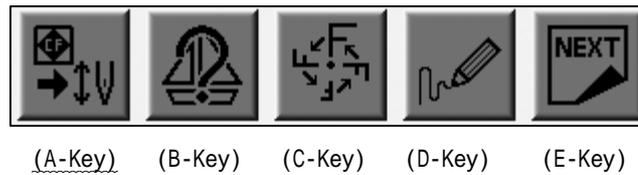
Designs saved on the Compact Flash (CF) Card can be sewn directly from the card.

1) Press the Menu Key to display “ Menu 2 ” as below.

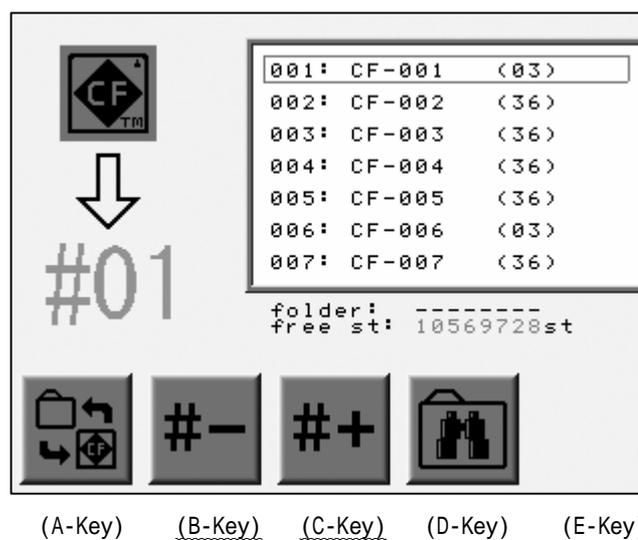
2) Press the B-Key..



3) Press the A-Key.

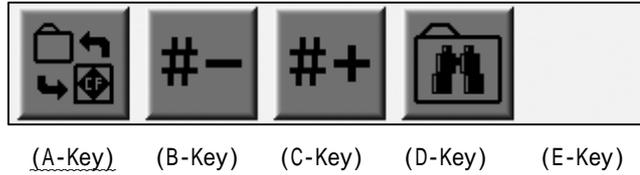


4) The list of the Folders on the Compact Flash (CF) Card displays.

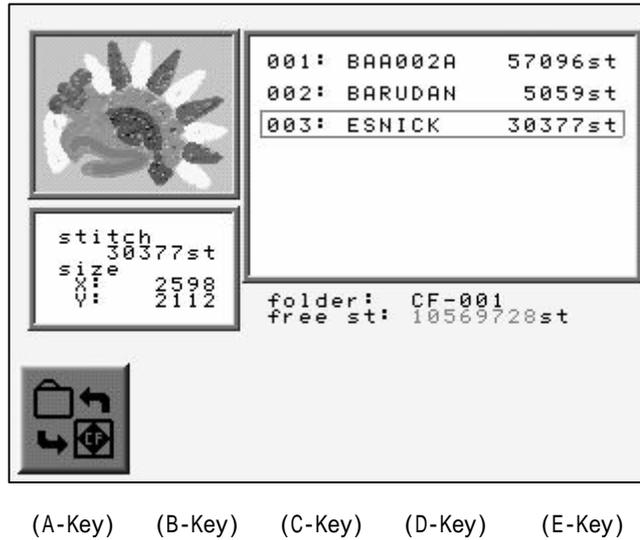


Press the B or C-Key to choose the Memory location for the design.

5) Press the A-Key.

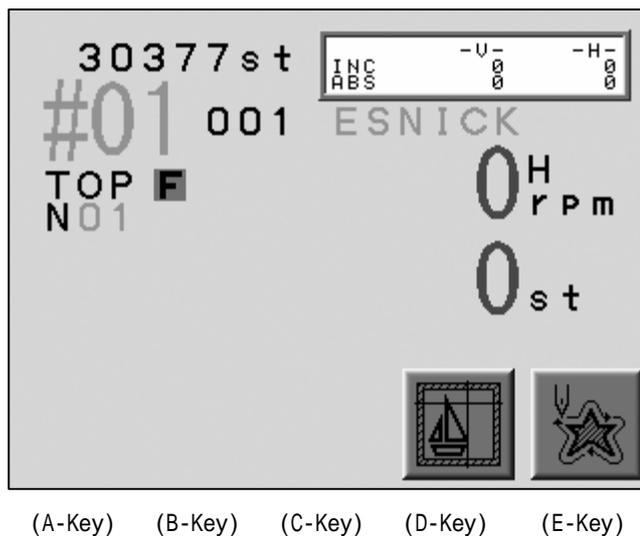


- 6) The design file is listed in the Folder.
Use the jog keys to select a design to load.



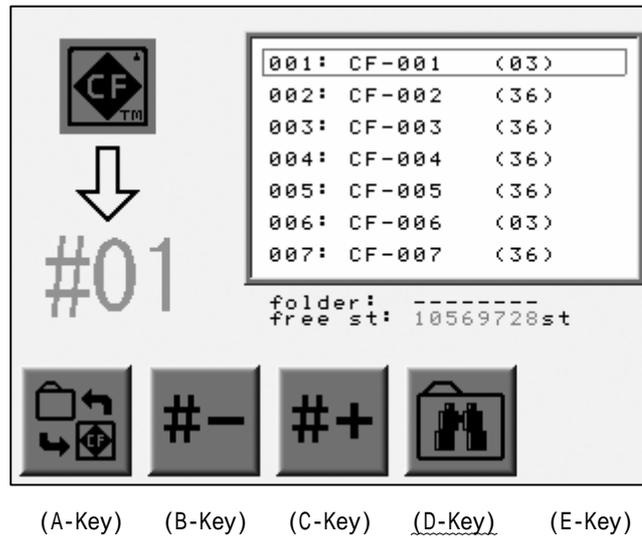
- 7) Press the Drive Key  to place the machine in Drive mode.

The selected file is loaded and the controller goes into Drive mode.

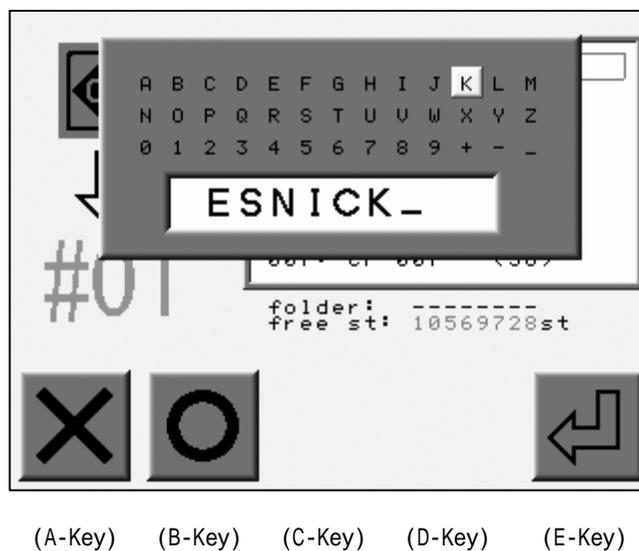


9-2. Searching a Design on the Compact Flash (CF) Card

- 1) Refer to the "CF Direct Drive" and display the menu.
- 2) Press the D-Key.



- 3) The Lettering Menu pops up.



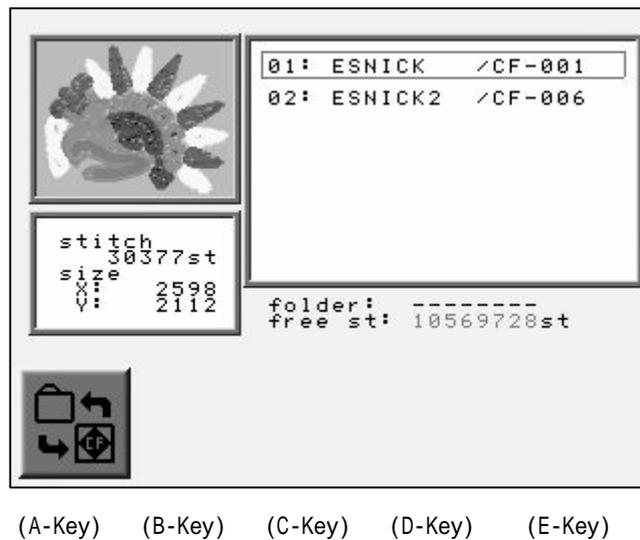
- Use the Jog keys to select a letter.
- Press the Origin Key or the B-Key to enter the letter.
- Press the A-Key to delete the last letter.
- Enter a Design File Name to be searched.

4) Press the E-Key to start searching.



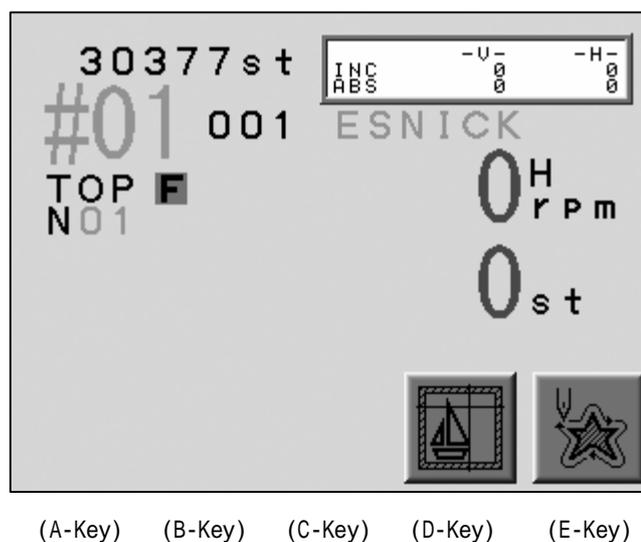
5) The search result displays.

Use the jog keys to select design to load.



6) Press the Drive Key  to place the machine in Drive mode.

The design file is loaded to the Memory and the machine is placed in Drive mode.



Chapter 8. Program Parameters

This chapter includes instructions on applying program parameters to a design.

1. Changing the Program Parameters
2. Setting the Sub-Soft Limits
3. Setting the Matrix Embroidery
4. Program Parameter List

1. Changing the Program Parameters

Program parameters control the appearance of a pattern when it is sewn. Changing Program parameters, affects the selected pattern in memory.

Changes to the Program parameters can only be made while the machine is in Stand-By state.

While in Drive mode, the Program parameters can only be viewed.

1) Refer to the “Switching Designs” and display the list.

*The list will not display while in Drive mode.

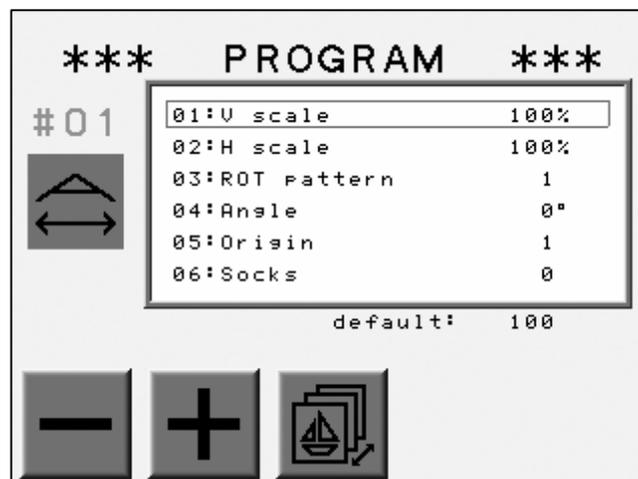
2) Press the C-Key.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

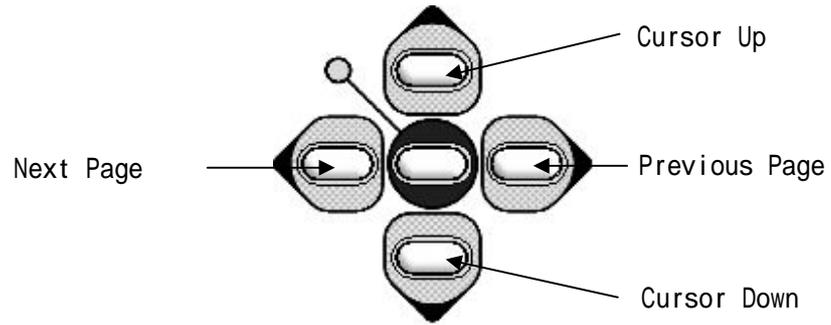
3) The Program List appears.

Use the Jog keys to select a Program parameter.

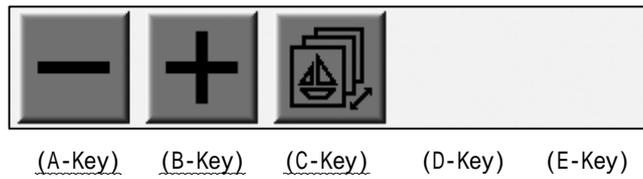


(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

* Basic Operations for the Jog keys



4) Press the A or B-Key to change the value.



Press the C-Key for the previous menu.

2. Setting the Sub-Soft Limit

The controller memorizes 3 embroidery areas to limit the movement of the Pantograph. These areas are called Sub-Soft Limits.

Register the Lower Left Corner (P1) and Upper Right Corner (P2) for each area. The pantograph movement would be limited to the rectangular area created by the 2 corners.

*Registering the 2 corners is done by moving the pantograph with the jog keys.

*The area for the Sub-Soft Limit is not larger than the Soft Limit Area in the Machine Condition Parameters (MC).

1) Refer to “ Changing the Program Parameters ” and display the list.

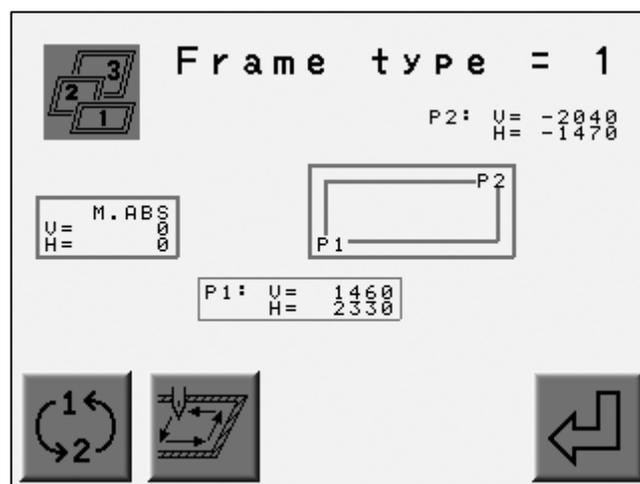
2) Use the jog keys to move the the cursor “ Frame type ” .

3) Select the value 1 to 3.

*0 leaves the Sub-Soft Limit inactive.

4) Press the Origin Key to display the screen below.

*The screen below is for the first limit (Sub-Soft Limit 1).



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

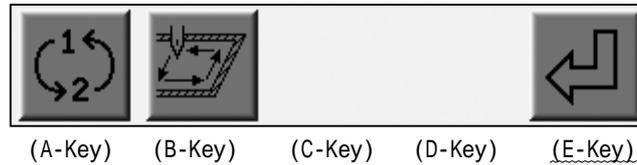
Press and hold the Origin Key for 2 short beeps when the Sub-Soft Limit is turned OFF. It shows the Soft Limit range set in the MC.

5) Use the jog keys to move the Pantograph to find the lower left corner of the area.

*Check if the P1 and V, H are surrounded by a rectangular. (P1 is chosen.)

6) Press the E-Key to register the position as P1.

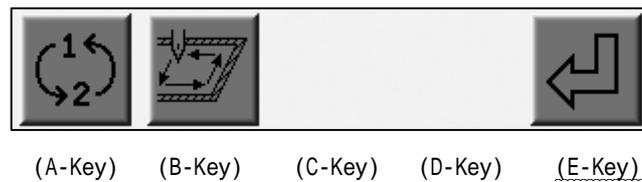
The screen automatically selects P2.
(P2 and V, H are surrounded by a rectangular)



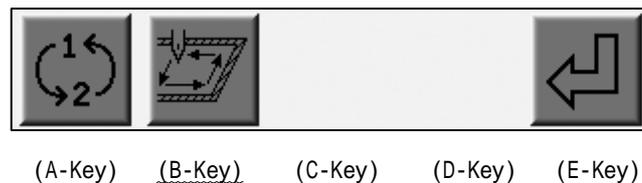
7) Register P2 (Upper Right Corner of the area).

Move the Pantograph to find the Upper Right corner of the area.

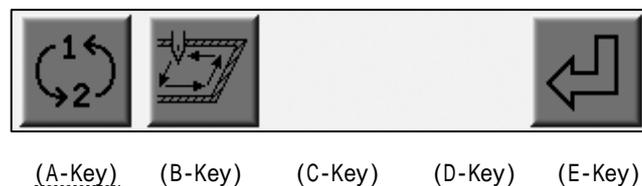
8) Press the E-Key to register the location as P2.



9) Press the B-Key to start tracing the area.



10) Press the A-Key to toggle the setting menu for P1 and P2.



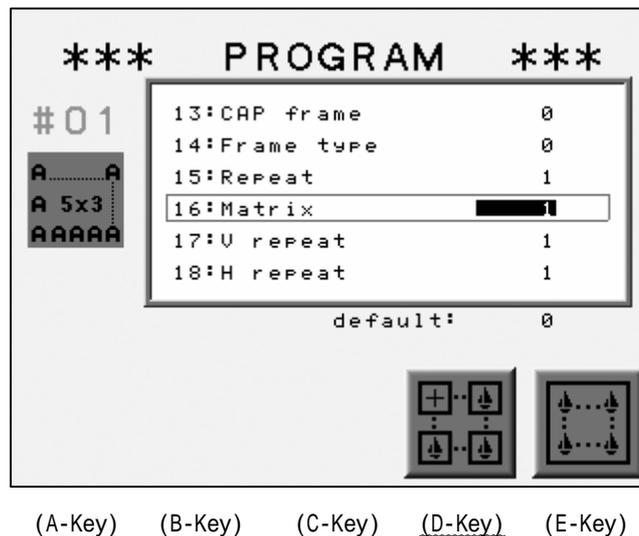
3. Setting up a Matrix

3-1. Setting the Design Size

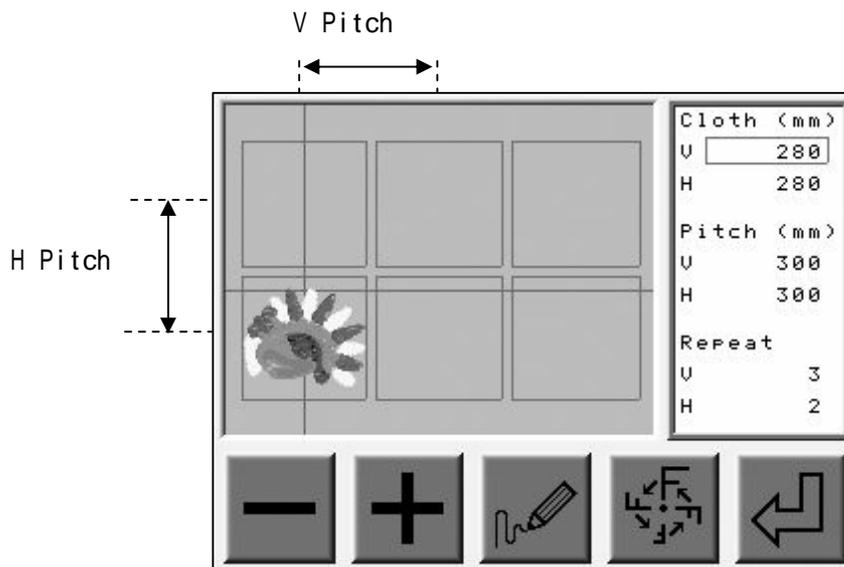
The feature automatically repeats the design in the Embroidery Area.
The layout is calculated from the distance between the center of the pattern and the quantity entered.

* This setting resets the Program setting #06 : Socks and #15 : Repeat.

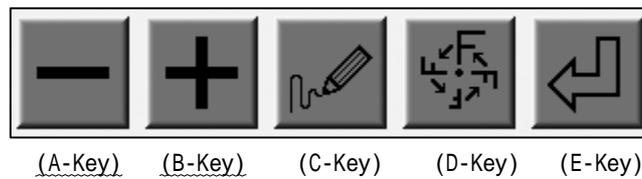
- 1) Refer to the “Changing the Program” and find the list.
- 2) Use the jog keys to move the cursor to parameter #16.
- 3) Change the value to “1” .
- 4) Press the Origin Key to find the menu below.
- 5) Press the D-Key.



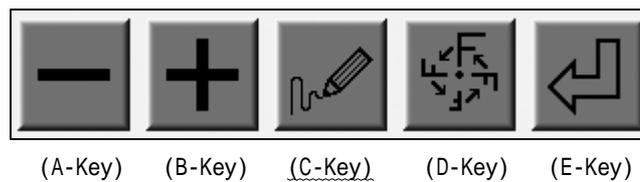
6) The setting menu displays.



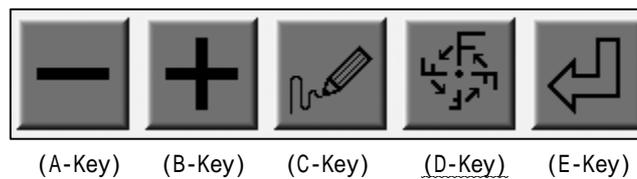
7) Use the jog keys to select a column, press the the A or B-Key to change the value.



8) Press the C-Key to redraw the screen for the new setting.



9) Press the D-Key to go back to the Program List.



10) Press the E-Key to change the following parameters automatically according to the new setting.

MC Parameter #17 : V repeat
 #18 : H repeat
 #19 : V space
 #20 : H space



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

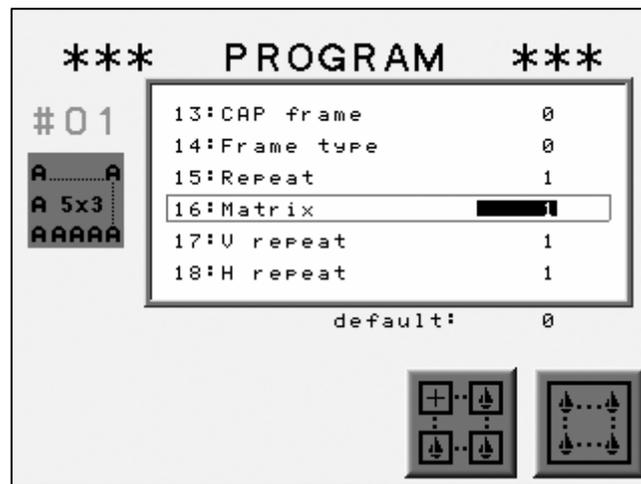
Item		Function	Range	Default
C l o t h	V	The Pantograph movement to V(X) in mm.	Regarding the Soft Limit setting	100
	H	The Pantograph movement to H(Y) in mm.	Regarding the Soft Limit setting	100
P i t c h	V	The size of the pattern to V(X) Direction in mm.	Regarding the Soft Limit setting	0
	H	The size of the pattern to H(Y) Direction in mm.	Regarding the Soft Limit setting	0
R e p e a t	V	The pattern repetition to V(X) direction.	1 - 400	0
	H	The pattern repetition to H(Y) Direction.	1 - 400	0

3-2. Automatic Repetition Setting

The feature automatically lays the maximum number of patterns in the embroidery area.

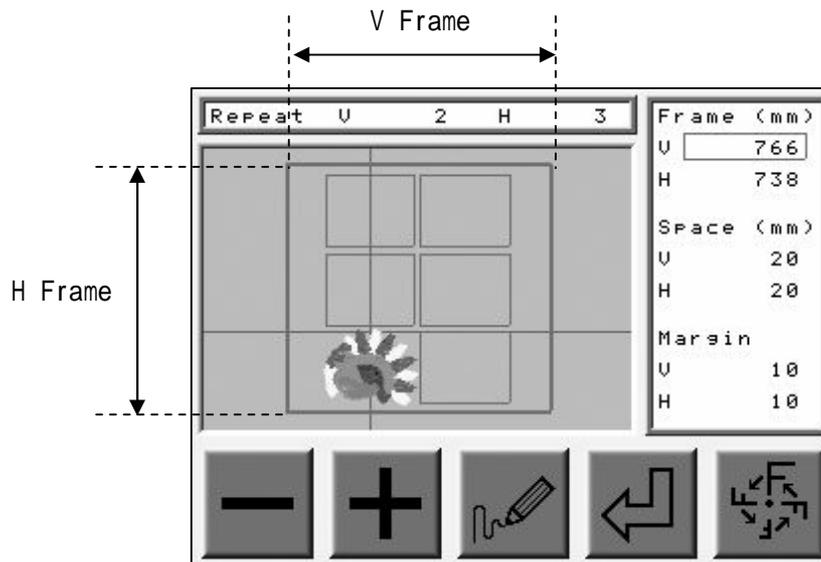
*This setting resets the Program setting #06 : Socks and #15 : Repeat.

- 1) Refer to the “Changing the Program Parameters” and display the list.
- 2) Move the cursor to column #16 with the Jog Keys.
- 3) Change the value to “1”.
- 4) Press the Origin Key to display the menu below.
- 5) Press the E-Key.

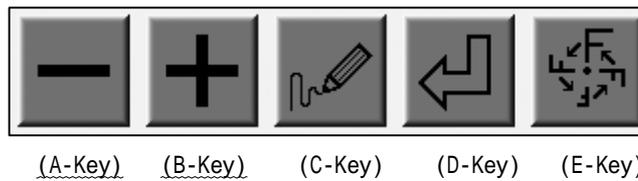


(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

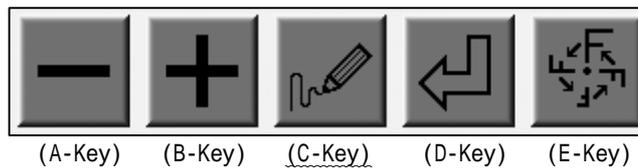
6) The setting menu appears.



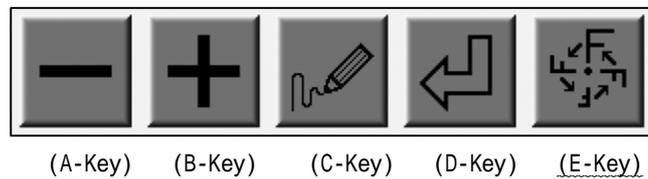
7) Use the jog keys to select a column, press the A or B-Key to change the value.



8) Press the C-Key to redraw the screen for the new setting.



9) Press the E-Key to go back to the Program List.



10) Press the D-Key to change the following parameters automatically according to the new setting.

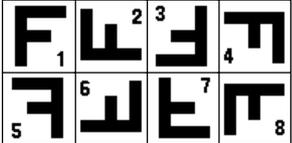
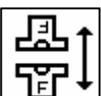
MC Parameter #17 : V repeat
 #18 : H repeat
 #19 : V space
 #20 : H space

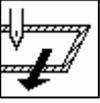
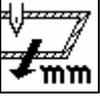
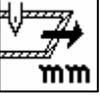
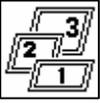


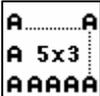
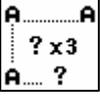
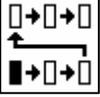
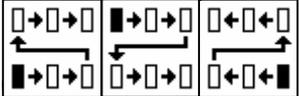
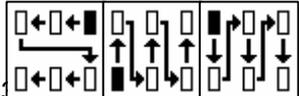
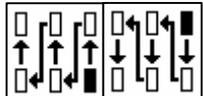
(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

Item		Function	Range	Default
Frame	V	The Pantograph movement to V(X) in mm.	Regarding the Soft Limit setting	Frame
	H	The Pantograph movement to H(Y) in mm.	Regarding the Soft Limit setting	
Space	V	The size of the pattern to V(X) Direction in mm.	-1000 to 1000	Space
	H	The size of the pattern to H(Y) Direction in mm.	-1000 to 1000	
Margin	V	Set the margin along the frame to V(X) direction in mm.	Regarding the Soft Limit setting	Margin
	H	Set the margin along the frame to H(Y) direction in mm.	Regarding the Soft Limit setting	

4. Program List

No.& Icon	Item	Function	Range	Default
1 	V Scale Left to Right	Scales the pattern.	50 - 200 %	100%
2 	H Scale Top to Bottom			
3 	ROT(Rotation) Pattern	Rotates a pattern counterclockwise, adds mirror imaging. 	Pattern 1 → 0 deg. 2 → 90 deg. 3 → 180deg. 4 → 270deg. Mirror Image Pattern 5 → 0 deg. 6 → 90 deg. 7 → 180 deg. 8 → 270 deg.	1
4 	Angle	Rotation in 1 degree increments.	0 - 89 degree	0 deg
5 	Origin	Automatically returns the pantograph to the pattern origin when sewing is completed.	1 : Active 0 : Inactive	1
6 	Socks	Automatically repeats the pattern in a different position. The gap between the 2 patterns is set with the Jog Keys after the machine is put in Drive mode. Creating a mirror image or rotating the original is available.	0 : Inactive 1 : Active  2: Mirror  3 : Rotation 	0

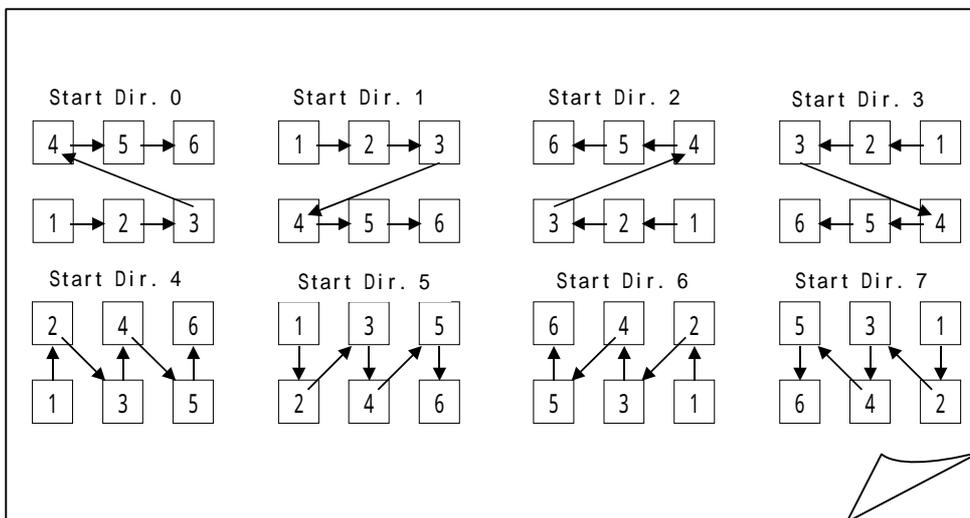
No.& Icon	Item	Function	Range	Default
7 	Appliqué	When the controller finds the "STOP" code, the Pantograph automatically moves as programmed in the following 2 parameters.	1 : Active 0 : Inactive	0
8 	A. H. Offset	When the "Appliqué" parameter is active (1), the pantograph comes out (H,Positive) and moves to Right (V,Negative) as much as the value set. When A. V. Offset is "0", the Pantograph does not move to side.	-3000 to 3000mm	0mm
9 	A. V. Offset			
10 	Frame	The Pantograph offset at the end of the design.	1 : Active 0 : Inactive	0mm
11 	F. H. Offset	When the "Frame" parameter is active, the Pantograph comes out (H, Positive) and moves to Right (V, Negative) .	-3000 to 3000mm	0mm
12 	F. V. Offset			
13 	CAP Frame	Cap frame setting. The setting automatically changes the speed of the machine and rotates the design 180 deg.	0 : standard 1-3 : Cap Frame	0
14 	Frame Type	Choosing the Sub-Soft Limit. 0 for not using it.	0 - 3	0

No.& Icon	Item	Function	Range	Default
15 	Repeat	The parameter sets the Repetition of a design.	1 - 201 201 for infinite	1
16 	Matrix	It activates the automatic layout.	0 : Inactive 1 : Active	0
17 	V(X) Repeat	Sets the repetition of the pattern in the Matrix layout.	Total of repetition (V + H) = 400	1
18 	H(Y) Repeat			
19 	V Space Width Direction	Sets the gap between the pattern.	-1000 to 1000mm	0mm
20 	H Space Depth Direction			
21 	Start Dir.	<p>Sewing order.</p>   	0 - 7	0

No.& Icon	Item	Function	Range	Default
22 	Swing Type	Sets the direction to scale the stitch length with the "Swing" parameter in the "MC" setting.	0 : V and H 1 : V(X) Only 2 : H(Y) Only	0

Matrix Sewing Order

Example. 3 patterns in width and 2 patterns in depth



Chapter 9. Sewing

This chapter contains information on sewing patterns in memory

1. Start Point
2. Drive Mode
3. Speed
4. Trace
5. Float
6. High Speed Float (By Stitch Count)
7. High Speed Float (By Color Change Code)
8. Color Change Code (Teaching)
9. Function Codes
10. Stitch Back
11. Automending
12. Stand-By Mode (Resume)

1. Start Point

Instructions for registering the designs Start Point. Each design in memory can have its own start point.

- 1) Select a design from Memory. Using the Jog keys move the pantograph to the location where the design should start sewing.
- 2) Press the Drive key to put the machine in Drive mode. The start point is registered for the design.

Refer to “Drive Mode” for the details.

*The design first to be sewn does not have the Start Point.

- 3) Press the Origin Key to move the Pantograph to the Start Point already registered.

*In the Stand-By mode, the Pantograph can move to the Start Point of the selected By pressing the Origin Key.

*The Pantograph moves to the Absolute Origin (machine origin).

2. Drive Mode

Instruction for putting the machine in Drive mode.

The machine can start sewing only in the Drive mode.

1) Move the Pantograph to the Start Point with the Jog Keys,

Refer to the “ Start Point ” .

2)  Press the Drive Key to put the machine in Drive mode.

3)  Press the Start or  Stop Switch to start/stop sewing.

4)  Press and hold the Drive Key for 3 seconds to exit Drive mode.

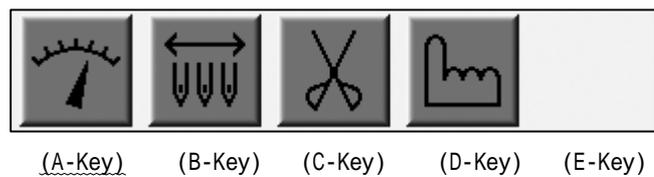
*The machine beeps when the machine is out of Drive mode.

3. Speed

Instructions for changing the sewing speed. The sewing speed can be changed while the machine is sewing.

1) Press the Menu Key to display “MENU 1” as below.

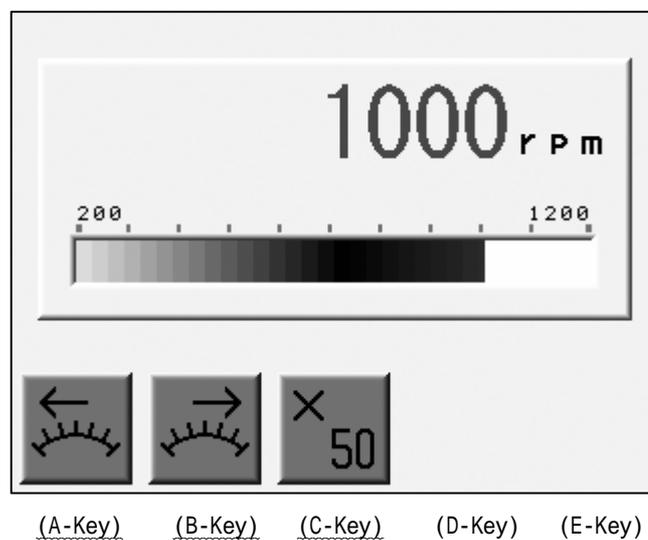
2) Press the A-Key.



3) Speed Menu appears.

Press the A or B-Key to change the speed by 10 rpm step.

Press and hold the C-Key and then press A or B-Key to change the speed by 50 rpm step.



4. Trace

4-1. Trace

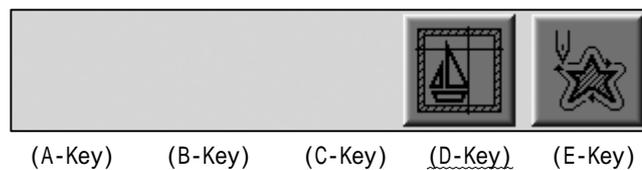
*Be sure the Frame Limit parameters in the MC (Machine Condition) are correctly set before using this feature.

The Pantograph traces a rectangle to see if the machine is sewing at the right position and right size.

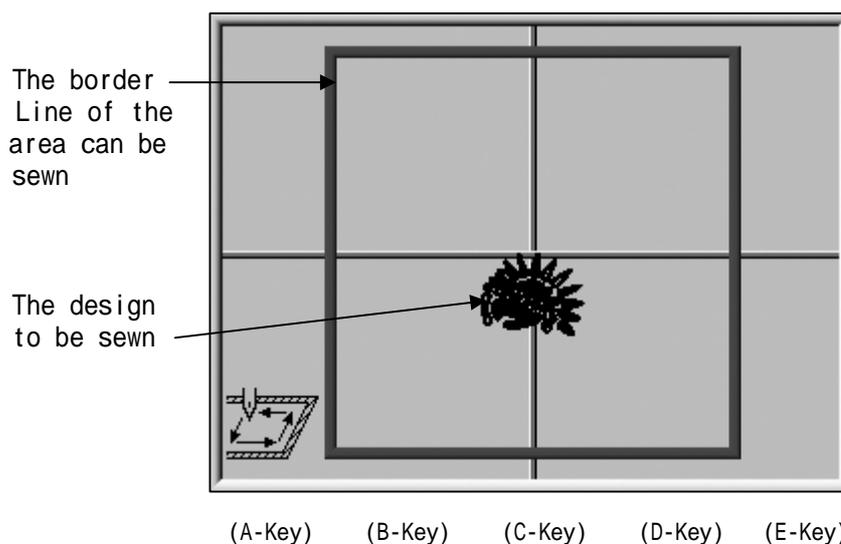
This feature is only available in Drive mode BEFORE sewing begins.

*The rectangle refers to the Programs (Scale, Rotation, Matrix and etc).

1) Press the D-Key.

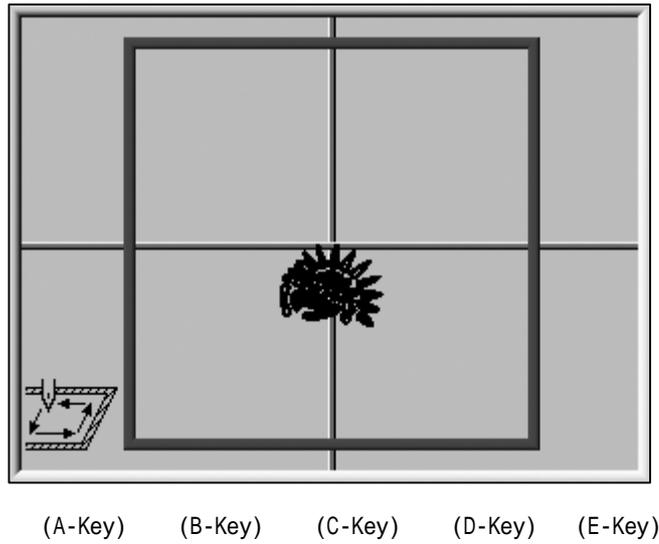


2) The Trace Screen appears.



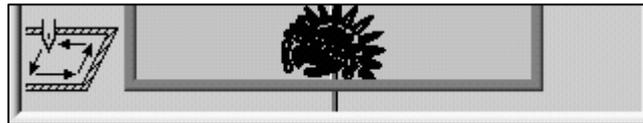
The screen shows whether the design fits into the bordered area.

3) The design moves as the Pantograph moves with the Jog Keys.

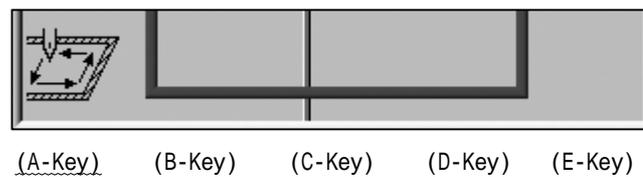


The Border Line is normally blue.

The line turns yellow then red, as the design gets closer to the border line.



4) Press the A-Key to start the Trace.



*If the design does not fit within the border, the machine makes a beep and stops the trace in that direction. Re-position the pattern or resize the design so that it fits within the border.

4-2. Outline Trace

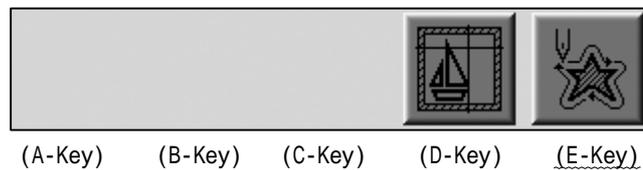
*Be sure the Frame Limit parameters in the MC (Machine Condition) are correctly set before using this feature.

The Pantograph traces the outline of the design to see if the machine is sewing at the right position and right size.

This feature is only available in Drive mode and BEFORE sewing begins.

*The outline refers to the Programs (Scale, Rotation, Matrix and etc).

1) Press the E-Key to start the Outline trace.



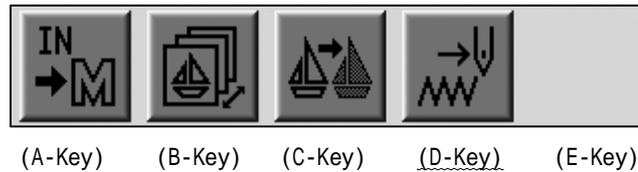
*If the design does not fit within the border, the machine makes a beep and stops the trace in that direction. Re-position the pattern or resize the design so that it fits within the border.

5. Float

Float moves the pantograph through the design without sewing.

1) Press the Menu Key to display “MENU 2” as below.

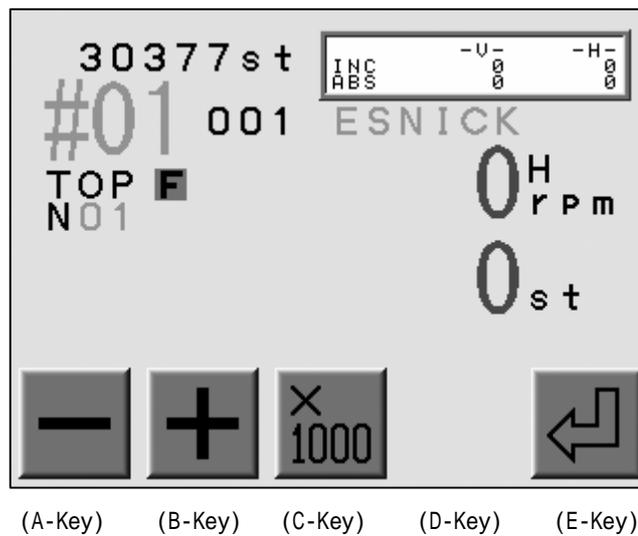
2) Press the D-Key.



3) The Float Screen appears.



Press the Start Switch for the Float.

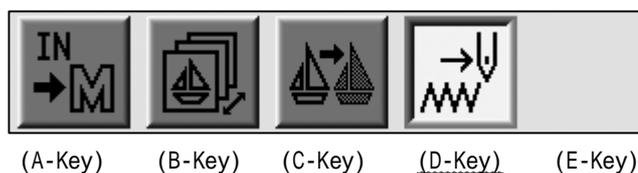


Exiting Float

a) Press  to stop the machine.

b) Press the Menu Key to display MENU 2.

c) Press D key to exit.

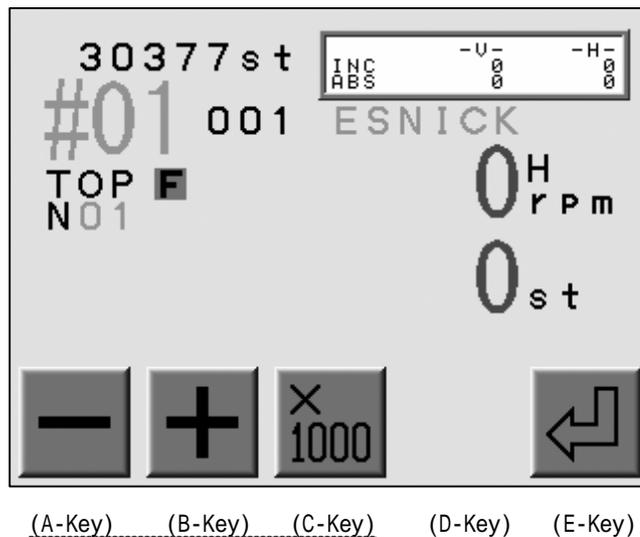


6. High Speed Float (By Stitch Count)

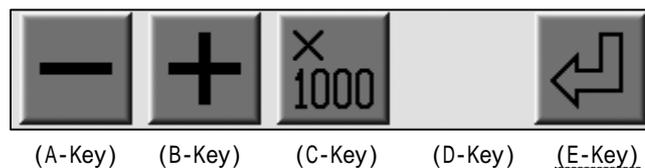
Instructions for floating to a specific stitch in a design.

- 1) Refer to the "Float" and display the Float Screen.
- 2) Press the A or B-Key to change the stitch count by 1.
(The stitch count on the screen blinks)

Press and hold the C-Key then press the A or B-Key to change the stitch count by 1000.

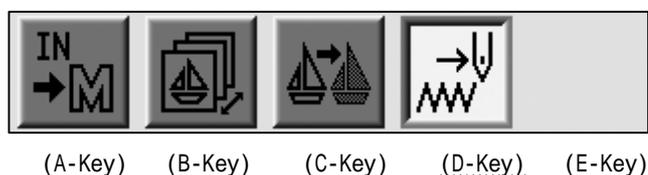


- 3) Press the E-Key to move the Pantograph to the position where the stitch count is appointed.



Exiting Float

- a) Press  to stop the machine.
- b) Press the Menu Key to display MENU 2.
- c) Press D key to exit.



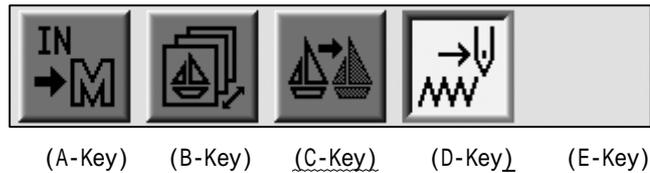
7. High Speed Float (By Color Change)

Instructions for floating through a design by color change.

1) Refer to the “Float ” and display the Float Screen.

2) Press the Menu Key to display “ MENU 2 ” as below.

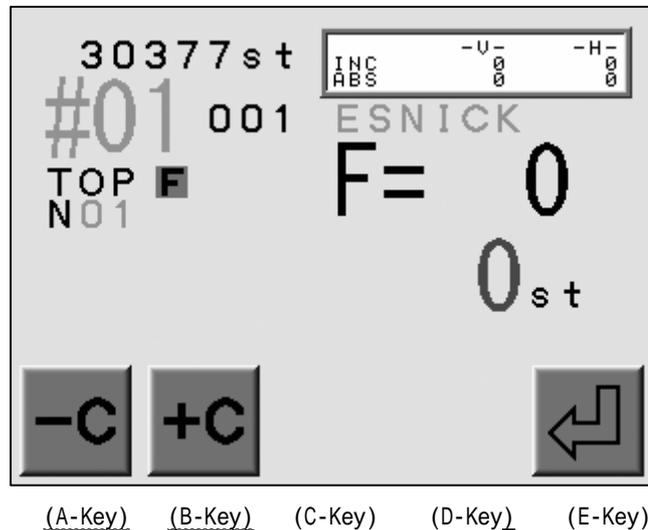
3) Press the C-Key



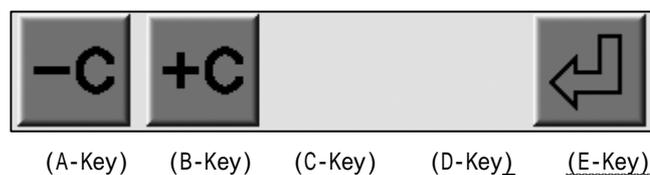
4) The Color Change Screen appears. Find a color change position to locate the Pantograph.

Press the A-Key to find the previous color changes.

Press the B-Key to find the following color changes.



5) Press the E-Key , the pantograph moves to the selected color change location.

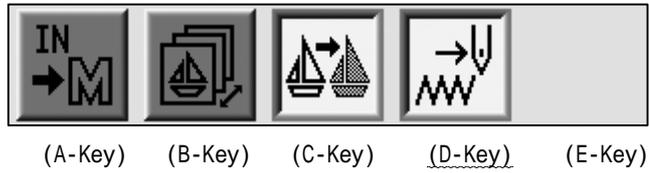


Exiting Float

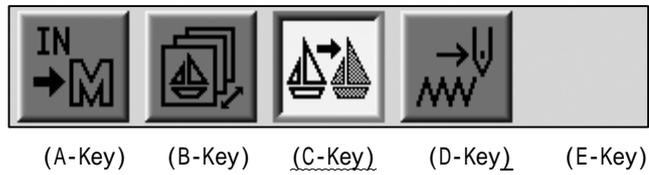
a) Press  to stop the machine.

b) Press the Menu Key to display MENU 2.

c) Press the D-Key



d) Press C key to exit.

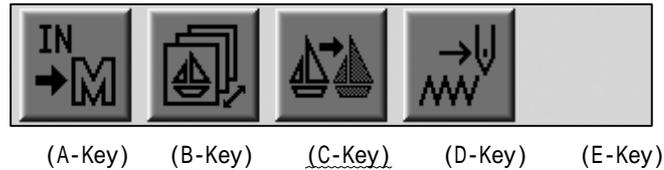


8. Color Code Change (Teaching)

Instructions for changing the color codes while running the machine.

1) Press the Menu Key to display "MENU 2" as below.

2) Press the C-Key



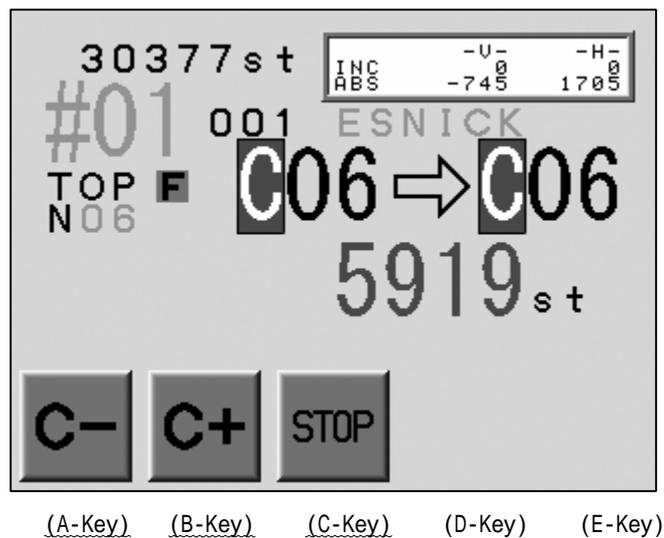
3)  Press the Start Key.

4) The machine will stop sewing when it reaches the next color code or stop code.

5) The controller shows the current code appointed.

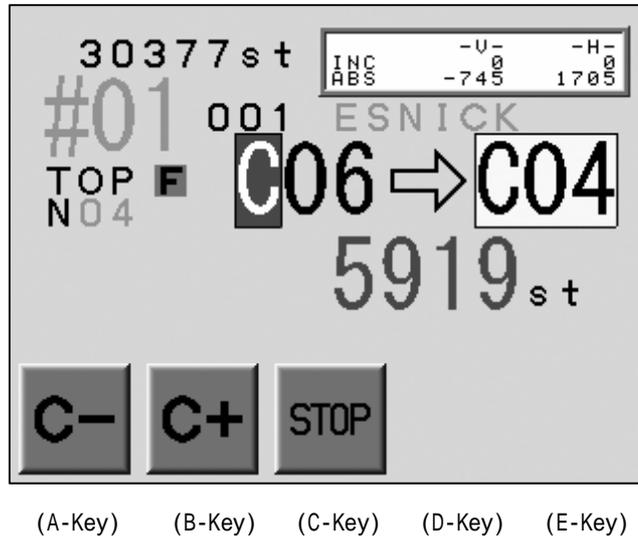
Press the A or B-Key to change the Color Code.

Press the C-Key to convert it into the Stop Code.



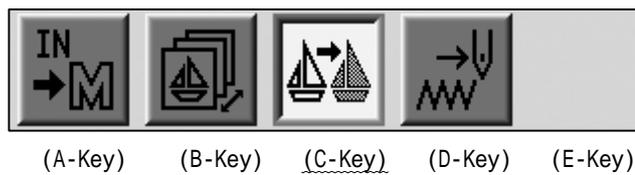
- 6)  Press the Start Switch to resume sewing with the new code.

The figure below shows how the Color Code changes.
C06 → C04



Exiting Float

- a) Press  to stop the machine.
- b) Press the Menu Key to display MENU 2.
- c) Press C key to exit.



9. Function Codes

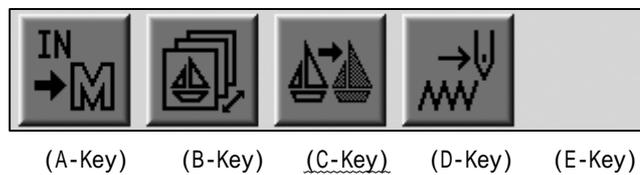
Instructions for changing Function codes while the machine is sewing.

Use this feature with High Speed Float (By Stitch count) to change the Function code of the desired stitch.

Refer to the “Function Codes” for details about Function codes.

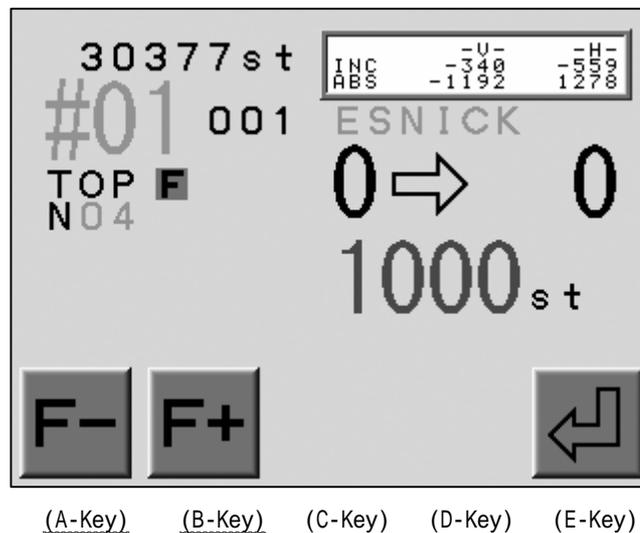
1) Press the Menu Key to display “MENU 2” as below.

2) Press and hold the C-Key until the machine beeps twice.



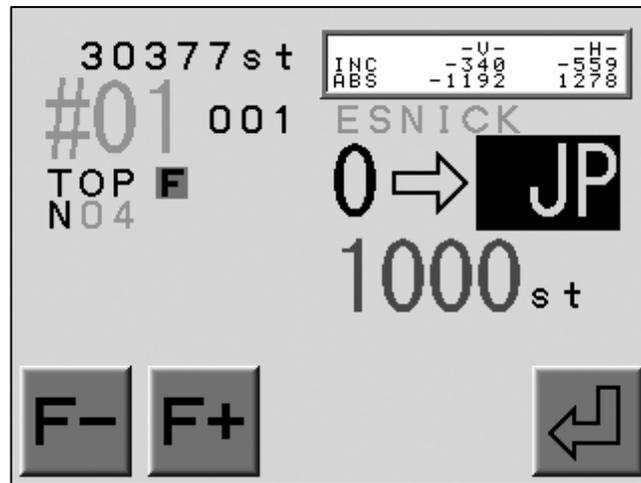
3) The Function Code Screen appears.

Press the A or B-Key to change the Function Code.



4) Press the E-Key to update the Memory for the new Function Codes.

The figure below shows how the function code changes.
None (Standard stitch) → Jump(JP) stitch



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

Exiting Float

a) Press the Menu Key to display MENU 2.

b) Press C key to exit.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

10. Stitch Back

Stitch Back repairs stitches using the Stop key

1) Stop the machine with the Stop key.

2) Press and hold the Stop-Key to start the Stitch Back.

The Pantograph goes back through the design.

3) Hold the Stop-Key, it will stitch back even if the Stop Key is released.

Press the Start-Key to stop the Stitch Back.

The Pantograph can go further back by holding the Stop Switch again.

4) Press the Start-Key to begin sewing and cover the stitches already sewn with the new stitches.

11. Automending

Automending backs up the machine to repair missed stitches.

Press and hold the Automending Switch at the Tension Box while the machine stops.

The Pantograph back track the sewing and the stitch count will follow.

The Pantograph stops back tracking, when the Automending Switch is released.

The sewing head on the Automending has the red LED on the Tension Box lit.

The Start Switch starts the sewing at the point were the machine back up to.

- 1) Stop the machine with the Stop-Key.
- 2) Press and hold the Automending Switch at the Tension Box on the sewing head which need to do the cover sewing. Release the Automend switch when the pantograph has reached the desired position.
- 3) Press the Start-Key to start the sewing.
- 4) The MC settings work after the Automending.

#12 : Overlap - Overlap stitches after the Automending, Default : 4

#13 : Auto Start - The automatic start after the Automending, Default : Inactive

The Auto Start option makes the machine stop after Automending or not.

When it stops : The machine stops where the Automending ends and makes Stitch

Back automatically for the stitch count which the Overlap parameter sets.

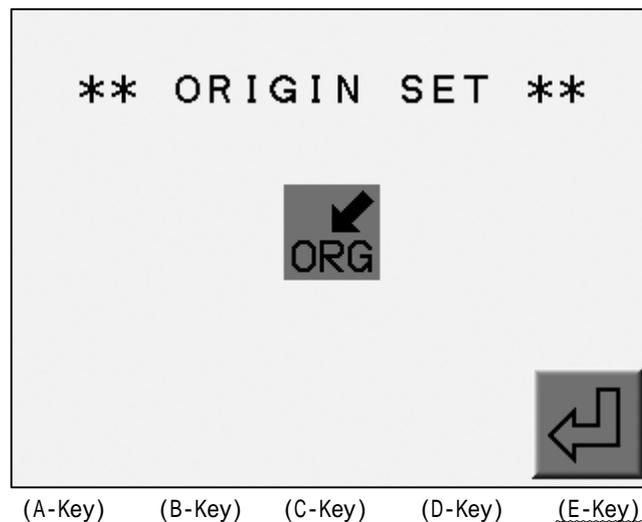
When it goes on : The machine would not stop at the end of the Automending and All the heads starts sewing.

*Back track with the Automending and then hold the Stop-Key for the Stitch Back when many stitches need Automending. The Stitch Back back tracks without holding the Stop-Key after 30 stitches.

12. Stand-By (Resume)

Stand-by is when the power to the machine is cut while it is in Drive mode, and the machine is ready to resume sewing at the position it left off at.

- 1) Turn ON the power of the machine.
- 2) Press the E-Key to find the machines origin.

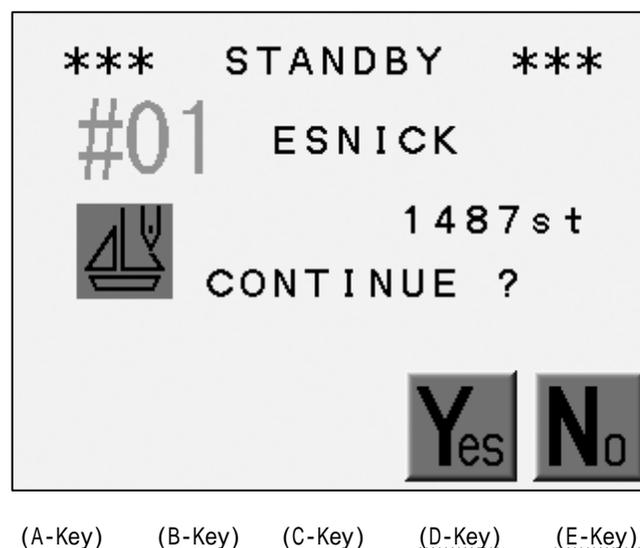


- 3) The Stand-By Screen displays.

Press the D-Key to continue sewing.

Press the E-Key to exit Stand By.

The machine does not continue the sewing and the machine will exit you out of Drive mode..



Chapter 10. Teaching

This chapter contains the instruction for changing Function codes. This method of Teach is quicker than changing codes while the design is sewing.

1. Color Codes
2. All Function Codes

1. Color Codes

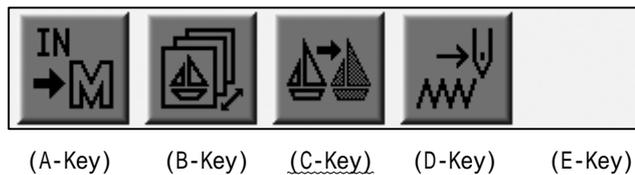
Instructions on changing Color Codes using Teach.

The machine must be out of Drive mode.

Refer to the "Function Codes" for the description of the Codes.

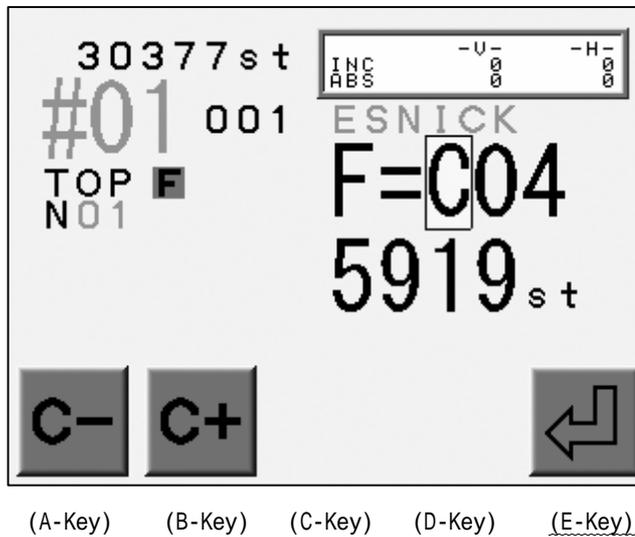
1) Press the Menu Key to display "MENU 2" as below.

2) Press the C-Key.



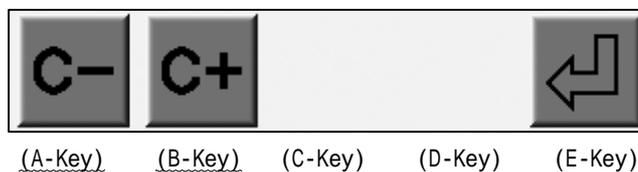
3) The Color Code Screen displays.

Press the E-Key to search the next Color Change Code.



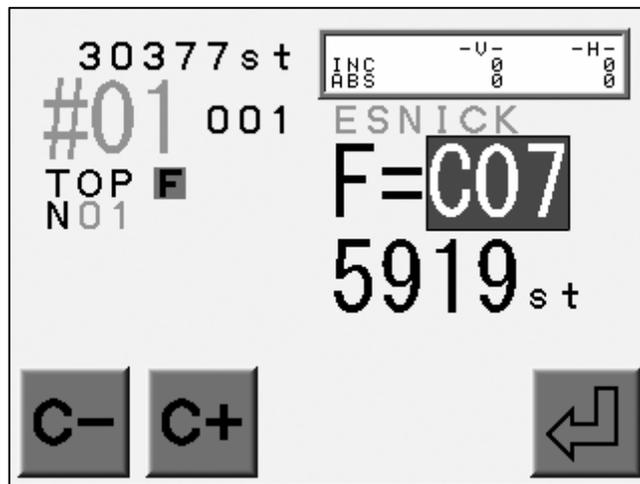
*The screen automatically closes if no Color Change is found.

4) Press the A or B-Key to change the Code.



5) Press the E-Key to save the change and search next Code.

The figure below shows how the Code was changed. → C07



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

2 . All Function Codes

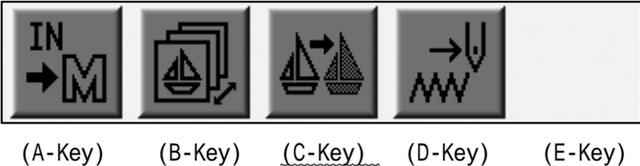
It is also possible to change all function codes in a design with the Teach function.

The machine must be out of Drive mode.

Refer to the “ Function Codes ” for the descriptions of the Codes.

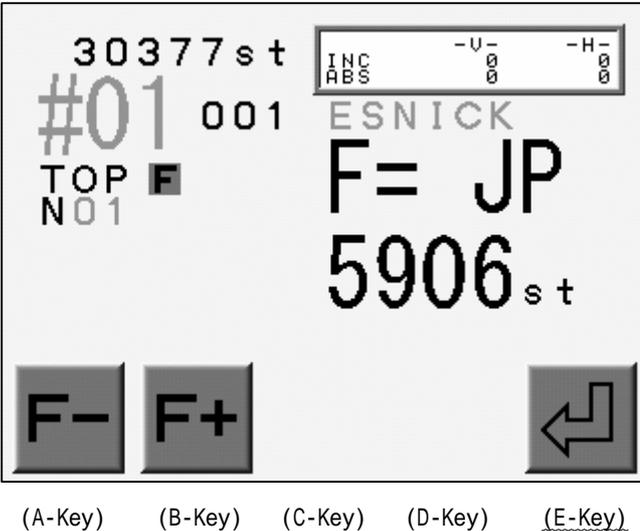
1) Press the Menu Key to display “ MENU 2 ” as below.

2) Press and hold the C-Key



3) The Function Code Screen displays.

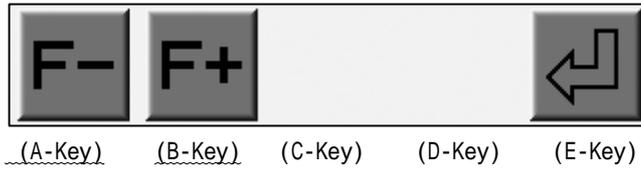
Press the E-Key to search the next Code.



*The screen automatically closes if a function code is not found.

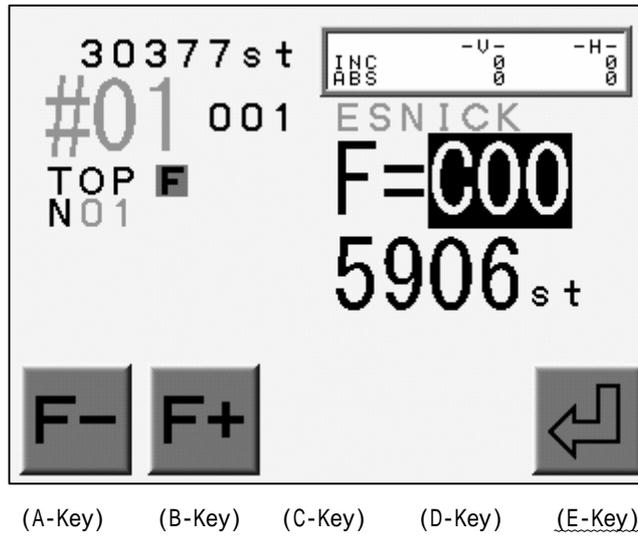
*It searches only consecutive jumps more that are more than the MC setting of “ Trim Jump. The machine automatically trims the thread when consecutive jumps are found that exceed the number programmed in this parameter.

4) Press the A or B -Key to change the Function Code.



5) Press the E-Key to save the change and search the next Function Code.

The figure below shows how the Function Code was changed. → C00



Chapter 11. MC (Machine Condition)

This chapter contains information on the machine's machine conditions.

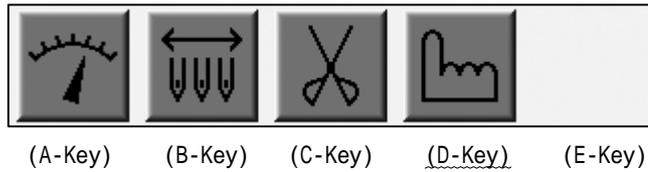
1. Changing the Machine Conditions (MC)
2. Resetting the Machine Conditions (MC)
3. Description of Machine Condition parameters

1. MC Change

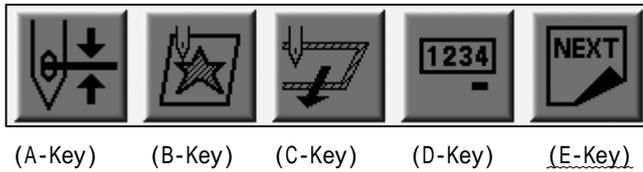
Instructions for changing the Machine Conditions

1) Press the Menu Key to display "MENU 1" as below.

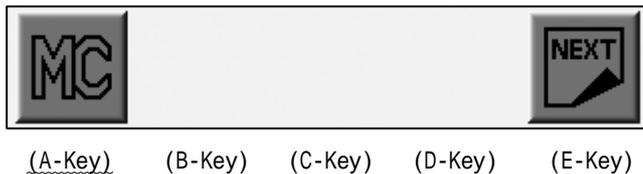
2) Press the D-Key.



3) Press the E-Key.

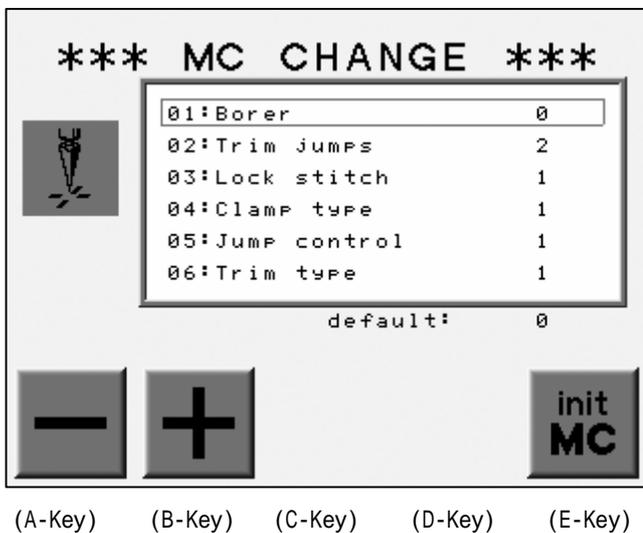


4) Press the A-Key

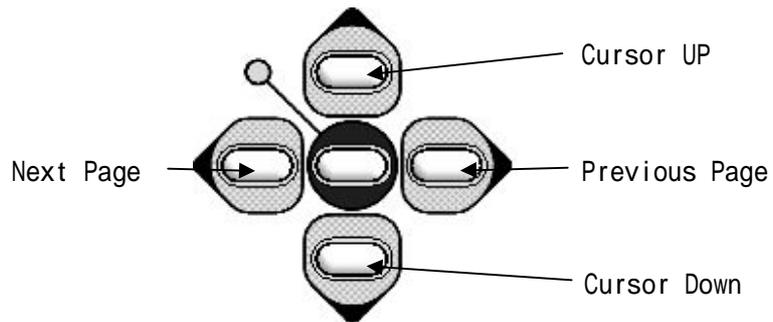


5) The MC List appears.

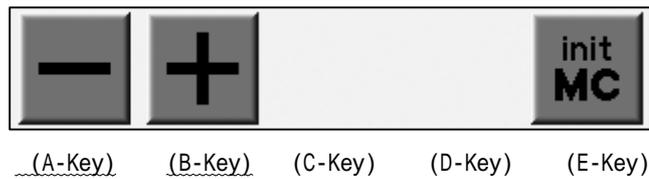
Use the jog keys to select a parameter.



*Basic Operations



6) Press the A or B-Key to change the value.

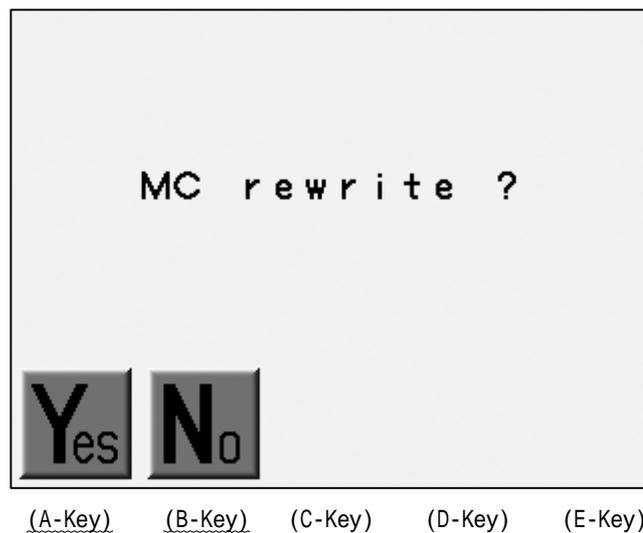


*The new values are not saved at this time. They are saved when MC is exited.

*The new values would not be valid if the power is cut before saving.

7) Press the Manu Key when all the settings are done.

8) Press the A-Key to save the new value.



Press the B-Key to cancel the change and close the list.

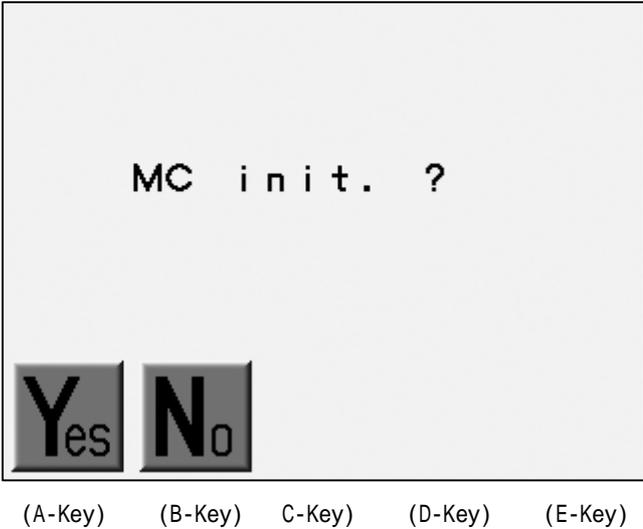
2. MC Reset

Instructions on initializing the MC parameters, resetting them back to factory defaults.
This operation is only available in the Drive state.

- 1) Refer to the "MC Change" to find the MC List.
- 2) Press and hold the E-Key for 2 short beeps.

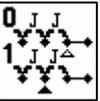


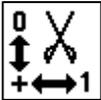
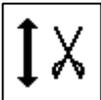
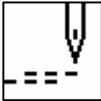
- 3) Press the A-Key to initialize the MC Parameters.

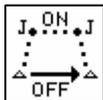
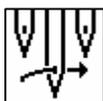


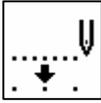
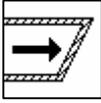
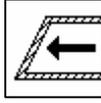
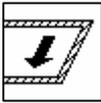
Press the B-Key to cancel the initialization.

3. MC List

No. & Icon	Item	Function	Range	Default
1 	Borer	Enter the number of the needle that has the borer. 0 : No borer used	0 - Max Needle No.	0
2 	Trim Jump	Controls the number of jump stitches above which the thread trimmer will cut the thread. 0 : No trimming for jumps	0 - 9	2
3 	Lock Stitch	Automatic lock stitches after a trim. It converts first stitch into the lock stitch. 1 : Split stitch 2 : Triangle stitch 3 : Reverse stitch 4 : No lock stitch Add 10 to the values above to create a stitch and converts it into a lock stitches.	1 - 4 & 11 - 14	1
4 	Clamp Type	The thread clamp control when start sewing after a trimming. 1 : Opens for 1 st stitch, Close at the DBC. Opens for 2 nd stitch. 2 : Opens for 2 nd stitch 3 : Opens for 1 st stitch	1 - 3	1
5 	Jump Control	Inactive	0 or 1	1
6 	Trim Type	0 : Trimmers off 1 : Moves the Pantograph 0.4mm to right before trimming. 2 : Reverse the Pantograph then trimming. 3 : Pull the thread with the Slider then trimming as 1. 11 : Same as 1 only the thread behind the fabric is shorter.	0 - 11	1

No. & Icon	Item	Function	Range	Default
7 	Trim Dir	Sets the direction the pantograph moves after a thread trim. 0 : moves in the H direction towards the machine origin to avoid interference between the frame and machine. 1 : moves in the V direction towards machine origin.	0 or 1	0
8 	Trim Vector	Determines the distance the pantograph moves, in mm, before a trim.	0 - 50	15
9 	Low Speed	Selects the speed at which the Low Speed function will operate.	200 - Max .Speed	450rpm
10 	Jump Divide	Selects the maximum stitch length that the machine sews in a single head revolution. A stitch longer than the programmed value is divided into two stitches.	30 -127	127
11 	Stitch Back	Controls the number of stitches the machine will automatically back up at a thread break.	0 - 7 st	4 st
12 	Overlap	Designates the number of stitches to overlap in automend.	0 - 7 st	4 st
13 	Auto Start	If on, during automend, the machine automatically starts all heads without the operator pressing the Green Start button when the machine has sewn stitches to mend. Use with caution!! 0 : Starts after the Automending Stops after the Appliqué Framing 1 : Stops after the Automending Stops after the Appliqué framing 2 : Starts after the Auto mending Stops after the appliqué Framing. 3 : Stops after the Automending Stops after the Appliqué framing.	0 - 3	1

No. & Icon	Item	Function	Range	Default
14 	Swing	The distance in tenths of millimeters that is added or subtracted from the length of a stitch.	-5 to 5	0
15 	Frame Start	Determines when the panto starts to move in relation to the needle.	45 - 135	70
16 	S. Frame (Spectacle Frame)	Sets the machine up for spectacle frame, allowing you to execute pantograph movements exactly as programmed. 0 : Skips the consecutive jumps. 1 : Makes jumps as programmed. Origin return, Trace prohibited. 2 : Makes jumps as programmed. Origin return, Trace allowed. *The Jog Key operation is always allowed.	0 - 2	0
17 	Needle Down	Determines if the needle is lowered after a thread break, for easier threading. 1 : Active 0 : Inactive	0 - 1	1
18 	Appliqué	Sets the presser foot height when the Appliqué command is executed.	60 - 120	80
19 	T. Break	The machine is designated to stop automatically when the top thread is broken. Normal value is three, meaning the machine requires three consecutive thread break detections before stopping.	1 ~ 9	3

No. & Icon	Item	Function	Range	Default
20 	0 Admit	Determines the number of 0 data stitches allowed when the pattern is read into memory. 0 : No Null Data allowed. 1 - 8 : The consecutive Null data as set value allowed. 9 : Loads all Null data	0 - 9	0
21 	Combine Data	Determines the smallest stitch length allowed when pattern is read into memory. Stitches smaller than the allowed length are combined into larger stitches. 0 : No combination. 1 - 9 : Combines the stitch smaller than set length. (0.1mm/unit) Ex. The setting 5 combines the 0.4mm or smaller.	0 - 9	0
22 	Right Limit	Sets right soft limit - allowable distance panto can move to the right of the mechanical origin.	0 - 3200mm	500mm
23 	Left Limit	Sets the left soft limit - allowable distance panto can move to the front of the mechanical origin.	0 - 3200mm	500mm
24 	Back Limit	Sets back soft limit - allowable distance panto can move to the front of the mechanical origin.	0 - 3200mm	500mm
25 	Front Limit	Sets front soft limit - allowable distance panto can move to the back of the mechanical origin.	0 - 3200mm	500mm

No. & Icon	Item	Function	Range	Default
26 	LCD Mode	Sets the background color scheme. 0 : Top-Standard, Bottom-Standard  1 : Top-Standard, Bottom-The Icon color 	0 - 1	0
27 	LCD Bright	Changes the brightness level of the LCD screen.	1:Dimmest 2:Normal 3:Bright	2
28 	Roll to Roll	Not Active	N/A	N/A
29 	WS System	Not Active	N/A	N/A
30 	Clamp Frame	Set the Clamp Frame to use 0 : No clamp frame used 1 : Clamp frame used	0 or 1	0

No. & Icon	Item	Function	Range	Default
31 	V. Clamp	Not Active	N/A	N/A
32 	H. Clamp			
33 	Frame Option	Not Active	N/A	N/A
34 	Sequin Size L (Left hand Device)	Adjust the feeding movement of the Sequin Device. *Factory Option Ex. 17 → Sequin Size D5 30 → D9	0 - 50	0
35 	Sequin Size R (Right hand device)			
36 	Special MC	Not Active	N/A	N/A

Chapter 12. Network

This chapter contains information on utilizing the optional networking system.

*LAN Board are the extension board equipped with an Ethernet Port.

1. Before Using the Network System
2. Registration of the Operator Code
3. Break Call
4. Operator Call
5. Time-Out
6. Downloading Design (Direct Download)
7. Downloading Design (Scheduled Download)
8. Scheduling
9. Information on the Designs Scheduled
10. Automat ID
11. LAN Board Set-Up
12. Initializing the LAN Board
13. LAN Board Parameters

1 . Before Using the Network system

This feature is only available for machines with the LAN Board.

1) Introduction

Networking between the Sever (PC) and embroidery machines through LAN connection.

*LAN Board is required for each machine.

Advantages of a Network System

The server can send designs to designated machine.

Operators can download designs from the Server.

The machines can upload designs to the Server.

The Server logs the machine status on a real time basis.

The Network System automatically recovers the connections between the Server and the embroidery machines.

2) Operations

The Network has 2 major functions.

Logging the machine status



Uploading/Downloading the designs



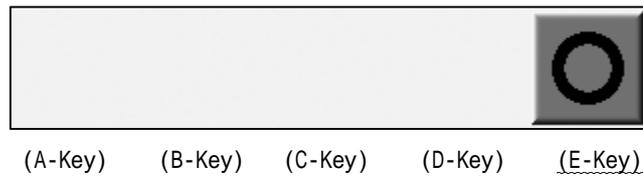
3) File Formats for Networking System

The file downloaded from the Server is converted into the PRJ file. *1

4) Stop/Cancel design file transmission

The Uploading/Downloading can be stopped or canceled during the operation.

a) Press the E-Key to stop the transmission. *2



b) The D-Key cancels the operation while the transmission is stopped.

Press the E-Key to resume the transmission.



5) The following equipment is required to build the Network System.

BEVT Automat

Barudan Options

LAN Board

Server Software

The Items to be prepared by Users

PC with Windows 2000 or XP preinstalled. LAN Port required.

*Refer to the instruction manual of the Server Software.

LAN Cable *3

Hub 4

*1 A PRJ File contains design data file, Program Parameters and a bitmap image of the design.

*2 Hold the E-Key if the transmission does not stop.

The controller cancels the transmission only when it is stopped.

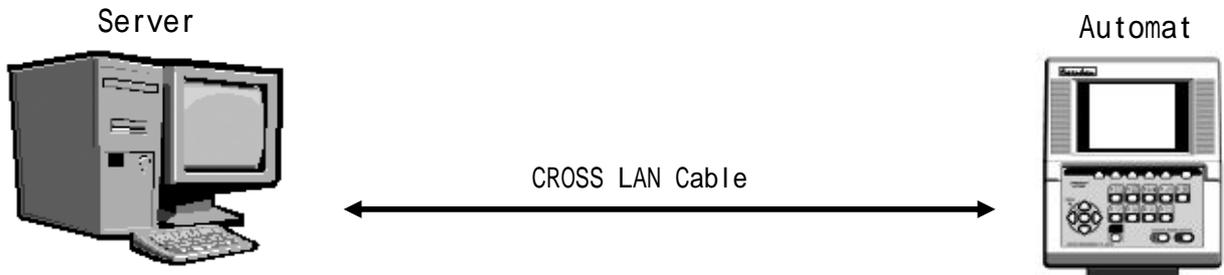
*3 The LAN cable may vary up to the connection schematic.

Refer to the following examples.

*4 The schematic of multiple embroidery machines requires HUB(s).

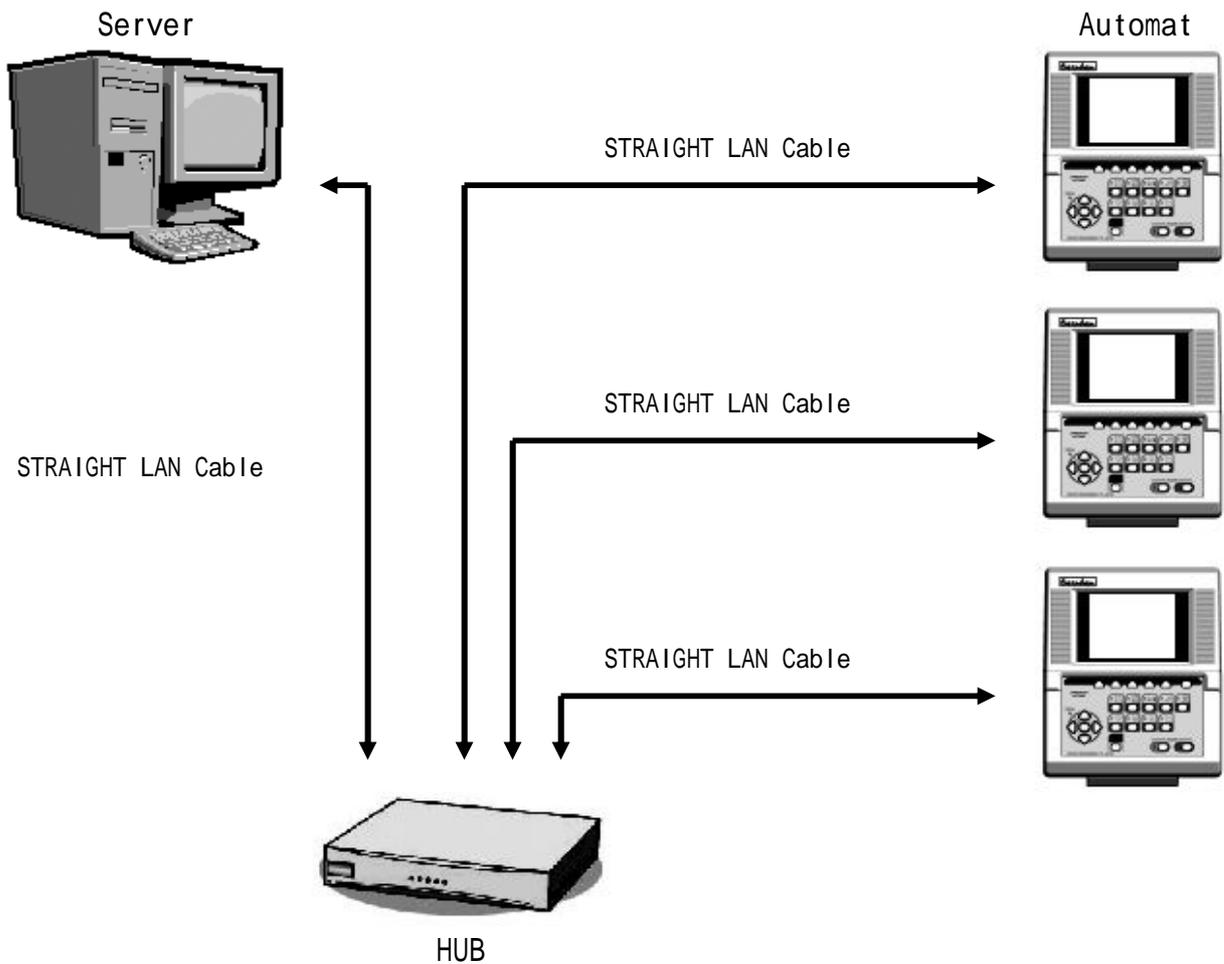
Ex. 1 : A Server VS an embroidery machine

*Use the "CROSS" LAN Cable



Ex. 2 : The Server VS multiple embroidery machines

*Use the "STRAIGHT" LAN Cable



*The schematic with multiple embroidery machines requires HUB(s).

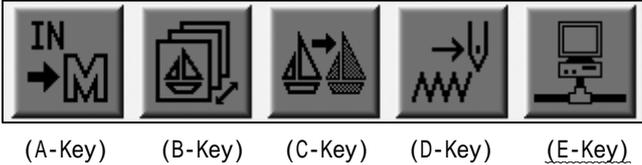
2. Registering the Operator Code

Instructions on registering the operator code with the Automat.

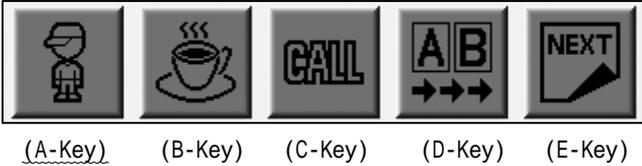
2-1. Reporting the Operator Code

Reporting the current operator to the server.

- 1) Press the Menu Key to display “MENU 2” as below.
- 2) Press the E-Key

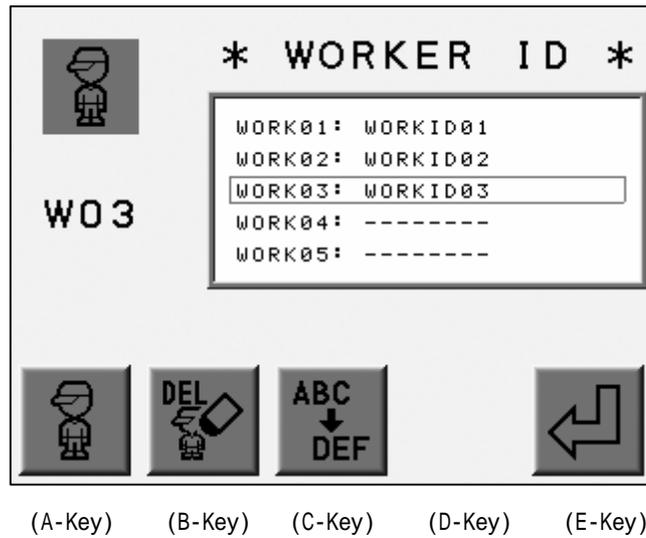


- 3) Press the A-Key.

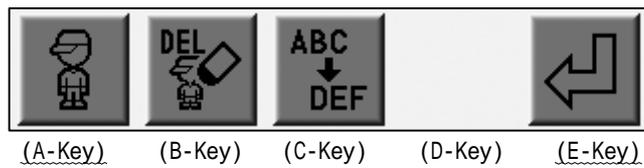


4) The Operator Code List displays.

Use the jog keys to select the operator code.



5) Press the E-Key to report the current operator code to the Server.



Press the A-Key to cancel the report and return to previous screen.

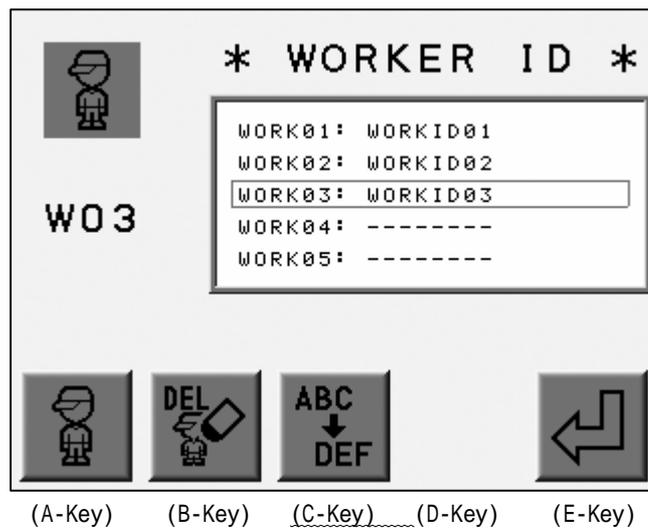
2-2. Registration of the Operator Code

1) Refer to the “Reporting the Operator Code” and find the Operator Code List.

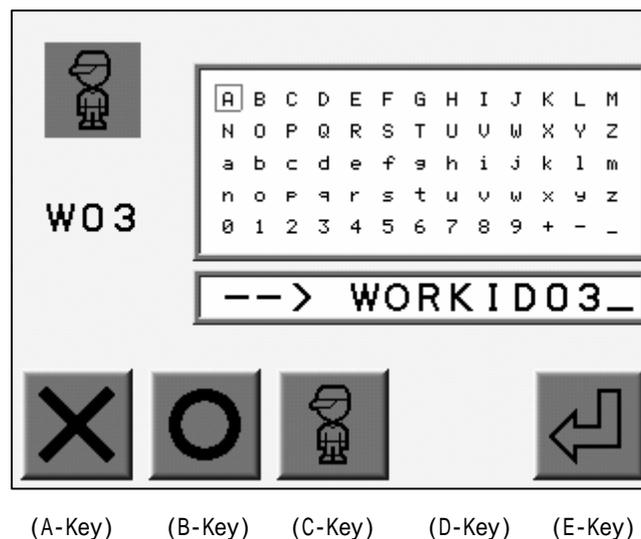
2) Use the jog keys to select an operator code.

*Select a blank id to register a new code, select an occupied id to edit it.

3) Press the C-Key.



4) The Registration Screen displays.

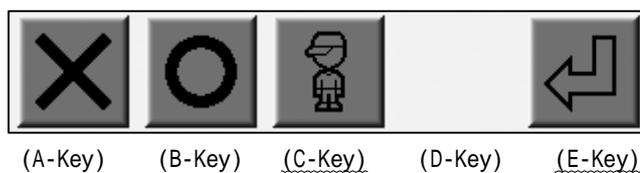


Use the jog keys to select a letter.

Press the Origin Key or the B-Key to enter the letter. *1

Press the A-Key to delete the last letter.

5) Press the E-Key to register/finish editing the Operator Code. *2



Press the C-Key to cancel the Registration/Edit of the Code and return to the the previous screen.

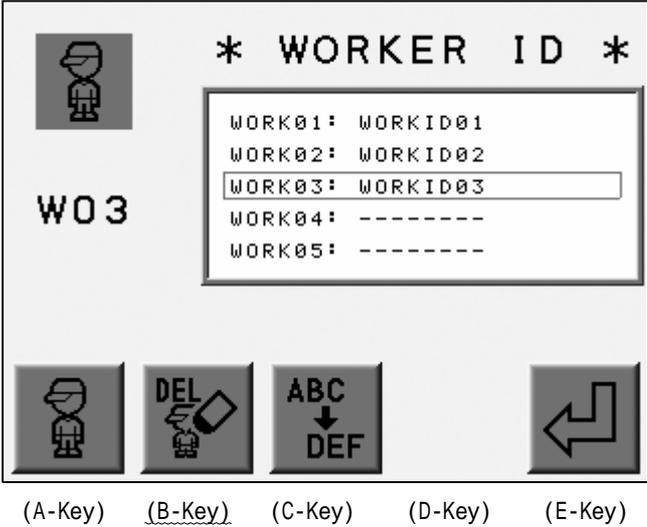
*1 An operator code can have a maximum of 8 characters.

*2 Press the Menu key to cancel the Registration/Edit.

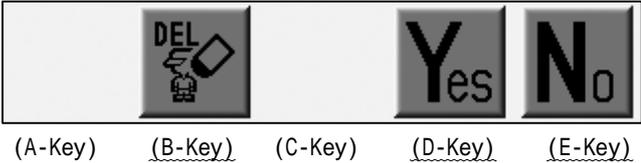
2-3. Deleting the Operator Code

- 1) Refer to the "Reporting the Operator Code" and display the Operator Code List.
- 2) Use the jog keys to select a code.

Press the B-Key to delete the Code.



- 3) Press the D-Key to confirm and delete.



Press the B or E-Key to cancel return to the previous screen.

3. Break Call

Instructions on how an operator reports he is on break and that the machine is not sewing.

*Refer to the the Server Software instruction manual for operation instructions.

1) Press the E-Key.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

2) Press the B-Key.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

3) The controller reports the break to the Server.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

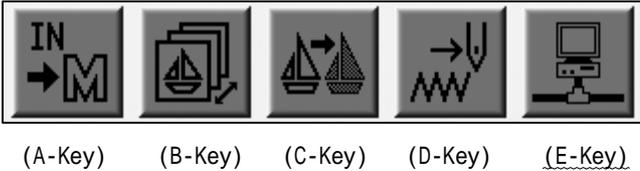
4. Operator Call

Instructions for placing a call to the server.

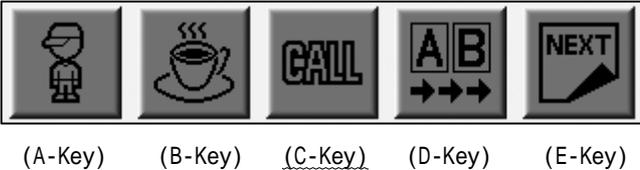
*Refer to the Server Software instruction manual for operation instructions.

1) Press the Menu Key to display " MENU 2 " .

2) Press the E-Key.



3) Press the C-Key to call the Server.



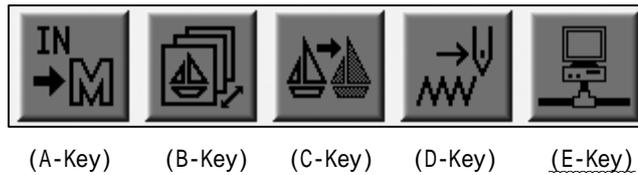
5. Time-Out

Instructions to report that the machine is not in production.

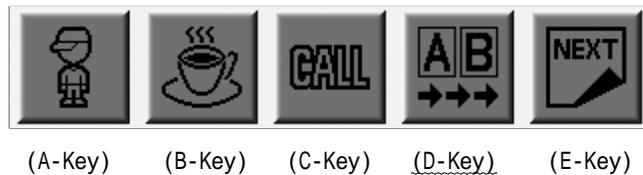
*Refer to the Server Software instruction manual for operation instructions.

1) Press the Menu Key to display “ MENU 2 ” as below.

2) Press the E-Key

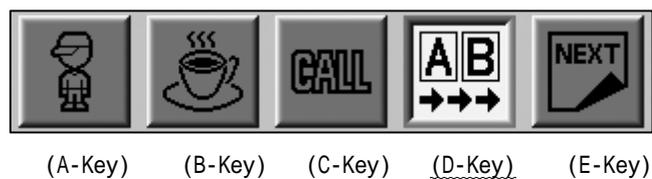


3) Press the D-Key to report the Time-Out.



The D-Key is highlighted while selected.

Press the D-Key again to notify the end of the Time-Out to the server.



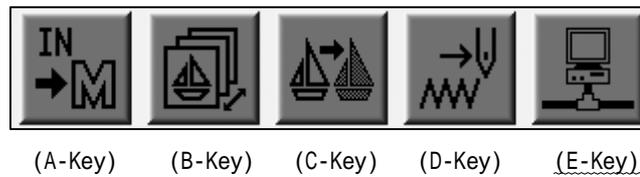
6. Downloading Designs (Direct Download)

Designs that are will be downloaded need to be at their specific location before downloading.

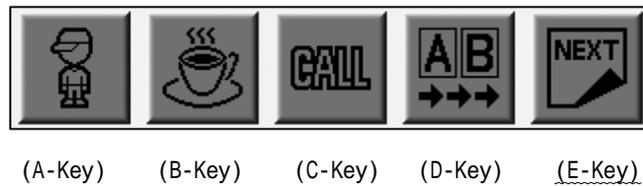
*Refer to the Server Software instruction manual for operation instructions.

1) Press the Menu Key to display “ MENU 2 ” as below.

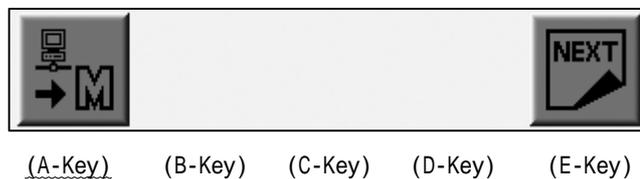
2) Press the E-Key



3) Press the E-Key.

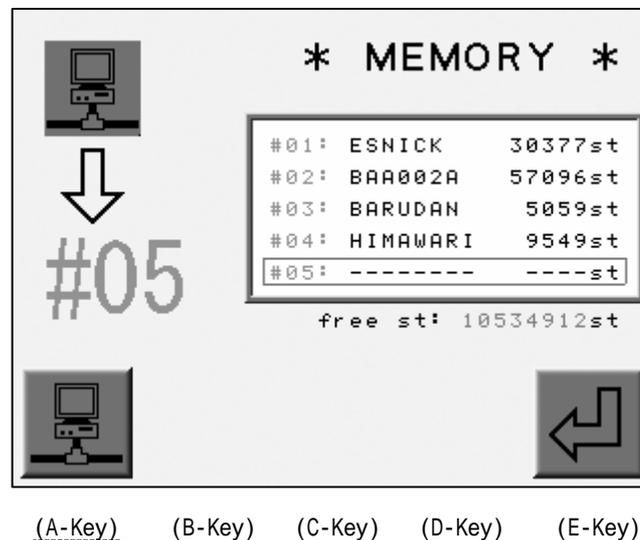


4) Press the A-Key.



5) The list of designs in Memory display.

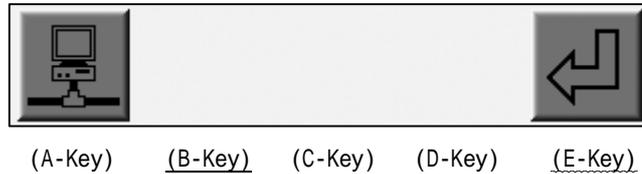
Use the jog keys to select an empty Memory location.



Press the A-Key to return to the previous screen.

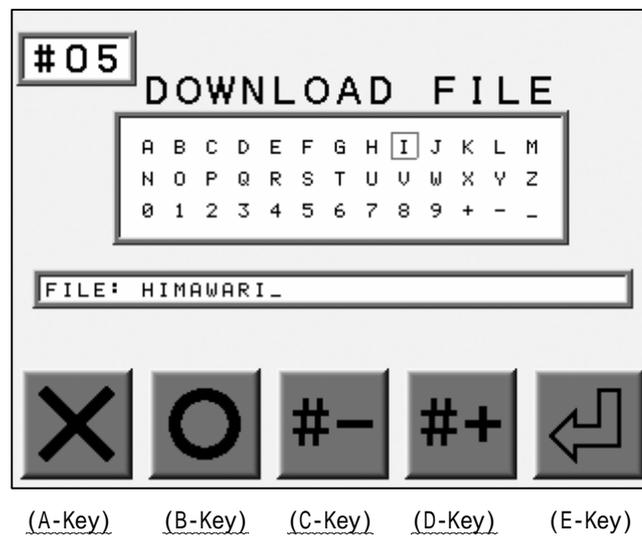
*Choose an occupied memory location to delete the design file and download another design.

6) Press the E-Key.



7) The Lettering Screen for the design file name displays.

Type in the file name of the design to download.



Use the Jog Keys to select letters.

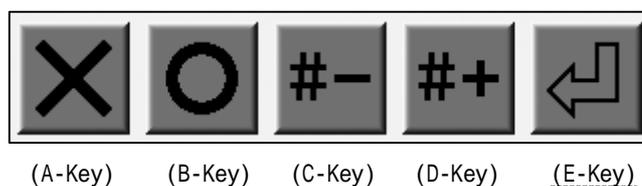
Press the Origin Key or the B-Key to enter the letter.

Press the A-Key to delete the last letter.

Press the C-Key to move to a lower numbered Memory location.

Press the D-Key to move to a higher numbered Memory location.

8) Press the E-Key to start downloading.



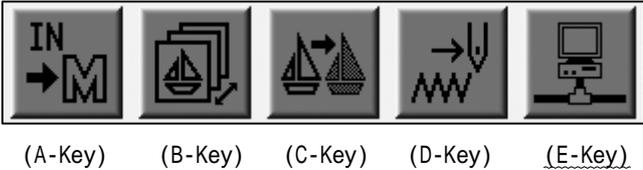
7. Downloading Designs (Scheduled Download)

Designs need to be appointed to machines before downloading.

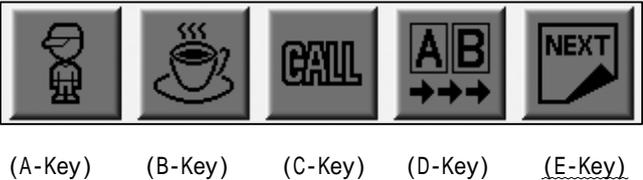
*Refer to the Server Software instruction manual for operation instructions.

1) Press the Menu Key to display "MENU 2" as below.

2) Press the E-Key



3) Press the E-Key.

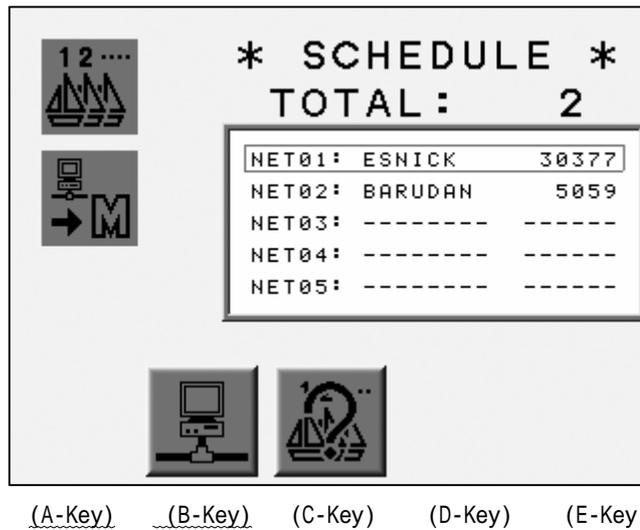


4) Press the A-Key.



5) The list of designs in the Memory displays.

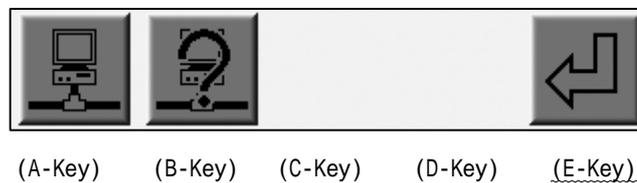
Use the jog keys to select an empty Memory location.



Press the A-Key to return to the previous screen.

Press the B-Key to view the information about the design to be downloaded.

6) Press the E-Key to start downloading.



8. Appointed Designs

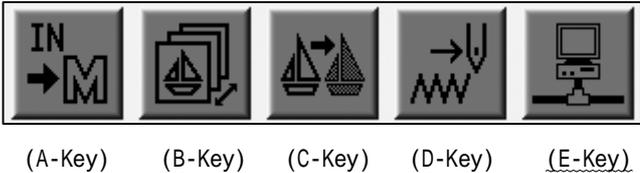
The Server can apoint designs to machine.s

The machine downloads the design and sews.

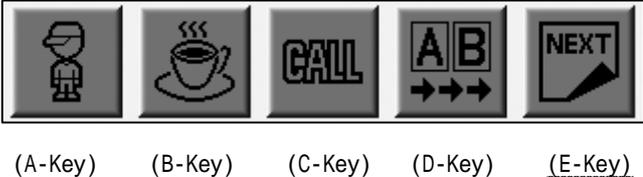
This feature helps provide an ideal production schedule.

1) Press the Menu Key to display “ MENU 2 ” as below.

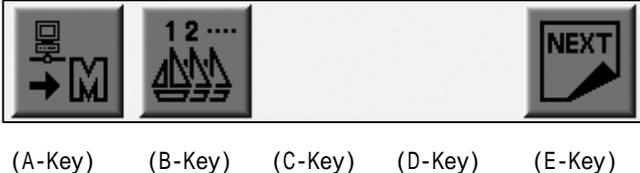
2) Press the E-Key



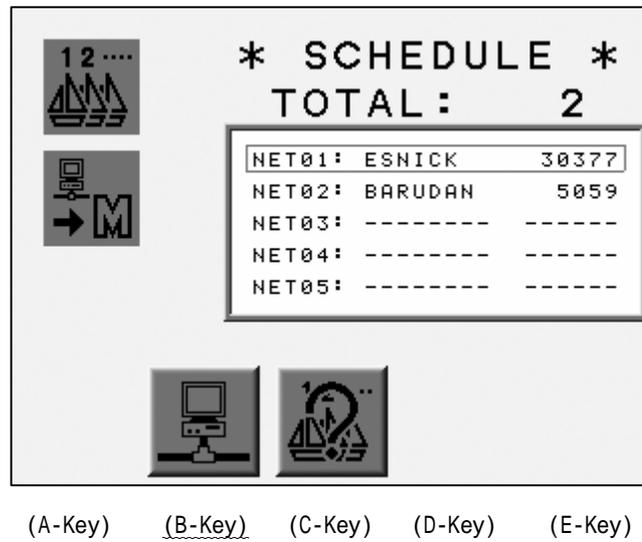
3) Press the E-Key.



4) Press the B-Key.



5) The list of appointed designs displays.



* SCHEDULE *

TOTAL: 2

NET01:	ESNICK	30377
NET02:	BARUDAN	5059
NET03:	-----	-----
NET04:	-----	-----
NET05:	-----	-----

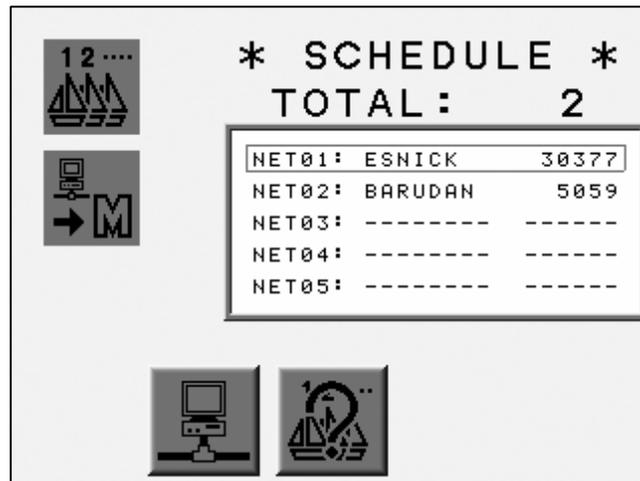
(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

Press the B-Key to return to the previous screen.

9. Information about Appointed Designs

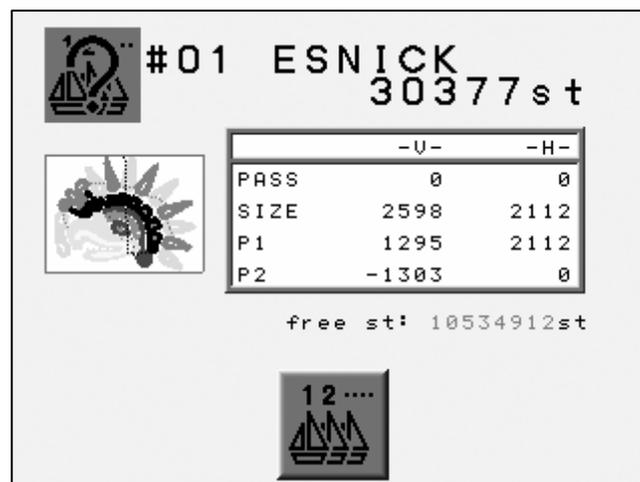
The instruction for viewing design information for the appointed designs.

- 1) Refer to "Appointed Designs" and display the list of the appointed designs.
- 2) Press the C-Key.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

- 3) The design information for the appointed design displays.



(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

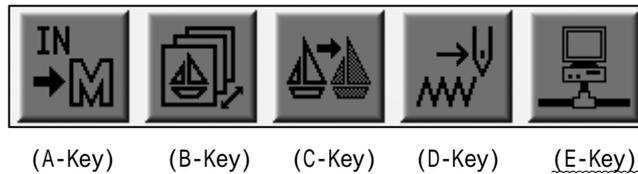
Use the jog keys to switch designs.

Press the C-Key to return to the previous screen..

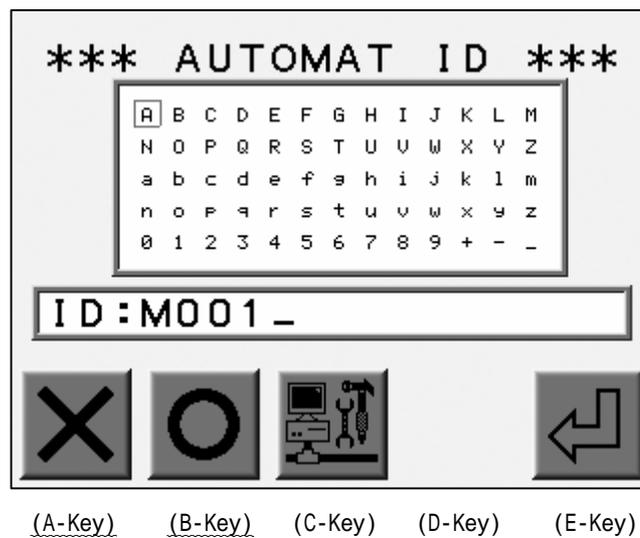
10. Automat ID

Instructions for registering the Automat ID.

- 1) Disconnect the LAN cable from the machine and turn ON the machine.
- 2) Press the Menu Key to display "MENU 2" as below.
- 3) Press the E-Key



- 4) The Registration Screen displays.

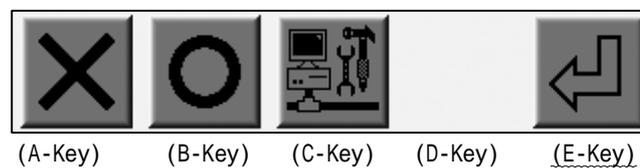


Use the jog keys to select a letter.

Press the Origin Key or the B-Key to enter the letter.

Press the A-Key to delete the last letter.

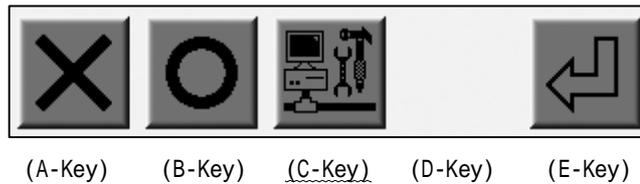
- 5) Press the E-Key to register the Automat ID and close the screen.



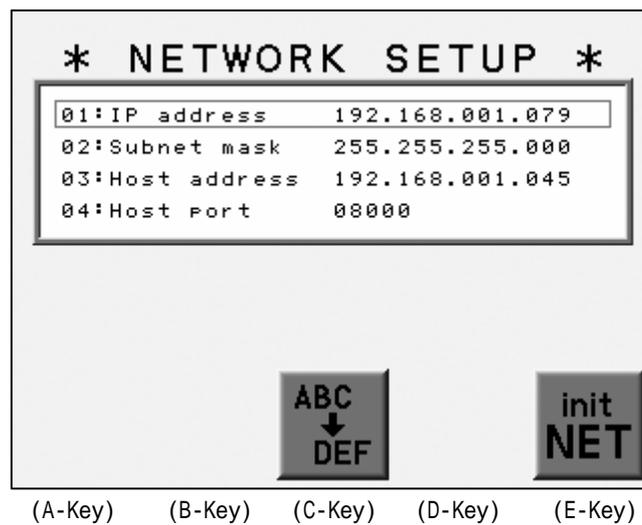
11. LAN Board Set-Up

Instructions for setting up the LAN board.

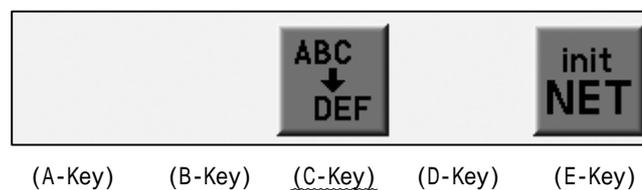
- 1) Refer to "Automat ID" and find the Registration Screen.
- 2) Press the C-Key to find the Set-Up Screen.



- 3) Use the jog keys to scroll through the options.



- 4) Press the C-Key to display the name screen,



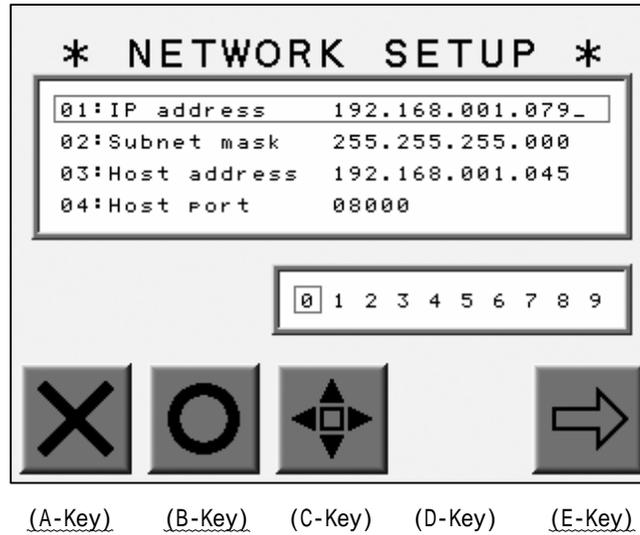
5) Use the jog keys to select a letter.

Press the Origin Key or the B-Key to enter the letter.

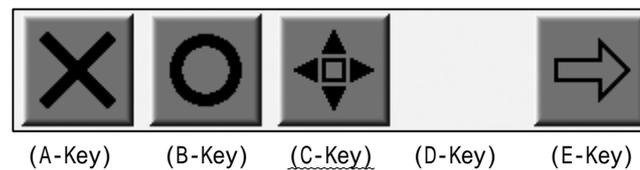
Press the A-Key to delete the last letter.

Press the E-Key to move the cursor in the column to right.

*The lettering is available only for IP Address, Subnet Mask and Host Address.

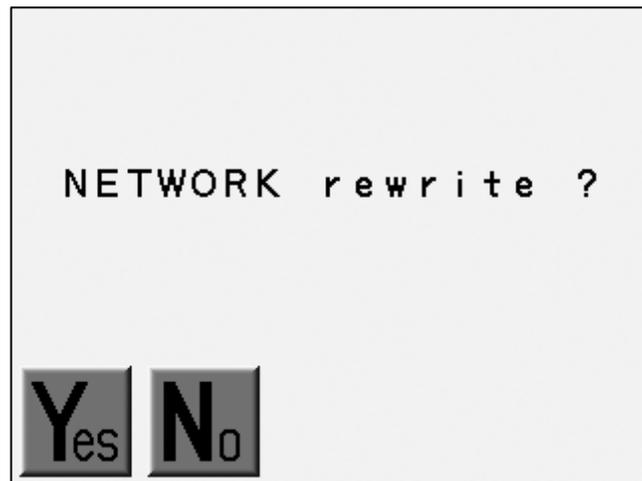


6) Press the C-Key to return to the previous screen.



7) Press the Menu Key again after all the parameters are programmed correctly.

8) Press the A-Key to save the changes.



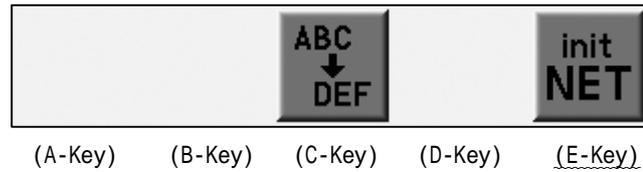
(A-Key) (B-Key) (C-Key) (D-Key) (E-Key)

Press the B-Key to cancel the Set-Up and return to the previous screen.

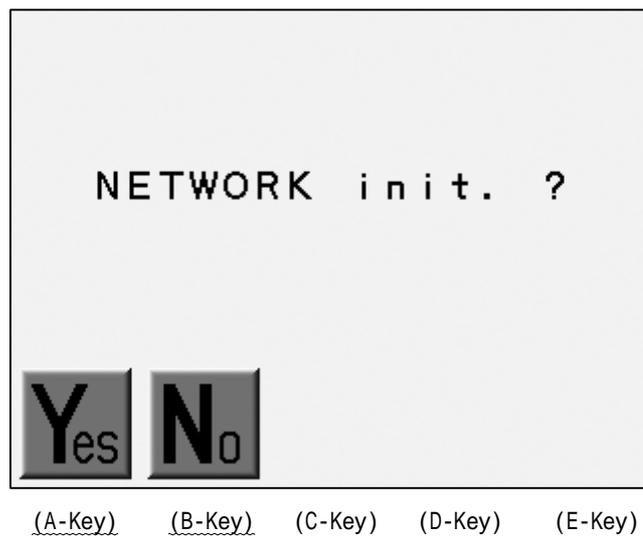
12. Initializing the LAN Board

Instructions to initialize a LAN Board.

- 1) Displays the Set-Up screen (Refer to 11.LAN Board Set-Up).
- 2) Press and Hold the E-Key until it starts beeping.



- 3) Press A-Key to start initializing.



Press B-Key to abort it.

13. The List of the LAN Board Parameters

No.	Item	Description	Default
1	IP Address	The IP Address of the Automat	0. 0. 0. 0
2	Subnet Mask	Subnet Mask	255. 255. 255. 0
3	Host Address	The IP Address of the Server	0. 0. 0. 0
4	Host Port	The Port No. on the Server	0000
5	COM Speed	Data Transmission Speed	115200

The above settings are dependent on the server settings.

Chapter 13. System

This chapter contains the instructions for updating the machines system software..

1. System Software Update with the CF Card.
2. Initialization of the Memory.
3. Date and Time Setting

1. System Software Update with the CF Card

- 1) Turn OFF the machine power.
- 2) Insert the CF Card with the System Software into the CF Slot on the Controller.
- 3) Press and hold the Start Key  and turn ON the machine power.
- 4) Release the Key when the indication, "SYSTEM Version #=V.***" displays.
Remove the Start Key after this, press and hold the Start Key again.
- 5) Use the jog keys to select System Software from the list.
- 6) Press and hold the D-Key to start updating the System Software.
- 7) The controller beeps a long beep then restarts if the System Software Update was properly done.

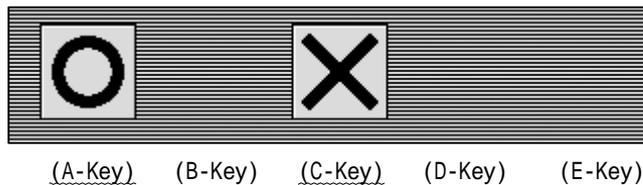
2. Initialization of the Memory

Instructions to initialize the machines memory.

*Be sure to back up the data before the initialization.

- 1) Turn OFF the machine.
- 2) Press and hold the B-Key and turn ON the machine.
- 3) Release the Key when the initialize message displays.
- 4) Press the A-Key to start the initialization.

Press the C-Key to stop.

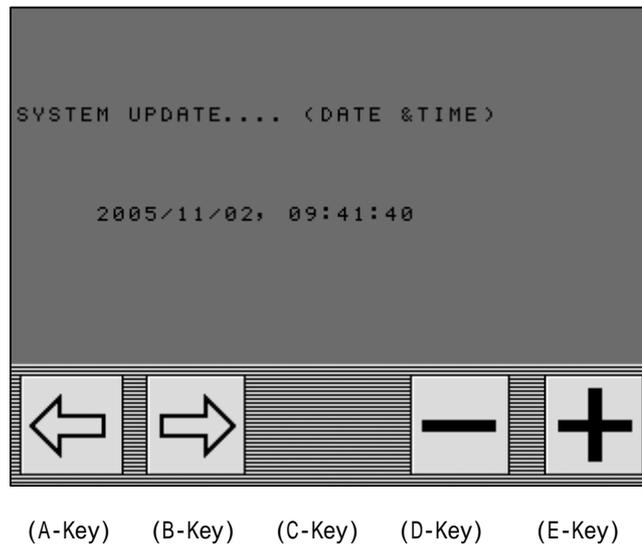


4. Date and Time Setting

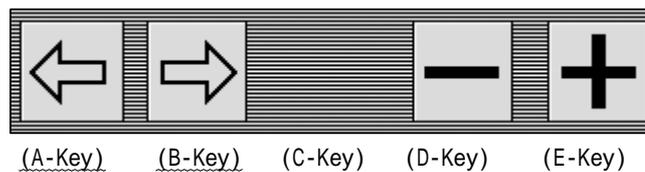
Instructions for setting up the date and time.

- 1) Turn OFF the machine.
- 2) Press and hold the A-Key then turn ON the machine.
- 3) Release the A-Key after the controller beeps.

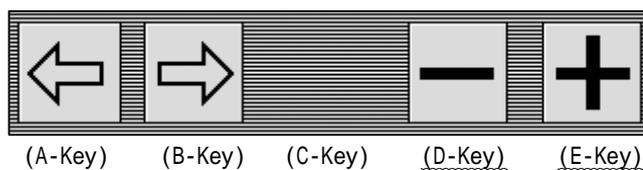
Date/Time Setting Screen appears.



- 4) Press the A or B-Key to choose the value to change.



- 5) Press the D or E-Key to change the value.



- 6) Press the Page Key to save the new setting and restart the machine.

Chapter 14. Appendix

This chapter contains the following lists as a reference.

1. Function Codes
2. Error Messages

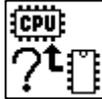
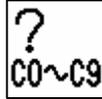
1. Function Codes

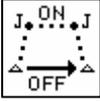
Symbol	Function
0	Normal Stitch
JP	Jump Stitch
L	Low Speed
LJ	Low Speed Jump
H	High Speed
HJ	High Speed Jump
T1	Top Thread Trimming
T2	Bobbin Trimming
G1	Group 1
G2	Group 2
SE	Sub End
C00	Stop
C01	Needle Bar 1
<hr style="border-top: 1px dashed black;"/>	
C15	Needle Bar 15
S0	Sequin OFF
S1	Sequin ON
SJ	Sequin Jump

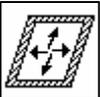
↓ The following Codes are called as The Color Change Codes.

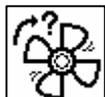
} Depends on the Needle No. of the Machine.

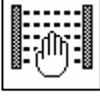
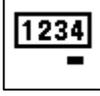
2. Error Messages

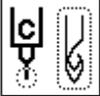
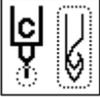
Message	Description
A 0 1 : 	No Battery.
A 0 5 : 	Wrong Code.
A 0 7 : 	IC Memory Error.
A 0 8 : 	Memory Full (Cancels the loading).
A 1 1 : 	No peripheral device was found. Turn ON the peripheral or check the connection.
A 2 0 : 	The Memory Slot has no design file.
A 2 1 : 	All Memory Slots have no design file.
A 2 4 : 	There is no Color Change Code following.
A 2 6 : 	No blank stroke of the Pantograph for the Socks feature.
A 2 7 : 	There is no Function Code following.
A 2 8 : 	Calculating. Please wait.
A 2 9 : 	Memory Full. Delete designs.

Message	Description
A 3 4 : 	Too many color changes. The 401 st and following Color Change Codes will be deleted.
A 3 5 : 	Operation prohibited for the Spectacle Frame Setting in the MC Parameter.
A 3 6 : 	The operation is prohibited during Manual operation, "Appliqué" is active.
A 3 7 : 	CF Card Full. Delete the designs in the CF Card.
A 3 8 : 	No CF Card. Insert the CF Card.
A 3 9 : 	Loading/Saving Error. Retry/Check the CF Card.
A 4 0 : 	Network broken.
A 4 1 : 	The false loading of the design information.

Message	Description
D 0 1 : 	False Color Change due to the lock error of the Color Change Turret. Manually turn the Turret.
D 0 3 : 	The Color Change Turret is not locked. Manually turn the Turret.
D 0 4 : 	Needle Bar Positioner Error. Check the Board.
D 0 5 : 	Unable to Color Change Check the Clamp/Jump Solenoid if there is no stuck.
D 0 6 : 	Main Motor Trip. Try to restart the machine. Turn OFF the power and check the bind by turning the Main Shaft with hands.
D 0 7 : 	Main Motor Overload. Turn OFF the machine and check the bind by turning the Main Shaft with hands.
D 0 8 : 	Pantograph Stroke Limit. Pantograph reached a Soft Limit in the MC Parameters.
D 0 9 : 	Start/Stop error.
D 1 1 : 	Rotary Encoder Error. Check if it is working properly.
D 1 2 : 	Slider Error. Move back the Slider to the original position. Check if the trimming is OK?

Message	Description
D 1 3 : 	No further Stitch Back/Automending.
D 1 4 : 	Push the Start Switch.
D 1 6 : 	Bobbin break.
D 1 9 : 	Stop for the Stop Code.
D 2 0 : 	The end of the Automending.
D 2 1 : 	The Stop for the Stop Switch.
D 2 2 : 	The error of the Trimmer Motor. Turn OFF the machine. Check and remove the bind.
D 2 3 : 	The Stop for the Appliqué.
D 2 5 : 	The Stop for a thread break.
D 2 6 : 	Pulse Motor Driver Over Heat. Turn OFF the machine to cool down. Check the Ventilation Fan and the Air Filter.

Message	Description
D 2 7 : 	The Stop for the Temporary Repair Stop which is entered in the previous run. Turn ON the sewing head for the pattern to be fixed.
D 2 8 : 	No further Stitch Back/Automending due to the Color Change Code. Trim the thread for further Stitch Back / Automending.
D 2 9 : 	Servo Driver Error. Call technician.
D 3 0 : 	Wrong Dip Switch Setting on the Head/Duct Board.
D 3 1 : 	No Driver Box recognized. Check the connection.
D 3 2 : 	The Stop for Sub End Code.
D 3 3 : 	A power interruption has occurred. Turn OFF and On the machine.
D 3 4 : 	The stop due to the Light Curtain. (Option) Check the connection if cannot restart.
D 3 5 : 	Lubrication Error. Check the Lubrication Device.
D 3 6 : 	The stop for the Bobbin Counter. Trim the thread. Change all the bobbins and restart the machine.

Message	Description
D 3 7 : 	Sequin Device Error.
D 3 8 : 	Chenille Driver Error.
D 3 9 : 	Looper Motor Error.
D 4 0 : 	Chenille Thread Clamp Motor Error.
D 4 1 : 	Chenille Needle Height Error.
D 4 2 : 	Chenille Error