

# AUTOMATIC UNIT PLK-G 1010 V4 Series

## INSTRUCTION MANUAL FOR THE OPERATOR

### INTRODUCTION

**VI.BE.MAC. S.p.A.** industrial sewing machine.

Before using this automatic unit, please read the following instructions, which will help you to understand how the machine operates.

These instructions illustrate the working method to be followed, in compliance with current regulations.



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Should you require an additional manual, or any further clarification, please contact:

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# 1. GENERAL MACHINE SPECIFICATIONS

The 1010 V4 unit can be programmed along two axes, with a *MITSUBISHI PLK G 1010* sewing head, which according to the equipment installed consents, **within the sewing head range:**

- ornamental stitching on rear trouser pockets with or without automatic material loading/unloading.
- the performance of dart-shaped seams.
- the application of patch pockets.
- flap stitching.
- application of labels of any format or thickness.
- Velcro® application.
- sewing of chin straps on helmets.

The high level of flexibility of the unit makes it possible to buy the sewing head with a fitting (e.g. Labels) and, with a quick change, to change easily the present fitting on the machine with another **optional** fitting for a different operation. Four different operating modes can be selected for the unit. The unit allows for a quick change of forms (in about three minutes), supplied together with a floppy disk containing the personalised programmes requested by the client. Changing the form does not require the intervention of a technician, but its simple design, together with the use of special materials, mean that it can be carried out by the operator.

## SUPPLY VOLTAGE

The supply voltage is 220 V single-phase 50/60 Hz

## COMPRESSED AIR CONSUMPTION AND PRESSURE

Consumption is about 1.5 litres of air intake per cycle with pressure of 5.5 bars.

## DIMENSIONS AND WEIGHT

Width: 120cm  
Length: 140cm  
Height: 135cm  
Weight: 160kg (approx.)

## NEEDLE AND OIL

This unit is equipped for using **135x17 SAN1 MR 4.5 T/SES** needles

For the lubrication is recommended oil type **MOBILE VELOCITE N°10**

### Physical property VELOCITE No 10

Aspect:	Amber fluid
Smell:	Characteristic
Density at 15°C (Kg/l):	0.862
Flame point °C	Not declare
Viscosity at 40°C:	22
Solubility in water:	insoluble
pH:	not applicable

inside the stacker cylinder (only dcs model ) the oil type is

### BP AUTRAN MBX or CASTROL 4226 TEXAMATIC

Specs	Typical Values
Density	870
Flash Point (in C)	217
Pour Point (in C)	-40
Viscosity at 100C	7.9
Viscosity at 40C	39
Viscosity Index	163

### Mineral oil anti foam

## WORKING POSITION

The operator works standing up in front of the Loading Feeder.

Normally on the right side he/she has the pockets or trousers

On the automatic unit there are the following devices:

- on the Sewing Head there are this switches:

The START SEWING switch (1)

Command the INTERNAL Clamp (2)

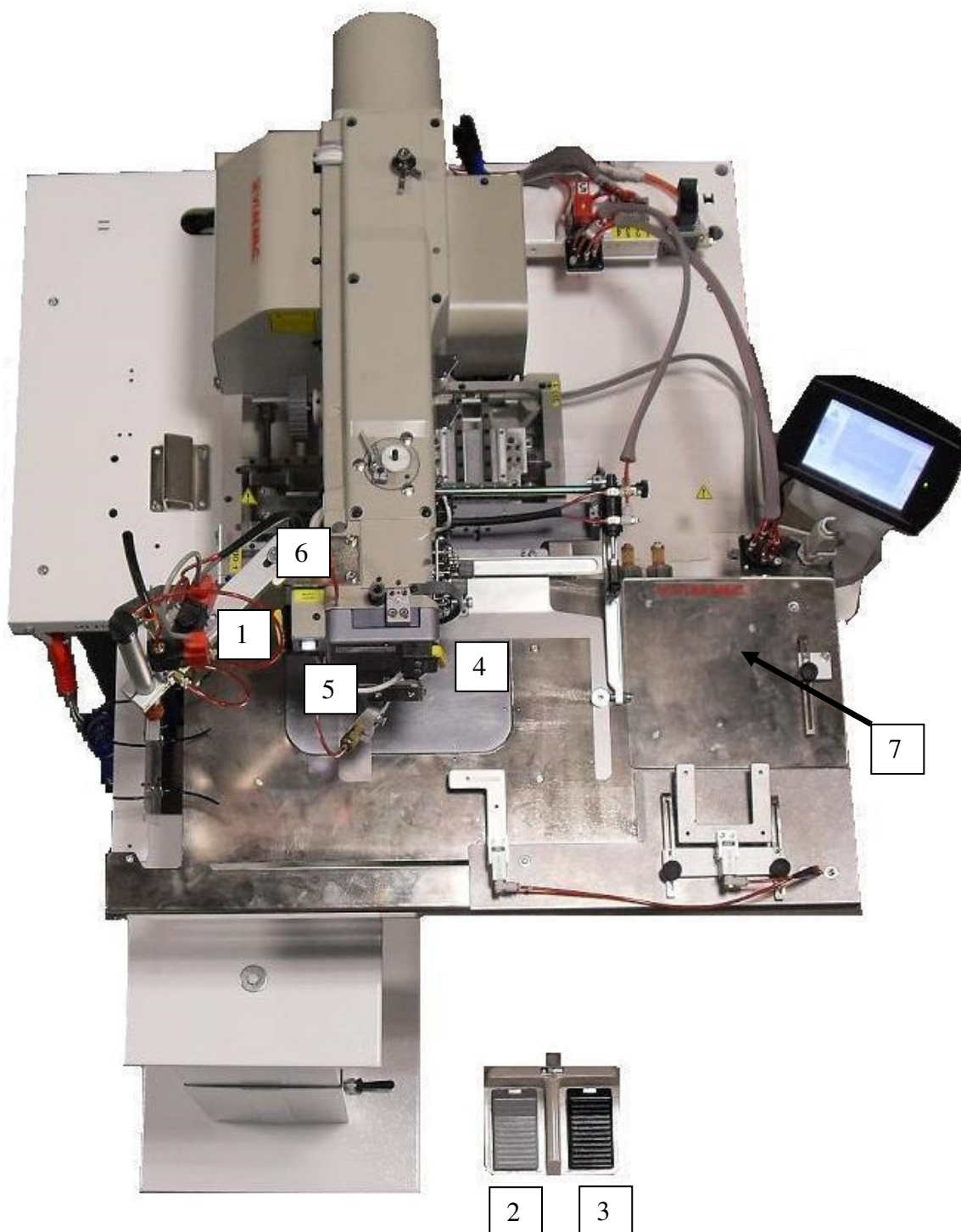
Command the loading clamp (3)

Command the START loading with the yellow switch (4)

Command the STOP SEWING/EMERGENCY (5)

Needle change (6)

Main SWITCH (7)



“Normal” operation includes all those operations for the preparation and application of a pocket onto trousers, respecting the following conditions:

- the operator must first have read and fully understood all parts of this manual.
- the operator must abide by all the instructions in this manual and "CE" regulations
- the maximum width of the pocket embroidery must be 220mm
- the maximum height of the pocket EMBROIDERY must be 90mm.
- the maximum width of the LABEL must be 110mm. (250 in SPECIAL version).
- the maximum height of the LABEL must be 80mm. (120 in SPECIAL version).
- the maximum width of the POCKET must be 220 in the SPECIAL version.
- the maximum height of the POCKET must be 130mm in the SPECIAL version.
- the material thickness of the trousers where the LABEL is to be applied must not be greater than 5 mm
- all safety regulations must be respected; safety covers installed by the manufacturer must not be removed.
- the electrical supply must be constant.
- the unit has to be connected under an automatic cut-out switch of 30mA
- the machine must be earthed to prevent disturbances and electric shocks.
- the machine must not operate at high temperatures (above 40°C) or low temperatures (below 10°C).
- water or other liquids (with the exception of oil) must not get into the sewing machine.
- water or other liquids must not get into the control panel, solenoid valves and cylinders.
- the automatic unit must be installed on a flat surface checking that the feet rest all together on the ground, and are blocked with the special nut.
- the automatic unit must not be used in areas where there is explosive gas, powder or oil vapours.
- the machine must not be connected to a compressed air circuit containing water or other liquids in the pressure circuit.
- the machine must be connected to a compressed air circuit with a constant minimum internal pressure of 5.5 bar.
- the operator must use soundproof earplugs to prevent damage to the ear.
- installation of the machine and extraordinary maintenance must be performed by qualified personnel.
- The manufacturer declines any responsibility for damage to persons or things caused by the machine in cases where:
  - the unit is not properly installed on an even surface.
  - installation of the machine is not performed by qualified personnel.
  - ordinary and extraordinary maintenance of the machine have not been performed by qualified personnel.
  - the electrical supply is not constant.
  - the air pressure in the pneumatic circuit does not satisfy the requirements.
  - routine maintenance of the unit is not performed as required.
  - non-original spare parts or parts which are not specified for the model are used.
  - there is a partial or total lack of observance of the instructions on the part of the user.
  - the maximum thickness of the trousers, at the point where the pocket is to be applied, is not respected.
  - the operator has been working with broken or unsuitable needles, thereby ruining the trousers.
- Under no circumstances:
  - deactivate the safety devices provided by the manufacturer, thereby making the machine dangerous for the operator.
  - remove the safety covers and devices from their position, thereby making the machine dangerous for the operator.
  - remove the eye protection shield without supplying the operator with special eye protection glasses in compliance with current regulations.
  - modify the machine, without authorisation from the manufacturer, thereby making the machine dangerous for the operator.

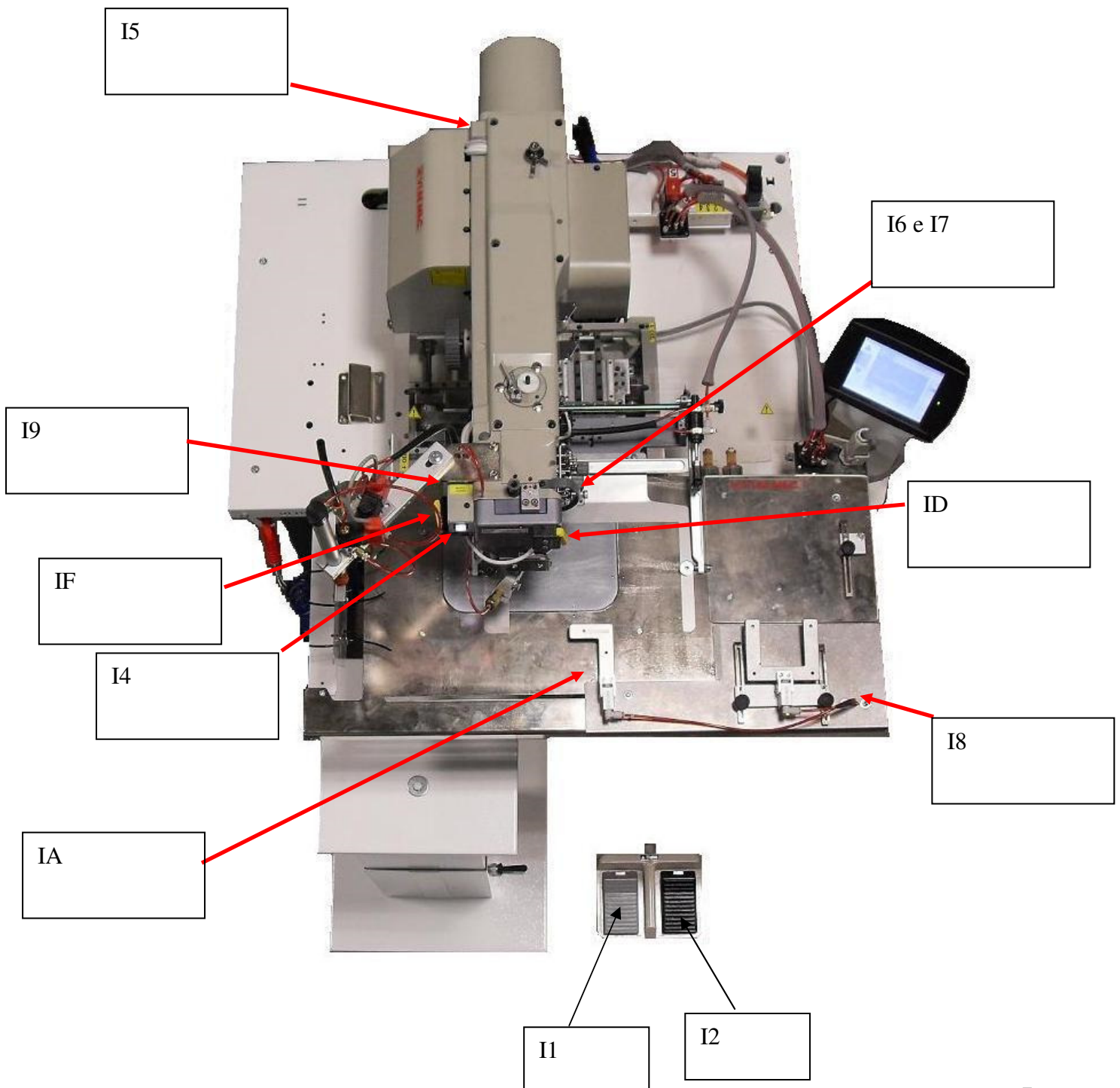
## 2. FORM OF WARRANTY

A Warranty of 1 (one) year applies to all parts that make up the unit, when delivered to the manufacturer and found to be defective.

**All parts damaged through improper use by the operator, and/or improper adjustment of the unit by technical personnel not authorized by VI.BE.MAC. S.p.A., will NOT be considered as defective by the manufacturer. In this case these will be charged for, including all transport costs and/or subsequent installation costs.**

### 3. INPUT DESCRIPTION

TYPE	FUNCTION	CONNECTION
FOOT SWITCH		I1
FOOT SWITCH		I2
MICRO SWITCH	STOP SWITCH	I4
PRESSURE SWITCH	TILT SAFETY SWITCH	I5
SENSOR	RIGHT THREAD BREAKAGE SENSOR	I6
SENSOR	LEFT THREAD BREAKAGE SENSOR	I7
MICRO SWITCH	LOADER REST POSITION SWITCH	I8
MICRO SWITCH	NEEDLE CHANGE	I9
MICRO SWITCH	LOADING CARRIAGE AT END STROKE SWITCH	IA
PUSH BOTTON	LOADIN CARRIAGE START BOTTON	ID
MICRO SWITCH	SEWING START BOTTON	IF



## 4. MACHINE START UP

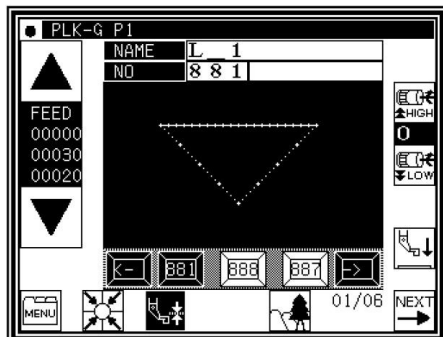
The flow of the TURN ON operation is shown below.


Check the position of these parts:

- If the steel Plate has the needle hole on the top of the hole on the Needle Plate (Original Position)
- If the Loader is all to right backwards.

Switch on the power supply by pressing the ON key on the mains switch.

Once the computer has performed check-up,  
the main menu will appear on the display:



Press the key . The machine will search for the two positioning sensors. When the machine has read the positioning sensors it finds the Original Point. The jigs rise and the machine is ready for use with the program last used in the memory.

## 5. STOPPING THE MACHINE

Press the STOP button and the current by pressing the OFF button on the main current switch only when the machine has stopped.

The compressed air is automatically turned off.


### ATTENTION

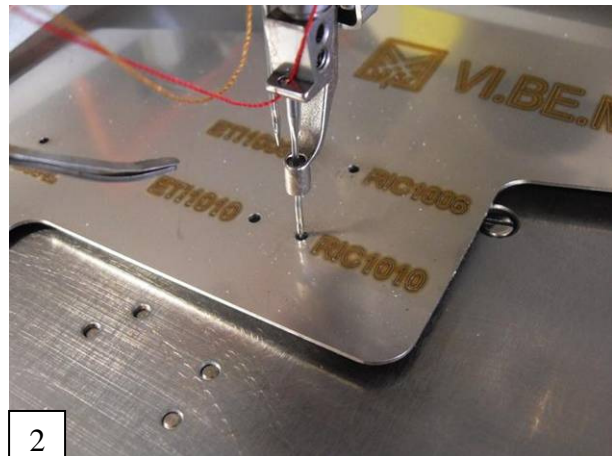
In the event of an electricity BLACK OUT, the sewing machine stops by inertia, the Loader unit remains in its resting position and the loading cycle, if running, is cancelled.



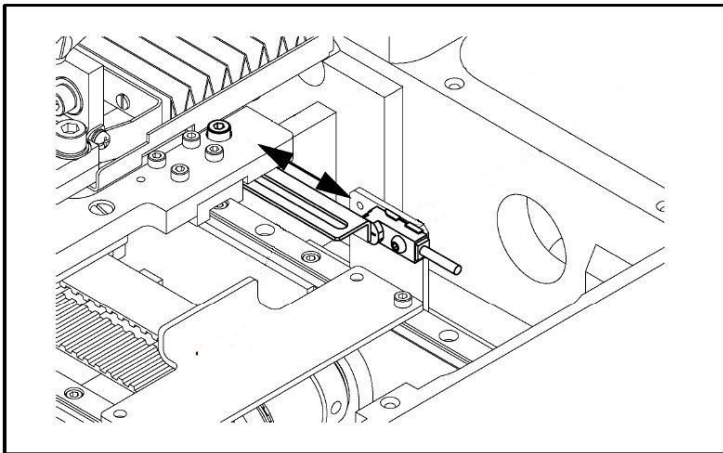
## 6. MECHANICAL ADJUSTMENTS

### 6.1. Home position regulation

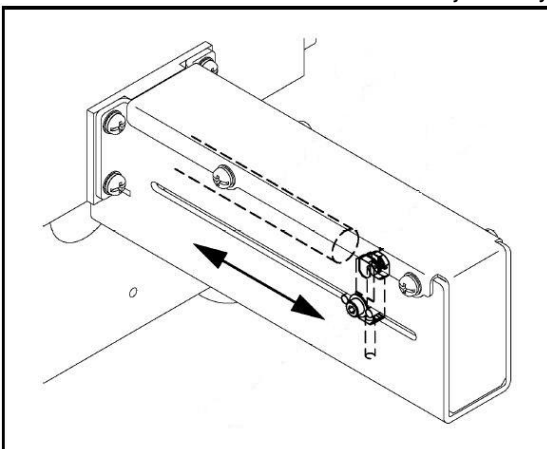
The home position can be controlled by positioning the centring plate (see photo 1) and lowering the external and the inner clamp and pressing  At this point the needle must be centred in the hole (see photo 2).



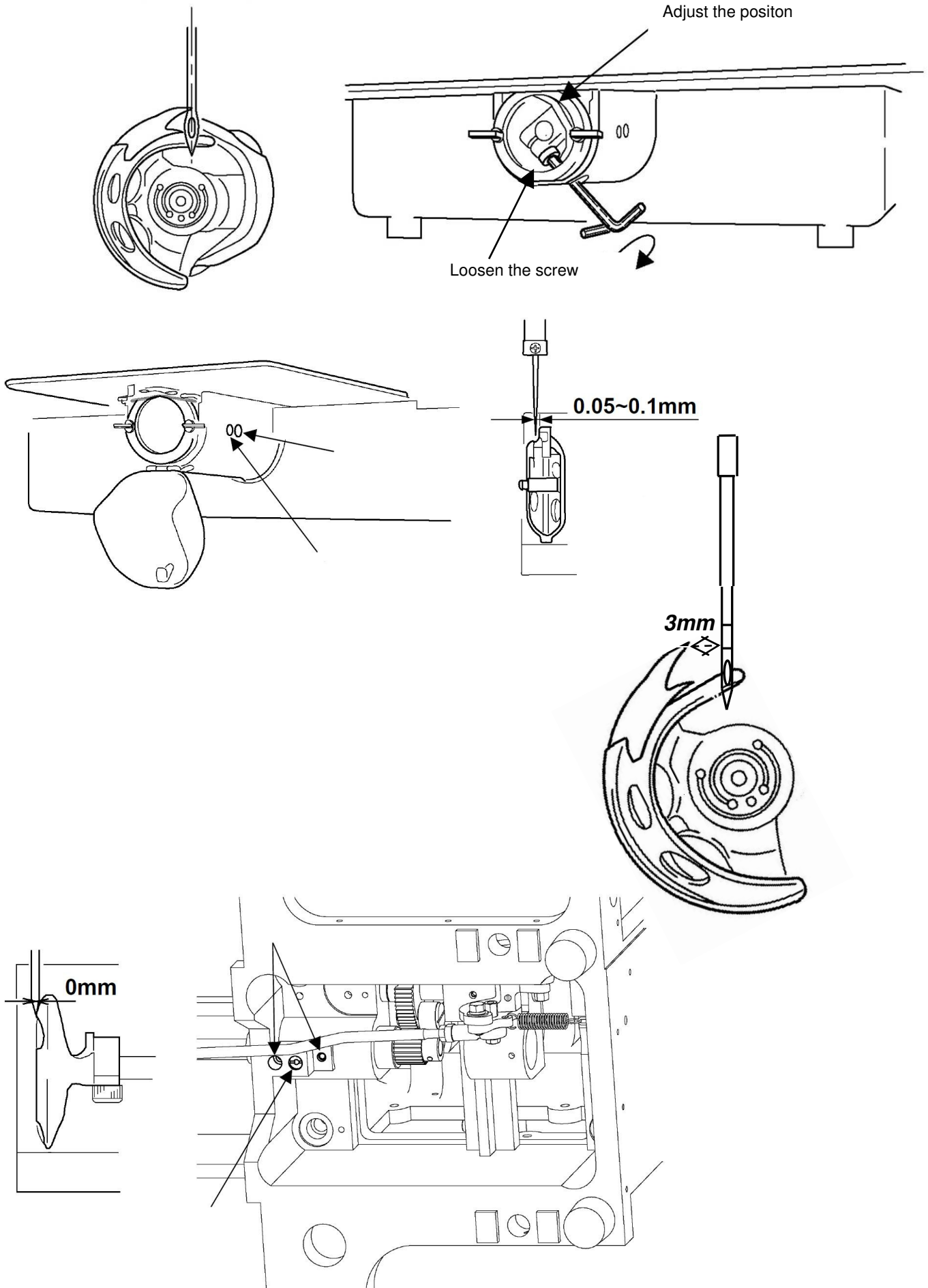
The home position of the machine can be adjusted, in the X axis moving the detector plate by loosening the screws and moving right or left (see photo)



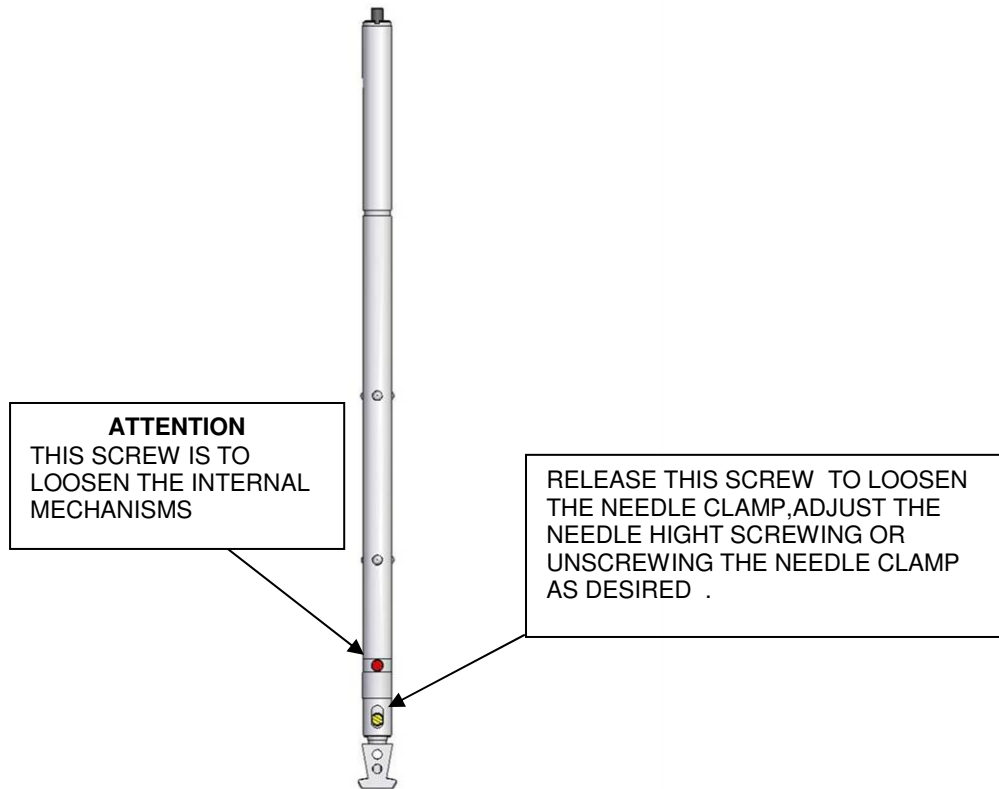
The sensor of the Y axis instead can be adjusted by loosening the screws and moving the sensor backward and forward



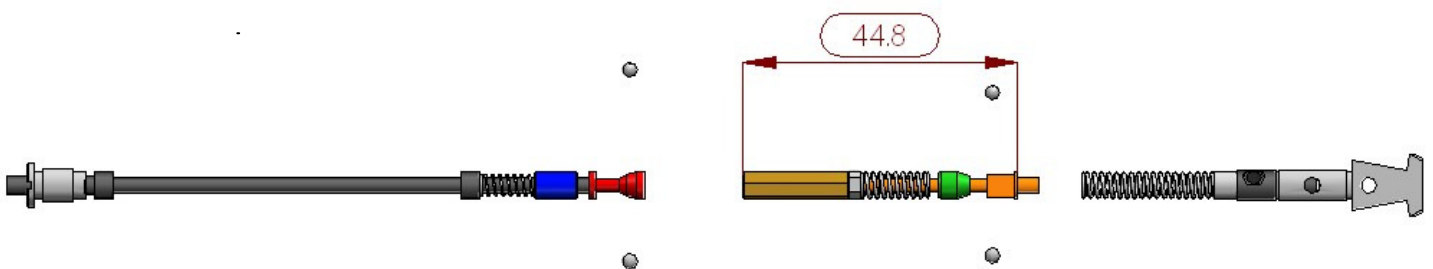
# 7. SEWING MECHANISMS REGULATION



## 7.1. Needle height adjustment

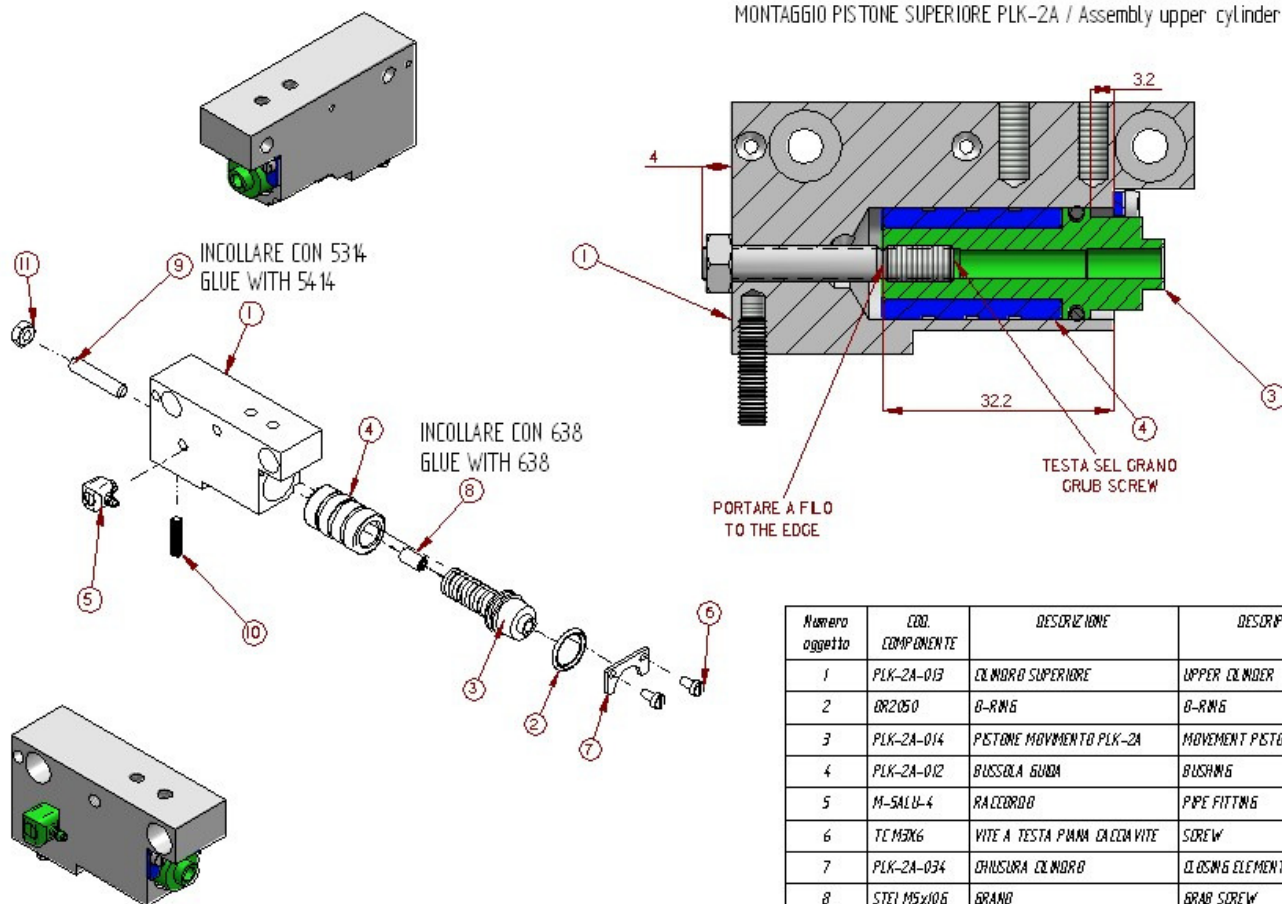


## 7.2. Internal regulation of the needle bar



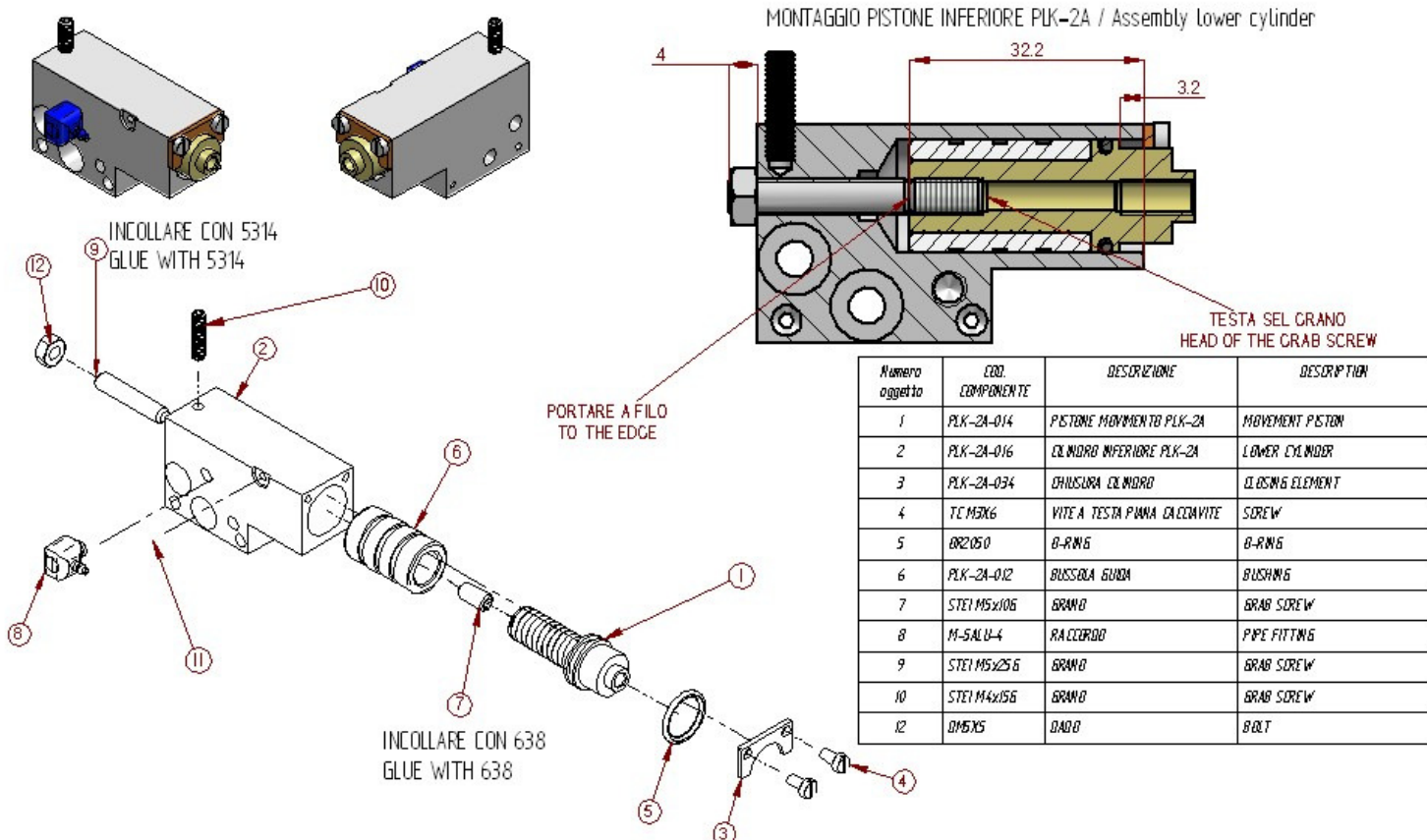
### 7.3. Needle bar movement cylinders

MONTAGGIO PISTONE SUPERIORE PLK-2A / Assembly upper cylinder



Numero oggetto	COD. COMPONENTE	DESCRIZIONE	DESCRIPTION
1	PLK-2A-013	CILINDRO SUPERIORE	UPPER CYLINDER
2	BR2050	B-RING	B-RING
3	PLK-2A-014	PISTONE MOVIMENTO PLK-2A	MOVEMENT PISTON
4	PLK-2A-012	BUSSOLA GUIDA	BUSHING
5	M-SALU-4	RACCORDO	PIPE FITTING
6	TC M3X6	VITE A TESTA PIANA CACCIAVITE	SCREW
7	PLK-2A-034	CHIUSURA CILINDRO	CLOSING ELEMENT
8	STE1 M5x106	GRANO	GRAB SCREW

MONTAGGIO PISTONE INFERIORE PLK-2A / Assembly lower cylinder

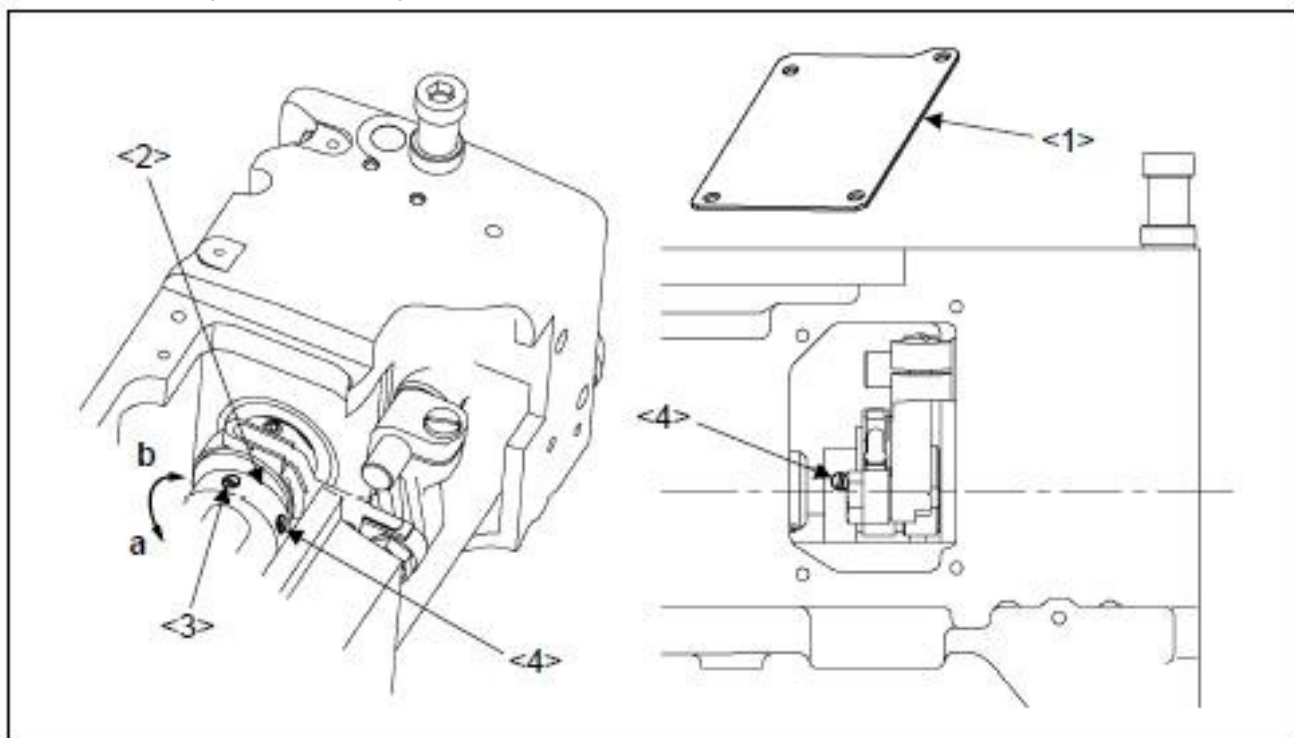


Numero oggetto	COD. COMPONENTE	DESCRIZIONE	DESCRIPTION
1	PLK-2A-014	PISTONE MOVIMENTO PLK-2A	MOVEMENT PISTON
2	PLK-2A-016	CILINDRO INFERIORE PLK-2A	LOWER CYLINDER
3	PLK-2A-034	CHIUSURA CILINDRO	CLOSING ELEMENT
4	TC M3X6	VITE A TESTA PIANA CACCIAVITE	SCREW
5	BR2050	B-RING	B-RING
6	PLK-2A-012	BUSSOLA GUIDA	BUSHING
7	STE1 M5x106	GRANO	GRAB SCREW
8	M-SALU-4	RACCORDO	PIPE FITTING
9	STE1 M5x256	GRANO	GRAB SCREW
10	STE1 M4x156	GRANO	GRAB SCREW
12	DM5X5	DADO	DRIFT

## 7.4. Adjustment of the presser foot timing.

The presser foot timing can be adjusted to avoid skip stitch on thin materials or to tighten the seam on thick materials. Remove the cover (1) and loosen screws (3) and (4) and move the eccentric (2) in (a) or (b) direction to anticipate or delete the presser foot speed.

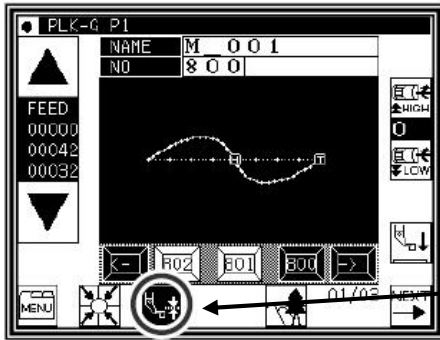
- a. to speed up the presser foot timing
- b. to slow down the presser foot timing



The STANDARD regulation is: turning the hand wheel in machine rotation direction when the needle is moving from LOWER DEAD POSITION up the presser foot starts moving up too.

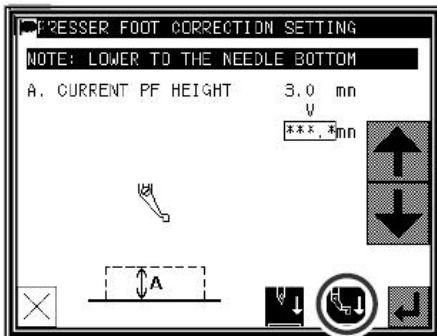
## 7.5. Presser foot thickness


Before doing this adjustment please control that :





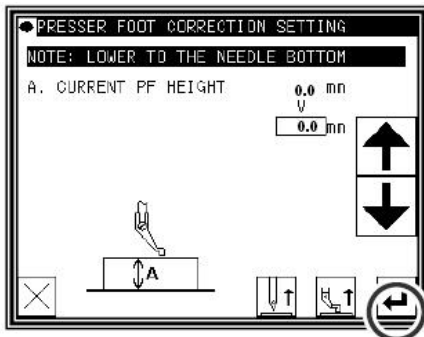
If this icon is WHITE means that the thickness is set at 0mm so it is OK  
 If it is BLACK means that the thickness is not at 0mm to adjust follow the following instructions


1) Presser foot THICKNESS  from main menu

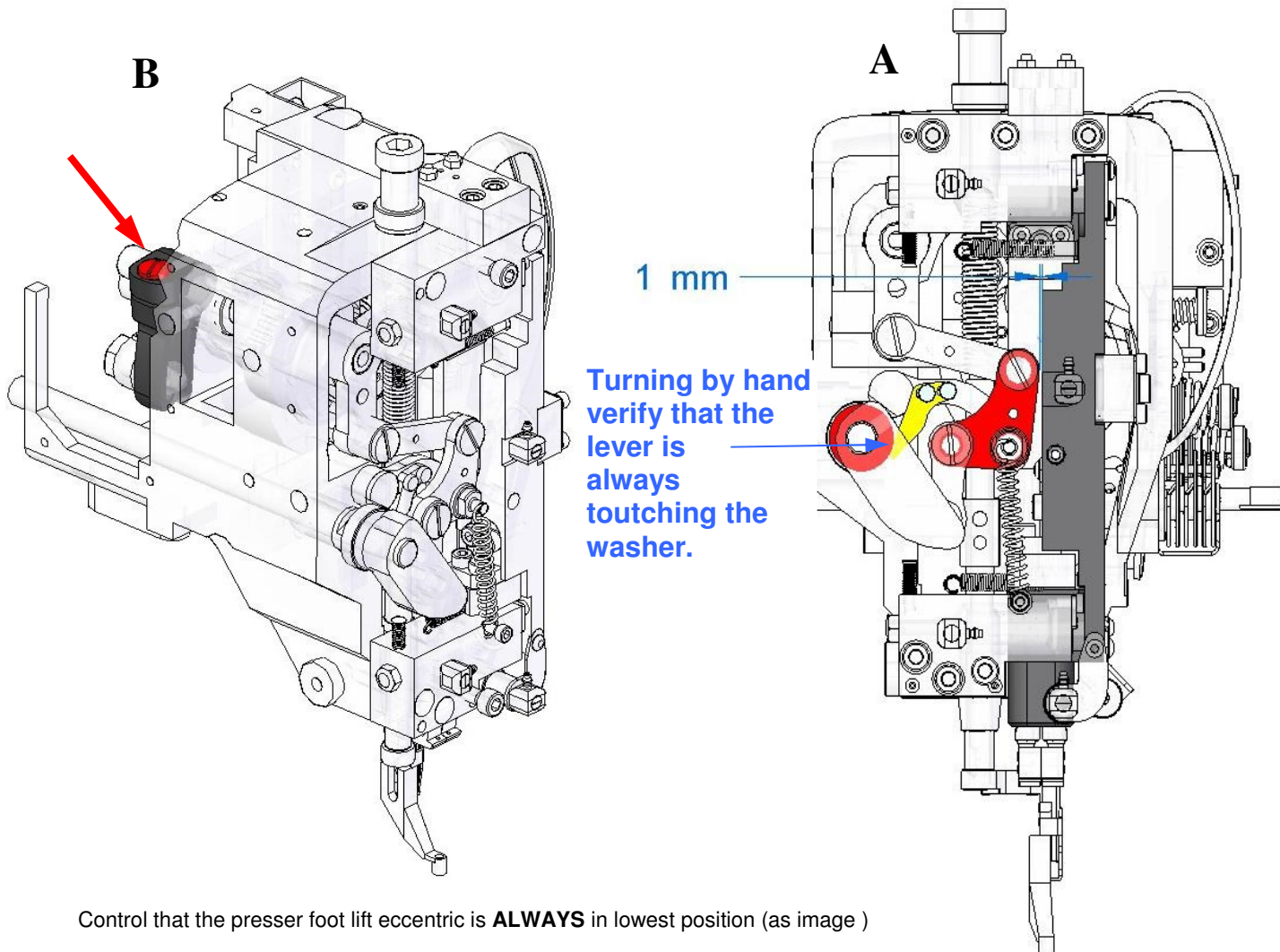


At this point the "THICKNESS" menu is displayed press 

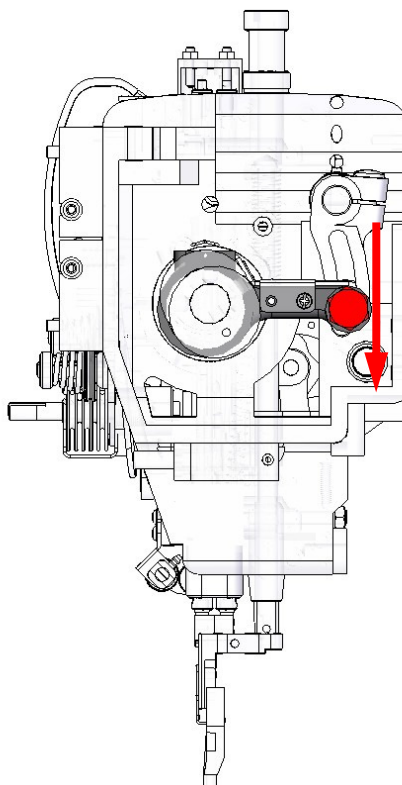
Set the thickness at **0mm** using the arrow keys  and press 



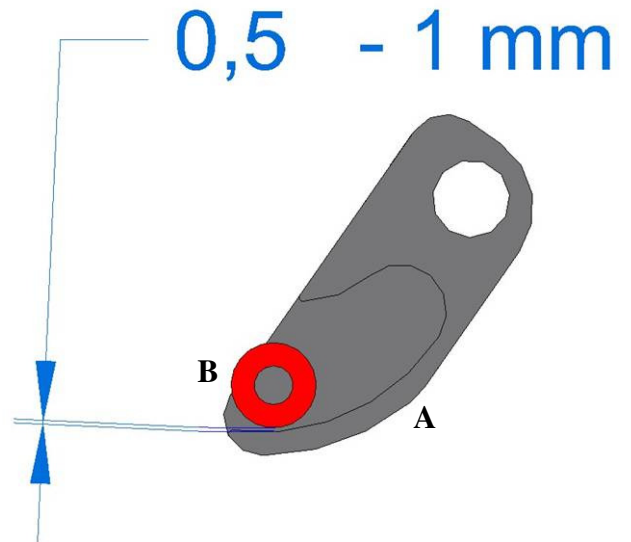
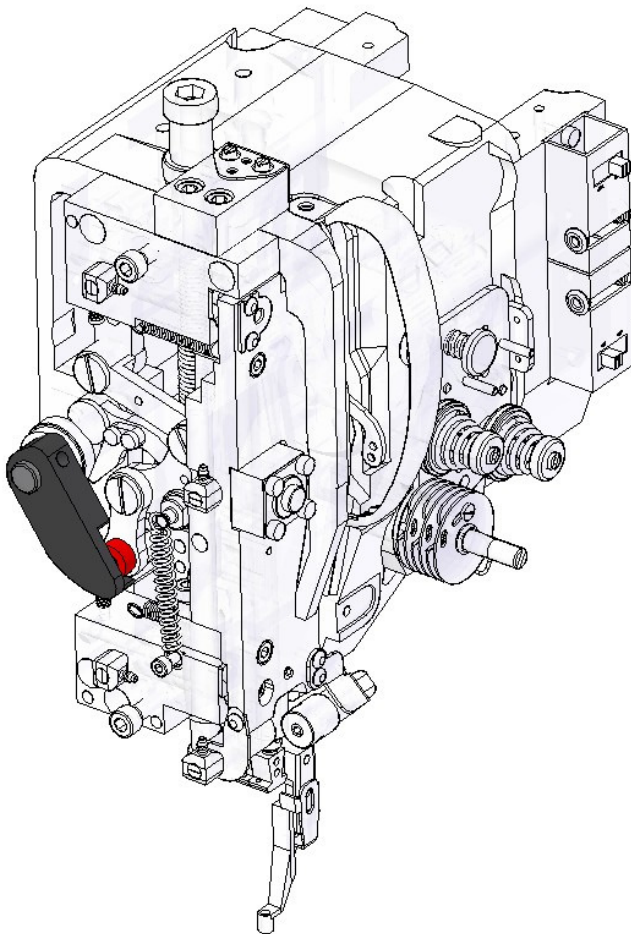
On the touch screen lower the presser foot by pressing  turning the hand well control that there is at least 1mm between the presser foot link and the the needle bar bracket  
 If the link is touching loosen the eccentric screw (image B) and move by hand the link to have 1mm of space as (image A)



Control that the presser foot lift eccentric is **ALWAYS** in lowest position (as image )



Control that between the presser foot lifting cam(A) and the baring(B) there is some space when presser foot is in lower dead point.  
To adjust this measure move the stepping motor detector plate.



### Adjustment of the presser foot stepping motor

With presser foot in lowest position the detector plate of the presser foot stepping motor must be 90° clockwise respect to the detection position.  
To adjust the position loosen the screws and move the position of the detector plate.

PRESSER FOOT IN LOWEST POSITION



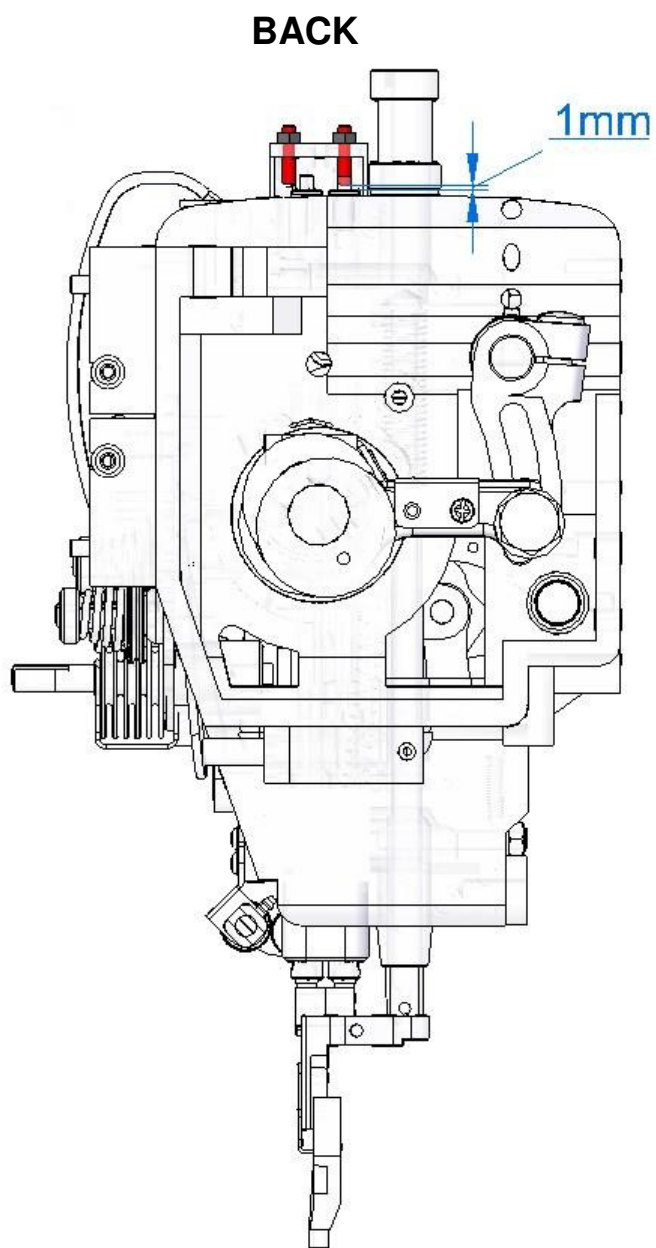
PRESSER FOOT IN HIGHEST POSITION  
Detection position





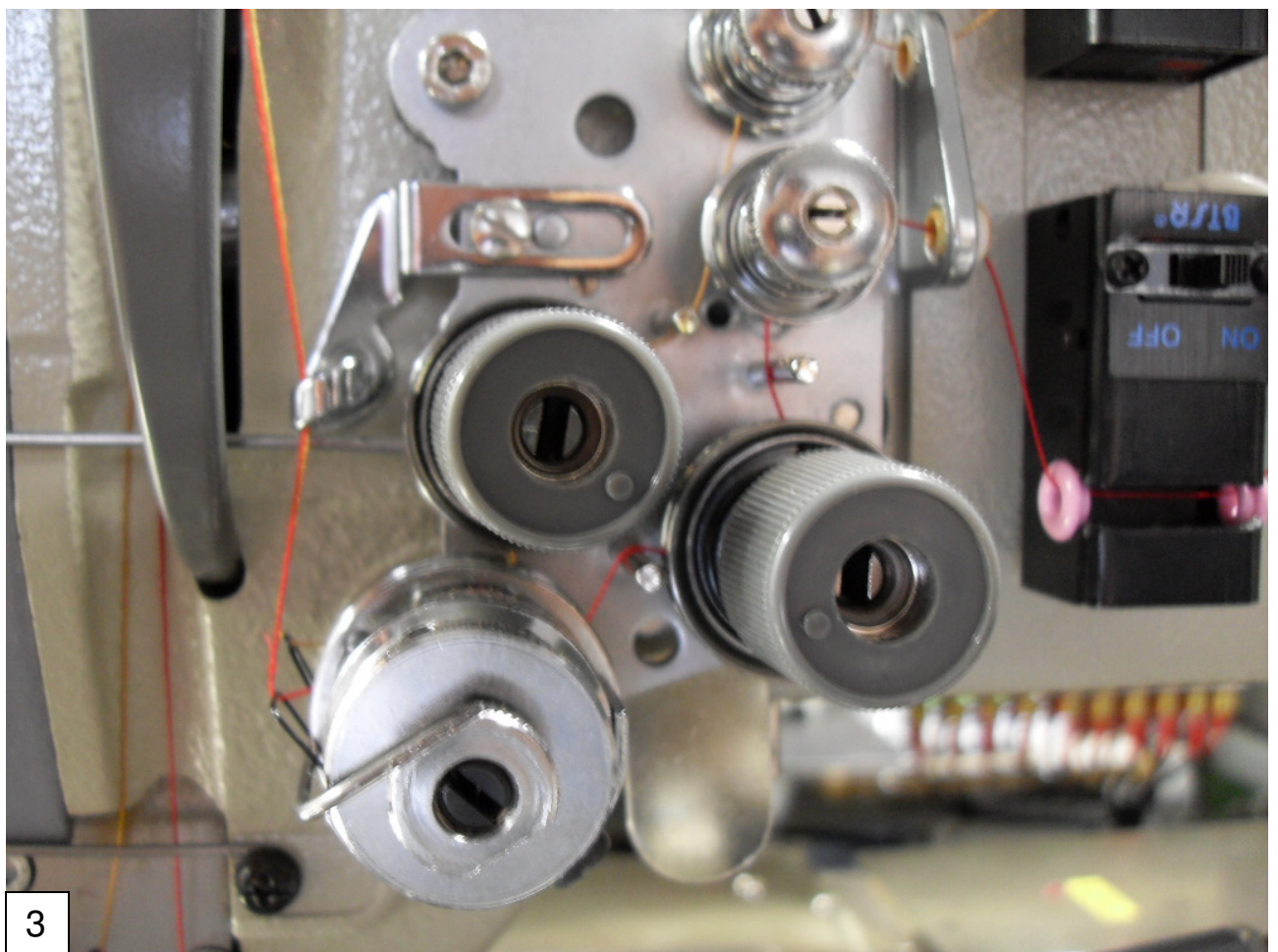
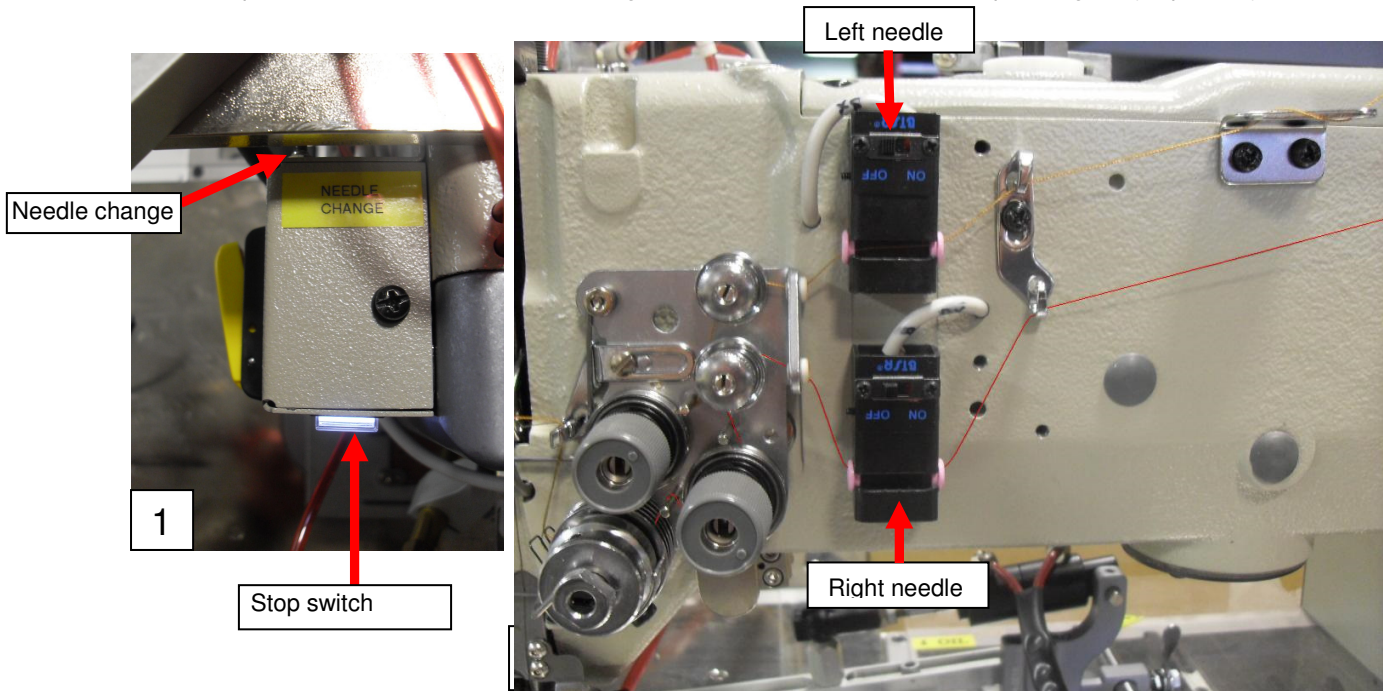
## 7.6. Needle bar unlocking pin regulation

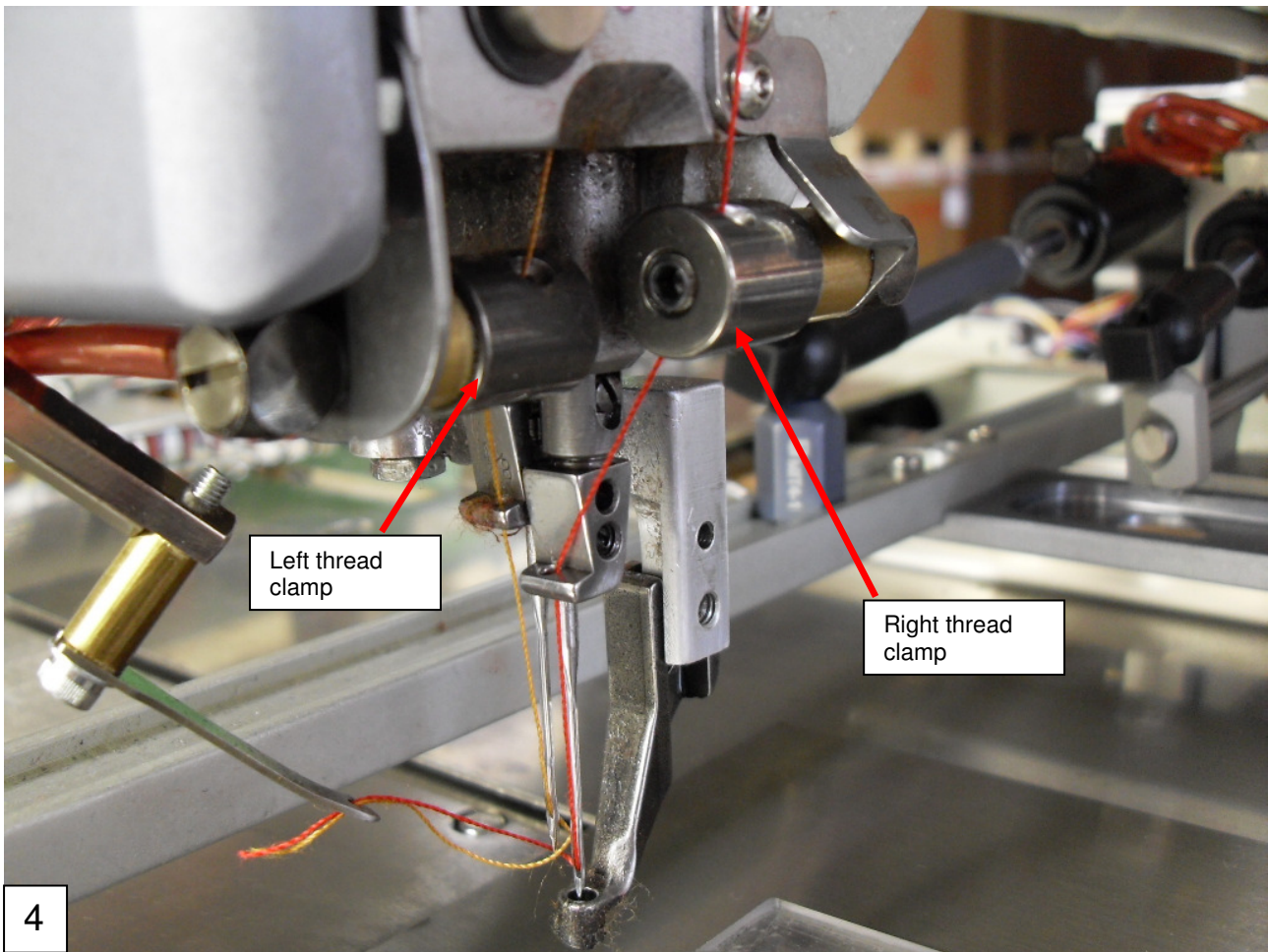
With needle bar in highest position:



## 8. THREADING THE MACHINE


To thread the machine : press STOP switch and the clamps will automatically go down if it is necessary to change needle bar press the micro switch "needle change" for 2 sec and to switch the bar press again (as photo 1)



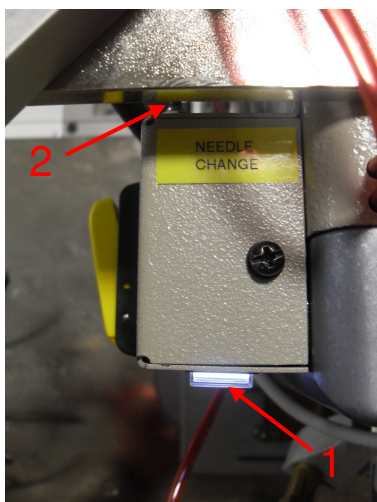


## 9. MANUAL NEEDLE CHANGE

To execute a manual needle change :

Set the machine in home position pressing 

Press the stop button on the sewing head (1) and keep pressed the needle change button(2) for at least 2sec until the machine lowers the clamps to change the needle bar position just press the needle change button(2) again.

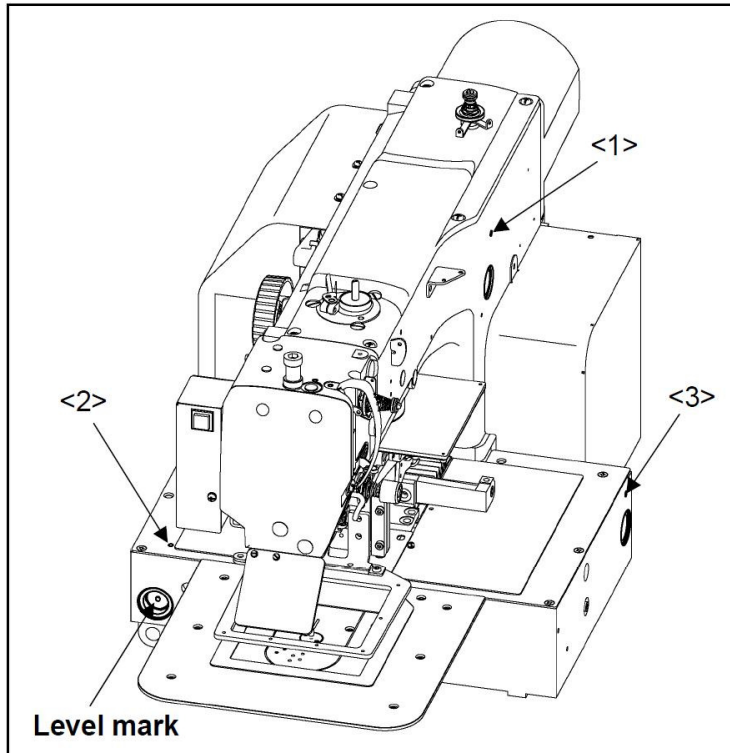


To exit from this mode release the emergency stop button (1) and the machine will return in working mode.

## 10. LUBRIFICATION

In this machine there are 3 oil tanks before starting up the machine make sure the oil tanks are at the correct level.

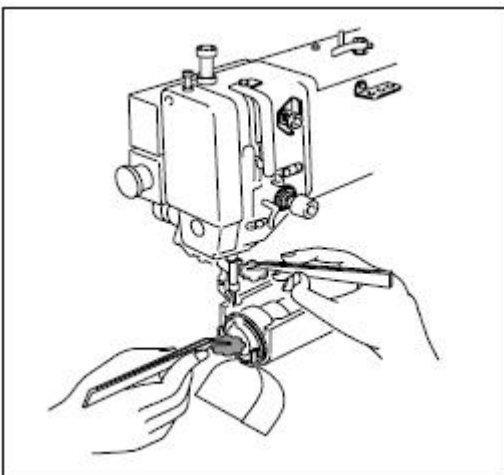
**VI.BE.MAC.** recommends to use oil type **sae32**



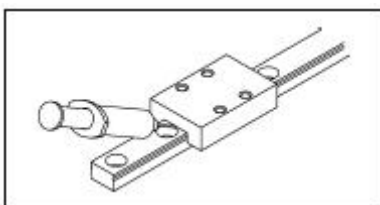
## 11. MAINTENANCE

The PLK-G machine requires low maintenance and we highly recommend to do these operations **once a week**

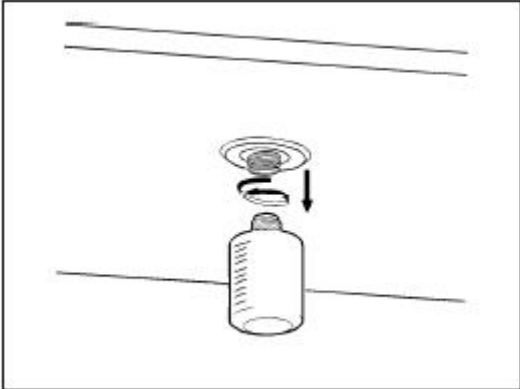
Remove the dust and the thread waste sticking to the threading parts or the hook area



Remove the dust from the X and Y rail and clean very well then apply some grease (Lithium grease 2 recommended)

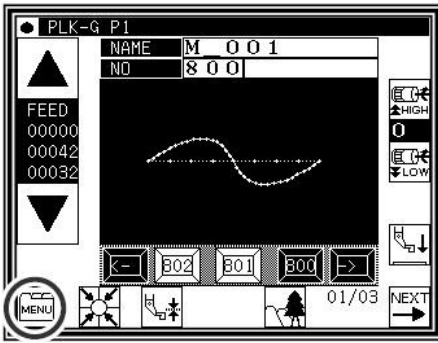


Empty the waist oil tank under the sewing machine when full

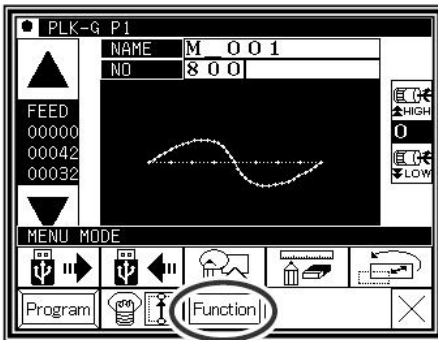


## 12. SELECTING FUNCTIONING SYSTEM

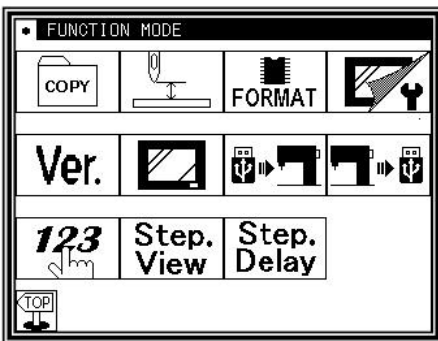
On the screen id displayed the main menu:



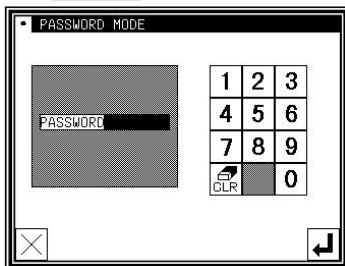
Press home key  then press .




Press .





Press .



Then digit the password **1010** and then confirm pressing .

Press .

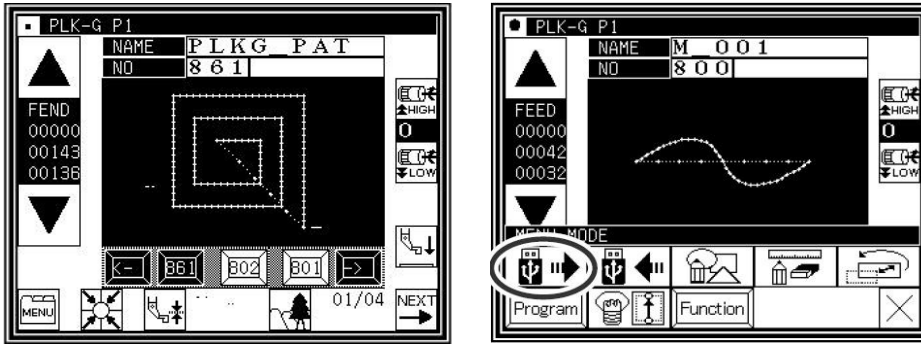
Select the NUMBER of the functioning mode desired confirm by pressing  when the machine has finished loading the functioning system press .

Once returned to the main menu switch OFF the machine and wait until the LED on the control box turns off and then turn ON the machine to start working



N°	TYPE	FUNCTIONING
1	DESIGNE AUTOMATIC CYCLE	The unit transports the material under the sewing machine ,the clamp lowers the loading clamp returns in loading position and the machine starts sewing <b>How to operate:</b> position the pocket against the loading clamp and press the BLACK pedal, press the right micro switch on the sewing head the carriage moves under the sewing machine and the sewing cycle starts automatically .
2	LABEL MANUAL CYCLE	After having lowered the outer clamp position the label lower the inner clamp and press both micro switches to start the sewing cycle. <b>How to operate:</b> Position the fabric and press the BLACK pedal then position the label and lower the inner clamp by pressing the GRAY pedal to start the sewing cycle press both the micro switches positioned on the sewing head.
3	LABEL AUTOMATIC CYCLE	After having lowered the outer clamp position the label lower the inner clamp and the machine will start the sewing cycle. <b>How to operate:</b> Position the fabric and press the BLACK pedal then position the label and lower the inner clamp by pressing the GRAY pedal once lowered the inner clamp the machine will automatically start the sewing cycle
4	PENCE MANUAL CYCLE	After lowering the internal clamp,then lower the external clamp and automatically the internal clamp moves back then press both the micro switches on the sewing head to start the sewing cycle. <b>How to operate:</b> Lower the inner clamp by pressing the BLACK pedal then lower the external clamp by pressing the GRAY pedal automatically the central clamp will move back without rising then press BOTH micro switches on the sewing head to start the sewing cycle.
5	PENCE AUTOMATIC CYCLE	After lowering the internal clamp,then lower the external clamp and automatically the internal clamp moves back at this point the sewing cycle will start automatically <b>How to operate:</b> Lower the inner clamp by pressing the BLACK pedal then lower the external clamp by pressing the GRAY pedal automatically the central clamp will move back without rising at this point the machine will start automatically the sewing cycle.
6	DESIGNE MANUAL CYCLE	After lowering the clamp and pressing both the micro switches the machine starts the sewing cycle. <b>How to operate:</b> Lower the clamp by pressing the BLACK pedal then pressing BOTH micro switches on the sewing head the sewing cycle starts.
7	NOT USED	
8	RUNNING IN NEEDLE BAR	This functioning system is developed for the first running-in of the needle bars to be used by technicians .

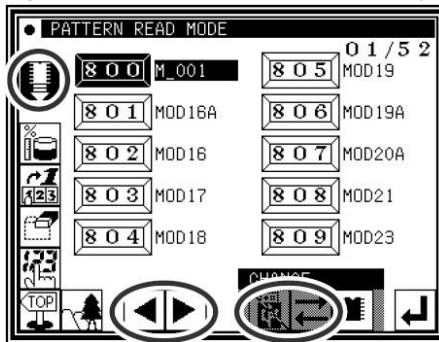
## 12.1. Read a program



To call up a program :



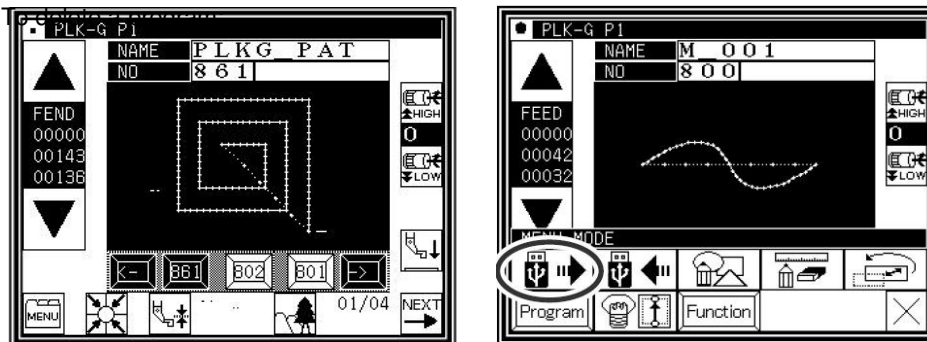
Press  .Then press  .  
Select from where to read the program by pressing, 

With this icon  the program is read from the internal memory ,with this icon instead  from the USB.  
This menu is displayed :

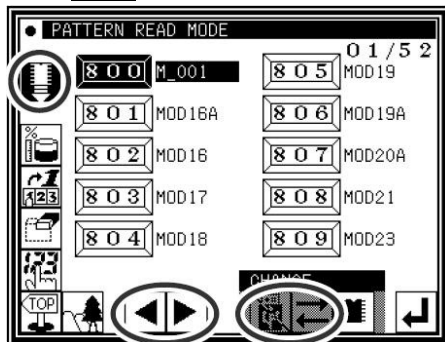


Select the desired program by touching the number,to change page press  .To confirm press .






## 12.2. Delete a program



Press  .  
Then press .



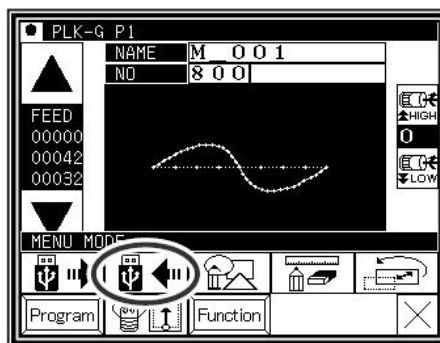
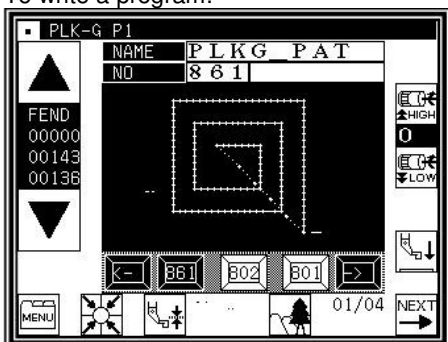
**NOTE: THE PROGRAM IN USE CANT BE DELETED**

Select from where you want to delete the program by pressing  if you want to delete from the memory or  from the USB. Select the desired program by touching the number or to change page press  ,once reached the desired program press  . And to confirm press .





### 12.3. Write a program (save)

To write a program:




Press  .

Press  .


Select where to write the program by pressing  to write on the internal memory or  to write on the USB

This page is displayed



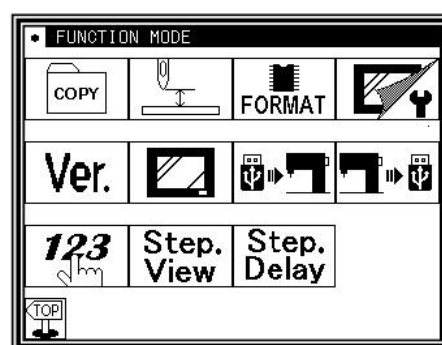
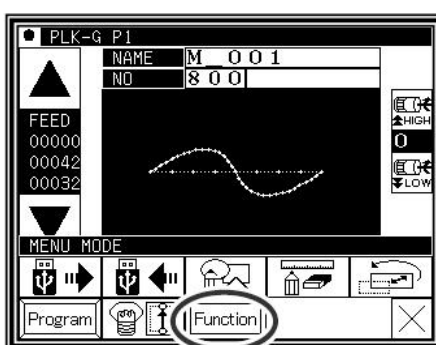
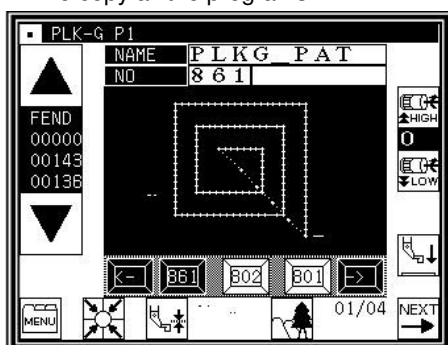
Select **NAME** . Digit the desired name using the letters , to erase press  . To change the number of the program press **NO** and digit the desired number.

**The programs have to be saved with a numeration included between 600 e 999.**

Confirm pressing  .


### 12.4. Coping all programs from USB to memory or vice versa

To copy all the programs:




Press  .

Then press  .

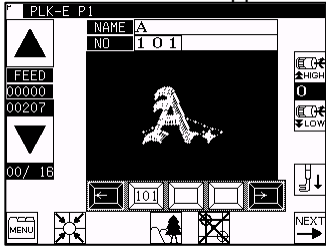
and then  .


At this point select where to copy the programs pressing  to copy in the internal memory or  to copy on the USB.

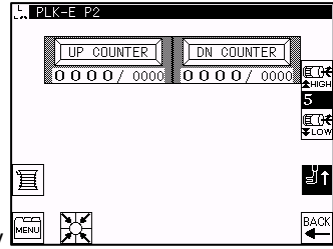
Once selected the destination of the programs select **ALL** and confirm pressing  .

## 12.5. Setting bobbin and production counters

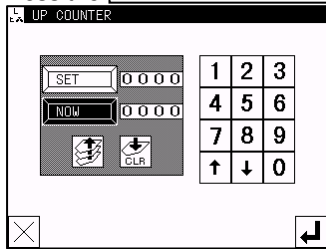
The main menu will appear on the display:

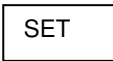


Press icon  and will appear the follow display



Press the **UP COUNTER** icon to select the PRODUCTION counter.



 will appear. Press the **SET** icon and set the value **9999** by numerical icon

Press **NOW** icon and set the value **0000** by numerical icon.

To enable the counter function press  the icon will be lighten with a blue color

To reset the production value press

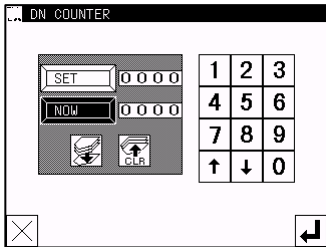


Press



## 12.6. Setting bobbin counter


Press the **DN COUNTER** icon to select the BOBBIN counter.



 will appear.

Press **SET** icon and set for example the value **100** by numerical icon .

Press **NOW** icon and set the value **100** by numerical icon .

To enable the counter function press the  icon.

Press



### 12.6.1. Resetting bobbin counter


A) When the BOBBIN counter reaches the number SET and the buzzer sounds the message "DOWN COUNTER SETTING VALUE UP" will appear on the display:



Press the  ENTER key to reset the counter

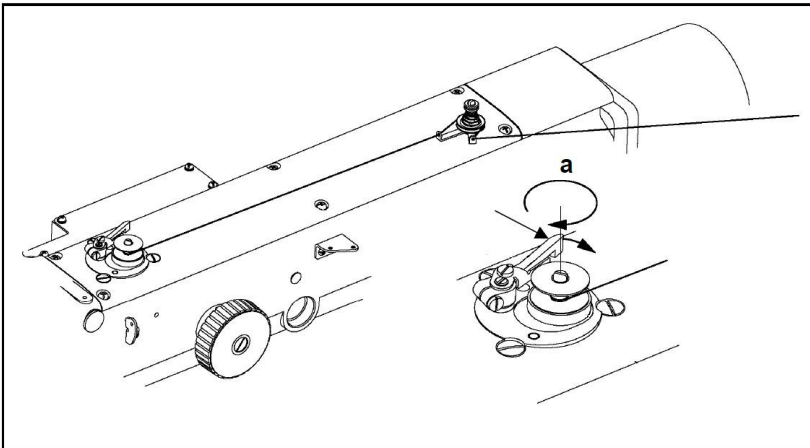
B) When the BOBBIN finishes before reaching the number SET

Press the **DN** icon to select the BOBBIN counter.

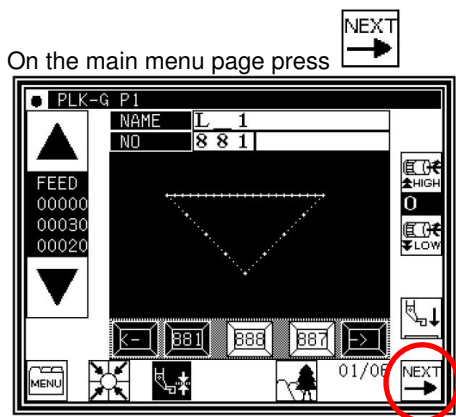
To reset the production value press the  icon.

## 12.7. Bobbin winding

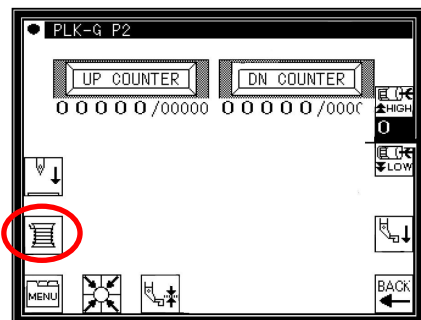
The bobbin winding works while the machine is running



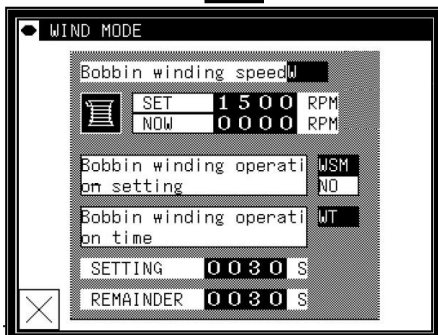
If it is necessary to load a bobbin without starting a sewing cycle :  
Once in HOME POSITION




This page will appear



At this point press  and this screen appears



At this point press the left micro switch on the sewing head ,the machine will start sewing on the home position once the bobbin is full release the micro switch and to exit from the bobbin winding mode press 

## 13. SEWING PROGRAMMATION

### GENERAL SPECIFICATIONS

The MITSUBISHI PLK G 1010 machine is equipped with an extremely versatile and easy-to-use software. To create a new sewing program of a FLY, follow the instructions given below, which will take you, step by step, all the way to saving the program onto a USB KEY or into the Internal Memory.

### STITCH LENGTH

Stitch lengths of between 0.1mm and 20.0mm can be programmed, in variations of 0.1mm. The machine turns at its maximum speed if the stitch length is in between 0.1 and 3.2mm and with a longer stitch automatically the speed is reduced.

### SEWING SPEED

Four different types of speed may be selected (H – MD1 – MD2 – L) during the sewing program.

The machine is calibrated for a maximum speed of 2500 rpm. The thread cutting speed is calibrated at 180 rpm.

### CODES

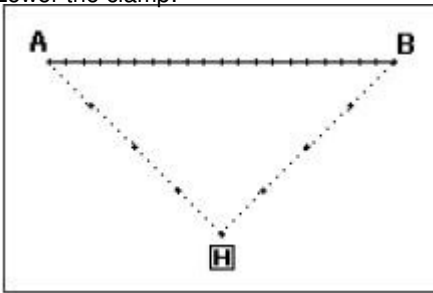
A series of codes manage some operation of the unit. The codes may be inserted in the sewing program.

Type of codes used in the programs:

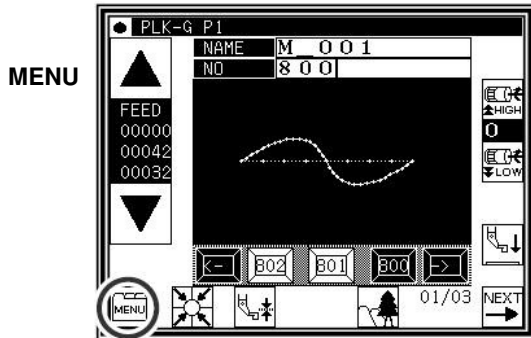
- F6\_H** LEFT NEEDLE is working
- F6\_L** RIGHT NEEDLE is working
- FUN 1** CENTRAL PLATE MOVEMENT
- ASRT** STOP & GO adjustable from 1 to 9 every number equals 0.2 seconds
- FB\_H** THREAD TENSION OPEN
- FB\_L** THREAD TENSION CLOSED

## 13.1. Programming a seam

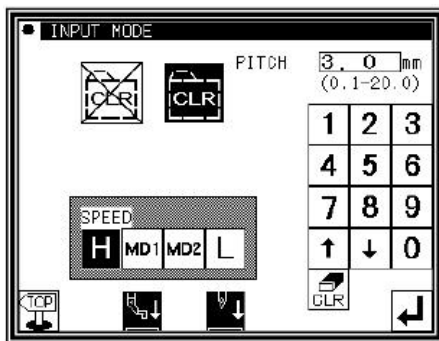
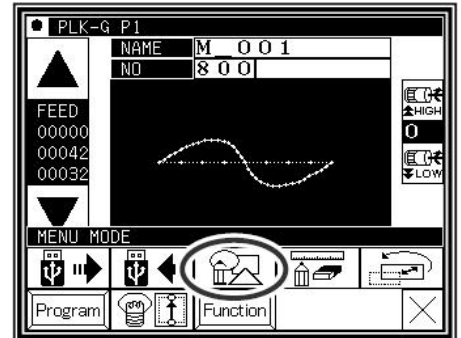
Lower the clamp:



PRESS:



PROGRAMMATION KEY



TO MODIFY THE PROGRAM IN USE

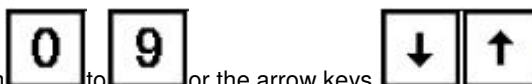


TO CREATE A NEW PROGRAM

SELECT THE SEWING SPEED BETWEEN:



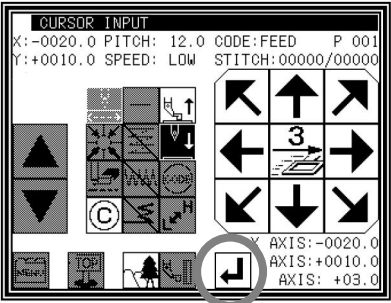
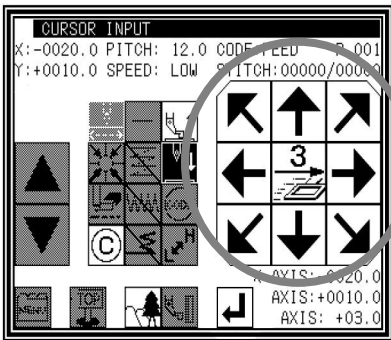
- H HIGH SPEED
- MD1 MEDIUM-HIGH SPEED
- MD2 MEDIUM-LOW SPEED
- L LOW SPEED




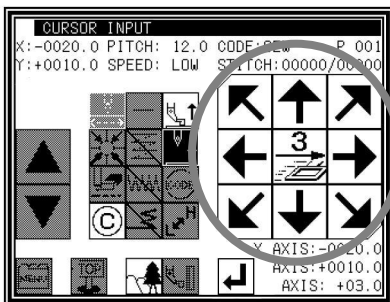
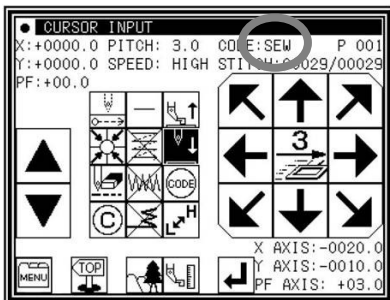
To set the stitch length use the numbers from 0 to 9 or the arrow keys ↓ ↑ the stitch length can be set between 0,1 and 20,0mm

To confirm press ↵

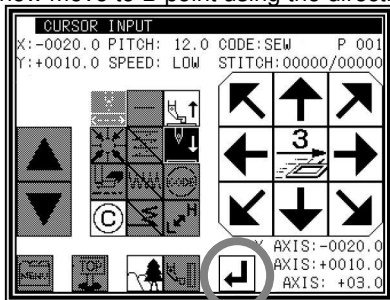
When this menu appears the machine is automatically set in FEED mode,  
 move to A point using the directional arrows





Press  At this point the code changes from FEED to SEW,

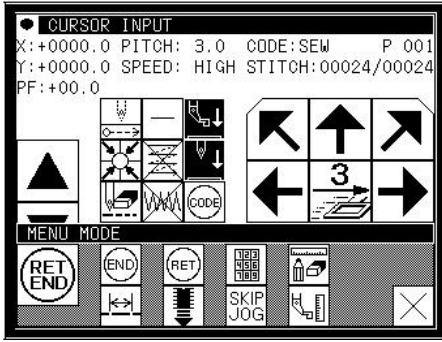


now move to B point using the directional arrows





Press . In this way we have created a straight line from A to B now


Press  and this menu appears



## !ATTENTION!



After having pressed  the machine moves quickly towards the home position, control that the position of the needle is high

Press  to end the program



This screen appears, press Home Position  
The machine returns to Home Position



Always memorize the programs with numbers between 600 and 999 with a maximum of 20,000 stitches.

OVERWRITE →

SAVE NEW PROGRAM →

EXIT WITHOUT SAVING →

PATTERN WRITE MODE


NAME

NO

OVERWRITE



SAVE AS NEW



EXIT WITHOUT SAVING


Once selected the desired number and name confirm pressing 

Follow the instructions at page 25 paragraph 12.3


## 13.2. Programming a Pocket design


Lower the clamps and press  then 

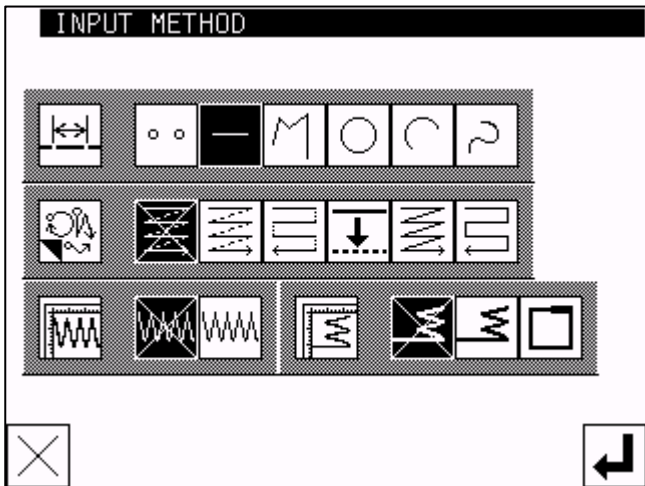
Press  to create a new program,  for the speed.

With the numbers select the desired stitch length (es.2.8mm)and confirm pressing 

Press 








Move using the arrow keys to point n°1 (see page 38) and press 



To select the sewing method desired press  and this menu appears :




Select the type of seam desired, to do so press the icon of the seam desired .

In the upper line there are 7 icons ,


	STITCH LENGTHT
	STITCH BY STITCH
	STRAIGHT LINE
	BROKEN LINE
	CIRCLE: it is created by adding 2 points in addition to the starting point
	CURVE :it is created by adding 2 points in addition to the starting point
	IRREGOLAR CURVE, joins up to 300 points with a series of curves .

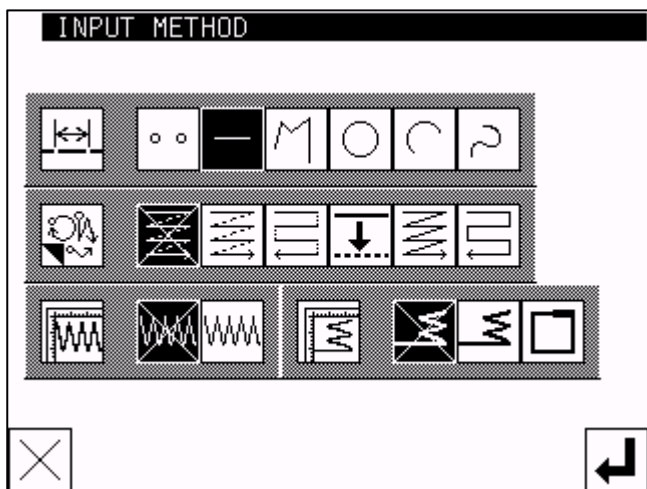
Select the stitching method between the ones in the top line in this case  and confirm pressing 



Move using the arrow keys to point n°2 (see page 38) and press  .








At this point :


To select the sewing method desired press  and this menu appears :






Select the type of seam desired, to do so press the icon of the seam desired .


In the upper line there are 7 icons ,

	STITCH LENGTH
	STITCH BY STITCH
	STRAIGHT LINE
	BROKEN LINE
	CIRCLE: it is created by adding 2 points in addition to the starting point
	CURVE :it is created by adding 2 points in addition to the starting point
	IRREGOLAR CURVE, joins up to 300 points with a series of curves .

Select the stitching method between the ones in the top line and confirm pressing  .



In this case select  and press  .

Move using the arrow keys to point n°3 (see page 38) and press  .


Move using the arrow keys to point n°4 (see page 38) and press .

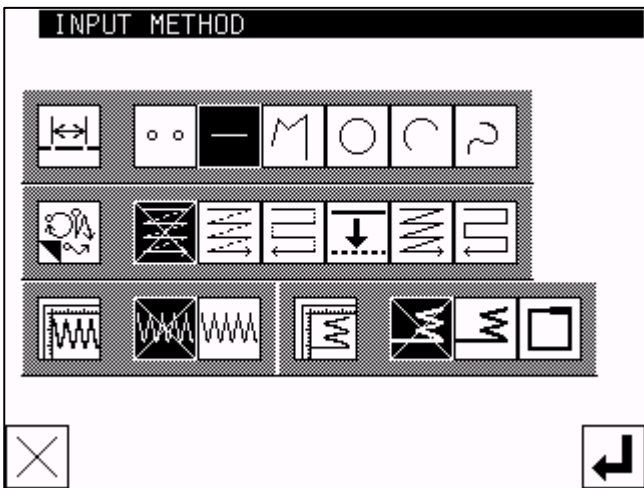
At this point this screen appears



Press  to confirm or  to return to point 3








At this point :


To select the sewing method desired press  and this menu appears :






Select the type of seam desired, to do so press the icon of the seam desired .


In the upper line there are 7 icons ,

	STITCH LENGTHT
	STITCH BY STITCH
	STRAIGHT LINE
	BROKEN LINE
	CIRCLE: it is created by adding 2 points in addition to the starting point
	CURVE :it is created by adding 2 points in addition to the starting point
	IRREGOLAR CURVE, joins up to 300 points with a series of curves .

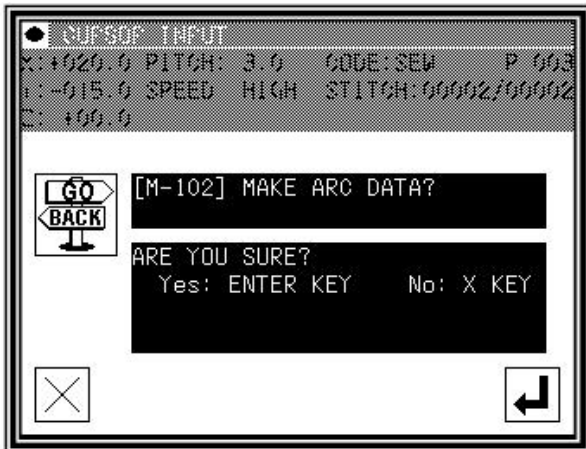
Select the stitching method between the ones in the top line and confirm pressing 



In this case select  and press 


Move using the arrow keys to point n°5 (see page 38) and press 

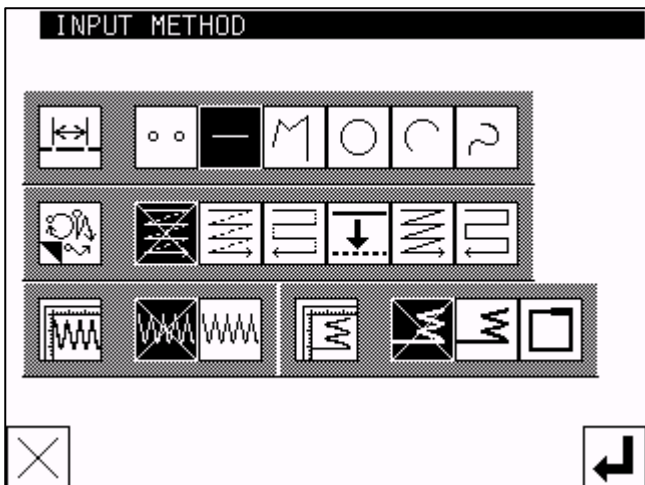
Move using the arrow keys to point n°6 (see page 38) and press 

At this point this screen appears











Press  to confirm or  to return to point 5



To select the sewing method desired press  and this menu appears :







Select the type of seam desired, to do so press the icon of the seam desired .  
In the upper line there are 7 icons ,

	STITCH LENGTHT
	STITCH BY STITCH
	STRAIGHT LINE
	BROKEN LINE
	CIRCLE: it is created by adding 2 points in addition to the starting point
	CURVE :it is created by adding 2 points in addition to the starting point
	IRREGOLAR CURVE, joins up to 300 points with a series of curves .

Select the stitching method between the ones in the top line and confirm pressing 


In this case select  and press 


Move using the arrow keys to point n°7 (see page 38) and press 


To insert a code press  and select the desired code ,in this case  then  repeat the operation and


Press  and select  and press  select  and press 


Select FEED 

Move using the arrow keys to point n°8 (see page 38) and press 



Move using the arrow keys to point n°9 (see page 38) and press 

Move using the arrow keys to point n°10 (see page 38) and press 

Move using the arrow keys to point n°11 (see page 38) and press 

Move using the arrow keys to point n°12 (see page 38) and press 


Select FEED 

Move using the arrow keys to point n°13 ( near home position)press  and select code  and

then select  and

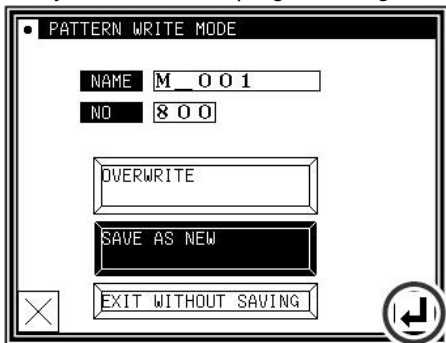
press  then select  and press 



At the end press  then 

Press 

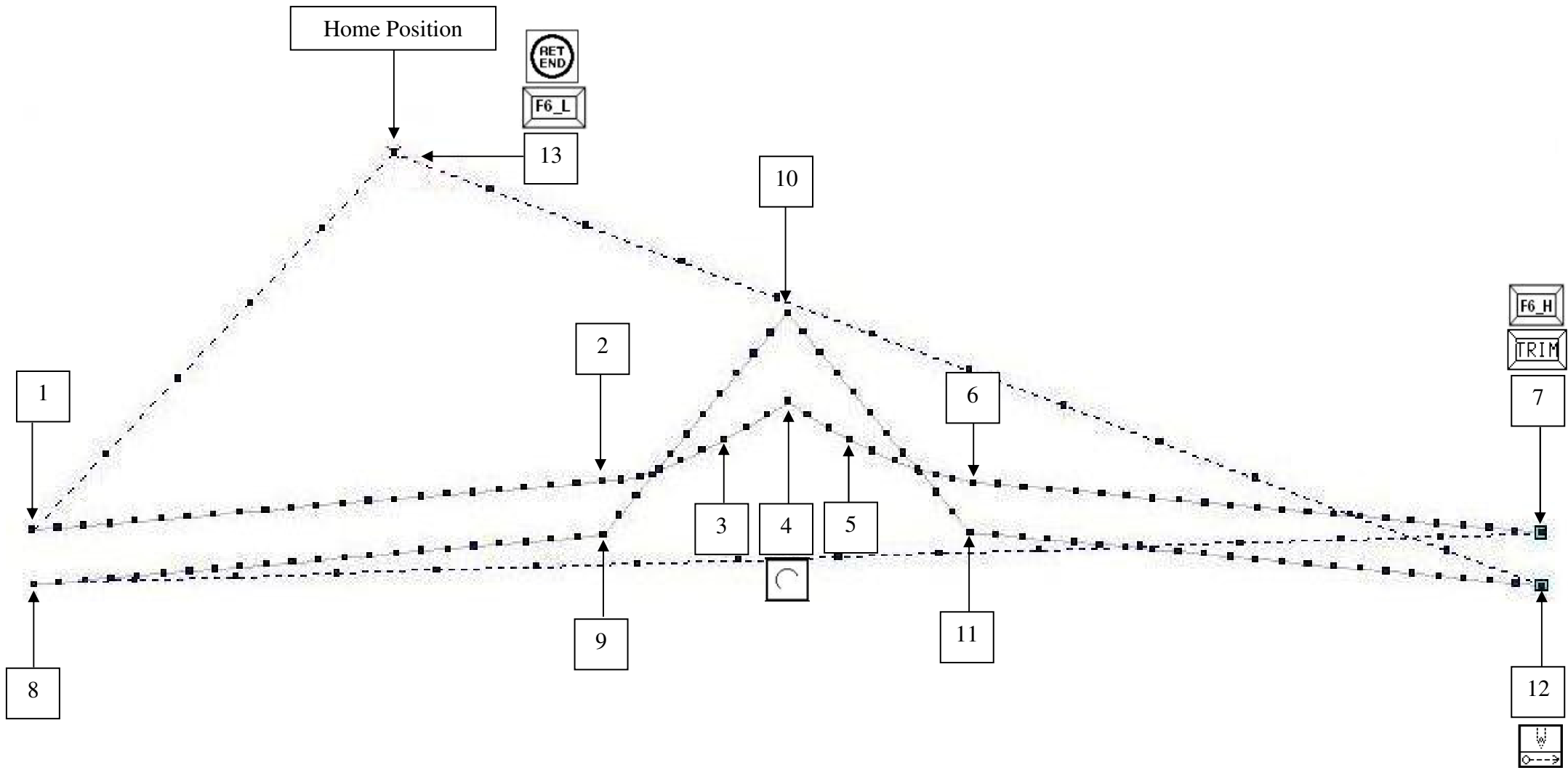
## SAVING THE PROGRAM

Always memorize the program using numbers between 600 and 999 with maximum 20,000 stitches







Press  to confirm, input the desired name and number and confirm pressing 


Follow the instructions at page 25 paragraph 12.3




### 13.3. Programming a label

Lower the clamps and press  then 


Press  to create a new program,  for the speed.

With the numbers select the desired stitch length (es.2.8mm)and confirm pressing 


Press 

Move using the arrow keys to point n°1 (see page 40) and press  .

Select FEED 




Move using the arrow keys to point n°2 (see page 40)and press  .





Move using the arrow keys to point n°3 (see page 40)and press  .

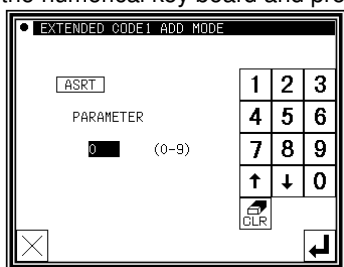
Move using the arrow keys to point n°4 (see page 40)and press  .

Move using the arrow keys to point n°5 (see page 40)and press  .


Move using the arrow keys to point n°6 (see page 40)and press  .

To insert a code press  and select the desired code ,in this case  and press 

Then repeat the same operation ,press  and select  and press  select the desired stop time with the numerical key board and press 



the numerical key board considering that each number is equal to 0,2 sec.(example number set: 4 = 0,8 sec.)this stop time is necessary to give time to the central clamp to move out .

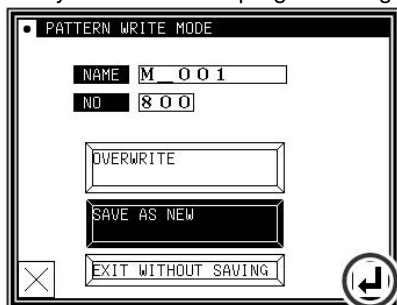
Move using the arrow keys to point n°7 (see page 40)and press  .



After all press  then 

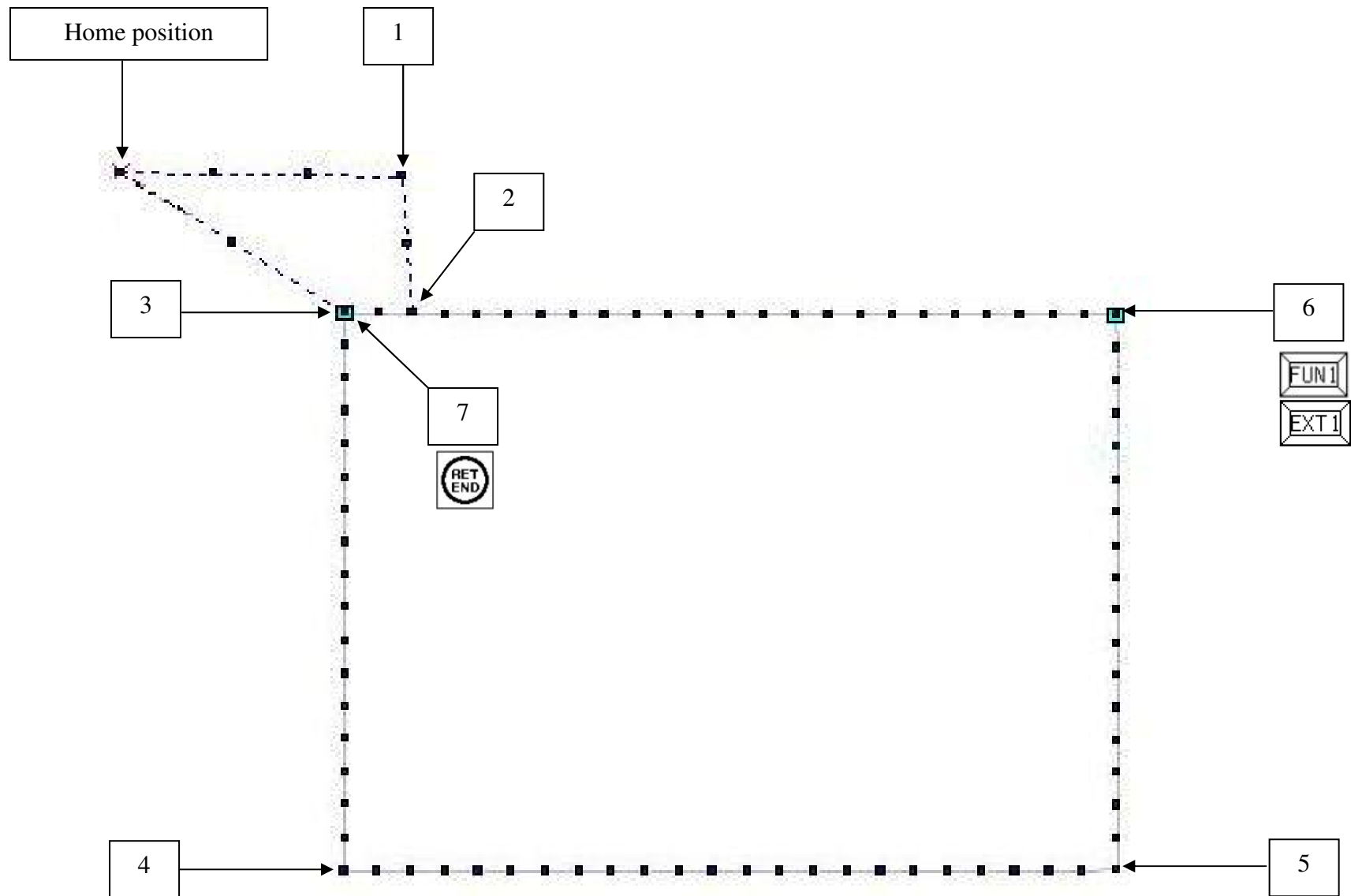
Press 

#### SAVING THE PROGRAM

Always memorize the program using numbers between 600 and 999 with maximum 20,000 stitches







Press  to confirm,input the desired name and number and confirm pressing 








### 13.4. Creating a program using multiple function

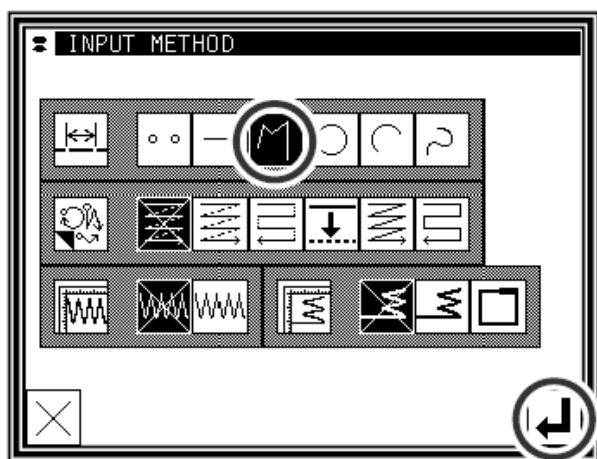
Lower the clamps and press  then 

Press  to create a new program,  for the speed.

With the numbers select the desired stitch length (es.2.8mm)and confirm pressing 








Move using the arrow keys to point n°1 (see page 44) and press .


To select the sewing method desired press  and this menu appears :



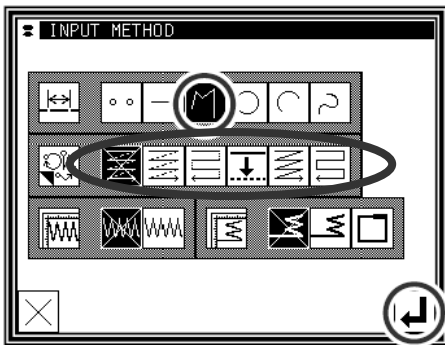
Select the type of seam desired, to do so press the icon of the seam desired .

In the upper line there are 7 icons ,

	STITCH LENGTHT
	STITCH BY STITCH
	STRAIGHT LINE
	BROKEN LINE
	CIRCLE: it is created by adding 2 points in addition to the starting point
	CURVE :it is created by adding 2 points in addition to the starting point
	IRREGOLAR CURVE, joins up to 300 points with a series of curves .


Select the stitching method between the ones in the top line in this case 

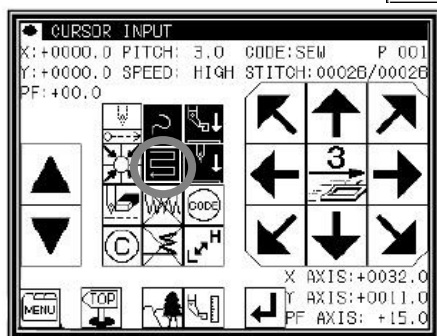
Then from the second line select the multiple mode desired:







Type	Connection	icon	Stitching data image	Explanation
Multiple	Feed data			"Stitching" in a set direction is connected with "feed without stitching".
	Stitching			"Stitching" in a set direction is connected with "stitching".
Reverse multiple	Feed data			"Stitching" in alternating reverse directions is connected with "feed data".
	Stitching			"Stitching" in alternating reverse directions is connected with "stitching".

In this case  and press 


From the programming menu press 





Then select the desired sewing direction between   ( in this case select L )and input the desired distance and repetition times using the numerical key board. 

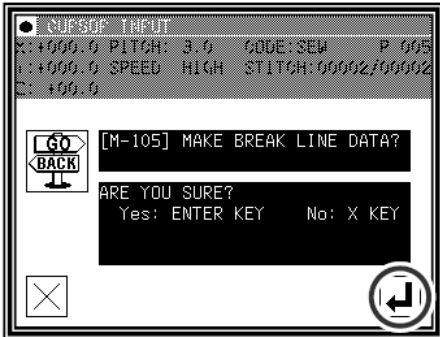
Move using the arrow keys to point n°2 ( see page 44) and press 

Move using the arrow keys to point n°3 (see page 44) and press



Move using the arrow keys to point n°4 (see page 44) and press 

Move using the arrow keys to point n°5 (see page 44) and press  and press  again.

This page appears:



Press 

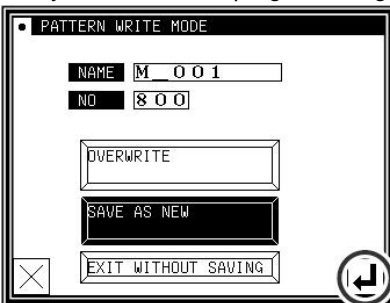
At this point press  and move using the arrow keys close to the Home position and press 



After all press  then 

Press 

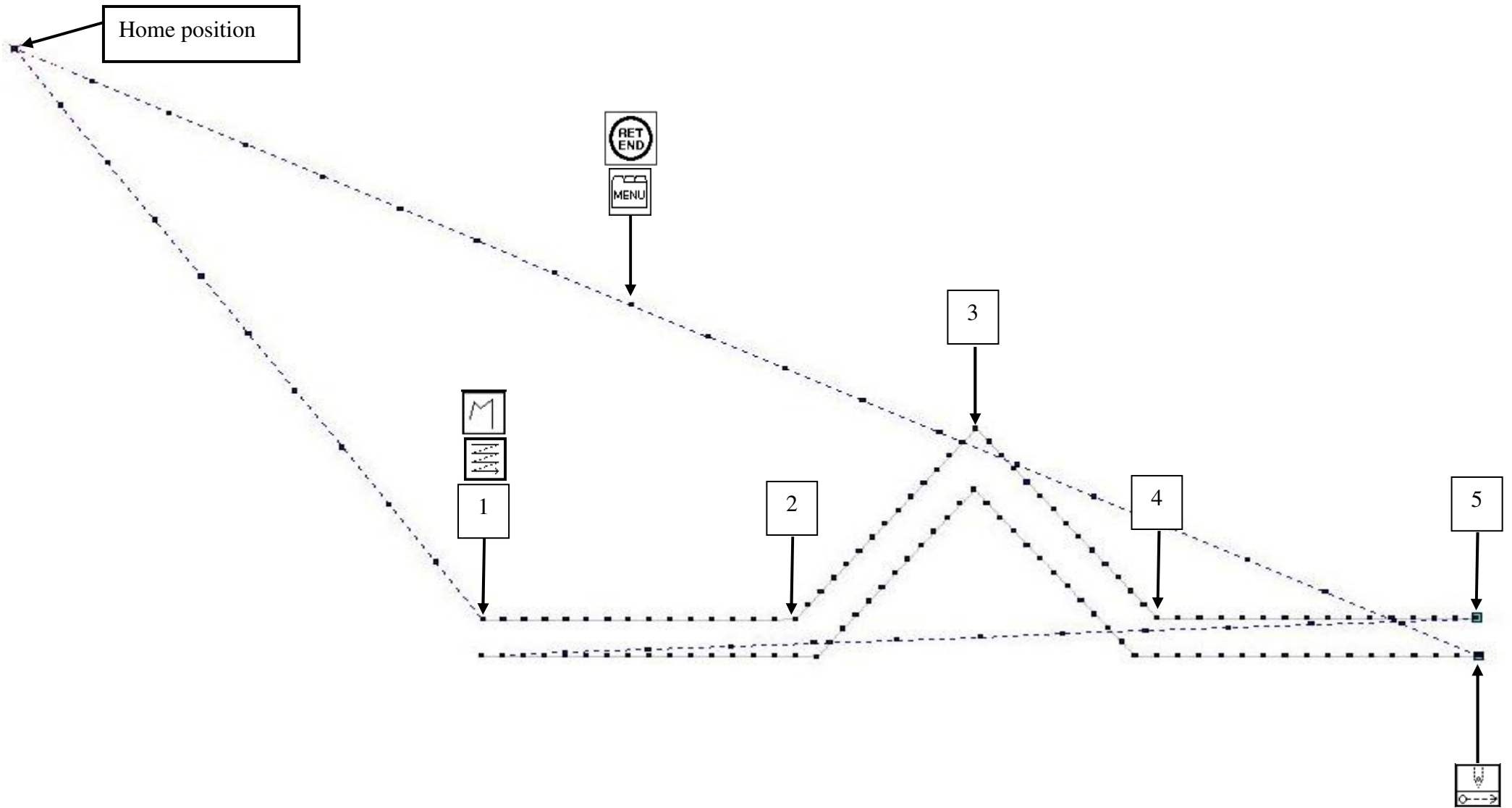
## SAVING THE PROGRAM

Always memorize the program using numbers between 600 and 999 with maximum 20,000 stitches



Press  to confirm, input the desired name and number and confirm pressing 

**NOTE:** to set codes please see paragraph 14.7(Adding codes) and look at page 40 example to see the standard codes set on the program.

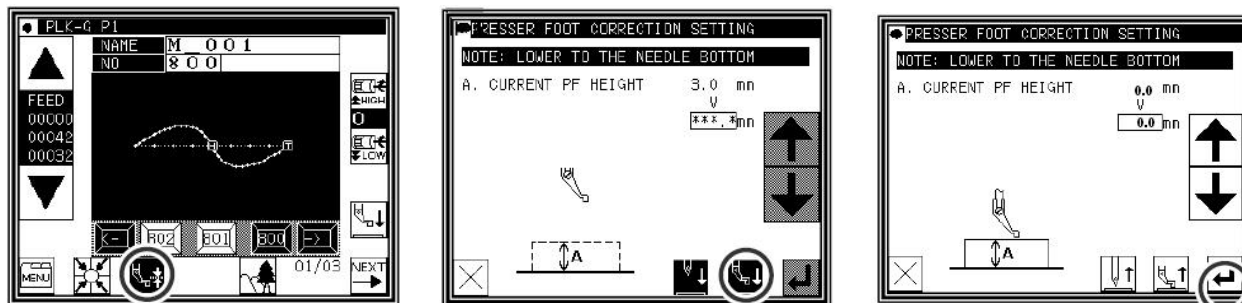


## 13.5. Presser foot regulation during programming mode

The movement of the presser foot is determined by a step motor that works directly on the presser foot bar

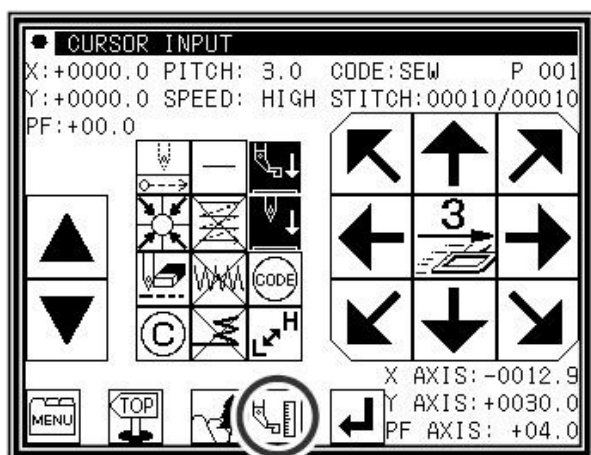
### ATTENTION

Before adjusting the presser foot height control that THICKNESS on the main menu is set on 0mm

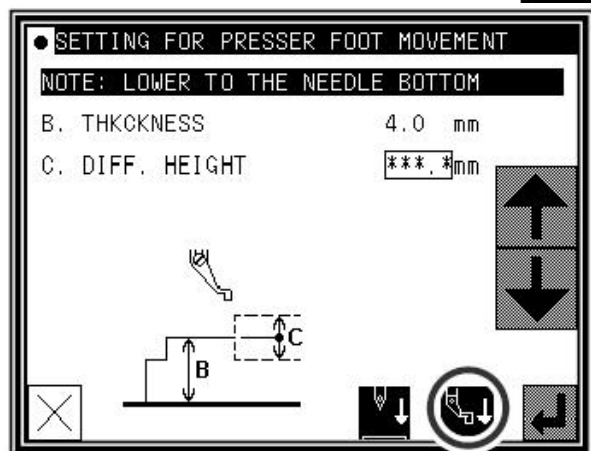


Press Then press and increase or decrease the value using the arrow keys, once setted the value to **0mm**  
Confirm pressing

To adjust the presser foot height during programming :



In the point indicated in the previous page press and this screen appears:



At this point press and adjust DIFF.HEIGHT at +9mm using the arrow keys to make the presser foot remain in high position and repeat the same operation but setting -9mm to make the presser foot go down to jumping mode

This is a standard configuration of the presser foot but consider that the presser foot can be adjusted at any time you desire and at any height between +9mm and-9mm.

### 13.6. Create a bar tack during programming

Select  to enter ZIG-ZAG menu. Select the icon  to enable the zig-zag.

Press **ZIG WIDTH** and input the desired width

Example: 3.0mm

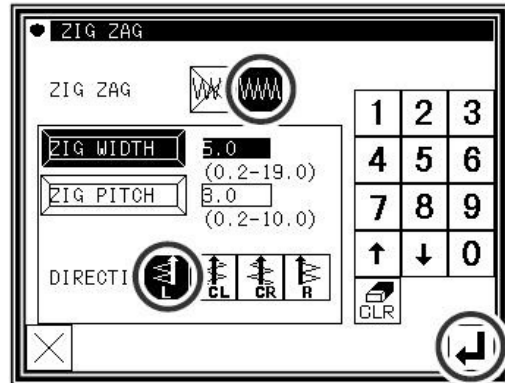
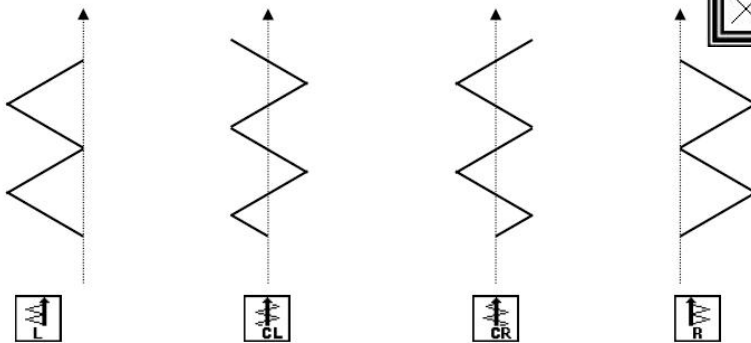


Press **ZIG PITCH** and input the desired pitch

Example: 1.0mm



select the direction **DIRECTION**

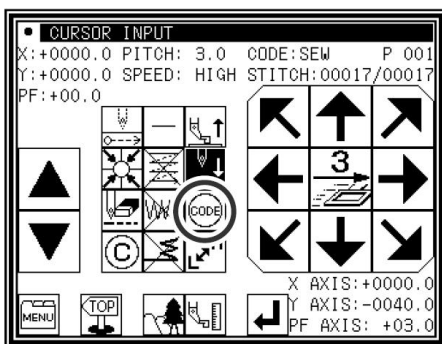



### 13.7. Inserting the needle bar code


To insert the needle bar code during the programming :







**ATTENTION: the code to change needle must be always after TRIM code**

Press 



And select 

And then select 

Press  and select  and press  select  to make the LEFT needle work or  to make the RIGHT needle work and press 

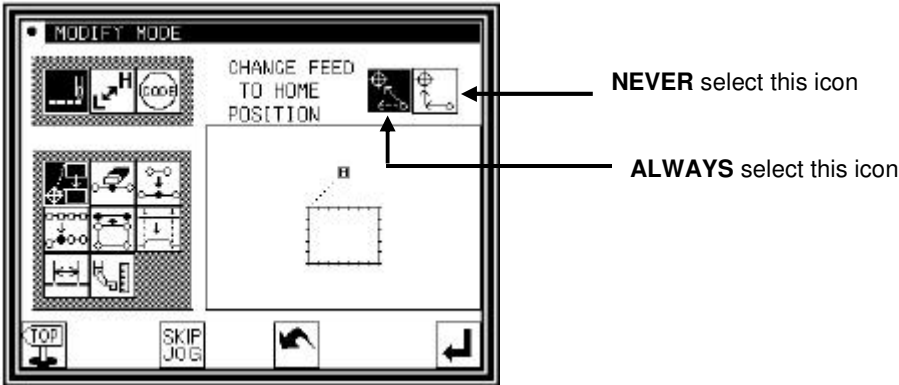
# 14. GENERAL SPECIFICATIONS OF MODIFY MODE


























The MITSUBISHI PLK-G machines are equipped with a user friendly software. Following there are specified step by step the most common modifications on a pocket, embroidery or label.

Lower the clamps:

Press  and then press  (MODIFY)

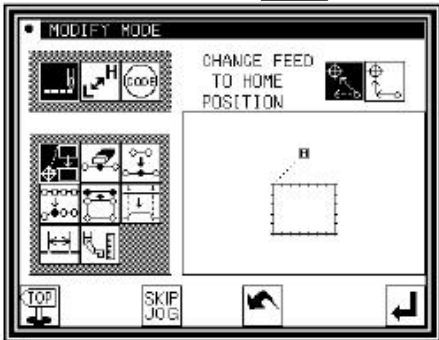
On the upper line there are the 3 keys that enter the various modification functions:





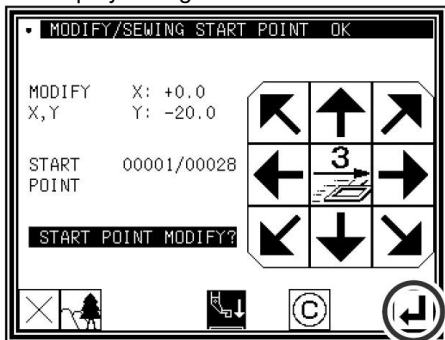
	Modifies the position of the first sewing stitch		The complete program is moved of the measure desired	
	Delete stitch			 Deletes a specified number of stitches  Deletes all stitches
	Add stitch			 Add a stitch  Adds a sewing stitch adding keeping the same stitch length
	Modify a stitch position			 Moves only the specified stitch  Moves all the stitches from the specified one on
	Move a block			 The modification changes the length of the stitch where it is performed.  The modification ADDS a stitch where it is performed
	Modify a block		The area between 2 points is modified using arc,line,zig zag feed.....	
	Modify stitch length			 Modifies the stitch length of a specified number of stitches  Modifies all the stitches stitch length.
	Modify presser foot height		Modifies the presser foot height	
Modify speed			 Modifies the speed of a specified number of stitches  Modifies the speed of all stitches	
Add or remove a code			 Add code  Delete code	

## 14.1. Move the complete program

Lower the clamp. Press  Then press 



Select  and confirm pressing   
The machine moves to the first sewing stitch  
And display changes :





Move of the desired amount using the arrow keys


(every pressure of the arrow key is a movement of 0.1mm in that direction )

Press 

Press 

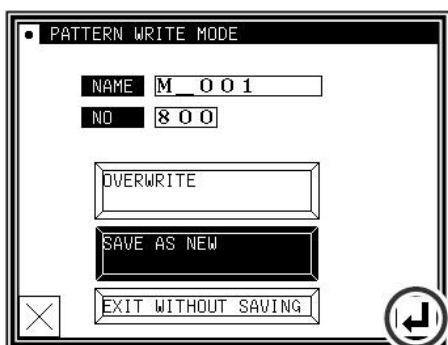
Press 



Always test the program with JOG 

At the end of the program press 

### SAVING THE PROGRAM

Always memorize the program using numbers between 600 and 999 with maximum 20,000 stitches






Press  to confirm, input the desired name and number and confirm pressing 



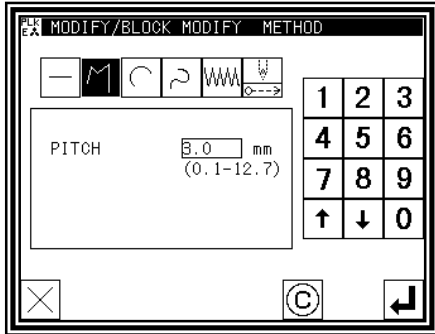
## 14.2. Modifying an angle


Lower the plates. Press the key  Press the  key.

The display will change, select the  icon.

At this point select the modification method, in this case select  and confirm with .

The following menu will appear:




Select the type of seam 

Set the desired stitch length

Example 3.0mm


Confirm with 

The display will change to show:  
START POINT JOG


Use  to go to the start of the modification (point A).

Press .

The display will change to:  
END POINT JOG

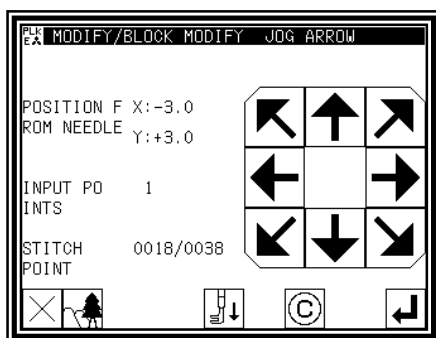
Use  to go to the end of the modification (point B)

Press . Press .

Use  to go to the POINT TO BE MODIFIED (point C)

Press .

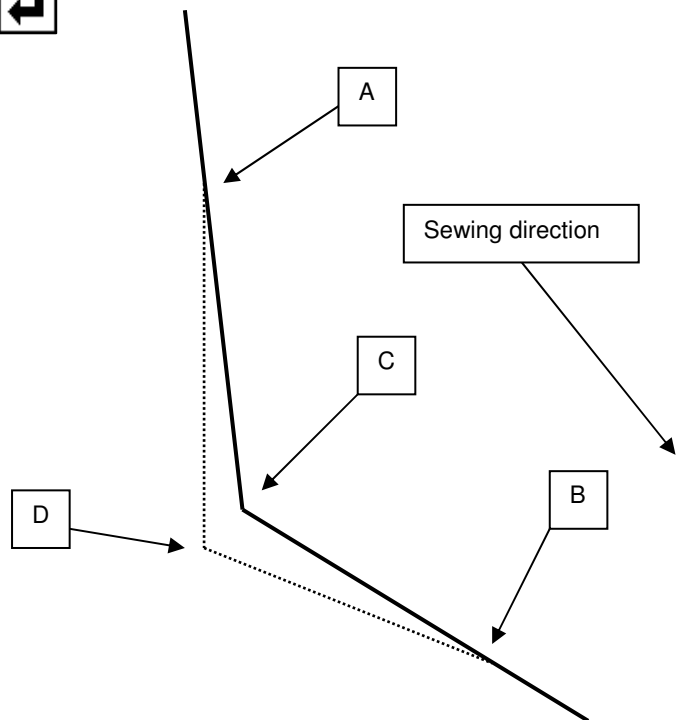
The display will change to show:



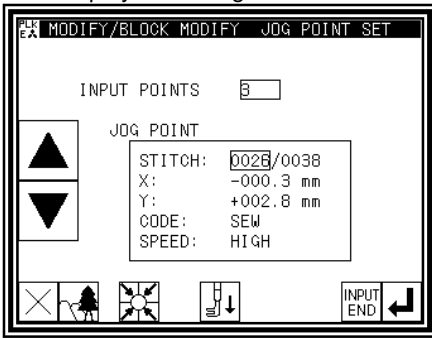
Advance the desired quantity using the direction arrows (point D)

(Each pulse is equal to a one tenth of a millimeter shift in that direction).

Press .



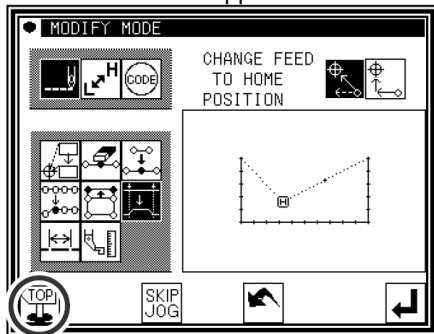
The display will change to show:




Press 

Press 

The main menu will appear

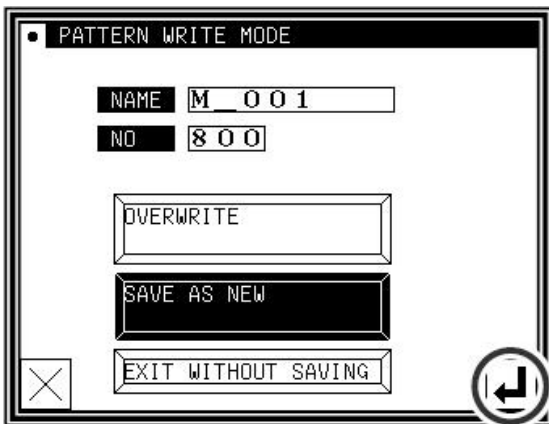




Press  to confirm the modification

Press 

### SAVING THE PROGRAM


Always memorize the program using numbers between 600 and 999 with maximum 20,000 stitches





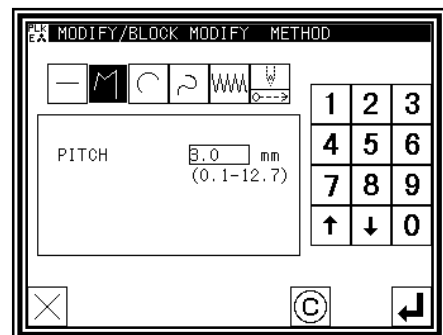
Press  to confirm, input the desired name and number and confirm pressing 


### 14.3. Modifying a curve

Lower the plates. Press the  key. Press the  key.

The display will change, select the  icon.


Now select the modification mode, in this case select  and confirm with .



Select the stitch type .

Set the desired stitch length

Example 3.0mm


Confirm with .

The display changes to show:  
START POINT JOG

Use  to go to the START of the modification (point A)

Press .


The display changes to show:  
END POINT JOG

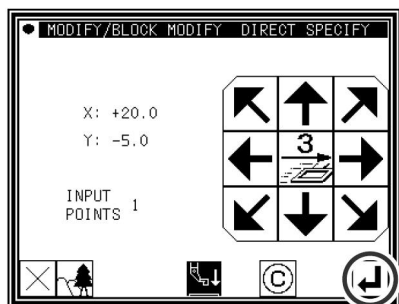
Use  to go to the END of the modification (point B)

Press .

Press .

Use  TO GO TO THE POINT TO BE MODIFIED (point C)

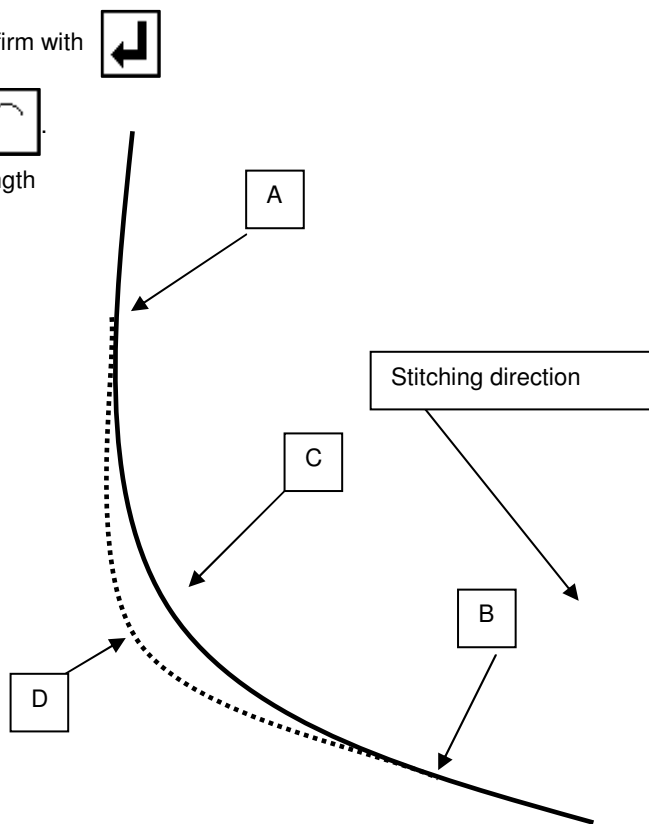
Press  The display will change to:



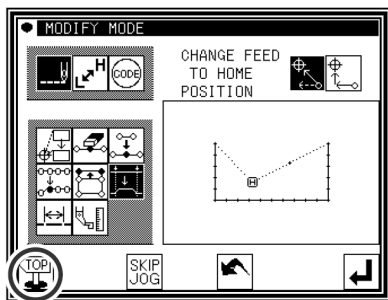
Move the desired quantity using the direction arrows (point D)



(Each pulse is equal to a tenth of a millimetre shift in that direction)

Press  . Press .



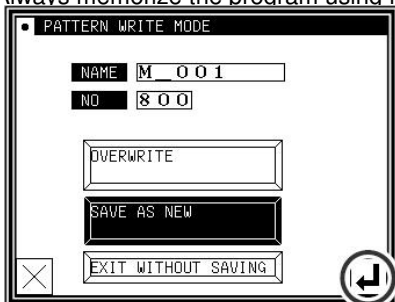
The main menu will appear





Press  to confirm the modification made. Press 

### SAVING THE PROGRAM



Always memorize the program using numbers between 600 and 999 with maximum 20,000 stitches




Press  to confirm, input the desired name and number and confirm pressing 

## 14.4. Modifying sewing speed

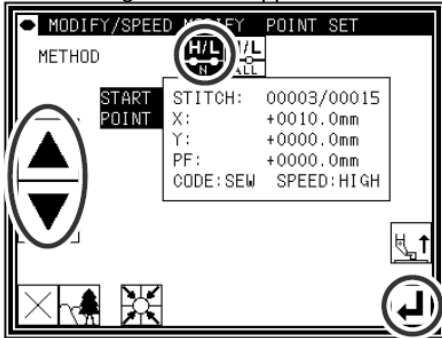
Lower the plates. Press the  key. Press the  key.

The display will change, select the  icon, confirm with .


Use  to go to the start of the modification (point A)


Press .

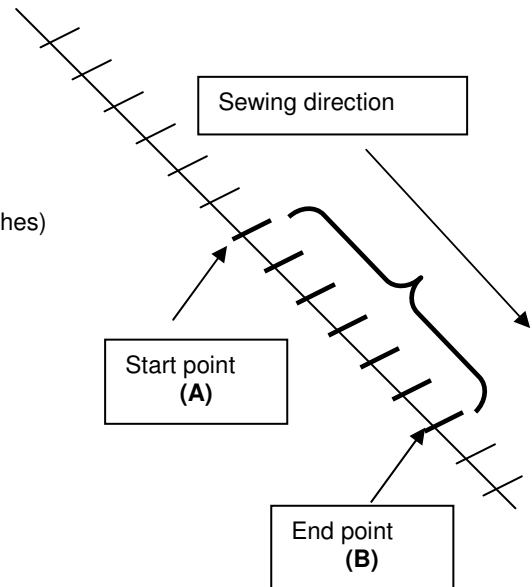
The following menu will appear:






Select the METHOD

Between  (n° of stitches)


or  (all stitches)




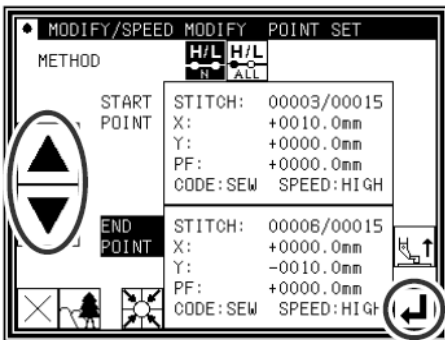
Use  to go to the **start point (A)**

If selected  once pressed  all stitches from that point

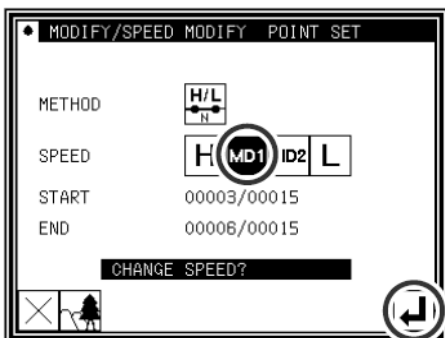
on will change speed


If selected  instead the machine will ask for **end point (B)**, use the

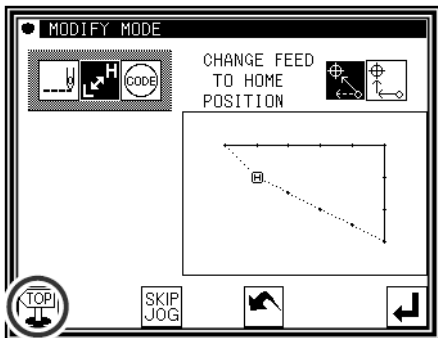
Arrow keys to move to the desired point and press .




Then on the display will appear :




Select the desired speed and press  to confirm.



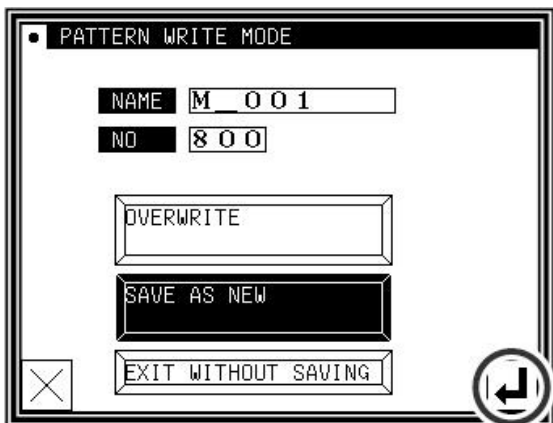
Press  to confirm the modification.



Press 

At the end press 

### SAVING THE PROGRAM

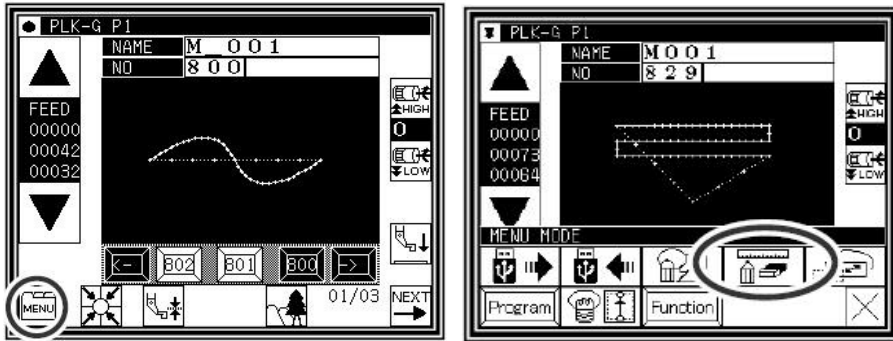
Always memorize the program using numbers between 600 and 999 with maximum 20,000 stitches




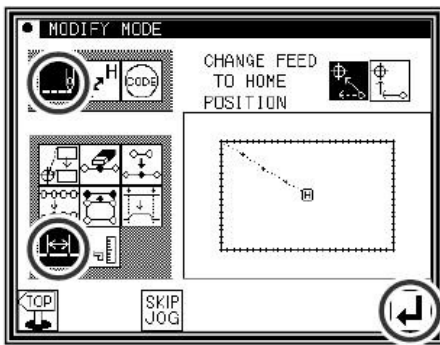
Press  to confirm, input the desired name and number and confirm pressing 

## 14.5. Modifying stitch length


Select modify mode:






Then select stitch length modify 

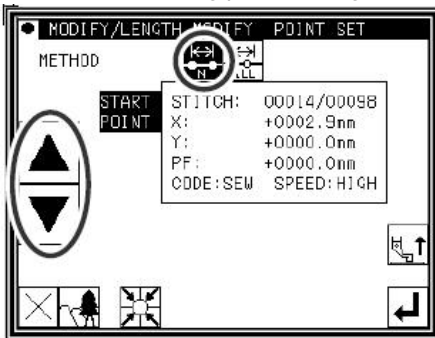



At this point select:

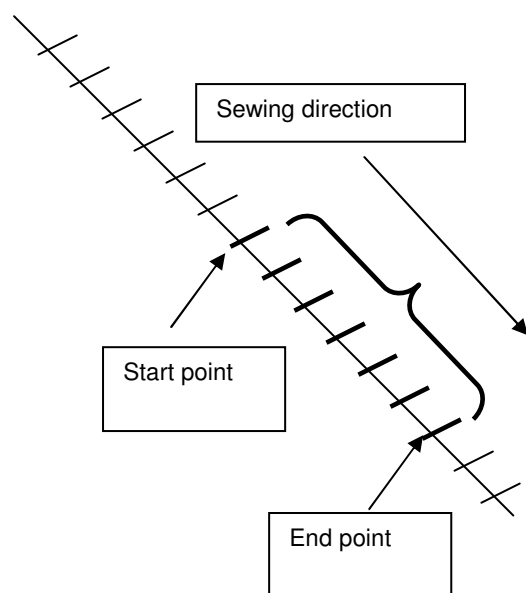
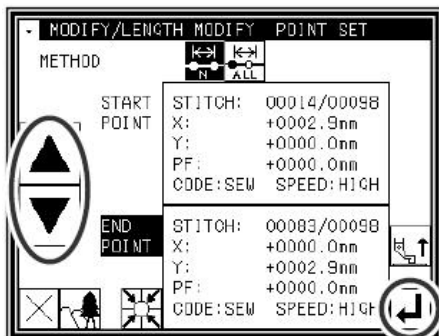
 To select to change the stitch length of all the stitches from the statted start point on


 To select the desired number of stitches included between start point and end point

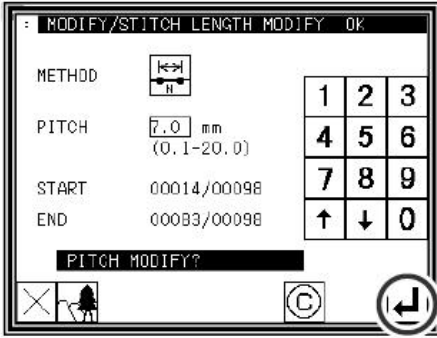
Then set the starting point moving with the arrow keys   and press 



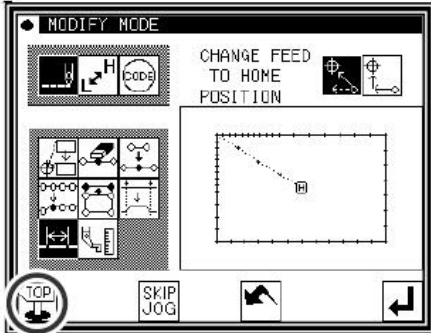
Then set end point and confirm pressing 



Input the desired stitch length included between 0.1 and 20.0 mm and confirm pressing 

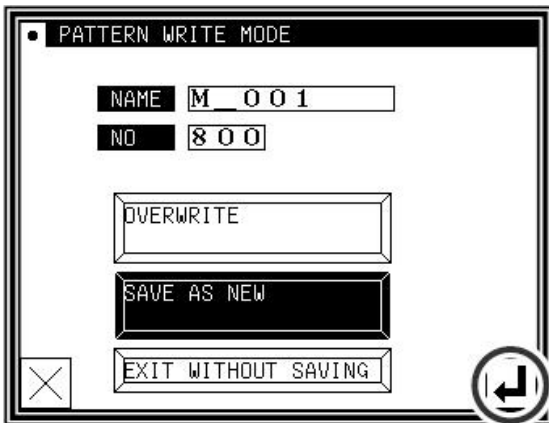




Press 



### SAVING THE PROGRAM

Always memorize the program using numbers between 600 and 999 with maximum 20,000 stitches



Press  to confirm, input the desired name and number and confirm pressing 

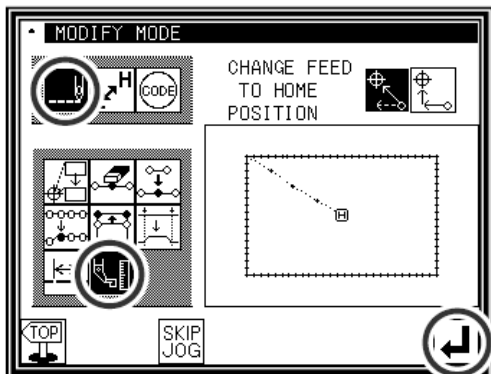




## 14.6. Modify the presser foot height

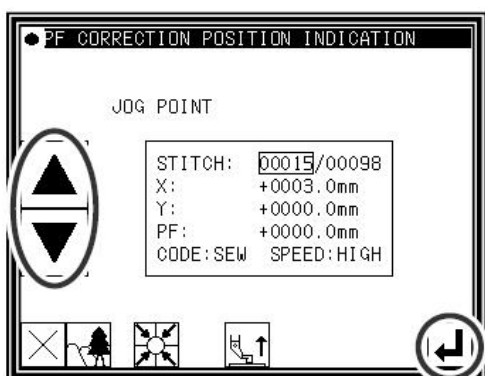
**ATTENTION:** for safety reasons while modifying the presser foot height the presser foot will remain in high position.



Before modifying the presser foot height control that the THICKNESS is set at 0mm at paragraph 8.5.

To modify the presser foot height press  then  and this screen appears:

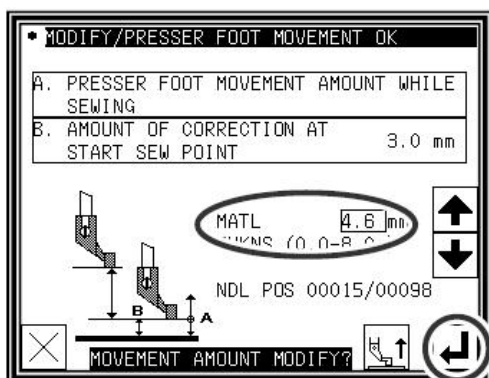


When this screen appears press  then 





When this screen appears move to the desired point using the arrow keys  

And press 



Press  and

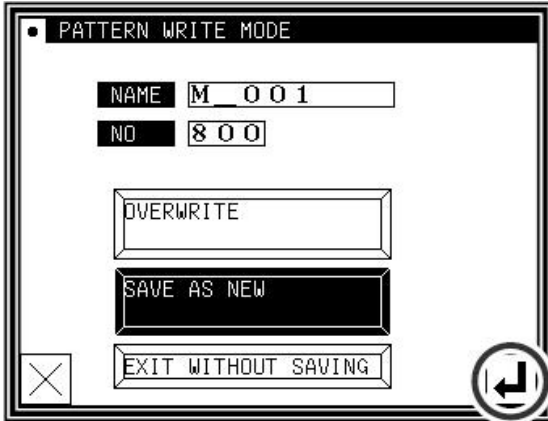
Select the desired height from +9.0mm (maximum) to -9.0mm (minimum) increasing or decreasing the value using the arrow keys and press  to confirm



To exit press 

Then press 

### SAVING THE PROGRAM


Always memorize the program using numbers between 600 and 999 with maximum 20,000 stitches




Press  to confirm, input the desired name and number and confirm pressing 

## 14.7. Adding codes


- FUN 1** INNER CLAMP-re entry
- F6\_H** LEFT NEEDLE is working
- F6\_L** RIGHT NEEDLE is working
- ASRT** STOP & GO adjustable from 1 to 9 every number equals 0.2 seconds

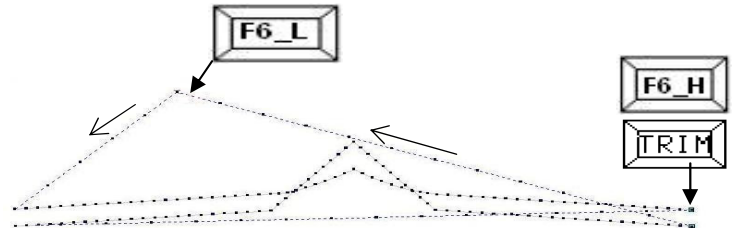
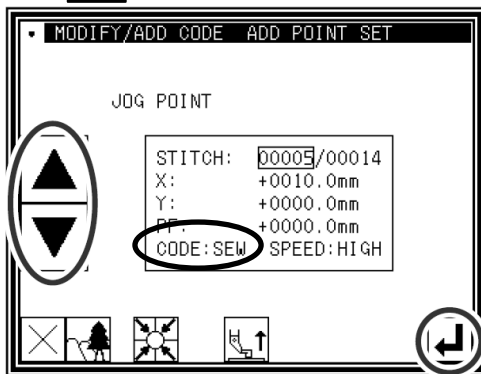
Lower the plates. Press the  key.

Press the  key


The display will change, select the  icon.


Press .






Press .

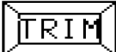


**ATTENTION: the code to change needle must be always after TRIM code**

Use  to go to the required point.

On the display will appear all the codes already set on the program, to select the needle bar change code press .

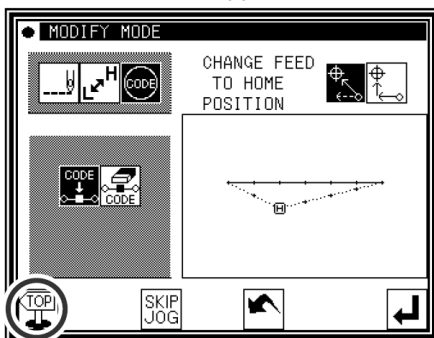
and press  then select  then  to make the LEFT needle bar work or  then  to make the RIGHT needle bar work


Select for example .


Press .



Press .

The main menu will appear



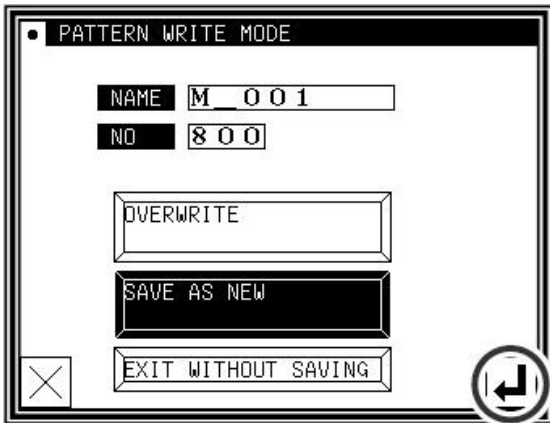
Press  to confirm the modification.



Press .

Test the program, lower the jig using the relevant switch. Test the program by the  key to go to the end of the sewing program. At the end of the program press 

### SAVING THE PROGRAM

Always memorize the program using numbers between 600 and 999 with maximum 20,000 stitches




Press  to confirm, input the desired name and number and confirm pressing 

## 14.8. Deleting codes


Lower the clamps.


Press the  key.

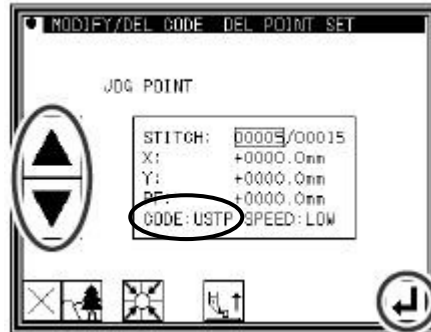
Press the  key.

The display will change, select the  icon.


Press .

Press .

Use  to go to the required point. (Check on the screen)




When the code to be removed appears on the display,

for example 

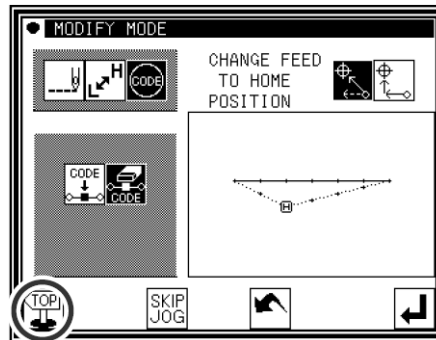
Press .

Press  again.

The main menu will appear

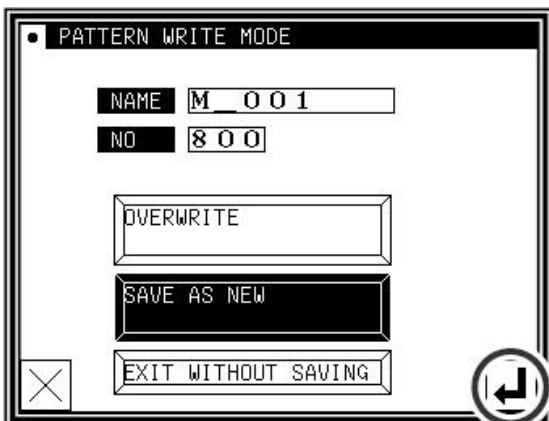
Press  to confirm the modification



Press .



### SAVING THE PROGRAM


Always memorize the program using numbers between 600 and 999 with maximum 20,000 stitches




Press  to confirm, input the desired name and number and confirm pressing 



## 14.9. Re programming a straight seam

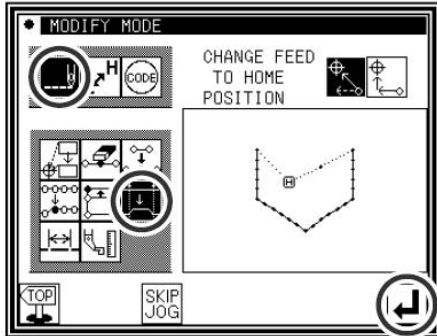
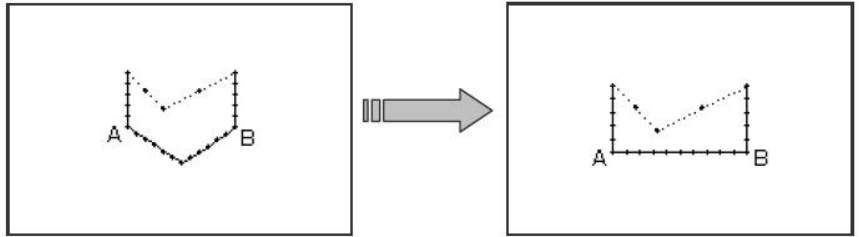
Lower the plates.

Press the  key.

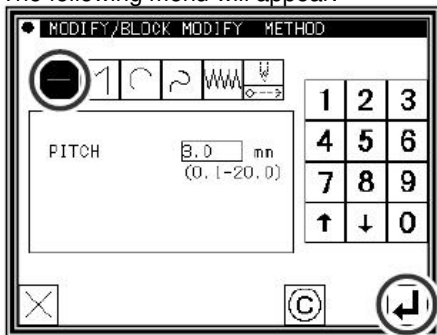
Press the  key.


The display will change, select the  icon.

At this point select the modification method, in this case select  and confirm with .




The following menu will appear:



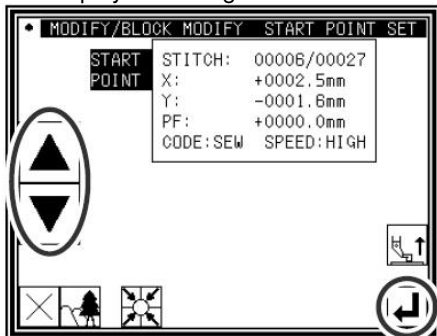
Select the type of stitch .



Set the desired stitch length

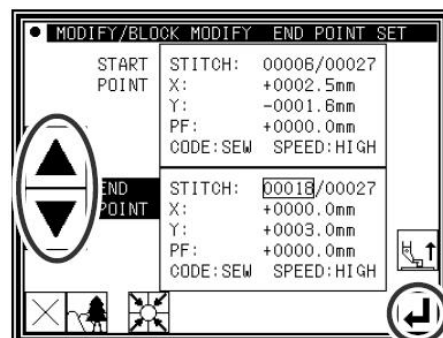
Example 3.0mm



Confirm with .

The display will change to show:

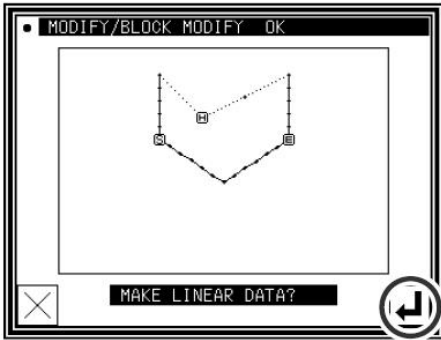


Use  to go to the **START** of the modification (point **A**) Press .



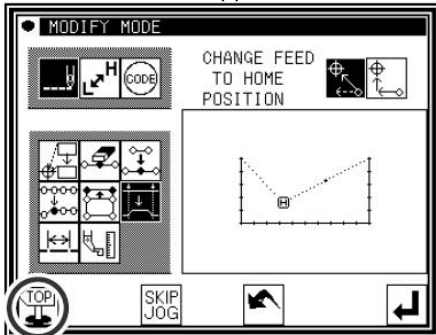
Use  to go to the **END** of the modification (point **B**) Press .


The display will change to show:



Press  .

The main menu will appear

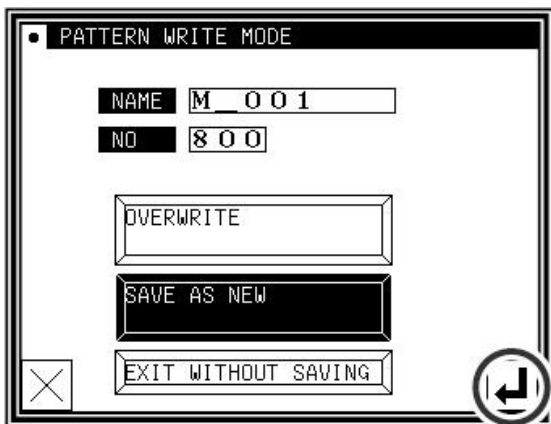




Press  to confirm the modification

Press 

### SAVING THE PROGRAM

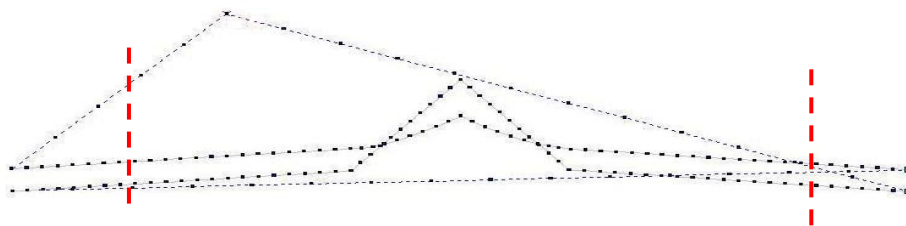
Always memorize the program using numbers between 600 and 999 with maximum 20,000 stitches



Press  to confirm, input the desired name and number and confirm pressing 


## 14.10. Reducing the program size


This operation is used on fly and embroidery to reduce the program to easily create a smaller size





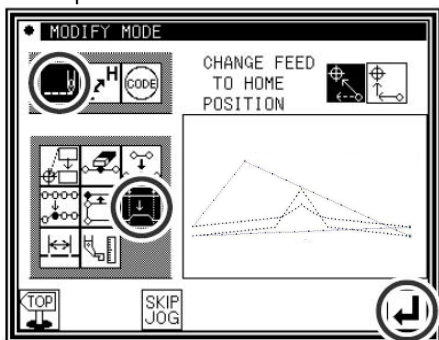
Lower the plates.

Press the  key.

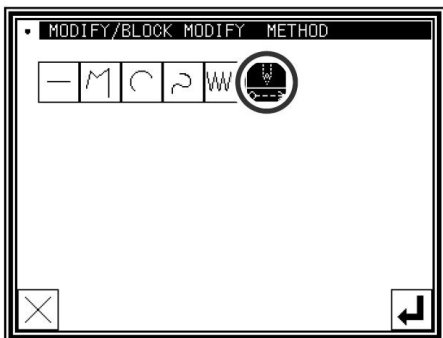
Press the  key.

The display will change, select the  icon.

At this point select the modification method, in this case select  and confirm with 

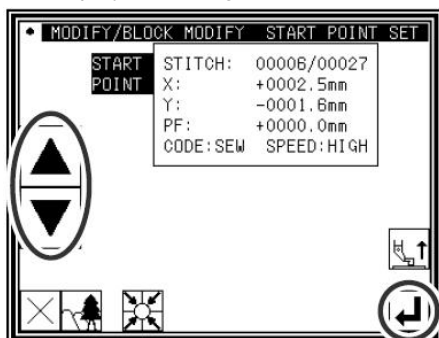



The following menu will appear:

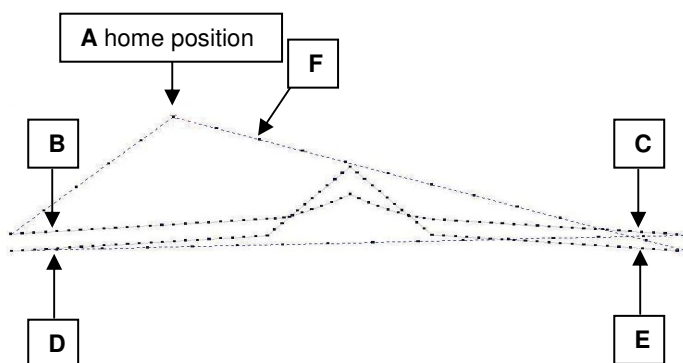


Press  and 

The display will change to show:

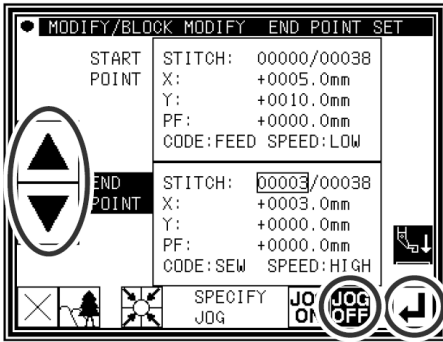




At Home position (point A) Press 



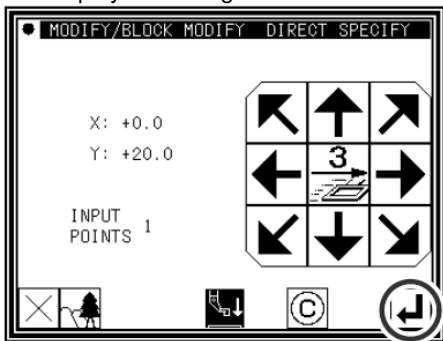


The display will change to show:



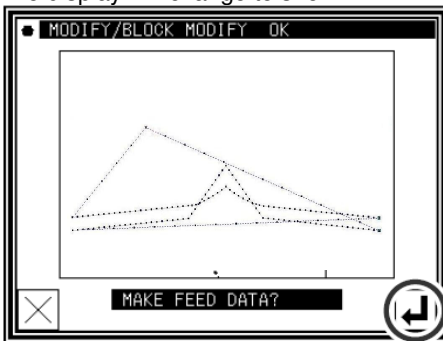
Use  to go to the **END** of the modification (point **B**) select **JOG OFF** and press .

The display will change to show:



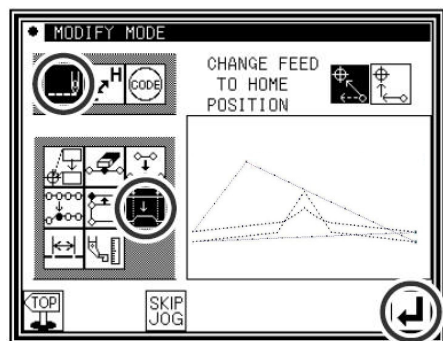
Press .



The display will change to show:



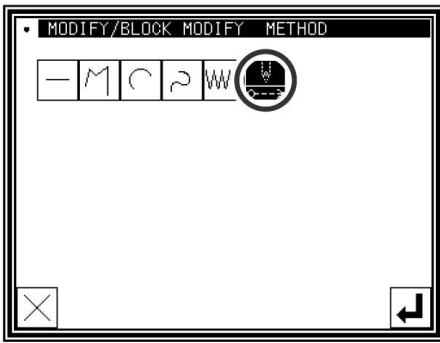
Press .

The display will change to show:



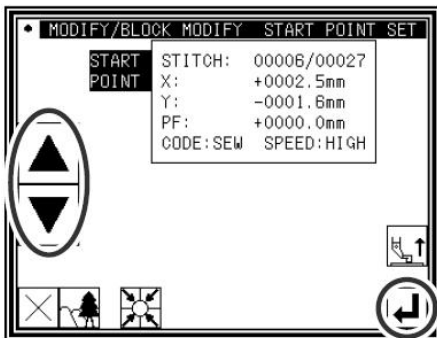
Press  and confirm with .



The following menu will appear:



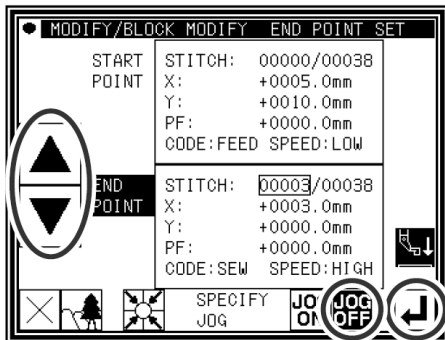
Select  and press 



The display will change to show:



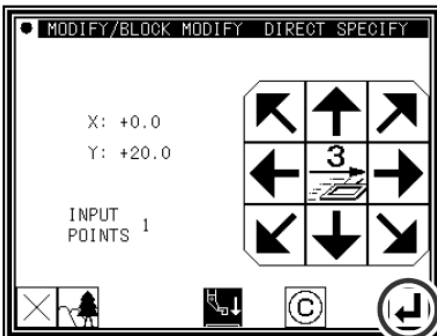
Use  to go to the **START** of the modification (point C) Press 

The display will change to show:



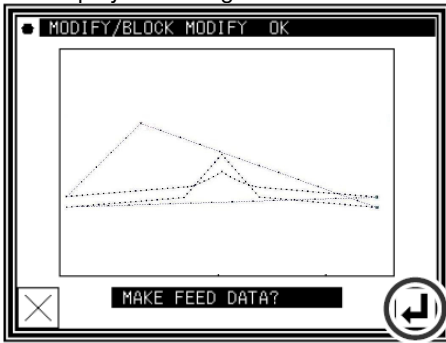
Use  to go to the **END** of the modification (point D) and select **JOG OFF** and press  .

The display will change to show:



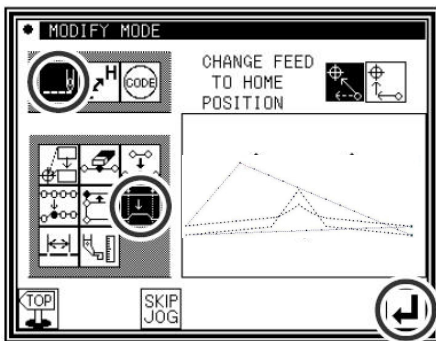
Press  .

The display will change to show:



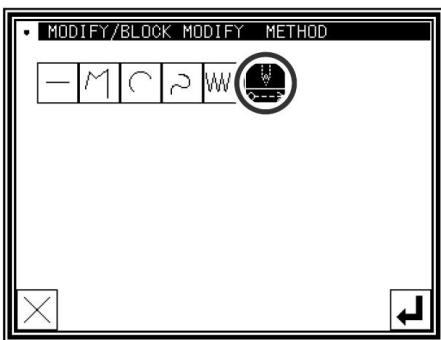
Press

The display will change to show:



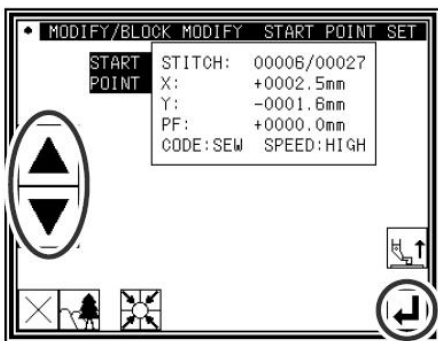
Press and confirm with

The following menu will appear:



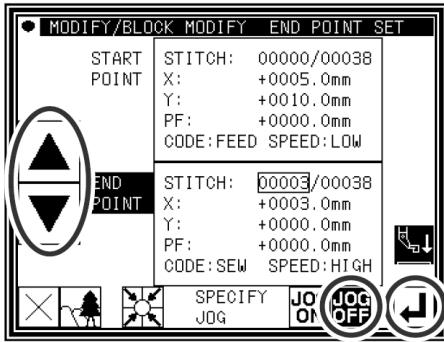
Select and press



The display will change to show:



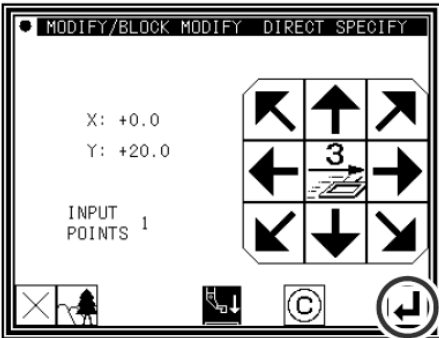
Use to go to the **START** of the modification (point E) Press

The display will change to show:



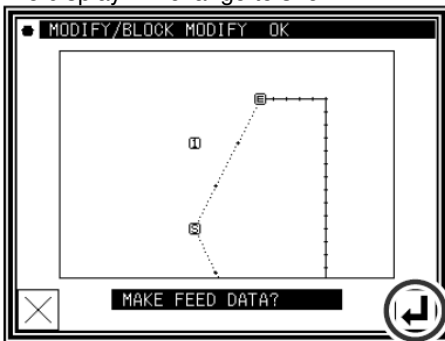
Use  to go to the **END** of the modification (point **F**) and select **JOG OFF** and press .


The display will change to show:



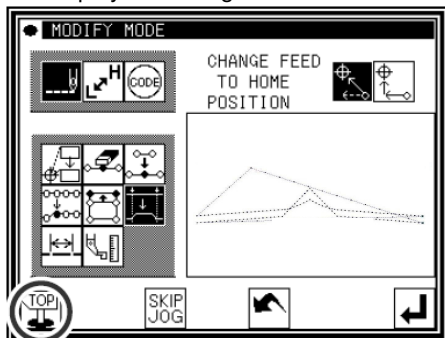
Press .


The display will change to show:



Press .

The display will change to show:

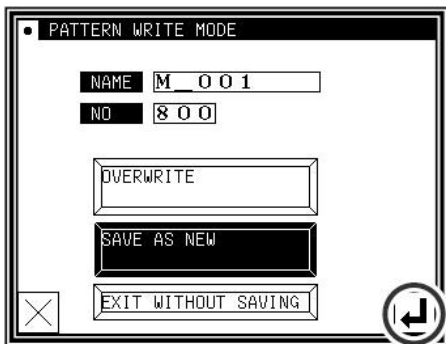




Press  to confirm the modification

Press 

## SAVING THE PROGRAM

Always memorize the program using numbers between 600 and 999 with maximum 20,000 stitches



Press  to confirm, input the desired name and number and confirm pressing 


ATTENTION: reducing the program can happen to delete the CODES to re add the codes follow paragraph 14.7

## 14.11. Rotation of a program

Lower the jig. Press the  icon. Press the  icon.


The subsequent menu will appear:


Press the  icon

Press the  icon

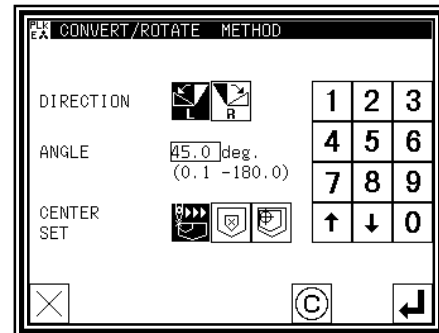
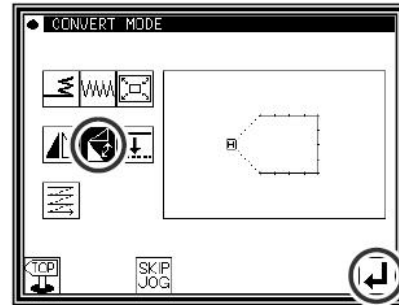
The subsequent menu will appear:

Select the direction, wish

towards the right, select 

towards the left, select 

Set the desired angle of rotation using the number keys ex : 0,1deg. ( min 0,1 max 0,3 )





**THE MODIFICATION IS EXECUTED KEEPING THE SELECTED POIT FIXED.**






**THE MODIFICATION IS EXECUTED FROM THE CENTER OF THE PROGRAM.**




**THE MODIFICATION IS EXECUTED FROM THE HOME POSITION.**


Press the  icon. Press the  icon .

Use the  key to go to the desired point (A)

Press the  icon. Press the  icon.

Press 

The main menu will appear


Press  to confirm the modification

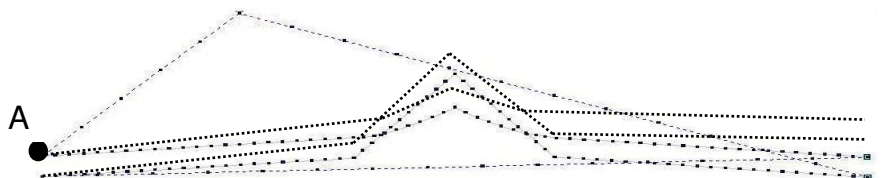
Press 

Test the program, lower the jig

using the relevant button, with the  key

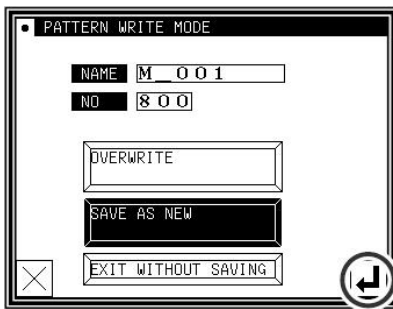
Move to the end of the sewing cycle.



At the end of the program press .



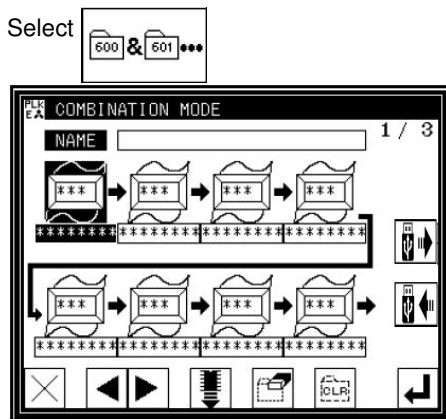
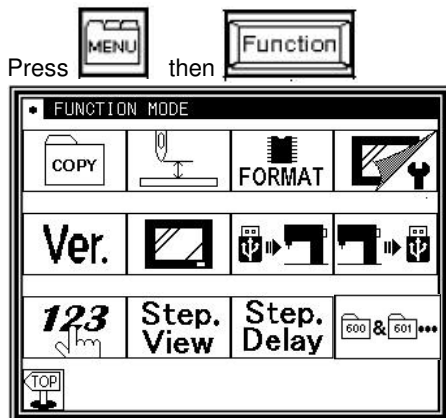
## SAVING THE PROGRAM


Always memorize the program using numbers between 600 and 999 with maximum 20,000 stitches

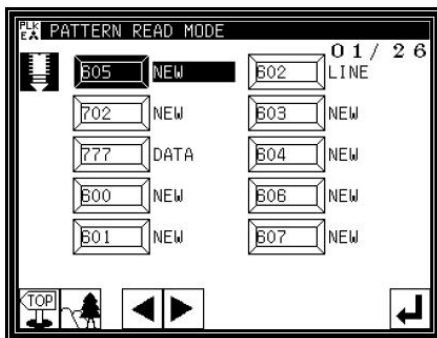



Press  to confirm, input the desired name and number and confirm pressing 

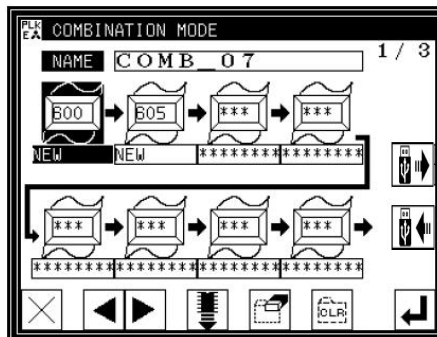
## 14.12. Creating a sequence of programs




Select  in order to read the program from the internal memory.



Select the desired program to add and confirm pressing . Repeat this step to add all the programs you desire in the sequence.



Once inserted all the programs desired (max24) press  to save the program.

Press  enter the desired name, select where to save if on internal memory or on a USB drive then press 

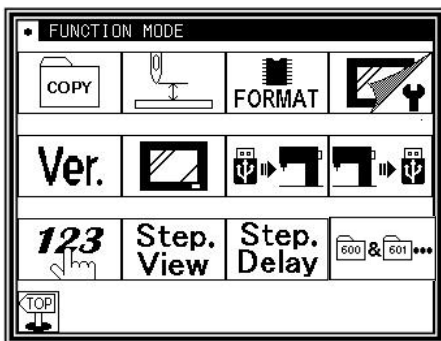
Then  and 

At this point the sequence just programmed is in use.

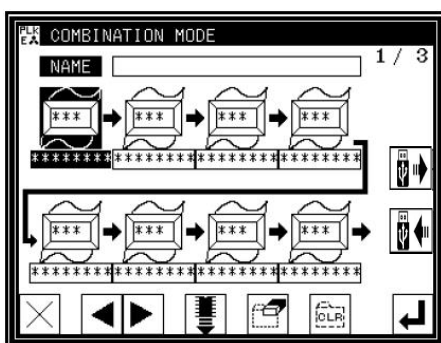


### 14.13. Exit from a sequence of programs

Press  then 



Select 



Select 

Press 

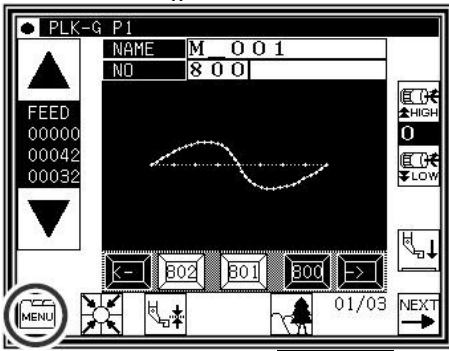
Press 

Press 

At this point the machine is in the normal functioning mode.

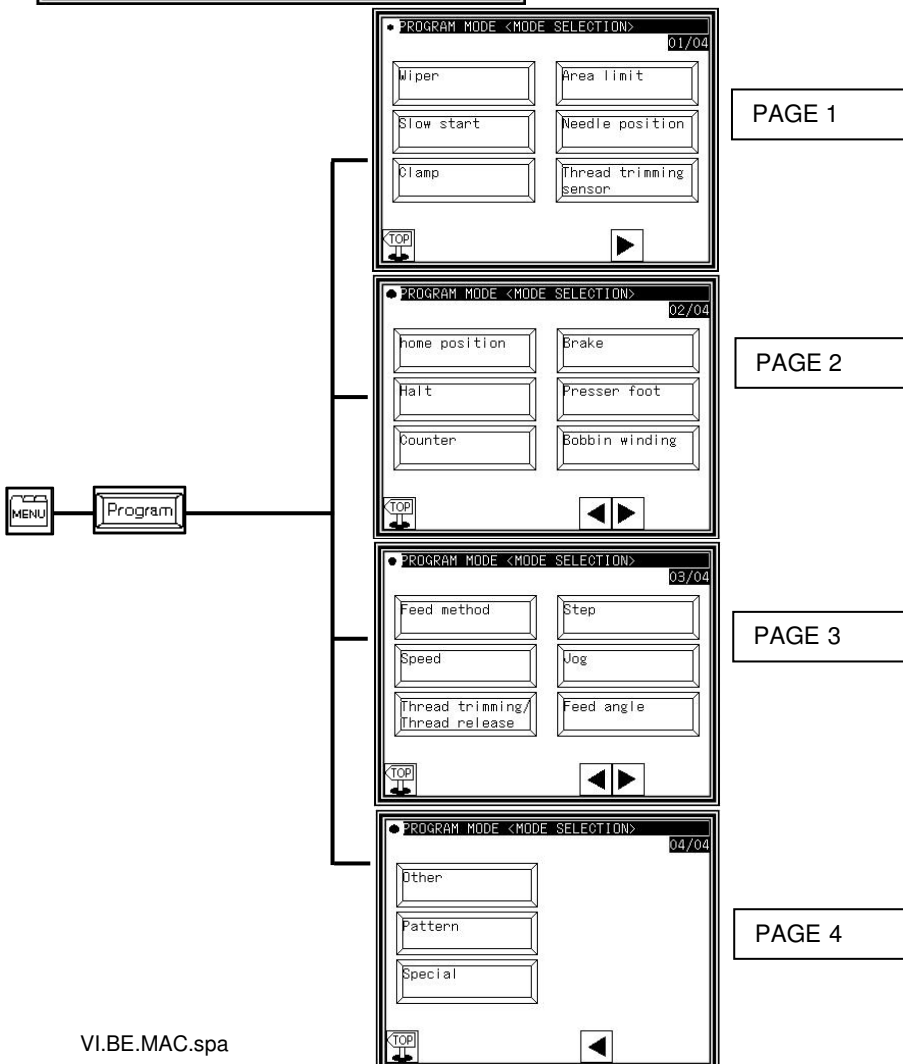
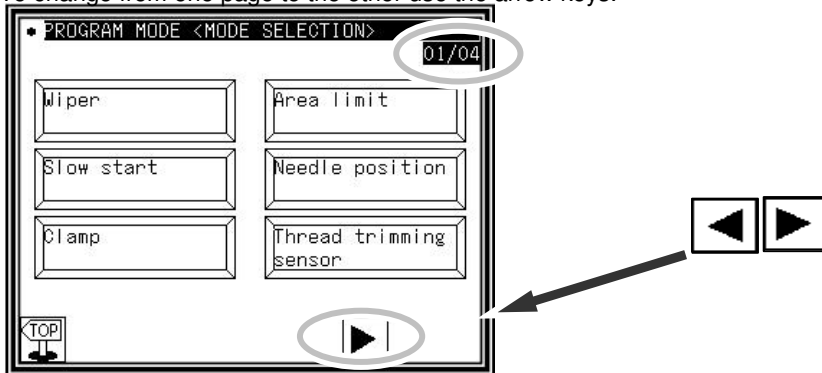
# 15. BASIC PARAMETER ADJUSTMENTS

From the working menu



Press . Then press .

In the display are visualized various icons in various pages to select .  
To change from one page to the other use the arrow keys.



### 15.1. Regulation of the tension opening delay

Select the parameter

**LRS.**(220 standard setting)( Tension opening delay) the parameter

**LRE.**(50 standard setting) (duration time of the tension impulse).

**T** (180 standard value)(thread trimming speed)

### 15.2. Feed speed control

Select

**F e s.** ( 9 standard setting)(Feed speed can be setted from 0 to9 ).

### 15.3. Sewing speed

Select

**H** = XXXX(High speed).

Standard speed 2499 Rpm (2100during the running in)

**MD1** = XXXX(Medium-high speed) Standard speed 2000 Rpm

**MD2**= XXXX(Medium-low speed). Standard speed 1000 Rpm

**L** = XXXX(Low speed). Standard speed 200 Rpm

### 15.4. Slow start

Select

**S = xxx** (SLOW START speed).

**SL = off /on** (SLOW START on/off).

**SLn = x** (N°of stitches ).Standard value 2

# 16. SOFTWARE INSTALLATION

## PLKG\_system

To load the software :

**Copy the folders PLKG\_system and User\_system from CD/Computer on the empty USB drive and insert it in the control box**



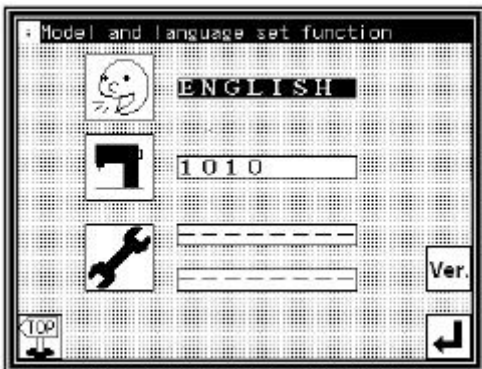
Turn on the machine and keep pressed the **F** key until the **RED LED** is **ON**




This screen appears





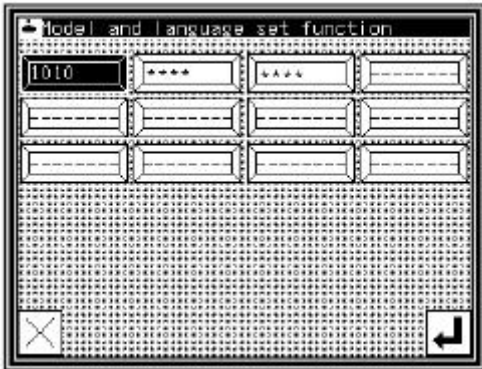
Then



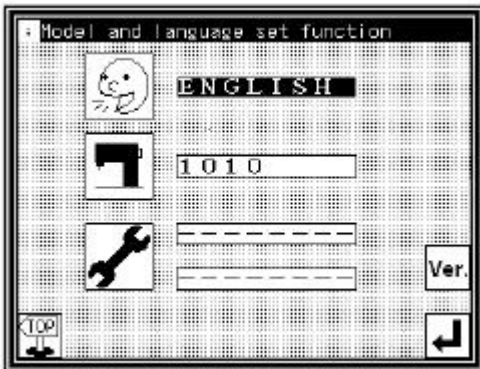
Press  to select the language (Spanish,French,English,Chinese,Japanese)



To select the machine model press  and select **2516R** for the **pocket setter** machine or select **1010** icon for the **pocket design** and **FLY** machine and confirm pressing 



Press 



Press 

This screen appears



Turn OFF the machine and wait until the GREEN LED is completely off and then turn on the machine again.



## 16.1. Loading the User\_system

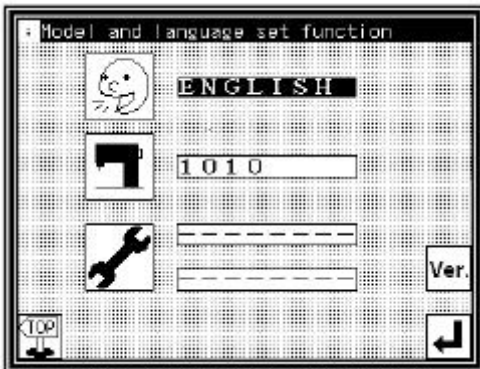
Turn on the machine and keep pressed the **F** key until the **RED LED** is **ON**



This screen appears



Then



Then select



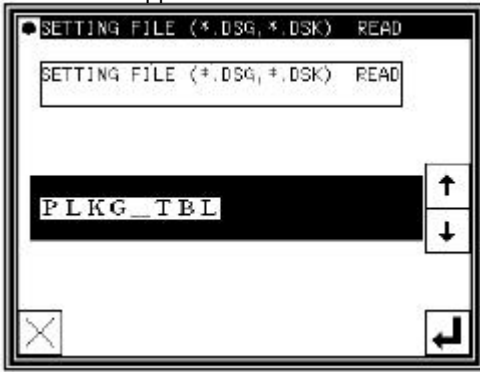
Select TBL&STP




and press

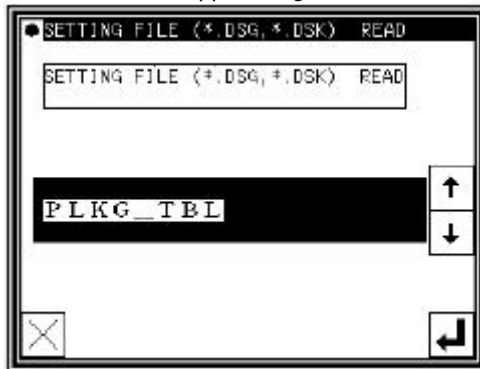



This screen appears :



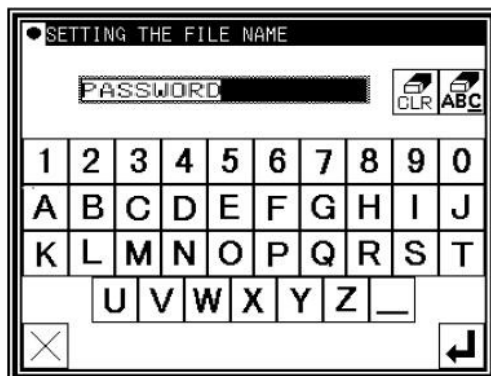
Select the setting file and press 

Then this screen appears again



Then select the step file and press 

At this point if the machine asks for a password please contact (VI.BE.MAC)



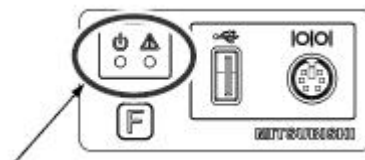
Insert the PASSWORD and

Press 

This screen appears



Turn OFF the machine and remove the USB drive



Once the **GREEN LED** is completely off turn back on the machine.


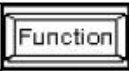


## 16.2. Loading VI.BE.MAC setting

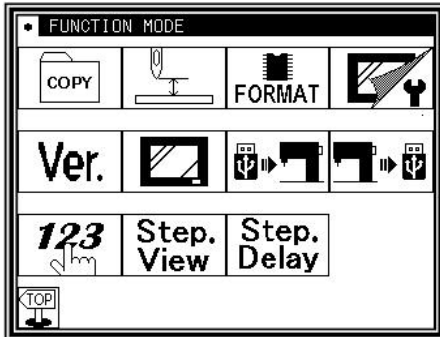
To load the software :

Copy the folder User\_system from CD/Computer on the empty USB drive and insert it in the control box

To load the step and setting file:

Press  then 

This menu appears:



Press 



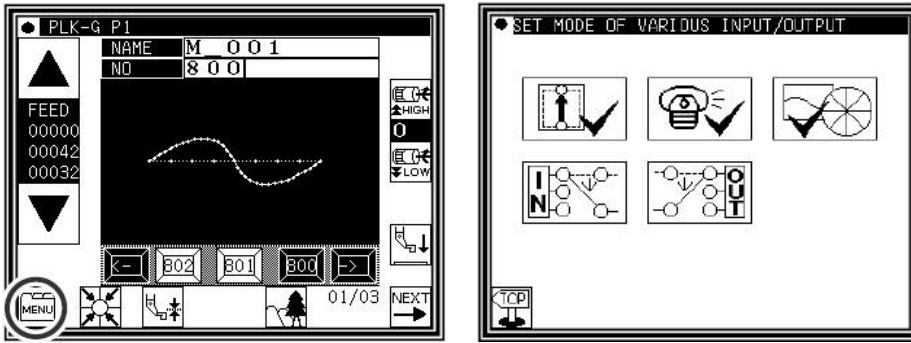
Press  then select the desired setting file and press  and select the desired step file and press  and confirm pressing  again

If a PASSWORD is required please contact **VI.BE.MAC.** and enter the password confirm pressing 

When the loading is finished M-290 appears on the screen , turn OFF the machine wait until the **GREEN LED** on the control box switches **OFF** remove the USB drive and switch back on the machine.

# 17. TEST INGRESSI (INPUT) / USCITE (OUTPUT)

The main menu will appear on the display:



Press icon . Press icon .

The following menu will appear, where the icons have the following meaning:

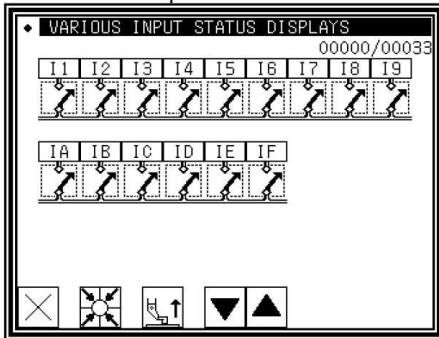
- INPUTS test                      OUTPUTS test
- SEWING HEAD SIGNALS test (HOME POSITION, ENCODER, SINCRONISING)
- INPUT ADDRESS PROGRAMMING (**do not use ONLY FOR VI.BE.MAC TECHNICIANS**)
- OUTPUT ADDRESS PROGRAMMING(**do not use ONLY FOR VI.BE.MAC TECHNICIANS**)

Select the icon required from those shown.

## 17.1. Input test

Press the icon.

All the INPUTS present are shown and can be tested manually (from i 1 to i P)



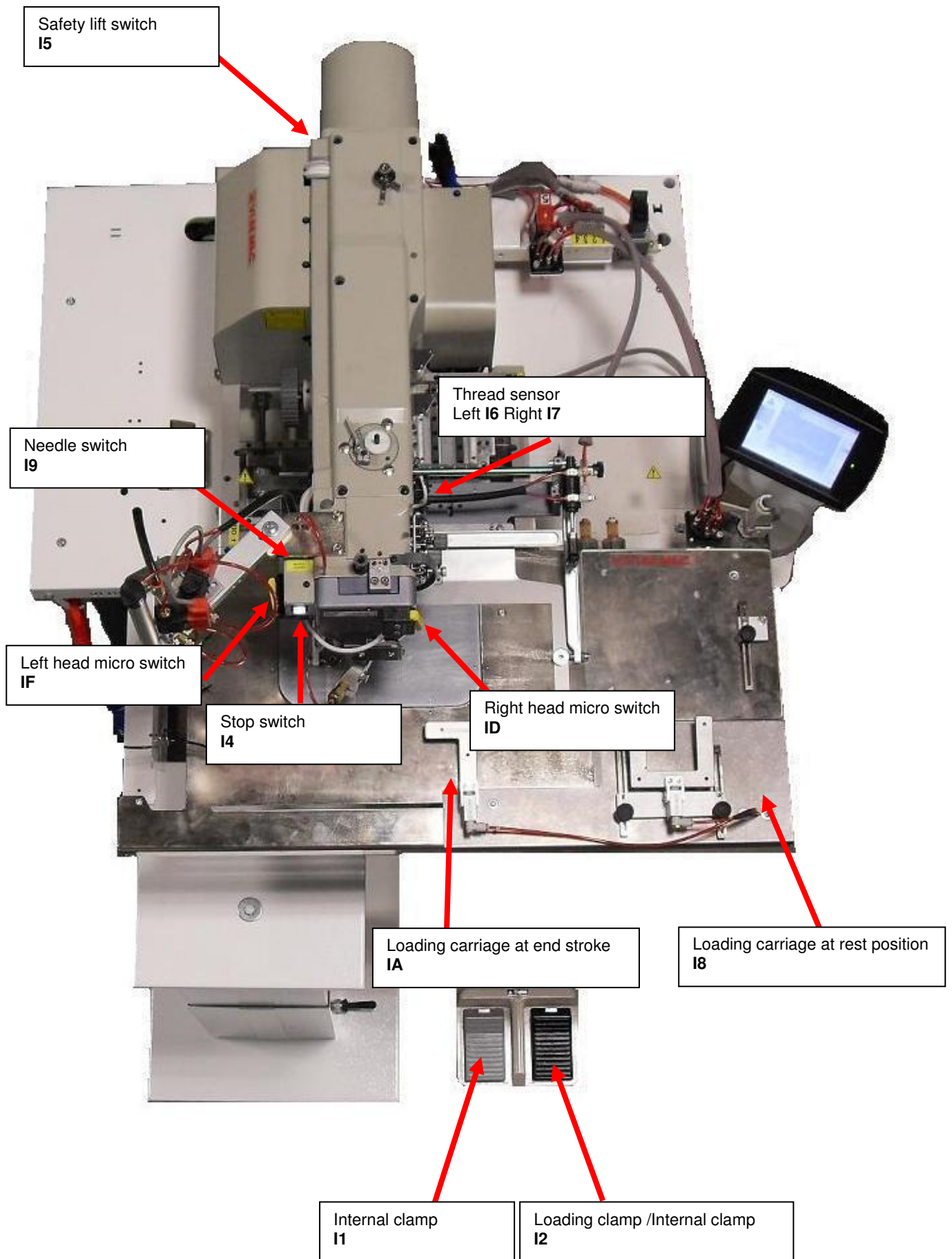
The display will show the INPUT value.

By pressing the respective function pedal or switch, It can be changed from **on** to **off** and/or vice versa.

When the contact is closed = ON the following icon appears

When the contact is open = OFF the following icon appears

TYPE	FUNCTION	CONNECTION
FOOT SWITCH	INTERNAL CLAMP	I1
FOOT SWITCH	LOADING CLAMP/INTERNAL CLAMP	I2
MICRO SWITCH	STOP SWITCH	I4
MICRO SWITCH	SAFETY LIFT SWITCH	I5
SENSOR	LEFT THREAD BREAKAGE SENSOR	I6
SENSOR	RIGHT THREAD BREAKAGE SENSOR	I7
MICRO SWITCH	LOADER REST POSITION SWITCH	I8
MICRO SWITCH	NEEDLE SWITCH	I9
MICRO SWITCH	LOADING CARRIAGE AT END STROKE SWITCH	IA
N.C.		IB
N.C.		IC
MICRO SWITCH	RIGHT HEAD MICRO SWITCH	ID
N.C.		IE
MICRO SWITCH	LEFT HEAD MICRO SWITCH	IF



# ELECTRIC CONNECTIONS 1010 PLK-G INPUT

## CON-L


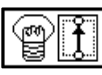
COLOUR	INPUT	PIN INPUT	0Vcc
	Stop switch	Pin 3 CON6(ES)	Pin 4 CON6(ES)
	Safety lift switch	Pin 2 CON7(S6)	Pin 3 CON7(S6)
Black	Left thread sensor	Pin 2 CON9(FSW) Brown (out signal)	Pin 1 CON8(THS) Red +Vcc Pin 3 CON8(THS) White 0Vcc
Orange	Right thread sensor	Pin 2 CON8(THS) Brown (out signal)	Pin 1 CON8(THS) Red +Vcc Pin 3 CON8(THS) White 0Vcc
Blue	Right loading carriage switch SB3	Pin 1 CON-L	Pin 5 o Pin 8 CON-L
Gray	Needle switch SB4	Pin 3 CON-L	Pin 5 o Pin 8 CON-L
White	Right loading carriage switch SB5	Pin 4 CON-L	Pin 5 o Pin 8 CON-L
	N.C.	Pin 6 CON-L	Pin 5 o Pin 8 CON-L
	N.C.	Pin 7 CON-L	Pin 5 o Pin 8 CON-L
Red	Right micro switch (sewing head)SB6	Pin 9 CON-L	Pin 5 o Pin 8 CON-L
	N.C.	Pin 10 CON-L	Pin 5 o Pin 8 CON-L
Green	Left micro switch (sewing head) SB7	Pin 12 CON-L	Pin 5 o Pin 8 CON-L

CON-L  
INPUT



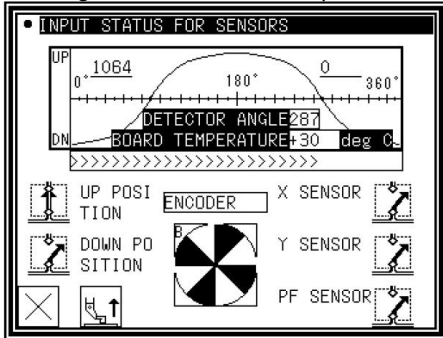
Pin01: I8 Blue	Pin07: IC N.C.
Pin02: 0 Vcc N.C.	Pin08: 0 Vcc Black
Pin03: I9 Gray	Pin09: ID Red
Pin04: IA Yellow	Pin10: IE N.C.
Pin05: 0 Vcc Black	Pin11: 0 Vcc N.C.
Pin06: IB N.C.	Pin12: IF Green

## 17.2. Test sewing head signal

Press icon  Press icon .

Press

Entering this function all the inputs of the sewing head can be controlled :



UP POSITION = Sensor needle in highest position  
 DOWN POSITION = Sensor needle in lowest position  
 X SENSOR = Sensor X position  
 Y SENSOR = Sensor Y position  
 ENCODER = Signals from the motor encoder

When the sensor is reading = ON



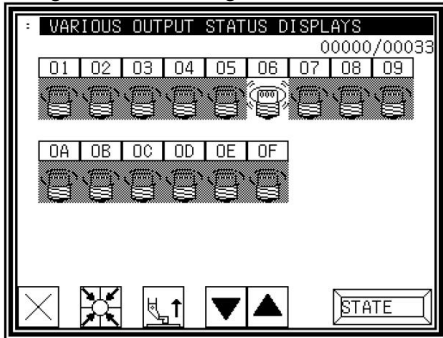
When the sensor is not reading = OFF.



## 17.3. Test output

Press icon  Press icon  Press 

Using this test the logical status of the each output can be controlled and tested (from 0 1 to 0 F)



When the output is activated the icon is this colour



When the output is deactivated the icon is this colour

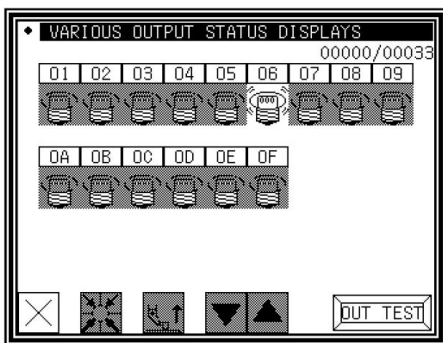


To test manually if the output is working :

Press 



**VERIFY BEFORE ACTIVATING ANY OUTPUT THAT NO OBJECTS OR PERSONS ARE IN THE RANGE OF ACTION OF THE OUTPUT TESTED**

Press the icon of the desired output to test ( ES : O1 = thread trimmer ) to verify if it is working.




PARAMETER	FUNCTION
O1	Thread trimmer
O2	Stacker (down stroke)
O3	Tension opening + wiper
O4	External clamp
O5	Unloader
O6	Stop light
O7	Needle change +thread clamp
O8	Carriage movement / Central clamp backwards-forwards
O9	N.C.
OA	N.C.
OB	N.C.
OC	Loading clamp / Central clamp up -down

**ATTENTION : before testing the OC output remove the loading clamp and keep the icon pressed until the carriage reaches the loading end stroke position.**

To exit from the output test mode press  and to return to the working position press 

# ELECTRIC CONNECTIONS 1010 PLK-G OUTPUT CON-M AND INTERNAL CON

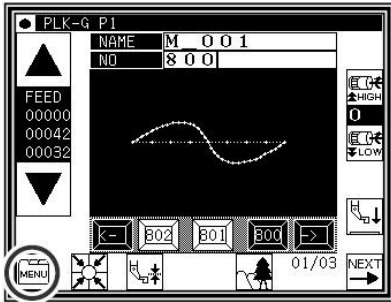
COLOUR	ELECTROVALVE	PIN OUT 0Vcc	+24Vcc
Black	EV0 = General Air	Pin 5 o Pin 8 CON-L	Pin 8 o 11 CON-M
	EV1 = External clamp	Pin 1 CON13(FU)	Pin 2 CON13(FU)
Brown/Green	EV2 = Loading clamp or Central clamp	Pin 10 CON-M	Pin 8 o 11 CON-M
White/Yellow	EV3 = Carrage movement Central clamp backwards/forwards	Pin 1 CON-M	Pin 8 o 11 CON-M
	EV4 = Needle change+thread clamp	Pin 1 CON14(OP2)	Pin 3 CON14(OP2)
	EV5 = Tension opening	Pin 1 CON12(L)	Pin 2 CON12(L)
Brown/ Yellow	EV9 = Wiper	Pin 3 CON-M	Pin 8 o 11 CON-M
	N.C.	Pin 4 CON-M	Pin 8 o 11 CON-M
	N.C.	Pin 6 CON-M	Pin 8 o 11 CON-M
	EV8 = Stacker (down)	Pin 1 CON11(W)	Pin 3 CON11(W)
	Thread trimmer T	Pin 1 CON10(T)	Pin 2 CON 10 (T)
	EV6/7 = Unloader	Pin 1 CON15(OP1)	Pin 3 CON15 (OP1)
	Stop light	Pin 4 CON6(ES)	Pin 3 CON6(ES)

CON-M USCITE	
	
Pin01: O8 White/Yellow	Pin09: +24Vcc N.C.
Pin02: +24Vcc N.C.	Pin10: OC Brown/Green
Pin03: O9 Brown/Yellow	Pin11: +24Vcc Brown
Pin04: OA N.C.	Pin12: OD N.C.
Pin05: +24Vcc N.C.	Pin13: OE N.C.
Pin06: OB N.C.	Pin14: +24Vcc N.C.
Pin07: +24Vcc N.C.	Pin15: OF N.C.
Pin08: +24Vcc Brown	

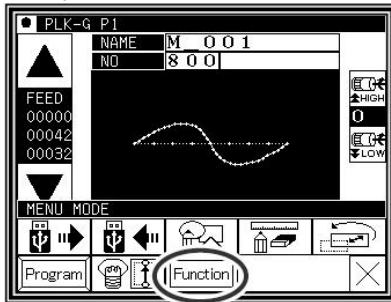
# 18. FREQUENTLY ASKED QUESTIONS

- *If after several modification on a program the machine doesn't let us modify any more*

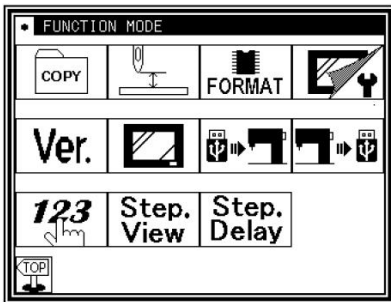
Press MENU



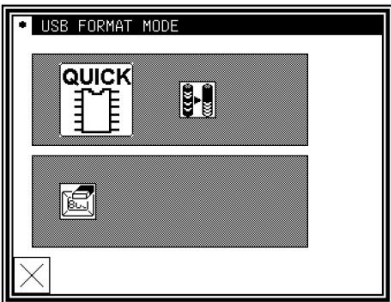
Then press FUNCTION



Select FORMAT



Reached this screen select OPTIMIZE



Then confirm pressing



The pattern data are not erased.  
And at this point you can re apply the modification to the program



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INDUSTRIAL SEWING MACHINES - AUTOMATIC UNITS - TECHNICAL DEVICES

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