

6. HOW TO USE THE MEMORY SWITCH (LK-1930)

(1) Memory switch

The memory switches mean switches which are able to set the various performances of the sewing machine by means of programming.

There are two different start levels, level 1 and level 2, for the memory switches according to the function level as described below.

Level 1 : The function that allows selection of performances or change of set values which are supposed to be comparatively frequently changed is actuated. The contents of the function by the level 1 are described in the instruction manual.

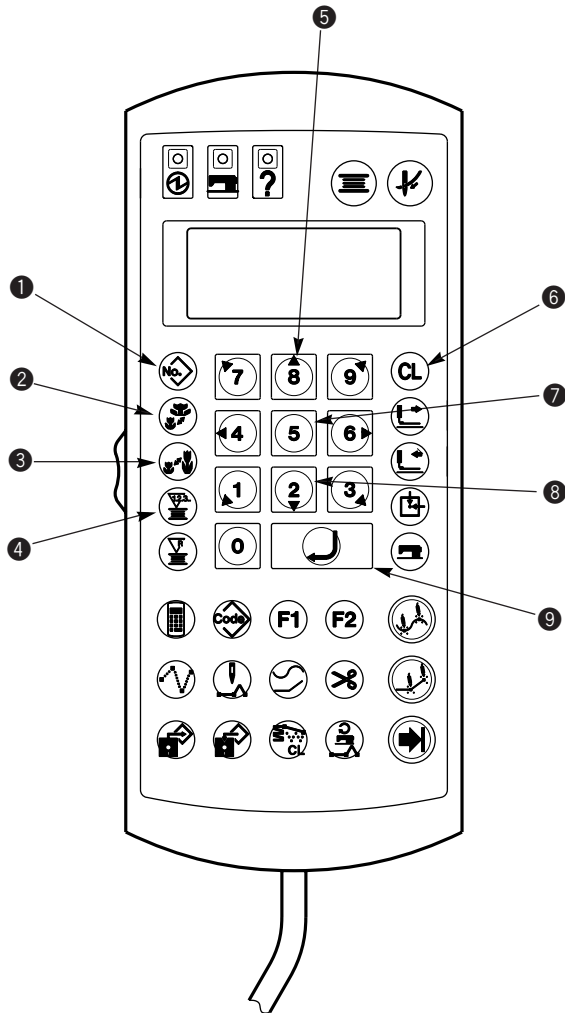
(Example : Intermediate presser operation mode, bobbin thread counter mode, etc.)

Level 2 : The function that allows setting of special performances at the time of modification or more detailed operation is actuated. Also, level 2 actuates while including the function that actuates on the level 1.

(2) Explanation of the operation panel to be used

The functions of the operation panel to be used are as described below.

Names of the switches for the memory switches



- ① Key for indication of changing function No.
- ② Key for changing set item 1
- ③ Key for changing set item 2
- ④ Key for changing set item 3
- ⑤ Key for update (+1) and level 2 starting
- ⑥ Key for memory switch setting mode cancel
- ⑦ Key for update and level 1 starting
- ⑧ Key for update (-1)
- ⑨ Key for memory switch setting mode end

(3) How to start the memory switches

Perform the start of the memory switches as described below.

[How to start the level 1]

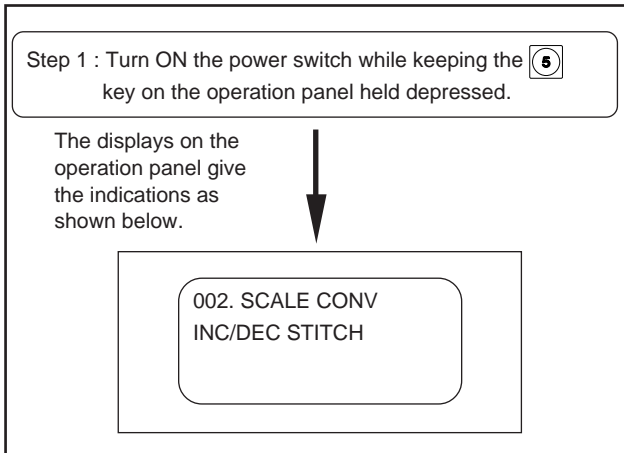


Fig. 2

[How to start the level 2]

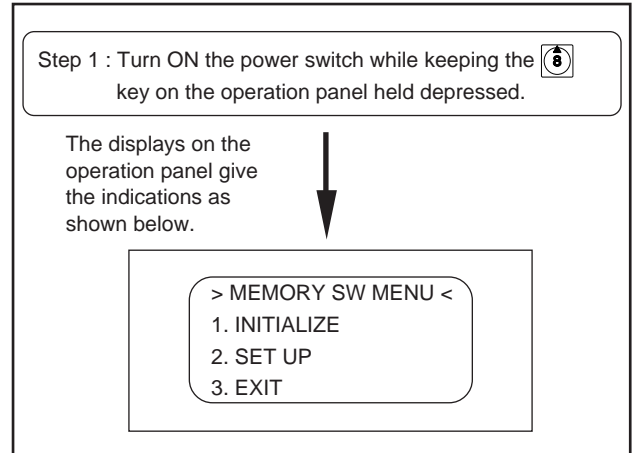


Fig. 3

(4) How to change the contents of each setting

The sequence of the way of change when starting level 1 and level 2 is shown in the figures below.

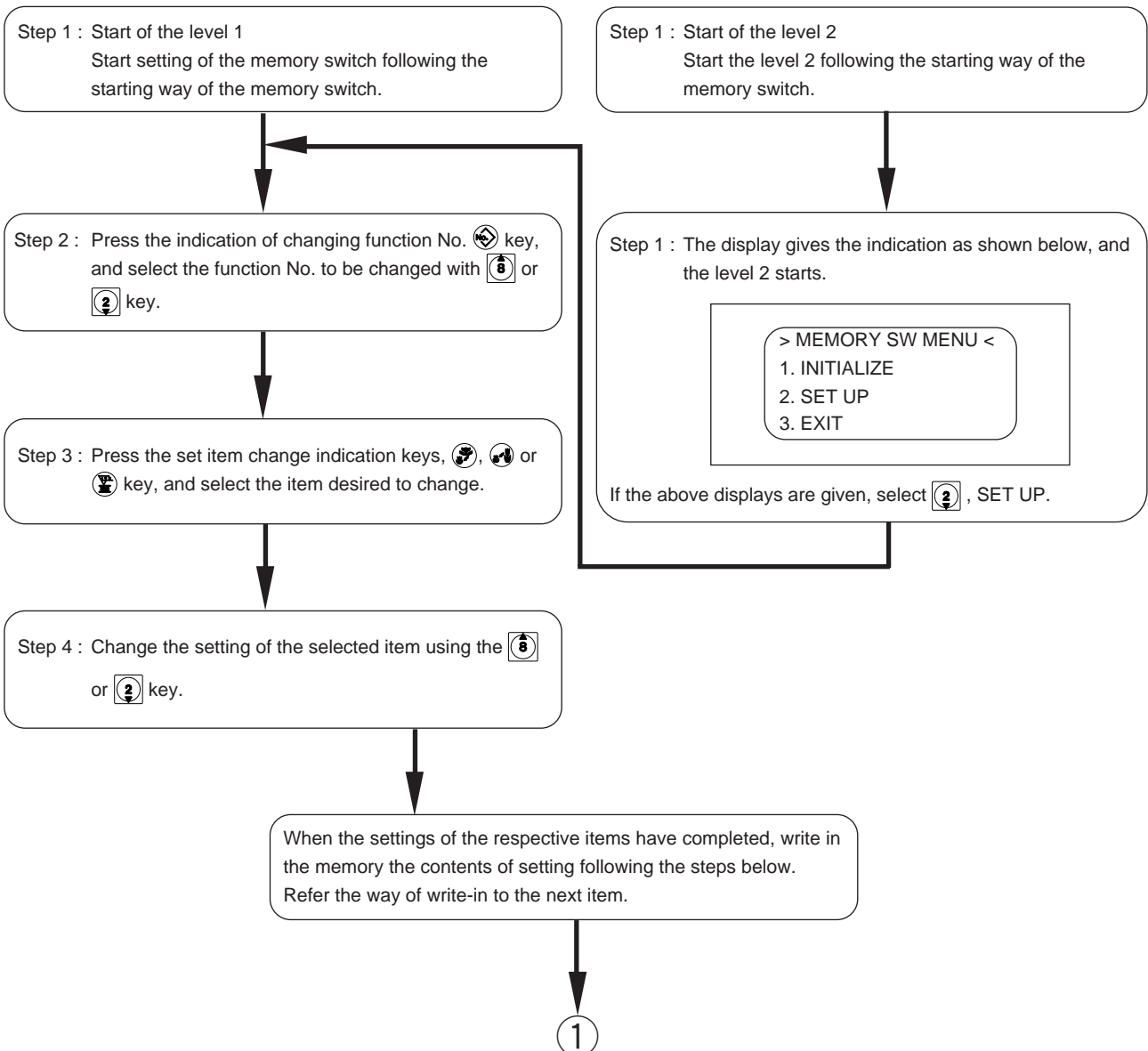


Fig. 4

(5) Write-in of the contents of setting

After setting the respective items, write in the memory the contents of setting following the way of operation as described below.

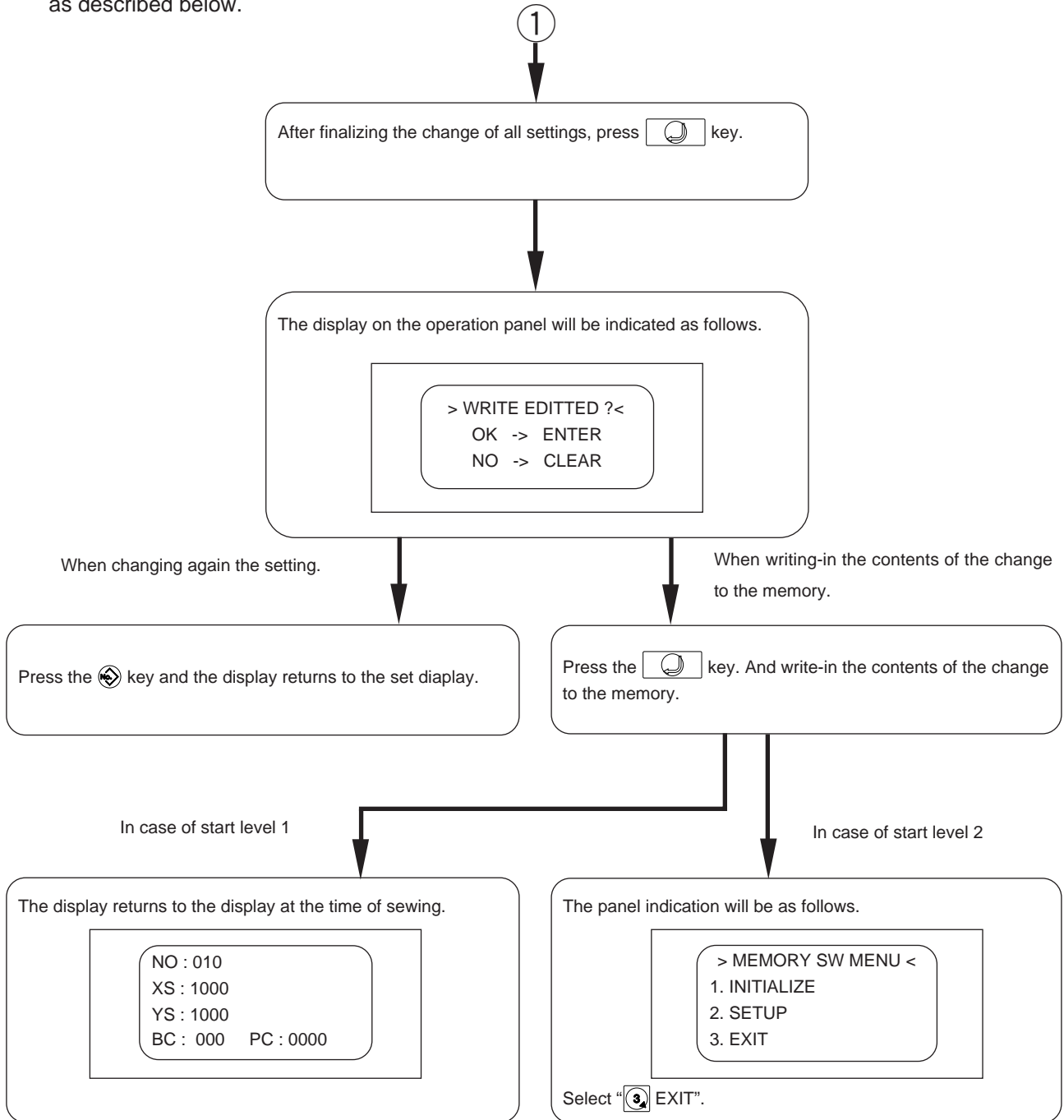


Fig. 5

(6) Writing/reading of the contents of the memory switches onto the floppy disk

It is possible to write the contents of the memory switches onto the floppy disk or to read the memory switches written onto the floppy disk.

Writing/reading of the memory switches can be performed by the operation procedures as shown in the figure below.

How to start writing of the memory switches onto the floppy disk (FD)

How to start reading of the memory switches from the floppy disk (FD)

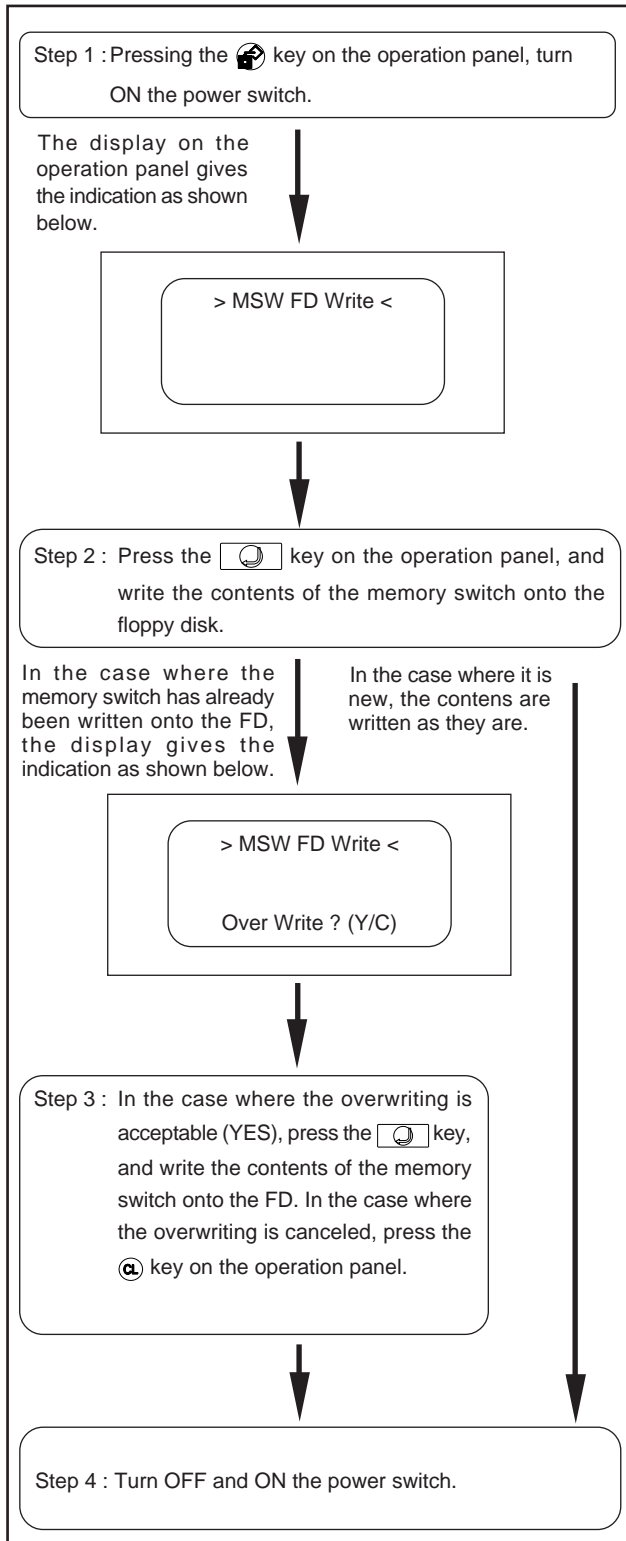


Fig. 6

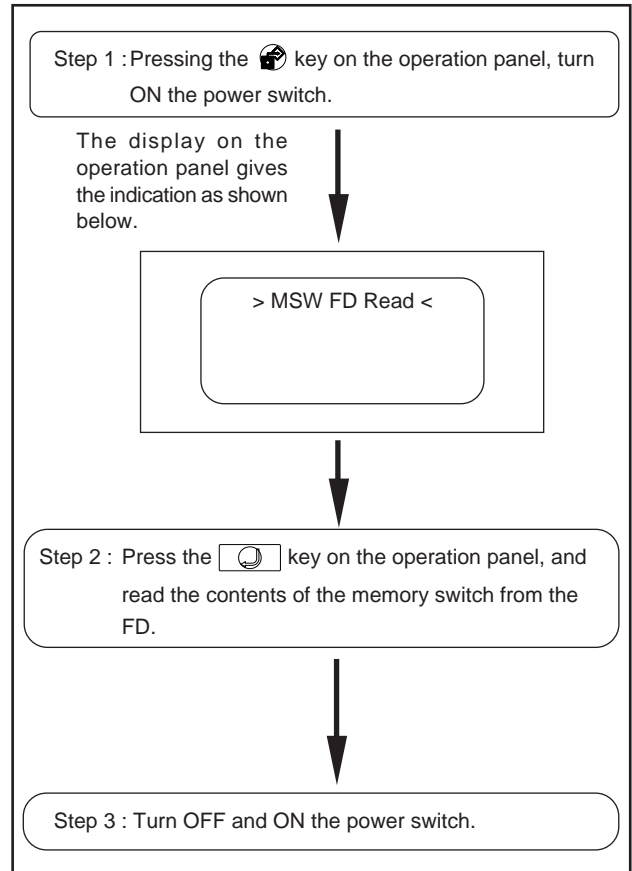


Fig. 7
















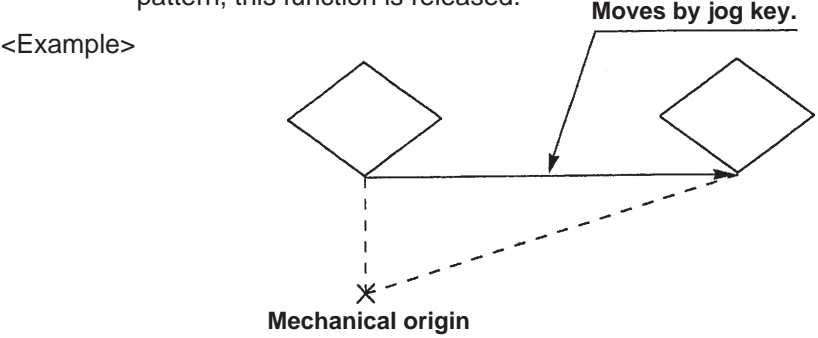








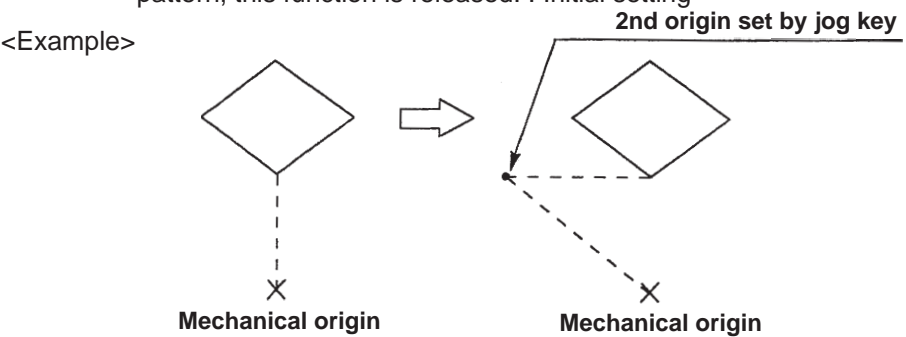
Only one writing of contents of the memory switch for one floppy disk (FD) is possible. If you desire to write plural contents of setting, prepare the number of floppy disks you desire.

7. DESCRIPTION OF THE MEMORY SWITCHES (LK-1930)

NOTE : The contents of the memory switches may vary due to the revision of the system ROM.
(Following contents are applied to the Revision 008 of the System ROM.)

(1) Setting of the language indication		
Function No. : 001	Function : Specifies the language indication on the panel display.	
Item : 1 Language specification		(Set level 2)
Indication	JPN (Katakana)	[Contents] Japanese (Katakana indication)
	ENG (English)	[Contents] English : Initial setting

(2) Setting of the enlargement/reduction function		
Function No. : 002	Function : Pattern enlargement/reduction mode setting	
Item : 1 Selection of increase/decrease method		(Set level 1)
Indication	OFF	[Contents] Prohibition of enlargement/reduction
	STITCH	[Contents] Increase/decrease of the number of stitches (Pitch fixed) : Initial setting
	PITCH	[Contents] Increase/decrease of the stitching pitch (Number of stitches fixed)

(3) Jog function setting		
Function No. : 003		Function : Jog mode is set.
Item : 1 Mode specification		(Set level 1)
Indication	OFF	[Contents] Moving of the feeding frame cannot be made with jog keys,  ,  ,  ,  ,  ,  and  .
	PARA	[Contents] A sewing pattern can be moved to a specified position by using jog keys  ,  ,  ,  ,  ,  and  the return-to-origin key. If the 2nd origin is set in the sewing pattern, the 2nd origin also moves. If pressing the  key two times or reading another sewing pattern, this function is released. <Example> 
	2ND	[Contents] The 2nd origin is set to the place specified by the jog keys,  ,  ,  ,  ,  ,  and  the return-to-origin key. If the 2nd origin is set in the sewing pattern, the machine does not stop at the 2nd origin in the sewing pattern. If pressing the  key two times or reading another sewing pattern, this function is released. : Initial setting 2nd origin set by jog key <Example> 
Item : 2 Use of the fixed turn-out position		(Set level 2) Complementary explanation P90
Indication	OFF	[Contents] The fixed turn-out position is not used. : Initial setting
	ON	[Contents] Based on the coordinate set in the EEPROM, the 2nd origin common to each sewing pattern is used. The machine does not stop at the 2nd origin in the sewing pattern. Also, the movement of the feeding frame cannot be made by the jog key. Refer the setting way of the fixed turn-out position to P90.

(4) Mechanical origin retrieval		
Function No. : 007	Function : This function sets the operation of the mechanical origin retrieval.	
Item : 1 Setting the operation of each sewing cycle		(Set level 2)
Indication	OFF	[Contents] Not operative : Initial setting
	ON	[Contents] Origin retrieval is made for each sewing cycle.
Item : 2 Operation setting at the time of the moving limit error		(Set level 2)
Indication	ON	[Contents] Origin retrieval is made when returning from the moving limit. (Initial setting)
	OFF	[Contents] No operation

(5) Return to origin operation		
Function No. : 008	Function : This function sets the returning route to the sewing start when pressing the return to origin switch.	
Item : 1 Operation mode setting		(Set level 1)
Indication	ROUTE	[Contents] The machine returns to the sewing start point through the shortest distance. : Initial setting
	HOME &	[Contents] The machine moves to the sewing start point along the pattern data after the origin is retrieved.
	TRACE	[Contents] The machine moves to the sewing start along the pattern data in the reverse direction. : Inversion specification • Initial setting
Item : 2 Setting of the return to the upper dead point only at the time of origin retrieval and return to origin (Needle UP in the reverse rotation)		(Set level 1)
Indication	OFF	[Contents] Without stopping at the upper dead point : Initial setting
	ON	[Contents] With stopping at the upper dead point : Inversion specification initial

(6) Counter indication setting		
Function NO. : 009	Function : Counter indication setting	
Item : 1 Bobbin thread counter indication setting		(Set level 1)
Indication	UP	[Contents] UP counter setting (When one cycle stitching completes, the value shown on the bobbin thread counter increases by 1 count. The counter counts the bobbin thread from 000 to 999.) If the counter set value other than "000" is set, when the set value has come equal to the counter set value, the sewing machine stops. : Initial setting
	DOWN	[Contents] DOWN counter setting (When one cycle stitching completes, the value shown on the bobbin thread counter decreases by 1 count. The counter counts the bobbin thread from 999 to 000.) If the counter set value other than "000" is set, the counter starts counting down from the set value and if the counter value has become "0000", the sewing machine stops.
Item : 2 Production counter indication setting		(Set level 1)
Indication	OFF	[Contents] Does not indicate the production counter.
	ON	[Contents] Indicates the production counter. : Initial setting
Item : 3 Number of counter digits setting		(Set level 2)
Indication	3 FIG	[Contents] This function makes the number of indicating digits 3 digits. : Initial setting
	4 FIG	[Contents] This function makes the number of indicating digits 4 digits.

(7) Setting of pattern data reading operation		
Function No. : 010	Function : Pattern data reading operation mode is set.	
Item : 1 Pattern data reading operation setting		(Set level 2)
Indication	SETUP	[Contents] Pattern data can be read under the sewing setting state. (the sewing LED goes out.) : Initial setting
	READY	[Contents] Pattern data can be read under the sewing ready state. (the sewing LED lights up.)
Item : 2 Constant pattern data reading mode setting		(Set level 2)
Indication	OFF	[Contents] Constant pattern data reading function is inoperative. (The backup data becomes effective, and if the pattern No. desired is the same, the pattern data is not read from the floppy disk.) : Initial setting
	ON	[Contents] Constant pattern data reading function is operative. (Pattern data is constantly read from the floppy disk.)

(8) Pattern read-in order setting		
Function No. : 011	Function : This function sets the reading-in order of the SATRA data and the standard sewing machine data.	
Item : 1 Reading-in order setting		(Set level 2)
Indication	FD > STR	[Contents] Retrieval is made in the order of sewing machine data Satra data. : Initial setting
	STR > FD	[Contents] Retrieval is made in the order of Satra data sewing machine data.
Item : 2 Read-in media setting		(Set level 2)
Indication	FD	[Contents] This function retrieves the data of floppy.
	PROM	[Contents] This function retrieves the data of PROM.
	FD > PROM	[Contents] This function performs retrieval in the order of data of floppy data of PROM. : Initial setting
	PROM > FD	[Contents] This function performs retrieval in the order of data of PROM data of floppy.
By this setting, read-in speed is increased when using data of floppy or data of PROM. Standard data specifications of the numerical controlled sewing machines for the shoe industry.		

(9) Speed change in idling operation		
Function No. : 012	Function : This function sets the speed change of the jump speed when the machine runs idle.	
Item : 1 Jump speed changing function		(Set level 2)
Indication	OFF	[Contents] The machine performs jumping at a constant speed at all times. : Initial setting
	ON	[Contents] 2-step speed changing function is possible. While the machine performs jumping of the sewing data, the jump speed can be decreased by turning ON the pedal switch.

(10) Selection of thread trimming after turning ON the temporary stop switch		
Function No. : 013	Function : This function sets the thread trimming operation when operating the temporary stop switch.	
Item : 1 Thread trimming setting		(Set level 1)
Indication	AUTO	[Contents] Thread trimmer automatically actuates. (When the temporary stop switch is pressed, the sewing machine temporarily stops as well as the thread trimmer actuates.)
	NDL	[Contents] Manual 1 (When the temporary stop switch is pressed, the sewing machine temporarily stops. In this state, the thread trimmer is actuated by turning ON "needle threading switch".)
	STOP	[Contents] Manual 2 (When the temporary stop switch is pressed, the sewing machine temporarily stops. In this state, the thread trimmer is again actuated by pressing "the temporary stop switch". At this time, the thread trimmer can also be actuated by operating "needle threading switch") : Initial setting

(11) Input command time out		
Function No. : 016	Function : This function sets the length of time of the external input command time out (time to wait for input).	
Item : 1 Setting of the length of time to wait for external input		(Set level 2)
Indication	0	[Contents] There is no time-out. (Time-out of the external input command is not valid, and the input is being waited forever. It is possible for the sewing machine to be in the temporary stop state by operating the temporary stop switch.) : Initial setting
	0 to 655	[Contents] Setting of length of time to wait for input (the input is being waited for the time of this set value x 100 mse. If there is no input, the sewing machine is in the temporary stop state.)

(12) Thread trimming command control		
Function No. : 018	Function : Setting of effective/ineffective thread trimming command in the sewing pattern.	
Item : 1 Setting of effective thread trimming command or ineffective thread trimming command		(Set level 2)
Indication	ON	[Contents] Thread trimming command is rendered effective. : Initial setting
	OFF	[Contents] Thread trimming command is rendered ineffective. (In this case, when the machine temporarily stops, and the needle thread is broken, the thread trimmer is actuated.)

(13) Stop control at the time of the sewing end		
Function No. : 019	Function : The machine is temporarily stopped at the end of a sewing pattern.	
Item : 1 Stop control setting		(Set level 2)
Indication	OFF	[Contents] Temporary stop operation at the end of a sewing pattern is rendered ineffective. : Initial setting
	ON	[Contents] Temporary stop operation at the end of a sewing pattern is rendered effective. At this time, closing/opening of the feeding frame is not possible. However, tracing of the sewing pattern is possible by the feed forward/backward key. The sewing is in the state of the end by depressing the start pedal at the position of the end.

(14) Bank function setting		Complementary explanation	P.91
Function No. : 021	Function : This function sets bank operation.		
Item 1 : With/without the bank operation and setting of the number of banks		(Set level 2)	
Indication	0	[Contents] Bank function is ineffective. (Bank function does not work.) : Initial setting	
	1 to 16	[Contents] This function sets the number of banks to be used.	
Item : 2 Pattern data read-in method setting		(Set level 2)	
Indication	SEQ	[Contents] Consecutive-number reading (From the specified pattern No., as many as patterns specified in the item 1 are read in bank consecutively.) : Initial setting	
	PANEL	[Contents] Specified-number reading (From the operation panel, bank Nos. and pattern Nos. are specified and read in the bank. However, the bank numbers are from 0 to 9.)	
Item : 3 Selection setting		(Set level 2)	
Indication	EXT	[Contents] Setting by an external input terminal (A bank pattern corresponding to the bank No. (0 to F binary) selected by the external input terminal is sewn. Initial setting	
	PANEL	[Contents] The bank is specified from the operation panel. (By combination of [PATTERN NO.] key + [NUMERIC] key, the bank number can be specified.)	
	ROT	[Contents] Specifying the bank + Automatic update from the operation panel (Bank No. is automatically updated from the bank number set in the set value 1 whenever one cycle of sewing is completed, and the sewing is made.)	

(15) Combination function setting		Complementary explanation	P.91
Function No. : 022	Function : Mode selection of the combination function		
Item : 1 This function sets the operation mode of combination function		(Set level 2)	
Indication	NO USE	[Contents] Combination mode is ineffective. : Initial setting	
	OVERLAP	[Contents] Patterns are combined at the center of the origin. Refer to P96 <Example 1>.	
	O + PAUSE	[Contents] Patterns are combined at the center of the origin, and a temporary stop is added. Refer to P96 <Example 2>.	
	APPEND	[Contents] Patterns are combined at the sewing end and sewing start. Refer to P96 <Example 3>.	
	A + PAUSE	[Contents] Patterns are combined at the sewing end and sewing start, and a temporary stop is added. Refer to P96 <Example 4>.	

(16) Setting of F1 . F2 keys		
Function No. : 023	Function : Setting of F1 and F2 keys on the operation panel can be made. This function can set the keys which are used often during inputting.	
Item : 1 Setting of F1 key		(Set level 1)
Indication	-1	[Contents] Not registered.
	1 to 999	[Contents] Register the desired function No. The function No. is the "Function No. described in the instruction manual. : Initial setting 2
Item : 2 Setting of F2 key		(Set level 1)
Indication	-1	[Contents] Not registered
	1 to 999	[Contents] Register the desired function No. The function No. is the "Function No." described in the instruction manual . : Initial setting 25

(17) Setting of the stopping position of main shaft		
Function No. : 027	Function : This function selects whether the main shaft is stopped at the upper dead point of the needle UP in the reverse rotation or the upper position.	
Item : 2 Setting of the upper position or the upper dead point stop		(Set level 1)
Indication	UDET	[Contents] Main shaft stops at the upper position. : Initial setting
	AUDET	[Contents] Main shaft stops at the upper dead point.
Item : 3 Setting of the holding mode of the servo-motor at the stopping position of the main shaft : This function is not used with the standard machine.		(Set level 1)
Indication	OFF	[Contents] Holding control is not performed. : Initial setting
	ON	[Contents] Holding control is performed. (Excluding main body input mode)
	ALWAYS	[Contents] Holding control is always performed.

(18) Feed control		
Function No. : 029	Function : Setting of the synchronized control of the sewing machine and the X-Y feed	
Item : 1 Setting of the sewing pitch to the sewing speed		(Set level 1)
Indication	0	[Contents] 2500 r.p.m. / 3.0 mm : Initial setting
	1	[Contents] 2000 r.p.m. / 3.0 mm
	2	[Contents] 1700 r.p.m. / 3.0 mm
	3	[Contents] 1300 r.p.m. / 3.0 mm
Item : 2 Selection of the feed timing		(Set value 1)
Indication	-4 to 9	<p>[Contents] The feed start timing can be advanced by -4 to 9 TG pulses (in a unit of 8°) so as to adapt to the maerial thickness.</p> <p>-4 : Retards (Thin materials) \longleftrightarrow 9 : Advances (Thick materials)</p> <p>(0 : Initial setting)</p>
		<p>[Explanation]</p> <p>The X – Y feed is controlled on the basis of the basic signal of feed and the tachometer generator signal (TG). In case of the feed pulse, the feed finishes feeding earlier by 2 pulses of TG signal of the next feed base pulse.</p> <p>By this set value, the finish of the feed can be set so as to finish earlier. Accordingly, the feed can finish the feeding when the needle is in a higher position than the standard state.</p> <p>However, when the time of the feed moving is full such as 2,500 r.p.m. / 3.00 mm or excessive sewing pitch, this setting will be ineffective.To make this setting effective, it is necessary to reduce the sewing speed in the item 1 : setting of the sewing pitch to the sewing speed.</p>

(19) Feeding frame control 1		Complementary explanation	P.99
Function No. : 030		Function : Feeding frame device setting	
Item : 1 Setting at the automatic opening/closing			(Set level 2)
Indication	0 to 99	[Contents] Action sequence is set when the feeding frame automatically opens/closes in case of operating the preparation key, threading key, etc. Initial setting "0"	
Item : 2 Setting of opening/closing control at the time of pedal operation			(Set level 1)
Indication	0 to 99	[Contents] Action sequence is set when opening/closing the feeding frame at the time of pedal operation. (Set level 1) 0 : Monolithic feeding frame 1 : Separate-type feeding frame Feeding frame can be lowered from either right- or left-side. 2 : Separate-type feeding frame The right-side is prior. Feeding frame can be lowered in the order of right- to left-side. 3 : Separate-type feeding frame The left-side is prior. Feeding frame can be lowered in the order of the left- to right-side. 4 to 99 : Monolithic feeding frame	
Item : 3 Setting of opening/closing control at the time of pedal operation when temporary stopping			(Set level 1)
Indication	0 to 99	[Contents] Action sequence is set when opening/closing the feeding frame at the time of pedal operation when temporary stopping. 0 : Monolithic feeding frame 1 : Separate-type feeding frame Feeding frame can be lowered from either right- or left-side. 2 : Separate-type feeding frame The right-side is prior. Feeding frame can be lowered in the order of right- to left-side. 3 : Separate-type feeding frame The left-side is prior. Feeding frame can be lowered from left- to right-side. 4 to 99 : Monolithic feeding frame	

(20) Feeding frame control 2		Complementary explanation	P.101
Function No. : 031		Function : Feeding frame setting	
Item : 1 Setting of the order of the feeding frame at the completion of the sewing			(Set level 2)
Indication	0 to 99	[Contents] Initial setting 0 (release at all times) : when item "RELEASE" setting only.	
Item : 2 Setting of the action of the feeding frame at the completion of the sewing			(Set level 1)
Indication	ATSTART	[Contents] Feeding frame is opened after the completion of the sewing. (After moving to the sewing start point, the feeding frame is opened and waits.) : Initial setting	
	HOLD	[Contents] Feeding frame is not opened after the completion of the sewing. (After moving the sewing start point, the feeding frame is kept lowered and waits. It is opened by pedal operation.)	
	ATEND	[Contents] Feeding frame is opened immediately after the completion of the sewing. (After the completion of the sewing, the feeding frame is opened and moves to the sewing start point.)	
Item : 3 Setting of the constant lowering of the feeding frame			(Set level 1)
Indication	OFF	[Contents] Constant lowering action is rendered ineffective. : Initial setting	
	ON	[Contents] Constant lowering action is rendered effective. Feeding frame is in the lowering state at all times, and is not operative by the pedal operation.	

(21) Pedal control 1		Complementary explanation	P.102
Function No. : 032		Function : Setting of the pedal operation mode	
Item : 1 Setting of the latch operation of the pedal 1		(Set level 1)	
Setting of the operation mode of the pedal 1 (right-side pedal when using the PK-47 device)			
Indication	FLIP 1	[Contents] No latch operation (The feeding frame is lowered while depressing the pedal.) : Solenoid type initial setting	
	LATCH 2	[Contents] Latch operation is made. (The feeding frame comes down by the first depress of the pedal, and it goes up by the second depress of the pedal.) : Pneumatic type initial setting	
Item : 2 Setting of the latch operation of the pedal 2		(Set level 1)	
Setting of the operation mode of the pedal 2 (left-side pedal when using the PK-47 device)			
Indication	FLIP	[Contents] No latch operation (The feeding frame is lowered while depressing the pedal.)	
	LATCH	[Contents] Latch operation is made. (The feeding frame comes down by the first depress of the pedal, and it goes up by the second depress of the pedal.) : Initial setting	
Item : 3 Setting of the latch operation of the pedal 3		(Set level 1)	
Setting of the operation mode of the pedal 2 (Second-step of the left-side of the pedal when using the PK- 47 device)			
Indication	FLIP	[Contents] No latch operation (The feeding frame is lowered while depressing the pedal.)	
	LATCH	[Contents] Latch operation is made. (The feeding frame comes down by the first depress of the pedal, and it goes up by the second depress of the pedal.) : Initial setting	

AS for the 1 and 2, refer to page 102.

(22) Pedal control 2		Complementary explanation	P.102
Function No. : 033		Pedal 4 is not used.	
Item : 1 Setting of the latch operation of the pedal 4		(Set level 1)	
Setting of the operation mode of the pedal 4 (input of the optional pedal)			
Indication	FLIP	[Contents] No latch operation (The feeding frame is lowered while depressing the pedal.)	
	LATCH	[Contents] Latch operation is made. (The feeding frame comes down by the first depress of the pedal, and it goes up by the second depress of the pedal.) : Initial setting	

(23) Chuck error detection control 2		Complementary explanation	P.102
Function No. : 034		This function is not used.	
Item : 1 Check sensor setting		(Set level 2)	
Indication	OFF	[Contents] Without chucking error detection control : Initial setting	
	ON	[Contents] With chucking error detection control	

(24) Intermediate presser control		
Function No. : 035	Function : Setting of the intermediate presser operation mode	
Item : 1 Intermediate presser control		(Set level 1)
Indication	SEW	[Contents] Intermediate presser is operative. (The intermediate presser comes down by the sewing data when the machine runs.) : Initial setting
	TRIAL	[Contents] Intermediate presser is operative. (The intermediate presser comes down by the sewing data both when the feed goes forward and backward.)
	OFF	[Contents] Intermediate presser is inoperative and fixed at the lifting position. (Set level 2)
Item : 2 Lowering timing		(Set level 1)
Indication	START	[Contents] The intermediate presser is lowered immediately before the sewing machine starts. (The intermediate presser is lowered when the sewing machine starts rotating.) : Initial setting
	O. PRSR	[Contents] The intermediate presser is lowered simultaneously with the feeding frame. (The intermediate presser comes down simultaneously when the last feeding frame of the sequence of feeding frame is lowered.)

(25) Wiper control		
Function No. : 036	Function : Wiper operation mode setting	
Item : 1 Operation mode setting : Normally, use at the standard setting.		(Set level 2)
Indication	OFF	[Contents] Wiper operation is rendered ineffective.
	Mg	[Contents] Signal of the magnet type wiper is rendered effective. : Initial setting
	AIR	[Contents] Signal of the pneumatic type wiper is rendered effective.
Item : 2 Sweeping position setting		(Set level 2)
Indication	UNDER	[Contents] Below-sweeping (Wiper sweeps below the intermediate presser.) : This function is operative when the optional side-sweeping wiper is used.
	BETWEEN	[Contents] Above-sweeping (Wiper sweeps above the intermediate presser.) : Initial setting
Item : 3 Sweeping position setting 2		(Set level 2)
Indication	UDET	[Contents] Wiper sweeps when the needle bar stops up.: Initial setting.
	AUDET	[Contents] Wiper sweeps when the needle bar stops at the upper dead point. It is possible when the main shaft stop position is set to its upper dead point.

(26) Thread clamp control : This function is not used with the standard LK-1930.		
Function No. : 037	Function : Wiper operation mode setting	
Item : 1 Thread clamp control		(Set level 2)
Indication	OFF	[Contents] The thread clamp is made inoperative. : Initial setting
	ON	[Contents] The thread clamp is made operative.
Item : 2 Thread clamp release operation timing		(Set level 2)
Indication	0 to 15	[Contents] The number of stitches to be sewn, from the state where the thread clamp retains the needle thread to the point at which it releases the thread, is specified. : Initial setting 0

(27) Thread breakage detector control		
Function No. 038	Function : Thread breakage detector operation mode setting	
Item : 1 Device control		(Set level 1)
Indication	OFF	[Contents] The thread breakage detecting device is ineffective.
	ON	[Contents] The thread breakage detecting device is effective. Initial setting
Item : 2 Setting the number of stitches required to stop the machine (at the sewing start)		(Set level 2)
Indication	0 to 15	[Contents] When thread breakage or slip-off of the thread occurred at the sewing start, the number of stitches required to stop the sewing machine from the detection to the stop is set. : Initial setting 8
Item : 3 Setting the number of stitches required to stop the machine (during normal operation)		(Set level 2)
Indication	0 to 15	[Contents] The number of stitches required to stop the sewing machine after the detection of thread breakage during normal operation is specified. : Initial setting 3

(28) Air pressure drop detecting control		
Function No. : 039	Function : Air pressure drop detector setting	
Item : 1 Detecting operation mode setting		
Indication	OFF	[Contents] The air pressure drop detecting function is rendered ineffective. (Magnet type initial setting)
	ON	[Contents] The air pressure drop detecting function is rendered effective. (Pneumatic type initial setting)

(29) Material end detection control : This function is not used with the LK-1930.		
Function No. : 040	Function : Material end detector setting	
Item : 1 Detection control		(Set level 2)
Indication	OFF	[Contents] The material end detection function is rendered ineffective. : Initial setting
	ON	[Contents] The material end detection function is rendered effective.
Remarks : Input terminal number is set with the function No. 74.		

(30) Tension controller No. 3 optional control		
Function No. : 041	Function : Setting of the tension controller No. 3	
Item : 1 Device control		(Set level 2)
Indication	OFF	[Contents] The tension controller No. 3 control is rendered ineffective.
	ON	[Contents] The tension controller No. 3 control is rendered effective. : Initial setting

(31) Thread trimming control		
Function No. : 044		Function : Thread trimmer setting
Item : 1 Device control		(Set level 2)
Indication	OFF	[Contents] Thread trimming operation is not made in any case. (Thread trimming operation is not made at the time of temporary stop and thread breakage.)
	ON	[Contents] Thread trimming operation is made. : Initial setting
Item : 2 Feed operation control at the time of thread trimming		(Set level 2)
Indication	ON	[Contents] This function moves cloth (feed) simultaneously at the time of thread trimming to prevent defective thread trimming. : Initial setting
	OFF	[Contents] Feed operation is not performed at the time of thread trimming.
Item : 3 Needle hole guide diameter setting		(Set level 2)
Indication	16 to 40 (mm)	[Contents] By setting the inner diameter of needle hole guide used, feed amount at the time of thread trimming is set to proper amount. : Initial setting 16

(32) Inverting mechanism control : It is effective when using the inverting device (FU02).		
Function No. 045		Function : Inverting mechanism setting
Item : 1 Device control		(Set level 2)
Indication	OFF	[Contents] The inverting mechanism control is rendered ineffective. (Even when an inversion pattern is used, the inverting mechanism control is not performed.)
	ON	[Contents] The inverting mechanism control is performed. : Initial setting
Item : 2 Automatic inversion Y coordinate setting		(Set level 2)
Indication	0 to 999 (x 0.1 mm)	[Contents] Inverting position (coordinate of Y direction) is set when the inversion is made automatically. (Initial setting 170.)

(33) Bobbin thread replacing device control : It is effective only when the bobbin thread replacing device is attached.		
Function No. : 047		Function : Bobbin thread replacing device setting
Item : 1 Device control		(Set level 2)
Indication	OFF	[Contents] Bobbin thread replacing device control is not made. : Initial setting
	ON	[Contents] Bobbin thread replacing device control is made.

(34) Sewing machine speed control 1		
Function No. : 050		Function : Starting speed of the sewing machine (start of sewing to after 2 stitches) is set.
Item : 1 Soft-start 1		(Set level 1)
Indication	2 to 9 X 100 r.p.m	[Contents] Starting speed of the sewing machine is set. (Initial setting 2)
Item : 2 Soft-start 2		(Set level 1)
Indication	2 to 25 X 100 r.p.m	[Contents] Speed after 1 stitch when the sewing machine is actuated is set. (Initial setting 6)
Item : 3 Soft-start 3		(Set level 1)
Indication	2 to 25 X 100 r.p.m	[Contents] Speed after 2 stitches when the sewing machine is actuated is set. (Initial setting 10)

(35) Sewing machine speed control 2		
Function No. : 051	Function : Starting speed (after 3 stitches to after 4 stitches) of the sewing machine is set.	
Item : 1 Soft-start 4		
Indication	2 to 25 X 100 r.p.m	[Contents] Speed after 3 stitches when the sewing machine is actuated is set. (Initial setting 25)
Item : 2 Soft-start 5		
Indication	2 to 25 X 100 r.p.m	[Contents] Speed after 4 stitches when the sewing machine is actuated is set. (Initial setting 25)

(36) X-Y JOG feed speed shifting time : Normally use this function without changing the standard setting.		
Function No. : 052	Function : The accelerating time is set when the key is consecutively pressed for the consecutive forward/backward of the feed or the like.	
Item : 1 First speed shifting time of JOG mode (Set level 2)		
Indication	1 to 99 x 100 ms	[Contents] Setting of the length of time from the JOG speed to the medium speed : Initial setting 4
Item : 2 Second speed shifting time of JOG mode (Set level 2)		
Indication	1 to 99 x 100 ms	[Contents] Setting of the length of time from the medium speed to the start of acceleration to the maximum speed : Initial setting 12
Item : 3 Third speed shifting time of JOG mode (Set level 2)		
Indication	5 to 99 x 100 ms	[Contents] Setting of the length of time to the maximum speed : Initial setting 50
Outline of X-Y JOG feed		
Indication		

(37) Key input time function		
Function No. : 053	Function : Setting the interval of the time that a consecutively pressed key reads in repeatedly	
Item : 1 First interval time : Normally use this function without changing the standard setting. (Set level 2)		
Indication	1 to 99 x 100 ms	[Contents] Setting of the interval time between the time when the first key is ON and the second one. : Initial setting 4
Item : 2 Second interval time : Normally use this function without changiing the standard setting. (Set value 2)		
Indication	1 to 99 x 100 ms	[Contents] Setting of the interval time after the third time of the read-in of the key : Initial setting 1
Item : 3 Third interval time (Set level 2)		
Indication	1 to 99 x 100 ms	[Contents] The length of time until the action is consecutively made at the time of forward/backward of the feed (the case where forward/backward of the feed is made even when the key is released.). : Initial setting 30

(38) Magnet type wiper operation time function		
Function No. : 054	Function : Time setting of the magnet type wiper operation	
Item : 1 Wiper-on time		(Set level 2)
Indication	0 to 999 ms	[Contents] Setting of the wiper ON time : Initial setting 50
Item : 2 Wiper return waiting time		(Set level 2)
Indication	0 to 999 ms	[Contents] Setting of the length of time between the completion of wiper operation and the operation of the next device : Initial setting 100

(39) Pneumatic type wiper operation time function : This function is not used with the standard machine.		
Function No. : 055	Function : Time setting of the pneumatic type wiper operation	
Item : 1 Wiper-on time		(Set level 2)
Indication	0 to 999 ms	[Contents] Setting of the wiper ON time : Initial setting 100
Item : 2 Wiper return waiting time		(Set level 2)
Indication	0 to 999 ms	[Contents] Setting of the length of time between the completion of the wiper operation and the operation of the next device : Initial setting 100

(40) Intermediate presser operation time function : Use this function without changing the standard setting.		
Function No. : 056	Function : Time setting of the intermediate presser operation	
Item : 1 Setting the length of waiting time after the intermediate presser has come down.		(Set level 2)
Indication	0 to 999 ms	[Contents] If the sewing machine starts running immediately after the intermediate presser has operated, the intermediate presser is likely to interfere with the needle bar since the intermediate presser has a mechanical delay. To prevent this, the sewing machine starts to run after the length of time specified for this item has passed. : Initial setting 50
Item : 2 Setting the length of waiting time after the intermediate presser has gone up.		(Set level 2)
Indication	0 to 999 ms	[Contents] After the intermediate presser has gone up, and after the specified time in this item has passed, the next operation is made. : Initial setting 150

(41) Feeding frame connection setting 1 : This function is not used with the standard machine.		
Function No. : 063	Function : Setting of the output device of the drive signal of feeding frame	
Item : 1 Setting of the feeding frame 1		(Set level 2)
Indication	0	[Contents] No connection
	1 to 16	[Contents] Output of the feeding frame is set to the terminal number. By this setting, the signal output device of the feeding frame 1 can be freely changed. : Initial setting 1
Item : 2 Setting of the feeding frame 2		(Set level 2)
Indication	0	[Contents] No connection
	1 to 16	[Contents] Output of the feeding frame is set to the terminal number. By this setting, the signal output device of the feeding frame 2 can be freely changed. : Initial setting 2
Item : 3 Setting of the feeding frame 3		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] Output of the feeding frame is set to the terminal number. By this setting, the signal output device of the feeding frame 2 can be freely changed.

(42) Feeding frame connection setting 2 : This function is not used with the standard machine.		
Function No. : 064	Function : Setting of the output device of the drive signal of feeding frame	
Item : 1 Setting of the feeding frame 4		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] Output of the feeding frame is set to the terminal number. By this setting, the signal output device of the feeding frame 4 can be freely changed.
Item : 2 Chuck sensor setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] Set to the chuck sensor input terminal number. By this setting, the signal input device of the chuck sensor can be freely changed.
Item : 3 Setting of the output at the time of start		(Set level 2)
Indication	LOW	[Contents] Active LOW output (When the power is ON, the feeding frame goes up when the feeding frame signal is in the low level.) : Initial setting
	HIGH	[Contents] Active HIGH output (When the power is ON, the feeding frame goes up when the feeding signal is in the high level.)

(43) Intermediate presser connection setting : This function is not used with the standard machine.		
Function No. : 065	Function : Setting of the output device of the drive signal of intermediate presser lifter	
Item : 1 Intermediate presser lifter setting		(Set level 2)
Indication	0	[Contents] No connection
	1 to 16	[Contents] Output of the intermediate presser lifter is set to the terminal number. By this setting, the signal output device of the intermediate presser lifter can be freely changed. : Initial setting 3
Item : 2 Setting of the actuator of adjusting the height of intermediate presser This function is not used with LK-1930. (Set level 2)		
Indication	0	[Contents] No connection
	1 to 16	[Contents] Output of the device for adjusting the height of intermediate presser is set to the terminal number. By this setting, the signal output device of the device for adjusting the height of intermediate presser can be freely changed. : Initial setting 4
Item : 3 Setting of the output at the time of start		(Set level 2)
Indication	LOW	[Contents] Active LOW output (When the power is ON, the presser goes up when the presser signal is in the low level.) : Initial setting
	HIGH	[Contents] Active HIGH output (When the power is ON, the presser goes up when the presser signal is in the high level.)

(44) Wiper and thread clamp connection setting : This function is not used with the standard machine.		
Function No. : 066	Function : Setting of the output device of the drive signal of wiper and thread clamp	
Item : 2 Wiper setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] Output of the feeding frame is set to the terminal number. By this setting, the signal output device of the wiper can be freely changed.
Item : 3 Thread clamp setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] Output of the thread clamp is set to the terminal number. By this setting, the output device of output signal of the thread clamp can be freely changed.

(45) Inverting clamp connection setting : Use this function without changing the standard setting.		
Function No. : 069	Function : Setting of the output device of the drive signal of the inverting clamp	
Item : 1 Inverting device setting		(Set level 2)
Indication	0	[Contents] No connection
	1 to 16	[Contents] Output of the inverting clamp is set to the terminal number. By this setting, the signal output device of the inverting clamp can be freely changed. : Initial setting 5

(46) Bobbin thread replacing device connection setting : Not used.		
Function No. : 072	Function : Setting of the output/input devices of the bobbin thread replacing device	
Item : 1 Setting of the signal output of the start of replacement		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] Output device of the signal of the start of replacement is set to the terminal number. By this setting, output signal device of the signal of the start of replacement can be freely changed.
Item : 2 Setting of the input of the signal during the replacement		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] Input device of the signal during the replacement is set to the terminal number. By this setting, the input device of the signal during the replacement can be freely changed.
Item : 3 Setting of the error detection signal input		(Set level 2)
Indication	0	[Contents] No connection (Error detection is not made.) : Initial setting
	1 to 16	[Contents] Input device of the signal of error occurring is set to the terminal number. By this setting, the input device of the signal of error occurring can be freely changed.

(47) Tension controller No. 3 connection setting : Use this function without changing the standard setting.		
Function No. : 073	Function : Setting of the output device of the drive signal of tension controller No. 3	
Item : 1 Setting of the drive device		(Set level 2)
Indication	0	[Contents] No connection
	1 to 16	[Contents] The output device of tension controller No. 3 is set to the terminal number. By this setting, the signal output device of the tension controller No. 3 can be freely changed. : Initial setting 6

(48) Material end detection device connection setting : This function is not used with the standard machine.		
Function No. : 074	Function : Setting of the input device of the signal of material end detection device.	
Item : 1 Material end detection sensor		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of material end detection signal is set to the terminal number. By this setting, the signal input device of the material end detection device can be freely changed.

(49) Bank selection connection setting : This function is not used with the standard machine. Supplemental explanation : P91		
Function No. : 075	Function : Setting of the number of terminals when the bank selection is made by the external signal.	
Item : 1 Setting of the number of terminals for bank selection		(Set level 2)
Indication	1	[Contents] Can be used up to 2 patterns.
	2	[Contents] Can be used up to 4 patterns. : Initial setting
	3	[Contents] Can be used up to 8 patterns.
	4	[Contents] Can be used up to 16 patterns.
Item : 2 Setting of the starting position of the terminal for bank selection		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The starting position of the terminal for bank selection is set. By this setting, only the number of the terminals specified in the item 1 can be used as the terminal for bank selection.

(50) External output terminal connection setting 1 : This function is not used with the standard machine.		
Function No. : 076	Function : Setting of the output device of the external output terminal	
Item : 1 Output terminal 0 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The output device of the external output 0 is set to the terminal number. By this setting, the signal output device of the external output 0 can be freely changed.
Item : 2 Output terminal 1 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The output device of the external output 1 is set to the terminal number. By this setting, the signal output device of the external output 1 can be freely changed.
Item : 3 Output terminal 2 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The output device of the external output 2 is set to the terminal number. By this setting, the signal output device of the external output 2 can be freely changed.

(51) External output terminal connection setting 2 : This function is not used with the standard machine.		
Function No. : 077	Function : Setting of the output device of the external output terminal	
Item : 1 Output terminal 3 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The output device of the external output 3 is set to the terminal number. By this setting, the signal output device of the external output 3 can be freely changed.
Item : 2 Output terminal 4 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The output device of the external output 4 is set to the terminal number. By this setting, the signal output device of the external output 4 can be freely changed.
Item : 3 Output terminal 5 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The output device of the external output 5 is set to the terminal number. By this setting, the signal output device of the external output 5 can be freely changed.

(52) External output terminal connection setting 3 : This function is not used with the standard machine.		
Function No. : 078	Function : Setting of the output device of the external output terminal	
Item : 1 Output terminal 6 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The output device of the external output 6 is set to the terminal number. By this setting, the signal signal device of the external output 6 can be freely changed.
Item : 2 Output terminal 7 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The output device of the external output 7 is set to the terminal number. By this setting, the signal output device of the external output 7 can be freely changed.
Item : 3 Output terminal 8 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The output device of the external output 8 is set to the terminal number. By this setting, the signal output device of the external output 8 can be freely changed.

(53) External output terminal connection setting 4 : This function is not used with the standard machine.		
Function No. : 079		Function : Setting of the output device of the external output terminal
Item : 1 Output terminal 9 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The output device of the external output 9 is set to the terminal number. By this setting, the signal output device of the external output 9 can be freely changed.
Item : 2 Output terminal 10 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The output device of the external output 10 is set to the terminal number. By this setting, the signal output device of the external output 10 can be freely changed.
Item : 3 Output terminal 11 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The output device of the external output 11 is set to the terminal number. By this setting, the signal output device of the external output 11 can be freely changed.

(54) External output terminal connection setting 5 : This function is not used with the standard machine.		
Function No. : 080		Function : Setting of the output device of the external output terminal
Item : 1 Output terminal 12 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The output device of the external output 12 is set to the terminal number. By this setting, the signal output device of the external output 12 can be freely changed.
Item : 2 Output terminal 13 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The output device of the external output 13 is set to the terminal number. By this setting, the signal output device of the external output 13 can be freely changed.
Item : 3 Output terminal 14 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The output device of the external output 14 is set to the terminal number. By this setting, the signal output device of the external output 14 can be freely changed.

(55) External output terminal connection setting 6 : This function is not used with the standard machine.		
Function No. : 081		Function : Setting of the output device of the external output terminal
Item : 1 Output terminal 15 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The output device of the external output 15 is set to the terminal number. By this setting, the signal output device of the external output 15 can be freely changed.

(56) External input terminal connection setting 1 : This function is not used with the standard machine.		
Function No. : 082		Function : Setting of the input device of the external input terminal
Item : 1 Input terminal 0 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of the external input 0 is set to the terminal number. By this setting, the signal input device of the external input 0 can be freely changed.
Item : 2 Input terminal 1 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of the external input 1 is set to the terminal number. By this setting, the signal input device of the external input 1 can be freely changed.
Item : 3 Input terminal 2 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of the external input 2 is set to the terminal number. By this setting, the signal input device of the external input 2 can be freely changed.

(57) External input terminal connection setting 2 : This function is not used with the standard machine.		
Function No. : 083		Function : Setting of the external input terminal
Item : 1 Input terminal 3 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of the external input 3 is set to the terminal number. By this setting, the signal input device of the external input 3 can be freely changed.
Item : 2 Input terminal 4 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of the external input 4 is set to the terminal number. By this setting, the signal input device of the external input 4 can be freely changed.
Item : 3 Input terminal 5 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of the external input 5 is set to the terminal number. By this setting, the signal input device of the external input 5 can be freely changed.

(58) External input terminal connection setting 3 : This function is not used with the standard machine.		
Function No. : 084		Function : Setting of the input device of the external input terminal
Item : 1 Input terminal 6 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of the external input 6 is set to the terminal number. By this setting, the signal input device of the external input 6 can be freely changed.
Item : 2 Input terminal 7 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of the external input 7 is set to the terminal number. By this setting, the signal input device of the external input 7 can be freely changed.
Item : 3 Input terminal 8 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of the external input 8 is set to the terminal number. By this setting, the signal input device of the external input 8 can be freely changed.

(59) External input terminal connection setting 4 : This function is not used with the standard machine.		
Function No. : 085		Function : Setting of the input device of the external input terminal
Item : 1 Input terminal 9 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of the external input 9 is set to the terminal number. By this setting, the signal input device of the external input 9 can be freely changed.
Item : 2 Input terminal 10 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of the external input 10 is set to the terminal number. By this setting, the signal input device of the external input 10 can be freely changed.
Item : 3 Input terminal 11 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of the external input 11 is set to the terminal number. By this setting, the signal input device of the external input 11 can be freely changed.

(60) External input terminal connection setting 5 : This function is not used with the standard machine.		
Function No. : 086	Function : Setting of the input device of the external input terminal	
Item : 1 Input terminal 12 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of the external input 12 is set to the terminal number. By this setting, the signal input device of the external input 12 can be freely changed.
Item : 2 Input terminal 13 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of the external input 13 is set to the terminal number. By this setting, the signal input device of the external input 13 can be freely changed.
Item : 3 Input terminal 14 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of the external input 14 is set to the terminal number. By this setting, the signal input device of the external input 14 can be freely changed.

(61) External input terminal connection setting 6 : This function is not used with the standard machine.		
Function No. : 087	Function : Setting of the input device of the external input terminal	
Item : 1 Input terminal 15 setting		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] The input device of the external input 15 is set to the terminal number. By this setting, the signal input device of the external input 15 can be freely changed.

(62) Pedal control 3		Supplementaly explanation : P.103
Function No. : 098	Function : Pedal operation mode is set.	
Item : 1 Setting of pedal 1 operation active		(Set level 1)
Indication	HIGH	HIGH active (operates when switch is opened.) : Solenoid type : Initial setting
	LOW	LOW active (operates when switch is closed.) : Pneumatic type : Initial setting
Item : 2 Setting of pedal 2 operation active		(Set level 1)
Indication	HIGH	HIGH active
	LOW	LOW active : Initial setting
Item : 3 Setting of pedal 3 operation active		(Set level 1)
Indication	HIGH	HIGH active
	LOW	LOW active : Initial setting

(63) Pedal control 4		Supplementaly explanation : P.103
Function No. : 099	Function : Pedal operation mode is set.	
Item : 1 Setting of pedal 4 operation active		(Set level 1)
Indication	HIGH	HIGH active
	LOW	LOW active : Initial setting

(64) Needle cooler control		
Function No. : 109	Function : Needle cooler control is set.	
Item : 1 Whether needle cooler control is provided or not is set.		(Set level 2)
Indication	OFF	[Contents] Output signal for solenoid valve is not transmitted : Initial setting
	ON	[Contents] Output signal for solenoid valve is transmitted.
Item : 2 Output destination of needle cooler is set.		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] Output terminal for solenoid valve is set.

(65) Heat-wire thread trimming control : Not used with the standard sewing machine.		
Function No. : 110	Function : Heat-wire thread trimming control.	
Item : 1 Whether heat-wire thread trimming control is provided or not is set.		(Set level 2)
Indication	OFF	[Contents] Heat-wire thread trimming control is not performed. : Initial setting
	ON	[Contents] Heat-wire thread trimming control is performed.
Item : 2 Input terminal of thread trimming completion signal is set.		(Set level 2)
Indication	0	[Contents] No connection : Initial setting
	1 to 16	[Contents] Input terminal is set.

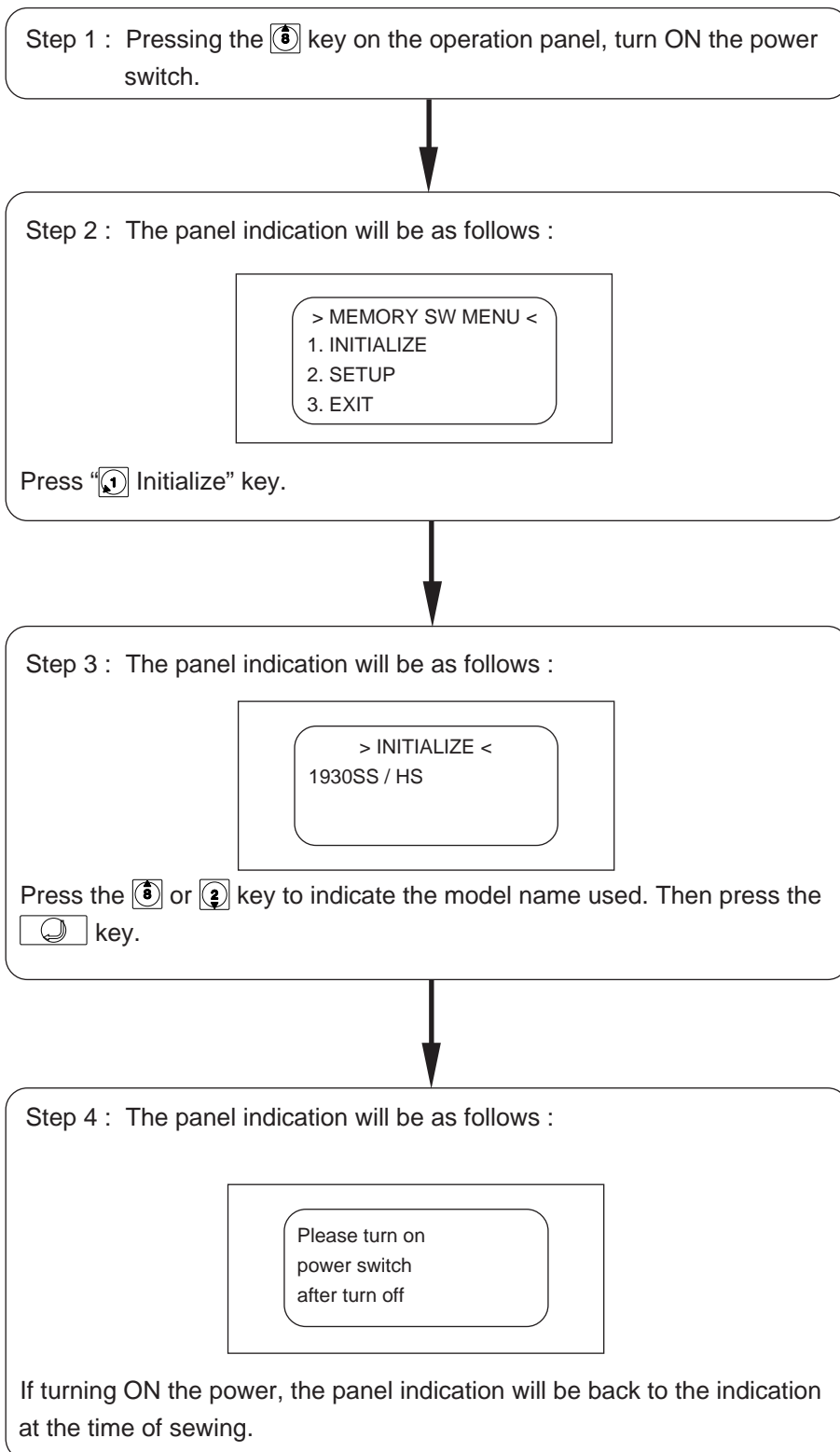
(66) Setting of the feeding frame operation timing		
Function No. : 111	Function : Timing after the feeding frame has come down is set.	
Item : 1 Delay time after output of feeding frame lowering signal is set.		(Set level 2)
Indication	0 to 999 X 1 mS	[Contents] Delay time from output of feeding frame lowering signal to lowering of intermediate presser is set. Initial setting : 170 mS (If the setting is 170 mS or less, the intermediate presser may come in contact with the feeding frame.)
Item : 2 Setting of feeding frame lowering sensor : Not used with the standard machine.		(Set level 2)
Indication	0 to 999 X 1 mS	[Contents] Sensor to securely detect lowering of the feeding frame is used and the delay time when the machine is actuated is set. : Initial setting : 500 mS

(67) Setting of needle thread tension disk floating control		
Function No. : 112	Function : Setting of disk floating solenoid (optional) control	
Item : 1 Whether solenoid operation is provided or not is set.		(Set level 2)
Indication	OFF	[Contents] No output : Initial setting
	ON	[Contents] Output is performed.
Item : 2 Delay time setting (ON)		(Set level 2)
Indication	0 to 999 X 1 mS	[Contents] Delay time before operating the solenoid is set. : Initial setting : 100 mS
Item : 3 Delay time setting (OFF)		(Set level 2)
Indication	0 to 999	[Contents] Delay time from completion of solenoid operation to the next control is set. : Initial setting : 0 mS

8. INITIALIZATION OF THE MEMORY SWITCH (LK-1930)

(1) HOW TO INITIALIZE

When the first setting state of the memory switch is not known, or the sewing machine fails to operate well, the contents set in the memory switch can be restored to the state at the time of delivery by means of the following operation.



(2) TABLE OF THE INITIAL SETTING

The initial value of the memory switch is as shown in the following table.

Function No.	Function	Item	Start level	Initial setting			
				1930 SS / HS	1930 SA / HA	1930 SS / HS -FU02S	1930 SA / HA -FU02S
001	Indicating language setting	1. Language specification	2	ENG			
002	Scale function setting	1. Selection of enlargement/reduction method	1	STITCH			
003	Jog function setting	1. Mode specification	1	2ND			
		2. Use of fixed retracted position	2	OFF			
007	Mechanical origin retrieval	1. Operation of each sewing cycle	2	OFF			
		2. Operation at the time of move limit error	2	ON			
008	Return-to-origin operation	1. Mode setting	1	Route		TRACE	
		2. Return at needle bar upper dead point	1	OFF		ON	
009	Counter indication setting	1. Bobbin thread counter indication	1	Up			
		2. Production counter indication	1	ON			
		3. Number of digits	2	3 FIG			
010	Pattern read-in operation	1. Read-in operation setting	2	Set up			
		2. Constant read-in	2	OFF			
011	Order of pattern read-in	1. Order of read-in	2	FD>SAR			
		2. Read-in media setting	2	FD>PROM			
012	Idling operation	1. Speed changing function	2	OFF			
013	Thread trimming after temporary stop	1. Thread trimming operation after temporary stop	1	STOP			
016	External input command	1. Length of time-out	2	0			
018	Thread trimming command	1. Thread trimming in sewing pattern	2	ON			
019	Termination command	1. Temporary stop after completion of sewing	2	OFF			
021	Bank function	1. Number of banks	2	0			
		2. Read-in (memory) method	2	SEQ			
		3. Selection method	2	Ext			
022	Pattern combination function	1. Mode	2	NO USE			
023	F1, F2 key setting	1. F1 key	1	2			
		2. F2 key	1	25			
027	Upper position control of main motor	2. Change-over of upper position, upper dead point	1	UDET			
		3. Holding mode of the servo motor at the main shaft stop position is set.	1	OFF			
028	Speed control of main motor	1. Acceleration mode	1	0			
029	XY synchronized control of main motor	1. Sewing pitch to sewing speed	1	0			
		2. Timing delay setting	1	0			
030	Feeding frame control 1	1. Order at the time of automatic opening/closing	2	0			
		2. Order of opening/closing at the time of pedal operation	1	0	1	0	2
		3. Order of closing/opening at the time of temporary stop	1	0	1	0	2
031	Feeding frame control 2	1. Opening order at the completion of sewing	2	0			
		2. Opening control at the completion of sewing	1	ATSTART			
		3. Constant holding	1	OFF			
032	Pedal input control 1	1. Pedal 1	1	FLIP	LATCH	FLIP	LATCH
		2. Pedal 2	1	Latch			
		3. Pedal 3	1	Latch			
033	Pedal input control 2	1. Pedal 4	1	Latch			

Function No.	Function	Item	Start level	Initial setting			
				1930 SS / HS	1930 SA / HA	1930 SS / HS -FU02S	1930 SA / HA -FU02S
034	Chuck error detection	1. Control	2	OFF			
035	Intermediate presser control	1. Control	1	SEW			
		2. Lowering timing	1	START			
036	Wiper device control	1. Setting of operation device	1	Mg			
		2. Sweeping position	2	BETWEEN			
		3. Setting 2 of sweeping position	2	AUDET			
037	Thread clamp device control	1. With/without control	2	OFF			
		2. Opening operation timing	2	0			
038	Thread breakage detection	1. With/without control	1	ON			
		2. Number of stitches required to stop the machine at the sewing start	2	8			
		3. Number of stitches required to stop the machine during normal operation	2	3			
039	Air pressure detection	1. With/without detection	1	OFF	ON		
040	Material end detection	1. With/without detection	2	OFF			
041	Tension controller No. 3	1. With/without control	2	ON			
044	Thread trimming device	1. With/without control	2	ON			
		2. Feed operation control at the time of thread trimming	2	ON			
		3. Setting of needle hole guide diameter	2	16			
045	Inverting mechanism	1. With/without control	2	ON			
		2. Automatic inverting Y coordinate	2	170 (pulses)			
047	Bobbin thread replacement device	1. With/without control	2	OFF			
50	Sewing machine speed control 1	1. Soft start 1 2 (X 100 r.p.m)	1	2 (x 100 rpm)			
		2. Soft start 2 6 (X 100 r.p.m.)	1	6 (x 100 rpm)			
		3. Soft start 3 10 (X 100 r.p.m)	1	10 (x 100 rpm)			
51	Sewing machine speed control 2	1. Soft start 4 25 (X 100 r.p.m)	1	25(x 100 rpm)			
		2. Soft start 5 25 (X 100 r.p.m)	1	25(x 100 rpm)			
052	XY jog feed control	1. First step time	2	4 (x 100 ms)			
		2. Second step time	2	12 (x 100 ms)			
		3. Third step time	2	50 (x 100 ms)			
053	Key input time setting	1. First interval time	2	4 (x 100 ms)			
		2. Second interval time	2	1 (x 100 ms)			
		3. Third interval time	2	30 (x 100 ms)			
054	Magnet type wiper Setting of operation time	1. Energized time	2	50 (ms)			
		2. Time to wait for return	2	100 (ms)			
055	Pneumatic type wiper Setting of operation time	1. Energized time	2	100 (ms)			
		2. Time to wait for return	2	100 (ms)			
056	Setting of operation time of intermediate presser	1. Time to wait for lowering	2	50 (ms)			
		2. Time to wait for raising	2	150 (ms)			
063	Feeding frame device connection 1	1. Output terminal number of feeding frame device 1	2	1			
		2. Output terminal number of feeding frame device 2	2	2			
		3. Output terminal number of feeding frame device 3	2	0			
064	Feeding frame device connection 2	1. Output terminal number of feeding frame device 4	2	0			
		2. Input terminal number of chuck sensor	2	0			
		3. Output when the power is ON.	2	LOW	HIGH	LOW	HIGH
065	Intermediate presser device connection	1. Output terminal number of intermediate presser device	2	3			
		2. Output terminal number of height adjusting device	2	4			
		3. Output when the power is ON.	2	LOW			
066	Wiper device connection	2. Output terminal number of pneumatic type wiper	2	0			
		3. Output terminal number of thread clamp device	2	0			
069	Inverting device connection	1. Output terminal number of inverting device	2	5			

Function No.	Function	Item	Start level	Initial setting			
				1930 SS / HS	1930 SA / HA	1930 SS / HS -FU02S	1930 SA / HA -FU02S
072	Bobbin thread replacement device connection	1. Output terminal number of replacement start signal	2	0			
		2. Input terminal number of replacement being made signal	2	0			
		3. Input terminal number of error signal	2	0			
073	Tension controller No. 3 connection	1. Output terminal number to drive unit	2	6			
074	Material end detection device connection	1. Input terminal number of sensor signal	2	0			
075	Bank selection connection	1. Number of selection terminals	2	2			
		2. Terminal number of start of selection	2	0			
076	External output connection 1	1. Output terminal number of external output 0	2	0			
		2. Output terminal number of external output 1	2	0			
		3. Output terminal number of external output 2	2	0			
077	External output connection 2	1. Output terminal number of external output 3	2	0			
		2. Output terminal number of external output 4	2	0			
		3. Output terminal number of external output 5	2	0			
078	External output connection 3	1. Output terminal number of external output 6	2	0			
		2. Output terminal number of external output 7	2	0			
		3. Output terminal number of external output 8	2	0			
079	External output connection 4	1. Output terminal number of external output 9	2	0			
		2. Output terminal number of external output 10	2	0			
		3. Output external number of external output 11	2	0			
080	External output connection 5	1. Output terminal number of external output 12	2	0			
		2. Output terminal number of external output 13	2	0			
		3. Output terminal number of external output 14	2	0			
081	External output connection 6	1. Output terminal number of external output 15	2	0			
082	External input connection 1	1. Input terminal number of external input 0	2	0			
		2. Input terminal number of external input 1	2	0			
		3. Input terminal number of external input 2	2	0			
083	External input connection 2	1. Input terminal number of external input 3	2	0			
		2. Input terminal number of external input 4	2	0			
		3. Input terminal number of external input 5	2	0			
084	External input connection 3	1. Input terminal number of external input 6	2	0			
		2. Input terminal number of external input 7	2	0			
		3. Input terminal number of external input 8	2	0			
085	External input connection 4	1. Input terminal number of external input 9	2	0			
		2. Input terminal number of external input 10	2	0			
		3. Input terminal number of external input 11	2	0			
086	External input connection 5	1. Input terminal number of external input 12	2	0			
		2. Input terminal number of external input 13	2	0			
		3. Input terminal number of external input 14	2	0			
087	External input connection 6	1. Input terminal number of external input 15	2	0			

Function No.	Function	Item	Start level	Initial setting			
				1930 SS / HS	1930 SA / HA	1930 SS / HS -FU02S	1930 SA / HA -FU02S
098	Pedal control 3	1. Setting of pedal 1 operation active	1	HIGH	LOW	HIGH	LOW
		2. Setting of pedal 2 operation active	1	LOW			
		3. Setting of pedal 3 operation active	1	LOW			
099	Pedal control 4	1. Setting of pedal 4 operation active	1	LOW			
		2. Setting of start switch operation active	1	LOW			
109	Needle cooler control	1. Whether needle cooler control is provided or not is set.	2	OFF			
		2. Setting of output destination of needle cooler	2	0			
110	Heat-wire thread trimming control	1. Whether heat-wire thread trimming control is provided or not is set.	2	OFF			
		2. Setting of input terminal of thread trimming completion signal.	2	0			
111	Setting of feeding frame operation timing	1. Delay time after signal output of lowering of feeding frame	2	170(ms)			
		2. Setting of feeding frame lowering sensor	2	500(ms)			
112	Setting of needle thread tension disk floating control	1. Whether to operate disk floating solenoid or not is set.	2	OFF			
		2. Delay time setting (ON)	2	100			
		3. Delay time setting (OFF)	2	0			

**(Caution) 1 For the subclasses not described in the above table, the setting may vary.
2. The contents of setting may vary according to the revision of System ROM.
(The above table is for System ROM Revision 008.)**