

Content Index:

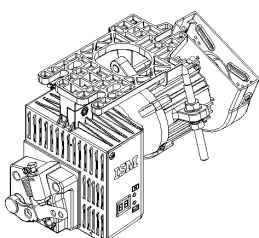
1. For safe operation
2. Installation manual
3. Operating way for control box panel and parameter setting
4. General Parameter List

1. For safe operation

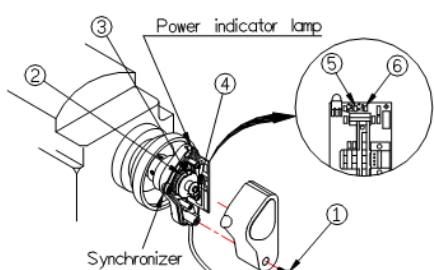
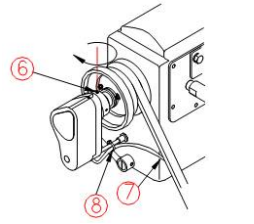
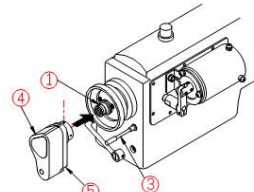
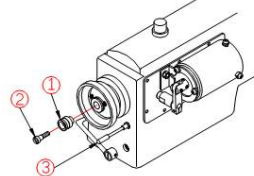
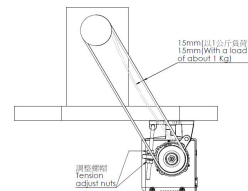
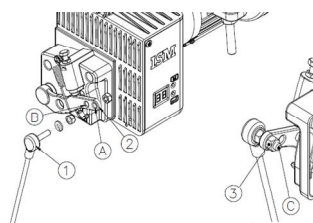
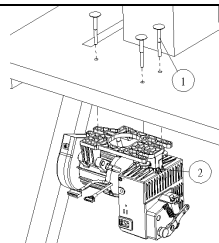
- 1.1 Prior the use of this product, please read the instruction Manual. Keep this Instruction Manual and the user may read it at anytime when necessary.
- 1.2 Before turn on the power, be sure to check the power voltage and phase agreeing with the nameplate that indicated in the control box.
 - * The operated voltage should follow the nameplate with ±10% range.
- 1.3 Grounding the machine is always necessary for safe and normal operation.
- 1.4 Check lubricating oil prior to operation.
- 1.5 Check that rotational direction of the motor is correct prior to operation.
- 1.6 So as to prevent personal injuries during operation, be careful not to allow your head and hands to come close to the moving parts. Also never try to stop it with external forces.
- 1.7 For the following conditions, turn off the power or disconnect the power plug from receptacle:
 - * For threading needle or replacing bobbin.
 - * To plug or unplug any connectors from control box.
 - * For maintenance and repairing.
 - * When machine is not at use, inspected or adjusted.
 - * When lightning and thunder occurs.
- 1.8 Operating environment
 - * Operating environment temperature 5°C~45°C.
 - * Operating environment temperature 30%~95%.
 - * Not close to high frequency or heat sources (such as electric heater).
 - * Dew, corrosive gases, and dust places should be avoided.
 - * Indoor use only, avoid the direct sunlight.
- 1.9 Warranty and maintenance
 - * The warranty period of the product is 18 months from the date of manufacture.
 - * Warranty void if improper use / man-made damage / voltage abnormal / bad grounding / self-dismantling / self-repair.
 - * Warranty void if foreign matter into / natural disasters / lightning / salt corrosion / damp / fall / self-transport damage.
 - * Repair parts should be provided by our company / maintenance person should be approved by our company.

2. Installation manual

- 2.1 Procedure for motor installation :
 - 2.1.1 Check whether the motor exterior is ok and use the accessory according to

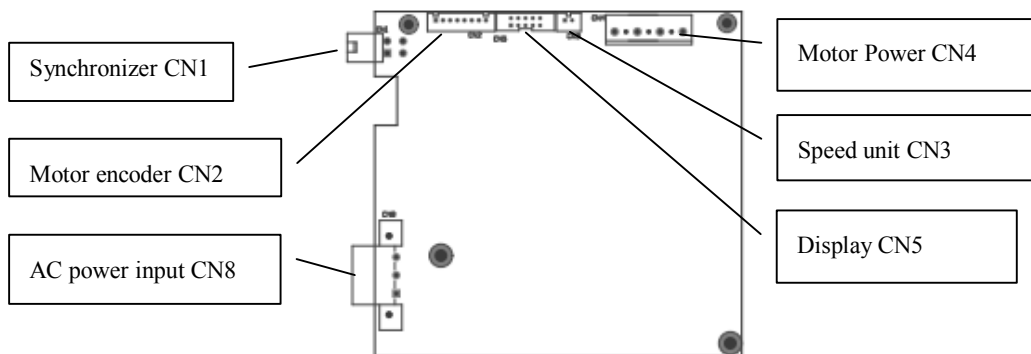


- 2.2 For motor set up :
 - 2.2.1 Drill three holes of 9 mm on the machine table, fixed the motor (suspending bracket Assy.) under the table; be sure that both pulleys of machine and motor should be parallel.
 - 2.2.2 Put the carriage bolts to table holes(①) Then using(②) spacer、spring washer、sleeve nut to fix it.
- 2.3 Installing the connecting rod :
 - 2.3.1 Fix connecting rod ① to install hole A or B of pedal sensor lever ② with nut ③.
 - 2.3.2 If connecting rod ① is installed in the hole A, lengthen the pedal depressing stroke, and the pedal operation at medium speed will be easier to control.
 - 2.3.3 If connecting rod ① is installed in the hole B, shorten the pedal depressing stroke, and the pedal operation will have quicker response.
- 2.4 Pulley rate adjustment :
 - 2.4.1 Installation of Pulley which Between Motor and machine.
 - 2.4.2 Up-down shift tension adjust nuts.
 - Adjust belt tension force.
 - 2.4.3 Adjust belt tension force ranging from 15mm/1kgf located in the center position.
- 2.5 Fixing the synchronizer :
 - 2.5.1 Securely fix adapter ① in the tapped hole in the main shaft of sewing machine using screw ②. Fix 5 supporting rod ③ on the machine head
 - 2.5.2 Then insert supporting rod ③ into slit ⑤ on the synchronizer stopper. Fit synchronizer ④ to adapter ① in the direction of the arrow.
 - 2.5.3 Tighten set screw ⑥ in synchronizer by turning it in the direction of the arrow. Fixed cord ⑦ of the synchronizer on supporting rod ③ using cord clamp ⑧.
- 2.6 Fixing the synchronizer :
 - 2.6.1 Loosen screw ① and remove the cover. Then loosen screw ④ located at the top of the shaft.
 - 2.6.2 Adjust the machine's pulley manually to needle down position. (the same direction as the machine rotates.)
 - 2.6.3 Adjust the photo disc ② till LED ⑤ is on. (the same direction as the machine rotates.)
 - 2.6.4 Repeat step 2. Then adjust the sewing machine's pulley manually till needle remains in needle up position.
 - 2.6.5 Adjust the photo disc ③ till LED ⑥ is on.
 - Note: Prior the execution of this procedure, never rotate pulley and photo disc ②.
 - 2.6.6 Tighten the screw ④.
 - 2.6.7 Confirm the needle up / down positions of the by operating the pedal.
 - In case of error, please repeat steps (2) through
 - 2.6.8 Set the cover and tighten it with screw ①.

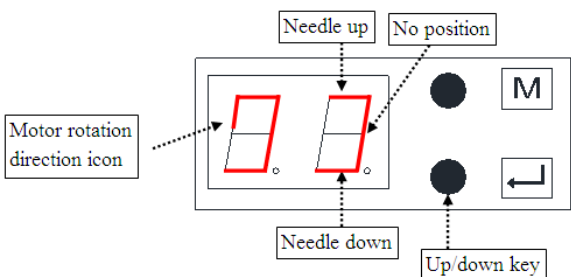


3. Control box How to connect the Cordially & Parameter setting

3.1 Connector Diagram



3.2 Panel key functions



3.3 Error message indicator

Error Code	Description of error detected
E.1 or E.A	Synchronizer failure
E.2	Motor is not rotating
E.5	Speed unit output failure
E.8	Setting speed over the motor maximum speed
E.9	IPM is failed
E.0 or E.C	Braking timing error

3.4 Parameter setting

Select the machine type and motor specification STEPS

1. Press **M** and **↩** simultaneously, and turn ON the power until panel display "rS" then release the key.
2. Press **M** key, thus machine type will be cycled increased.
3. Press **↩** key to save and enter motor specification selection.
4. Press **M** key, thus motor specification will be cycled increased.
5. Press **↩** key to save.

	Machine Type
LS	Lock Stitch
OL	Overlock.
PB	Postbed
TN	Twin Needle
CS	ChainStitch
SP	Special
CM	Skiving Machine
O2	2 Output Overlock

	Motor Type
45	SM71S-4550 motor
55	SM71S -5535 motor
65	SM71S -6535 motor
U6	SM80-6535 motor
d8	SM7-3570 motor
dA	SM7-6560 motor

Parameter setting STEPS

1. Press **M** key and turn on the power until the panel display "PA". Release **M** key, the panel display parameters number. (or)
2. In normal mode, then press **M** key until the panel display "PA". Release **M** key, the panel display parameters number.

Parameter Setting Key Description

M	↩
1. Press one time to increase Number. 2. Hold Press to decrease number	1. Press one time to enter Parameter or parameter value. 2. Press 2 Seconds to Save Parameter value

General Parameter List

NO.	Item	Range	Unit	LS	OL	PB	TN	CS	SP	CM
P1	Sewing machine maximum speed	2 ~ 80	*100spm	40	60	20	25	40	8	18
P2	Sewing machine positioning speed	10 ~ 25	*10spm	20	20	20	20	20	10	20
P3	Motor's pulley dimension	50 ~ 100 (note1)	*1mm	75	85	65	65	75	50	75
P4	Machine's pulley dimension	50 ~ 120 (note1)	*1mm	75	55	65	80	65	120	75
P5	Pulley ratio setting mode	ON: Refer motor pulley ratio measurement OF: Refer P.3 and P.4 AT: Auto measurement	--	AT	AT	AT	AT	AT	AT	OF
P6	Virtual needle down positioning function	ON: Valid OF: Invalid	--	OF	OF	OF	OF	OF	OF	OF
P7	The angles between virtual needle down positioning point and needle up signal	70 ~ 250	*1°	180	180	180	180	180	180	180
P8	Soft start stitches	0 ~ 19	*1 stitch	0	0	0	0	0	0	0
P9	Soft start speed	25 ~ 200	*10spm	40	40	25	40	40	40	40
F1	Synchronizer mode	ON: Valid OF: Invalid	--	OF	OF	OF	OF	OF	OF	ON
F2	Motor rotating direction	ON: Clock wise OF: Counter Clock wise	--	ON	OF	ON	ON	OF	OF	OF
F4	Accelerating speed slope	1 ~ 8 (fast-slow)	--	3	3	3	3	3	4	8
F5	Decelerating speed slope	1 ~ 14 (fast-slow)	--	4	3	6	6	6	10	3
F9	Motor's braking force when positioning	1 ~ 8	--	note2	note2	note2	note2	note2	note2	note2
L1	Auto needle up positioning when power on	ON: Valid OF: Invalid	--	ON	ON	ON	ON	ON	ON	ON
L3	Reversed revolution angles after pedal heel down	0~250	*1°	0	0	0	0	0	0	0
L4	Increase motor current limitation	0~20	--	0	0	0	0	0	0	0
L5	Function when pedal is heeled. (note3)	0: needle up 1: foot lifting 2: none 3: needle up & foot lifting	--	0	0	0	0	0	0	0
L6	Thread Suction control mode (note3)	0: Output when motor rotates 1: Middle	--	0	0	0	0	0	0	0
L7	Thread SD output ON stitches(Middle)	0~99	*1 stitch	0	0	0	0	0	0	0
L8	Thread SD output OFF stitches(Middle)	0~99	*10 stitch	0	0	0	0	0	0	0
L9	Thread SD_OUT acts time when motor stops	0~10	*100ms	0	0	0	0	0	0	0

note1. 1digital display is hundreds, 2digital display are tens and units respectively

note2. This value depends on motor specification.

note3. The function is valid in SV-72 control box