SV-71
INSTRUCTION MANUAL

Ver – 1A

For safe operation

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.

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.

3. Grounding the machine is always necessary for safe and normal operation.

4. Check lubricating oil prior to operation.

5. Check that rotational direction of the motor is correct prior to operation.

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.

7. For the following conditions, turn off the power or disconnect the power plug from receptacle.
   7.1 For threading needle or replacing bobbin.

   7.2 To plug or unplug any connectors from control box.

   7.3 For maintenance and repairing.

   7.4 When machine is not at use, inspected or adjusted.

   7.5 When lightning and thunder occurs.

8. Repairing, remodeling and adjusting works must only be done by appropriately trained technicians or specially skilled personnel.

I. Connector Diagram

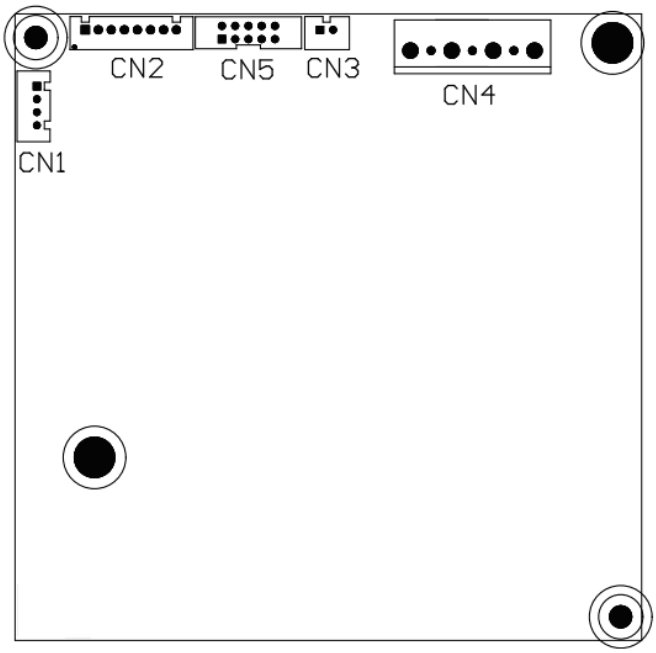


Fig.1

Connector	Connectors' description
CN1	Synchronizer connector
CN2 :	Motor encoder connector
CN3	Speed unit connector
CN4	Motor power line connector
CN5	Operation panel connector

II. Operating way

For regular operations:(Turning the power switch on without pressing any button)

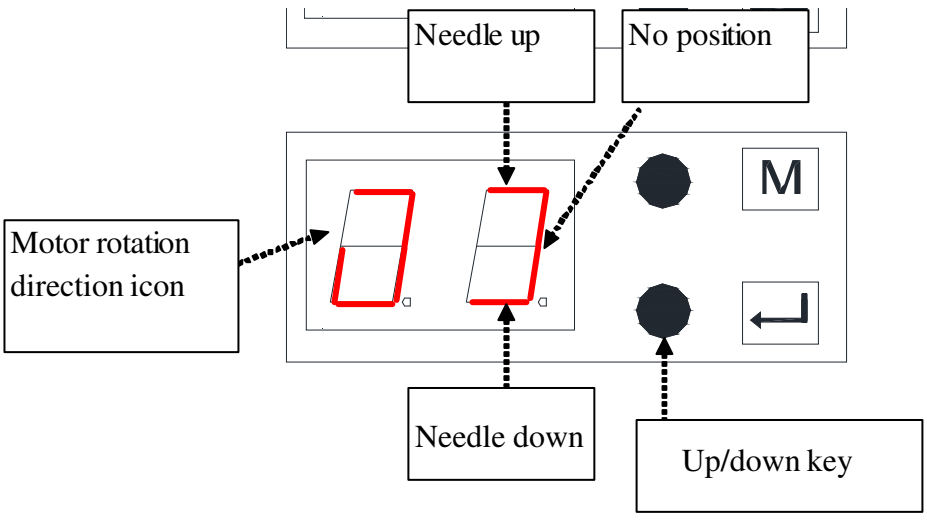
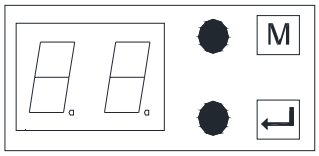


Fig.2)

III. Setting way



1. Motor pulley ratio measurement (Compulsory procedure when installing the motor for the first time to establish optimal motor performance)

STEPS

1. Press ↵ key and turn ON the POWER simultaneously until the panel display the pulley ratio flickeringly.

   Release ↵ key.

2. Press the "pedal" forward. The motor will rotate 7 turns to measure pulley ratio automatically.

3. Press ↵ key to save the pulley ratio.

4. Please restart the machine.

2. 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.

6. Please restart the machine.

Machine Type	
LS	Lock Stitch
OL	Overlock.
PB	Postbed
TN	Twin Needle
CS	ChainStitch

Motor Type	
45	450W motor
55	550W motor
65	650W motor
U6	SM80-6535 motor

3. Parameter setting(There are two ways can enter parameter setting.)

3-1. Press M key and turn on the power until the panel display “PA. Release M key, the panel display parameters number. (or)

3-2. In normal mode then press M key until the panel display “PA”. Release M key, the panel display parameters number.

4. <u>Parameter Setting Key Description</u>

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

5. Parameter List

No	Item	Range	Unit	Lock -stitch	Over -lock	Post -bed	Twin -needle	Chain -stitch	Special
P1	Sewing machine maximum speed	2 ~ 80	*100spm	40	60	20	25	40	8
P2	Sewing machine positioning speed	10 ~ 25	*10spm	20	20	20	20	20	10
P3	Motor's pulley dimension	50 ~ 100 (note1)	*1mm	75	85	65	65	75	50
P4	Machine's pulley dimension	50 ~ 120 (note1)	*1mm	75	55	65	80	65	120
P5	Pulley ratio setting mode	ON: Refer motor pulley ratio measurement OF: Refer P.3 and P.4 P.3 P.4	--	ON	ON	ON	ON	ON	ON
P6	Virtual needle down positioning function	ON: With the function OF: No such function.	--	OF	OF	OF	OF	OF	OF
P7	The angles between virtual needle down positioning point and needle up signal ,	70 ~ 250 (note1)	*1°	180	180	180	180	180	180
P8	Soft start stitches	0 ~ 19	*1 stitch	0	0	0	0	0	0
P9	Soft start speed	25 ~ 200 (note1)	*10spm	40	40	25	40	40	40
F1	Synchronizer mode or Clutch mode	ON: Clutch mode(No E.1) E.1) OF: Synchronizer mode	--	OF	OF	OF	OF	OF	OF
F2	Motor rotating direction	ON: Counterclockwise OF: Clockwise	--	ON	OF	ON	ON	OF	OF

F3	Motor static brake function	0: No such function 1 ~ 20: The bigger value means the more powerful braking force. ,	--	0	0	0	0	0	0
F4	Accelerating speed slope choice	1 ~ 8: The bigger value means slowly accelerating.	--	3	3	3	3	3	6
F5	Decelerating speed slope choice	1 ~14 The bigger value means the longer time of decelerating. , 15 No fast position function	--	3	3	3	3	3	9
F6	Motor current limitation		--	Note2	Note2	Note2	Note2	Note2	Note2
F7	Speed loop gain adjustment	1~6	--	1	1	1	1	1	1
F8	E.1 and E.A checking time E.1 E.A	1~8	*1second	1	1	1	1	1	8
F9	Motor's braking force when positioning 定	1~6	--	Note2	Note2	Note2	Note2	Note2	Note2
L1	Auto needle up positioning when power on	ON : With the function OF : No such function.	--	ON	ON	ON	ON	ON	ON
L2	Decelerating speed current limitation	1 ~ 8 The bigger value means smaller current.	--	4	4	4	4	4	4
L3	Sewing machine reversed revolution angles after pedal heel down		*1	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.

IV. Error message indicator

Error Code	Problem of Error	Check Items
E.1 or E.A	Synchronizer failure	-Synchronizer connector is loosen or line is broken.
E.2	Motor is not rotating	-Machine head is locked. -Motor is locked. -Motor power line or encoder line. is broken, or connector is loosen.
E.5	Speed unit output failure	-Speed unit connector is loosen -Speed unit is broken -Connecting rod installation is incorrect
E.6	CPU error	-Noise interference (Ex. High frequency machine, welding machine)
E.8	Setting speed over the motor maximum speed.	-Parameter No.1 setting value is too large -Motor pulley diameter is too small -Motor pulley ratio setting error
E.9	Power transistor module is failed.	-Power module overheated -Short circuit or low voltage -Current is too high -Increase value of parameter F6
E.0 or E.C	Braking timing error	-Increase value of parameter F5