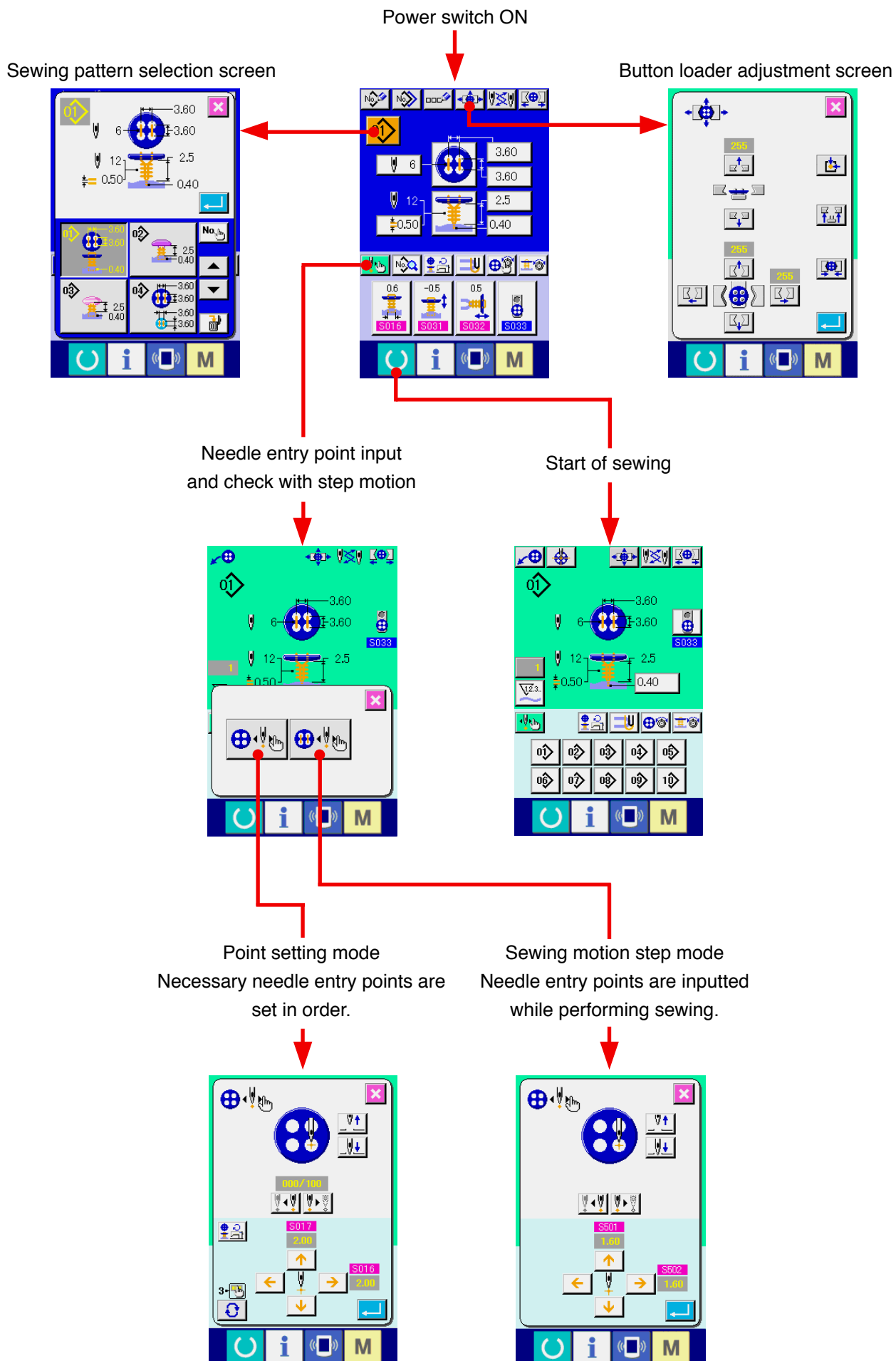


SIMPLIFIED MANUAL

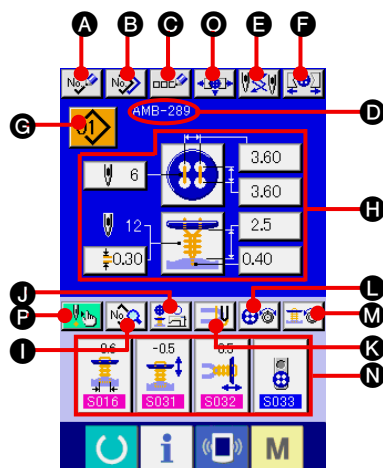
AMB-289/IP-420

1. BASIC OPERATION OF THE SEWING MACHINE



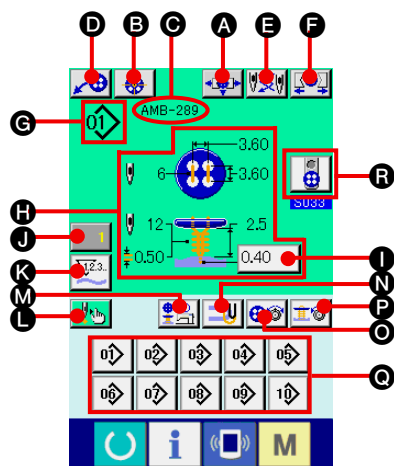
<Explanation of the display at the time of independent sewing>

1) Data input screen



Symbol	Display	Description
A	PATTERN NEW REGISTER button	Pattern No. new register screen is displayed. → Refer to "22. PERFORMING NEW REGISTER OF SEWING PATTERN" in Operation section of INSTRUCTION MANUAL.
B	PATTERN COPY button	Sewing pattern copy screen is displayed. → Refer to "23. COPYING SEWING PATTERN" in Operation section of INSTRUCTION MANUAL.
C	PATTERN NAME SETTING button	Sewing pattern name input screen is displayed. → Refer to "6. NAMING THE PATTERN" in Operation section of INSTRUCTION MANUAL.
D	PATTERN NAME display	Name which has been inputted to the sewing pattern being selected is displayed.
E	NEEDLE CHANGE button	This button performs origin retrieval, makes needle come down, and displays the needle change screen. → Refer to "34. PERFORMING CHANGE OF NEEDLE" in Operation section of INSTRUCTION MANUAL.
F	CHUCK CLOSE/ OPEN button	This button performs close/open of the chuck. Chuck is opened as long as the button is pressed.
G	PATTERN SELECTION button	Pattern No. being selected at present is displayed on this button and when the button is pressed, the pattern No. change screen is displayed. → Refer to "5. PERFORMING PATTERN No. SELECTION" in Operation section of INSTRUCTION MANUAL.
H	CONTENTS OF PATTERN display	Contents of the pattern which is registered to the pattern No. being selected at present are displayed. The respective display sections consist of buttons and can be changed. The contents of display differ in accordance with the sewing method. * Sewing flat/wrapped-around button with blindstitch → Refer to "8. PERFORMING DATA SETTING OF SEWING BUTTON WITH BLINDSTITCH (SHANK/ MARBLE BUTTON)" and "9. PERFORMING DATA SETTING OF SEWING BUTTON WITH BLINDSTITCH (FLAT BUTTON)" in Operation section of INSTRUCTION MANUAL. * Sewing flat button directly to cloth → Refer to "10. PERFORMING DATA SETTING OF SEWING FLAT BUTTON DIRECTLY TO CLOTH" in Operation section of INSTRUCTION MANUAL. * Sewing flat button with blindstitch → Refer to "11. PERFORMING DATA SETTING OF SEWING FLAT BUTTON WITH BLINDSTITCH" in Operation section of INSTRUCTION MANUAL. * Counter/stay button → Refer to "12. PERFORMING SETTING OF COUNTER/STAY BUTTONS" in Operation section of INSTRUCTION MANUAL. * Neck wrapping sewing → Refer to "13. PERFORMING DATA SETTING OF NECK WRAPPING SEWING DATA" in Operation section of INSTRUCTION MANUAL.
I	SEWING DATA CHANGE button	Sewing data list screen is displayed. → Refer to "21. CHANGING SEWING DATA" in Operation section of INSTRUCTION MANUAL.
J	NUMBER OF REVOLUTIONS SETTING button	Number of revolutions setting screen is displayed. Change of number of revolutions of sewing machine for button sewing and that for neck wrapping can be performed. → Refer to "16. PERFORMING SETTING NUMBER OF REVOLUTIONS OF SEWING MACHINE" in Operation section of INSTRUCTION MANUAL.
K	STAY THREAD SETTING button	Stay thread setting screen is displayed. This screen is displayed only in case of sewing flat/wrapped-around button with blindstitch or flat button with blindstitch, and setting of stay thread is possible. → Refer to "17. PERFORMING SETTING STAY THREAD" in Operation section of INSTRUCTION MANUAL.
L	BUTTON SEWING THREAD TENSION SETTING button	Button sewing thread tension setting screen is displayed. → Refer to "18. PERFORMING INPUT OF BUTTON SEWING THREAD TENSION" in Operation section of INSTRUCTION MANUAL.
M	NECK WRAPPING THREAD TENSION SETTING button	Neck wrapping thread tension setting screen is displayed. This screen is displayed only in case of sewing flat/wrapped-around button with blindstitch or neck wrapping sewing. → Refer to "19. PERFORMING INPUT OF NECK WRAP THREAD TENSION" in Operation section of INSTRUCTION MANUAL.
N	CUSTOMIZE button	Sewing data which are more frequently used can be laid out to four buttons. When this button is pressed, the laid-out sewing data change screen is displayed. → Refer to "36. CUSTOMIZING DATA INPUT SCREEN" in Operation section of INSTRUCTION MANUAL.
O	CHUCK ADJUSTMENT button	Chuck adjustment screen is displayed. → Refer to "24. PERFORMING CHUCK ADJUSTMENT" in Operation section of INSTRUCTION MANUAL.
P	STEP SEWING button	When this button is pressed, the step sewing screen which performs input and check of needle entry point is displayed. → Refer to "26. PERFORMING INPUT AND CHECK OF DATA WITH STEP MOTION" in Operation section of INSTRUCTION MANUAL.

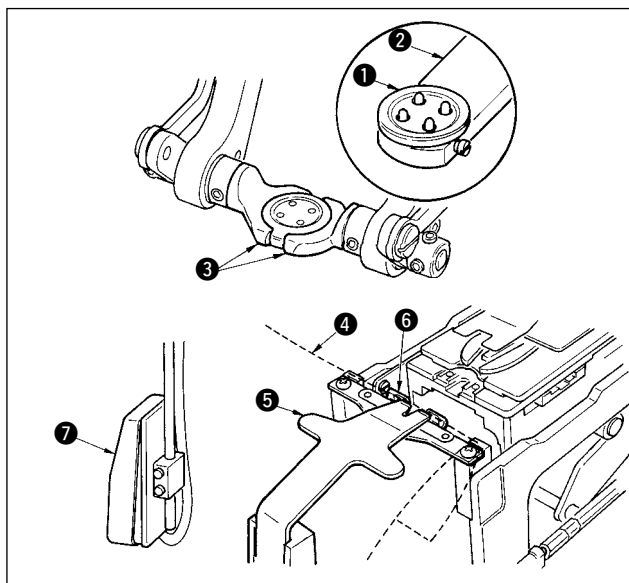
2) Sewing screen



Symbol	Display	Description
A	CHUCK ADJUSTMENT button	Chuck adjustment screen is displayed. → Refer to "24. PERFORMING CHUCK ADJUSTMENT" in Operation section of INSTRUCTION MANUAL.
B	BUTTON CENTERING button	This is not displayed in the initial state. → Refer to "25. PERFORMING BUTTON CENTERING" in Operation section of INSTRUCTION MANUAL.
C	PATTERN NAME display	Pattern name which is set in the pattern data during sewing is displayed.
D	LOADER MOTION button	When this button is pressed, loader works and sets button to the chuck.
E	NEEDLE CHANGE button	This button makes needle come down, and the needle change screen is displayed. → Refer to "34. PERFORMING CHANGE OF NEEDLE" in Operation section of INSTRUCTION MANUAL.
F	CHUCK CLOSE/ OPEN button	This button performs close/open of the chuck. Chuck is opened as long as the button is pressed.
G	PATTERN NO. display	Pattern No. during sewing is displayed.
H	PATTERN CONTENTS display	Contents of display depend on the sewing method. Blindstitch amount only can be set in the sewing screen.
I	BLINDSTITCH AMOUNT SETTING button	Setting of blindstitch amount is possible. * This is displayed only in case of sewing flat/wrapped-around button with blindstitch or flat button with blindstitch.
J	COUNTER VALUE CHANGE button	Existing counter value is displayed on this button. When the button is pressed, the counter value change screen is displayed. → Refer to "32. USING COUNTER" in Operation section of INSTRUCTION MANUAL.
K	COUNTER CHANGE OVER button	Display of sewing counter/No. of pcs. counter can be changed over. → Refer to "32. USING COUNTER" in Operation section of INSTRUCTION MANUAL.
L	STEP SEWING button	When this button is pressed, the step sewing screen which performs input and check of needle entry point is displayed. → Refer to "26. PERFORMING INPUT AND CHECK OF DATA WITH STEP MOTION" in Operation section of INSTRUCTION MANUAL.
M	NUMBER OF REVOLUTIONS SETTING button	Number of revolutions setting screen is displayed. Change of number of revolutions of the sewing machine for button sewing and that for neck wrapping can be performed. → Refer to "16. PERFORMING SETTING NUMBER OF REVOLUTIONS OF SEWING MACHINE" in Operation section of INSTRUCTION MANUAL.
N	STAY THREAD SETTING button	Stay thread setting screen is displayed. This screen is displayed only in case of sewing flat/wrapped-around button with blindstitch or flat button with blindstitch, and setting of stay thread is possible. → Refer to "17. PERFORMING SETTING STAY THREAD" in Operation section of INSTRUCTION MANUAL.
O	BUTTON SEWING THREAD TENSION SETTING button	Button sewing thread tension setting screen is displayed. → Refer to "18. PERFORMING INPUT OF BUTTON SEWING THREAD TENSION" in Operation section of INSTRUCTION MANUAL.
P	NECK WRAPPING THREAD TENSION SETTING button	Neck wrap thread tension setting screen is displayed. This screen is displayed only in case of sewing flat/wrapped-around button with blindstitch or neck wrapping sewing. → Refer to "19. PERFORMING INPUT OF NECK WRAP THREAD TENSION" in Operation section of INSTRUCTION MANUAL.
Q	DIRECT button	Pattern No. is changed over to pattern No. which is registered to the button. → Refer to "37. CUSTOMIZING SEWING SCREEN" in Operation section of INSTRUCTION MANUAL.
R	BUTTON LOADER SELECTION button	Button loader being selected at present is displayed on the button. When the button is pressed, the state of button loader can be changed.

2. SETTING PROCEDURE OF SEWING PRODUCT

<In case of sewing flat/wrapped-around button with blindstitch or sewing flat button with blindstitch>



Set button **1** to button loader **2** and depress the back part of the pedal to insert the button into button chucks **3**. (When the button loader is not used, insert the button by hand since the chuck is opened by depressing the back part of the pedal.)

Set cloth **4** to tongue **5** and make it come in contact with tongue stopper **6**. (Release of the tongue is performed by depressing the back part of the pedal.)

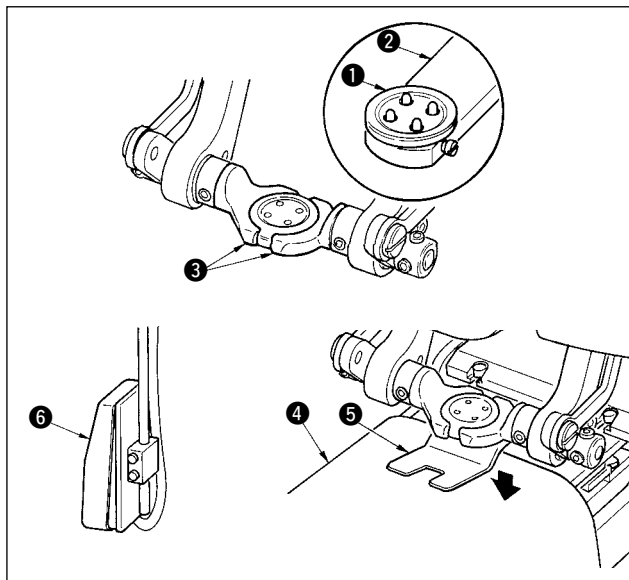
When the front part of the pedal is depressed, the button chuck comes down to the sewing position where the sewing is possible.

* By setting the pedal motion mode of memory switch data **U001**, the button chuck automatically comes down to the sewing position.

→ For the details of the memory switch data, refer to **"33. (2) Memory switch data list"** in Operation section of INSTRUCTION MANUAL.

Sewing starts when start switch **7** is turned ON.

<In case of sewing flat button directly to cloth>



Set button **1** to button loader **2** and depress the back part of the pedal to insert the button into button chucks **3**. (When the button loader is not used, insert the button by hand since the chuck is opened by depressing the back part of the pedal.)

Set cloth **4** under the needle, make the tongue come in contact with the tongue stopper, and make cloth presser **5** come down by depressing the front part of the pedal to fix the cloth. (By depressing the pedal reversely, the cloth presser is released.)

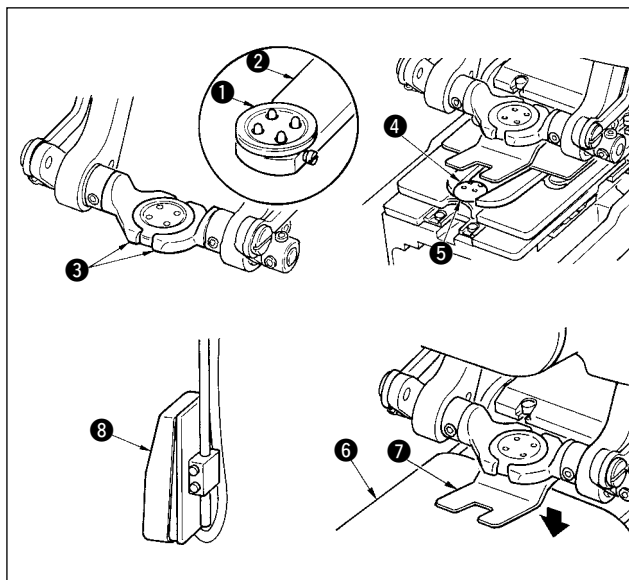
When depressing the front part of the pedal again, the button chuck comes down to the sewing position where the sewing is possible.

* By setting the pedal motion mode of memory switch data **U001**, the button chuck automatically comes down to the sewing position.

→ For the details of the memory switch data, refer to **"33. (2) Memory switch data list"** in Operation section of INSTRUCTION MANUAL.

Sewing starts when start switch **6** is turned ON.

<In case of counter/stay button>



Set upper button **1** to button loader **2** and depress the back part of the pedal to insert the button into button chucks **3**. (When the button loader is not used, insert the button by hand since the chuck is opened by depressing the back part of the pedal.)

Insert lower button **4** into button setting section **5** of the feed plate.

Set cloth **6** under the needle, make the tongue come in contact with the tongue stopper, and make cloth presser **7** come down by depressing the front part of the pedal to fix the cloth. (By depressing the pedal reversely, the cloth presser is released.)

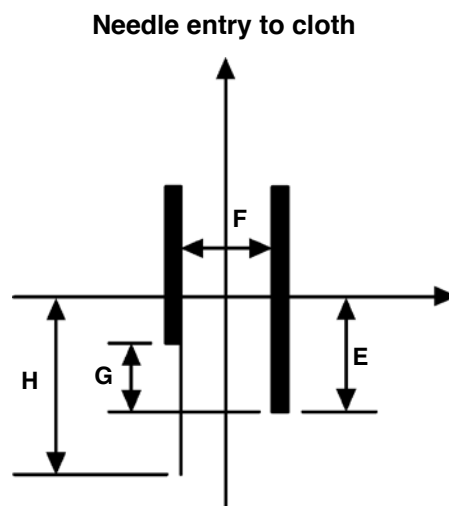
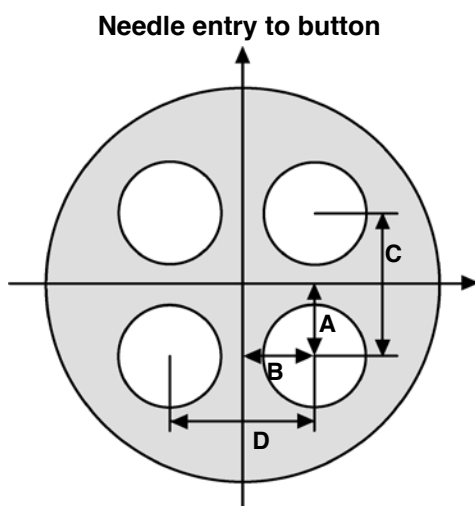
When the front part of the pedal is depressed, the button chuck comes down to the sewing position where the sewing is possible.

* By setting the pedal motion mode of memory switch data **U001**, the button chuck automatically comes down to the sewing position.

→ For the details of the memory switch data, refer to **"33. (2) Memory switch data list"** in Operation section of INSTRUCTION MANUAL.

Sewing starts when start switch **8** is turned ON.

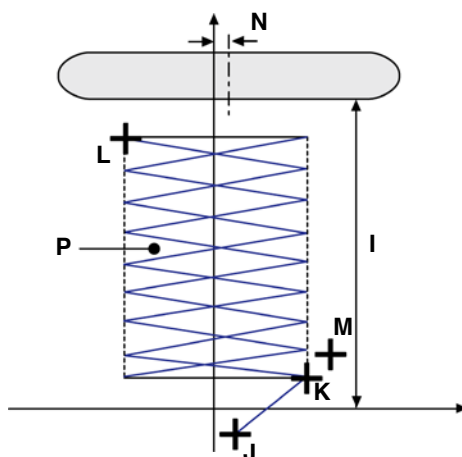
3. STITCHING DIAGRAM OF SEWING FLAT/WRAPPED-AROUND BUTTON WITH BLINDSTITCH



- A S501 1st stitch hole position of upper button (longitudinal)
- B S502 1st stitch hole position of upper button (lateral)
- C S008 Upper buttonhole interval (longitudinal)
- D S009 Upper buttonhole interval (lateral)

- E S017 Blindstitch amount
- F S016 Blindstitch width
- G S014 Compensation of lower left position of upper button
- H S057 Amount of stay thread

Needle entry of neck wrapping
































































- I S026 Button sewing height (only neck wrapping of sewing flat/wrapped-around button with blindstitch)
- S027 Button sewing height (shank and marble buttons)
- J S510 S512 Tie stitch position at the start of sewing of neck wrapping (longitudinal)
- S511 S513 Tie stitch position at the start of sewing of neck wrapping (lateral)
- K S518 Start position of neck wrapping
- S516 Stitch width of neck wrapping (right side)
- L S519 Top position of neck wrapping
- S517 Stitch width of neck wrapping (left side)
- M S532 Tie stitch position at the end of sewing of neck wrapping (longitudinal)
- S533 Tie stitch position at the end of sewing of neck wrapping (lateral)
- N S506 Whole compensation of button holding position (lateral)
- P S113 Neck wrapping pitch























S501 to S537 can select the step motion mode  and  only.

4. SEWING DATA LIST
















Sewing data are those that can be inputted to 99 patterns from pattern 1 to 99 and can be inputted to each pattern. However, the sewing data that can be inputted differ according to the selected sewing method or sewing shape.

No.	Item	Setting range	Edit unit	Initial display	Remarks
S001	Sewing method This item sets the sewing method.  : Sewing flat/wrapped-around button with blindstitch  : Sewing flat button directly to cloth  : Sewing flat button with blindstitch  : Neck wrapping  : Counter/stay button sewing	---	---	 Sewing flat/wrapped-around button with blindstitch	
S002	Stitch shape (sewing flat/wrapped-around button with blindstitch) This item sets the stitch shape of sewing flat/wrapped-around button with blindstitch.          	---	---	 4-holed button without cross-over stitches (longitudinal)	
S003	Stitch shape (sewing flat button directly to cloth) This item sets the stitch shape of sewing flat button directly to cloth.            	---	---	 4-holed button without cross-over stitches (longitudinal)	
S004	Stitch shape (sewing flat button with blindstitch) This item sets the stitch shape of sewing flat button with blindstitch.        	---	---	 4-holed button without cross-over stitches (longitudinal)	
S005	Stitch shape (counter/stay button sewing) This item sets the stitch shape of counter/stay button sewing. * Selection of the shape of lower button is performed with  .            	---	---	 Front : 4-holed button without cross-over stitches (longitudinal) Rear : 4-holed button without cross-over stitches (longitudinal)	
S008	Upper buttonhole interval (longitudinal) This item sets the needle entry interval of top feed. 	0.10 to 6.00	0.05mm	3.60	
S009	Upper buttonhole interval (lateral) This item sets the needle entry interval of top feed. 	0.10 to 6.00	0.05mm	3.60	
S010	Needle entry interval of bottom feed (longitudinal) This item sets the needle entry interval of bottom feed.  	0.10 to 6.00	0.05mm	3.20	
S011	Needle entry interval of bottom feed (lateral) This item sets the needle entry interval of bottom feed.  	0.10 to 6.00	0.05mm	3.20	
S012	Number of stitches for button sewing This item sets the number of stitches for button sewing. 	2 to 32	2 stitches	6	
S013	Number of stitches at the start of button sewing (1 to 3 stitches) This item sets the number of stitches at the start of button sewing. 	1 to 3	1 stitch	1	

No.	Item	Setting range	Edit unit	Initial display	Remarks
S014	Compensation of lower left position of upper button This item is set when cloth is pulled and the amount of blindstitch on the left side is different from that on the right side.	 -1.00 to 1.00	0.05mm	0	
S015	Compensation of 3rd stitch at the start of sewing This item compensates the position of 3rd stitch at the start of sewing to prevent thread from slipping off at the start of button sewing	 0 to 0.5	0.05mm	0	
S016	Blindstitch width This item has to be set within the range where needle and tongue do not come in contact with each other.	 0.0 to 1.2	0.2mm	0.6	*1
S017	Blindstitch amount This item sets the blindstitch amount to cloth.	 -1.00 to 5.00	0.05mm	0.40	
S018	Buttonhole height of shank/marble button sewing (Height from the feed plate) This item is set to prevent the contact of needle and buttonhole.	 0.0 to 10.0	0.1mm	3.0	
S021	Thinning level of the stay button This item decreases the number of cross-over stitches of the lower side button at the time of stay button sewing.  : Without thinning  : Thinning level 2  : Thinning level 1  : Thinning level 3	---	---	 Without thinning	
S022	Lateral compensation of needle entry of lower button at the time of sewing counter button (front : 4 holes, rear : 2 holes) Perform compensation to such an extent that needle does not come in contact with buttonhole within the range of lower buttonhole.	 0 to 0.30	0.05mm	0.30	
S024	Number of stitches of tie stitch at the end of sewing flat button directly to cloth. This item sets the number of stitches of tie stitch at the end of sewing flat button directly to cloth.	 2 to 3	1 stitch	2	
S025	Number of stitches of tie stitch at the end of counter sewing This item sets the number of stitches of tie stitch at the end of counter sewing.	 1 to 3	1 stitch	2	
S026	Button sewing height (only neck wrapping of sewing flat/wrapped-around button with blindstitch) This item sets the button holding height (finished height) in the neck wrapping process.	 0.5 to 15.0	0.1mm	2.5	
S027	Button height (shank/marble) This item sets the button holding height (finished height) in the neck wrapping process.	 0 to 15.0	0.1mm	Shank button: 3.5 Marble button: 2.5	*2
S028	Button height (counter button) This item sets the button holding height (finished height) in the button sewing process.	 0 to 20.0	0.1mm	4.5	
S029	Number of stitches at the start of sewing of neck wrapping This item sets the number of stitches at the start of sewing of neck wrapping.	 1 to 3	1 stitch	2	
S030	Number of stitches of tie stitch at the end of sewing of neck wrapping This item sets the number of stitches of tie stitch at the end of sewing in the neck wrapping process.	 2 to 3	1 stitch	2	
S031	Compensation of the button holding height at the time of sewing flat/wrapped-around button with blindstitch This item sets when compensating the button holding height in the button sewing process and desiring to give slackness between button and neck wrapping section.	 -5.0 to 5.0	0.1mm	-0.5	
S032	Thread release compensation This item is the compensation value of the button holding height in the button sewing process. Sewing is performed in the neck wrapping process by gradually returning the compensation value to the former one. This item is set when desiring to tightly wrap up to the root of the button.	 -5.0 to 5.0	0.1mm	0.5	

* 1 The maximum value of the range of data editing depends on the setting of **K005**.

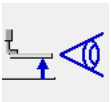




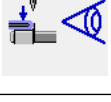
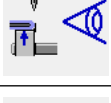
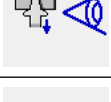



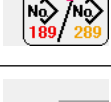
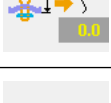
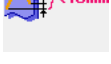
* 2 The maximum value of the data edit range varies according to the sewing shape.

No.	Item	Setting range	Edit unit	Initial display	Remarks
S033	Button loader selection <In case of shank/marble button>  : Loader OFF  : Loader ON <In case of normal button>  : Loader OFF  : Loader ON	---	---	 Loader used (Front side)	
S034	Number of times of wrapping This item sets the number of times of thread wrapping sewing in the neck wrapping process. 	0 to 5	1 time	0	
S035	Number of stitches of thread air-blow This item sets the number of stitches of thread air-blow in the neck wrapping process. 	0 to 20	1 stitch	6	
S036	Compensation of button height in the neck wrapping process This item compensates the button holding height in the neck wrapping process and adjusts the wrapped condition. 	-5.0 to 5.0	0.1mm	0	
S037	Button positioning motion With/without  : With  : Without This item sets whether the compensation motion of button positioning is performed at the time of operation by operator before driving the sewing machine. It is convenient to use this item when sewing buttons which are uneven in shape. * Compensation value which has been set here is applied to one button sewing only and the compensation value returns to 0 after completion of sewing.	---	---	 Without	
S038	Needle height at the time of button positioning This item sets the angle which automatically lowers needle at the time of button positioning motion. Set the angle which is easy to perform positioning according to kinds of buttons, neck wrapping height, etc. 	0 to 130	1°	80	
S039	Thread drawing motor start position in the button sewing process This item sets the thread slack amount at the start of sewing to stabilize thread remaining amount at the start of sewing. 	0 to 100	1 pulse	30	
S040	Number of stitches to start thread drawing motor operation in the button sewing process This item sets number of stitches to hold the thread slack amount set in No. S039. 	1 to 2	1 stitch	1	
S041	Compensation of tension timing on cloth side and rear side in the button sewing process This item changes the tension changeover timing at the needle entry on cloth side and rear side, and shifts the knotting position. 	-90 to 90	1°	0	
S501	1st stitch hole position of upper button (longitudinal)	-2.00 to 4.00	0.05	1.80	
S502	1st stitch hole position of upper button (lateral)	-2.00 to 4.00	0.05	1.80	
S503	Shank-/marble-button hole position for lower button (longitudinal)	-4.00 to 4.00	0.1	0	
S504	1st stitch hole position of lower button (longitudinal)	-13.00 to 4.00	0.05	1.60	
S505	1st stitch hole position of lower button (lateral)	-2.00 to 4.00	0.05	1.60	
S506	Whole compensation of button holding position (lateral)	-3.0 to 3.0	0.1	0	
S508	Compensation of shank/marble blindstitch position (left)	-2.0 to 2.0	0.1	0	
S509	Hole position of shank/marble button	-5.0 to 5.0	0.1	0.5	
S510	Tie stitch position of 1st stitch at the start of sewing of neck wrapping (longitudinal)	-4.0 to 4.0	0.1	0	

No.	Item	Setting range	Edit unit	Initial display	Remarks
S511	Tie stitch position of 1st stitch at the start of sewing of neck wrapping (lateral)	-4.0 to 4.0	0.1	-0.3	
S512	Tie stitch position of 2nd stitch at the start of sewing of neck wrapping (longitudinal)	-4.0 to 4.0	0.1	1.0	
S513	Tie stitch position of 2nd stitch at the start of sewing of neck wrapping (lateral)	-4.0 to 4.0	0.1	0.3	
S516	Stitch width of neck wrapping (right side)	0 to 5.0	0.1	3.0	
S517	Stitch width of neck wrapping (left side)	0 to 5.0	0.1	3.0	
S518	Start position of neck wrapping	-1.0 to 3.0	0.1	1.0	
S519	Top position of neck wrapping	-1.0 to 5.0	0.0	0.0	*1
S520	1st stitch of first compensation of tie stitch position at the end of button sewing (longitudinal)	-1.0 to 1.0	0.1	0.3	
S521	1st stitch of first compensation of tie stitch position at the end of button sewing (lateral)	-1.0 to 1.0	0.1	0	
S522	2nd stitch of first compensation of tie stitch position at the end of button sewing (longitudinal)	-1.0 to 1.0	0.1	0	
S523	2nd stitch of first compensation of tie stitch position at the end of button sewing (lateral)	-1.0 to 1.0	0.1	0	
S524	3rd stitch of first compensation of tie stitch position at the end of button sewing (longitudinal)	-1.0 to 1.0	0.1	0	
S525	3rd stitch of first compensation of tie stitch position at the end of button sewing (lateral)	-1.0 to 1.0	0.1	0	
S526	1st stitch of second compensation of tie stitch position at the end of button sewing (longitudinal)	-1.0 to 1.0	0.1	0.3	
S527	1st stitch of second compensation of tie stitch position at the end of button sewing (lateral)	-1.0 to 1.0	0.1	0	
S528	2nd stitch of second compensation of tie stitch position at the end of button sewing (longitudinal)	-1.0 to 1.0	0.1	0	
S529	2nd stitch of second compensation of tie stitch position at the end of button sewing (lateral)	-1.0 to 1.0	0.1	0	
S530	3rd stitch of second compensation of tie stitch position at the end of button sewing (longitudinal)	-1.0 to 1.0	0.1	0	
S531	3rd stitch of second compensation of tie stitch position at the end of button sewing (lateral)	-1.0 to 1.0	0.1	0	
S532	Tie stitch position at the end of sewing of neck wrapping (longitudinal)	-4.0 to 4.0	0.1	1.2	
S533	Tie stitch position at the end of sewing of neck wrapping (lateral)	-4.0 to 4.0	0.1	3.0	
S534	Longitudinal position of thread trimming of button sewing	-4.0 to 8.0	0.1	-1.0	
S535	Longitudinal position of thread trimming of neck wrapping sewing	-4.0 to 8.0	0.1	-0.2	
S536	Blindstitch width of shank/marble (right)	-2.0 to 5.0	0.1	0.3	
S537	Blindstitch width of shank/marble (left)	-2.0 to 5.0	0.1	0.3	

* 1 The maximum value of the data edit range varies according to the sewing shape.

5. ERROR CODE LIST

Error code	Pictograph	Description of error	How to recover	Place of recovery
E023		Detection of step-out of presser lifting motor error This error occurs when step-out of presser lifting motor is detected. Check whether the mechanical load is heavy.	Possible to recover by reset.	Data input screen
E031		Air pressure drop Check whether the air pressure dropped.	Possible to recover by reset.	Data input screen
E050		Stop switch This error occurs when stop switch is pressed.	Possible to recover by reset.	Data input screen
E099		Button loader motor step-out detection error This error occurs when step-out of button loader motor is detected.	Possible to recover by reset.	Data input screen
E302		Confirmation of tilt of machine head Check whether tilt of machine head sensor is OFF.	Possible to recover by reset.	Data input screen
E394		Feed plate lowering sensor undone error This error occurs when feed plate lowering sensor fails to work during sewing machine operation. Check whether a button or the like is put under the feed plate.	Possible to recover by reset.	Data input screen
E395		Feed plate lifting sensor undone error This error occurs when feed plate lifting sensor fails to work during sewing machine operation.	Possible to recover by reset.	Data input screen
E396		Tongue close/open sensor undone error This error occurs when sensor is not ON or OFF at the time of tongue close/open operation.	Possible to recover by reset.	Data input screen
E397		Chuck close/open sensor undone error This error occurs when a button is not in the chuck at the time of sewing machine operation.	Possible to recover by reset.	Data input screen
E398		Chuck level sensor undone error This error occurs when sensor fails to work at the time of chuck level operation. Perform confirmation of the sensor position.	Possible to recover by reset.	Data input screen
E399		Chuck inversion sensor undone error This error occurs when sensor fails to work at the time of chuck inversion operation. Perform confirmation of the sensor position.	Possible to recover by reset.	Data input screen
E497		Tongue type error This error occurs when "AMB289" type tongue and "AMB189" type one are mixedly used in the cycle data. Change the cycle data.	Possible to recover by reset.	Data input screen
E498		Button holding height over at the time of sewing This error occurs when button holding height (22.0 mm) is over and sewing cannot be performed at the time of button sewing. Change the sewing data.	Possible to recover by reset.	Data input screen
E499		Y feed motor move limit value over This error occurs when input data of the button height of shank/marble sewing exceeded the maximum (15 mm) of Y feed move amount. Change the sewing data.	Possible to recover by reset.	Data input screen

* For errors other than these errors, refer to the Instruction Manual.