

Installation manual for thermal printer

[*For Control PCB TH-200901*]

Autoclave

SX-300/500/700, SX-300E/500E/700E

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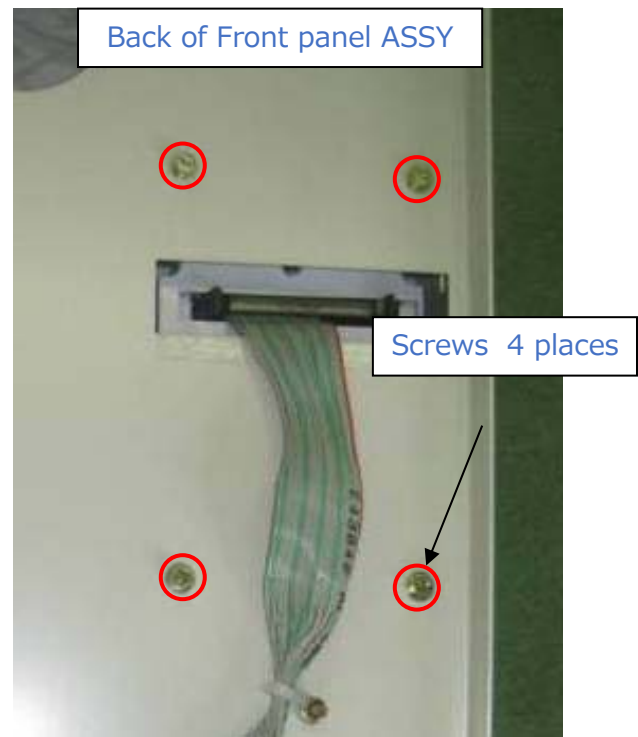
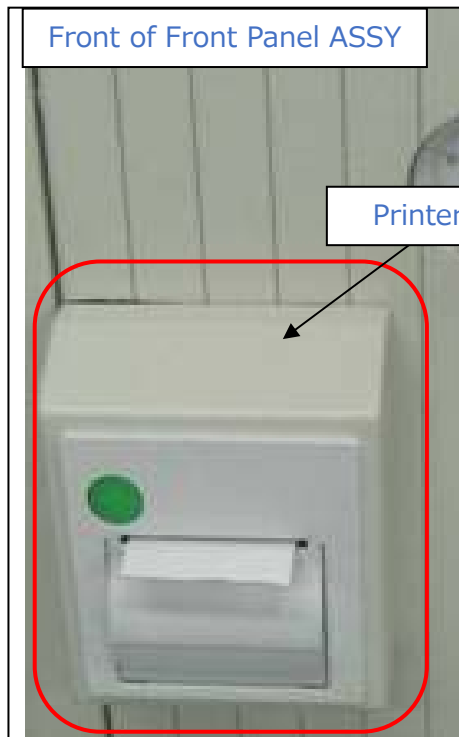
phone: +81-3-5971-8160

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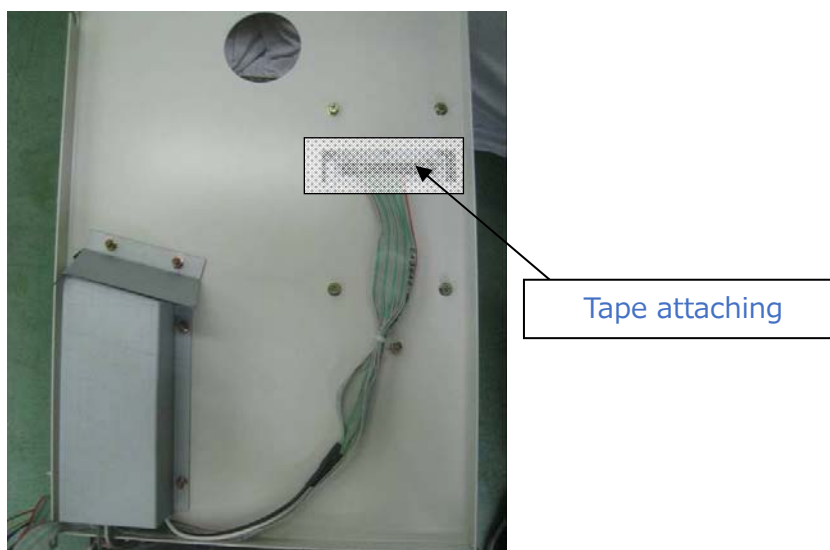
1. Install the printer to the front panel

Install Printer onto Front Panel.

- 1) take Front Panel ASSY and Printer ASSY.
※Front Panel ASSY and Printer ASSY is a separate packing.
- 2) Install Printer ASSY onto Front Panel ASSY.
Mount screws(4 places) from back of Front panel.



- 3) Connect the wiring to the printer.
- 4) attach attached aluminum glass cloth tape to the following position.
Attach to the square hole on the printer ASSY in order not to water entering.



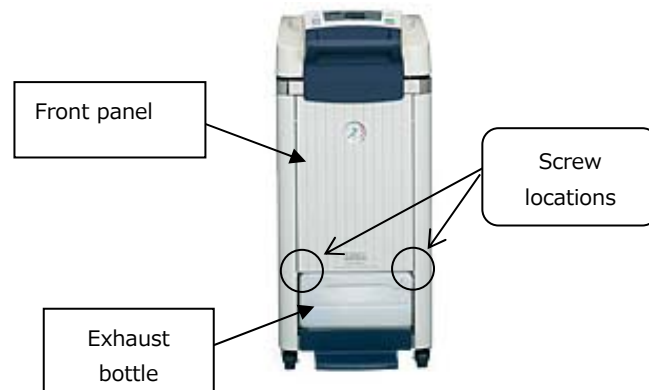
2. Installing the back plate on the exhaust bottle cover

1) Pull the exhaust bottle out of the autoclave and remove the exhaust hose.

2) Remove the front panel

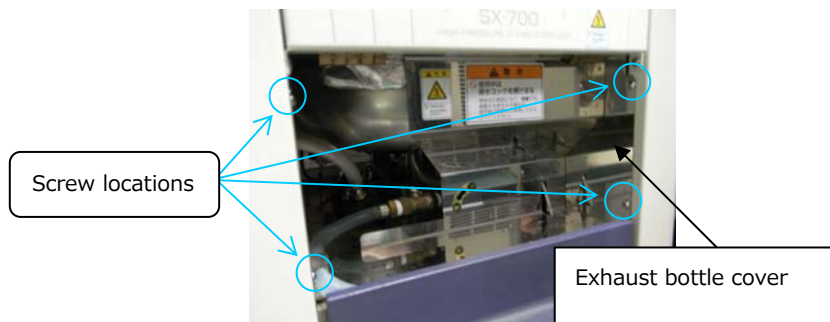
*Keep the autoclave lid open before removing the panel.

*Unscrew the two screws securing the front panel and pull the panel out to remove it.



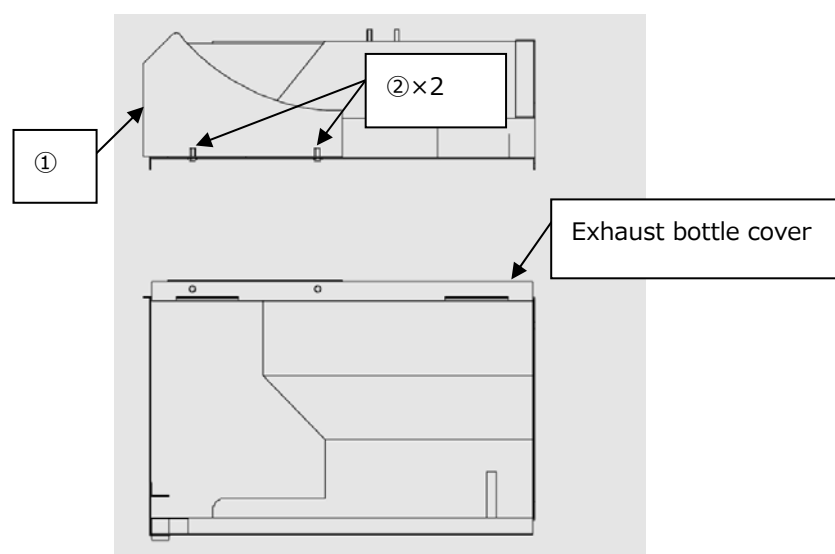
3) Remove the exhaust bottle cover located behind the exhaust bottle.

*Unscrew the four screws securing the cover.



4) Install the back plate ① on the exhaust bottle cover removed.

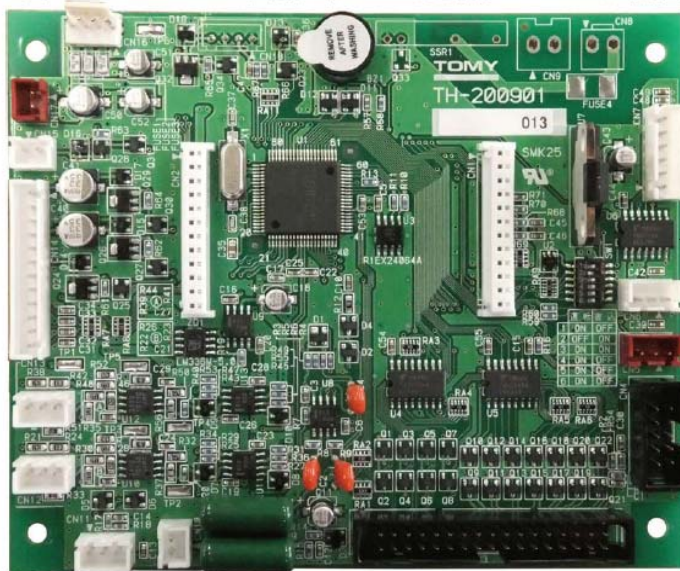
*Install and secure the back plate using cross recessed pan head screw, M4 x 8 ②



5) Install the exhaust bottle cover into the autoclave and put the exhaust bottle back in the place.

3. Remove the control PCB and install control PCB

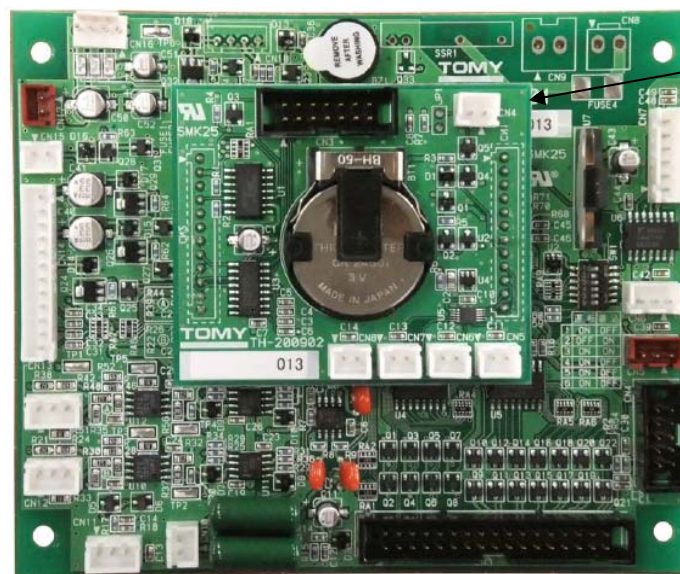
- 1) Remove the rear panel.
- 2) Disconnect each wiring harness and remove the control PCB.
- 3) **Put in the Dot-impact printer programed Control PCB with Option PCB and reconnect wires same as before.**



Control PCB TH200901



Exchange



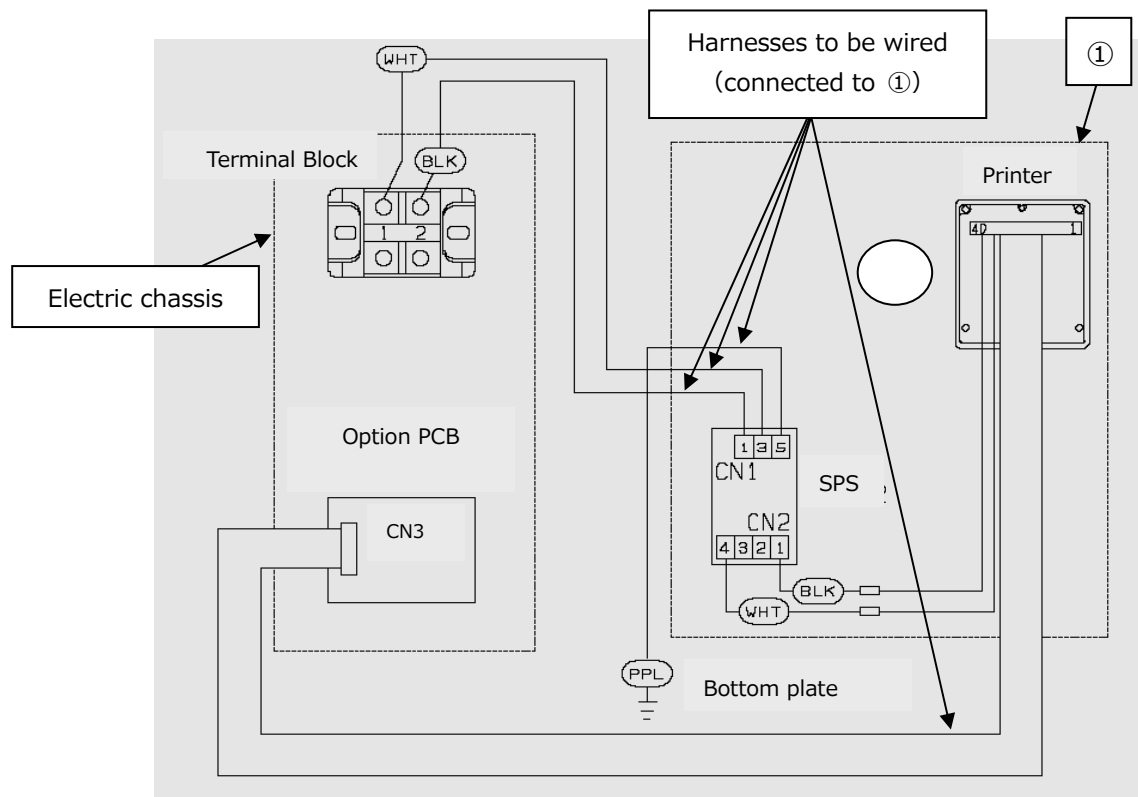
Option PCB

Thermal printer
programed Control
PCB

4. Wiring harnesses

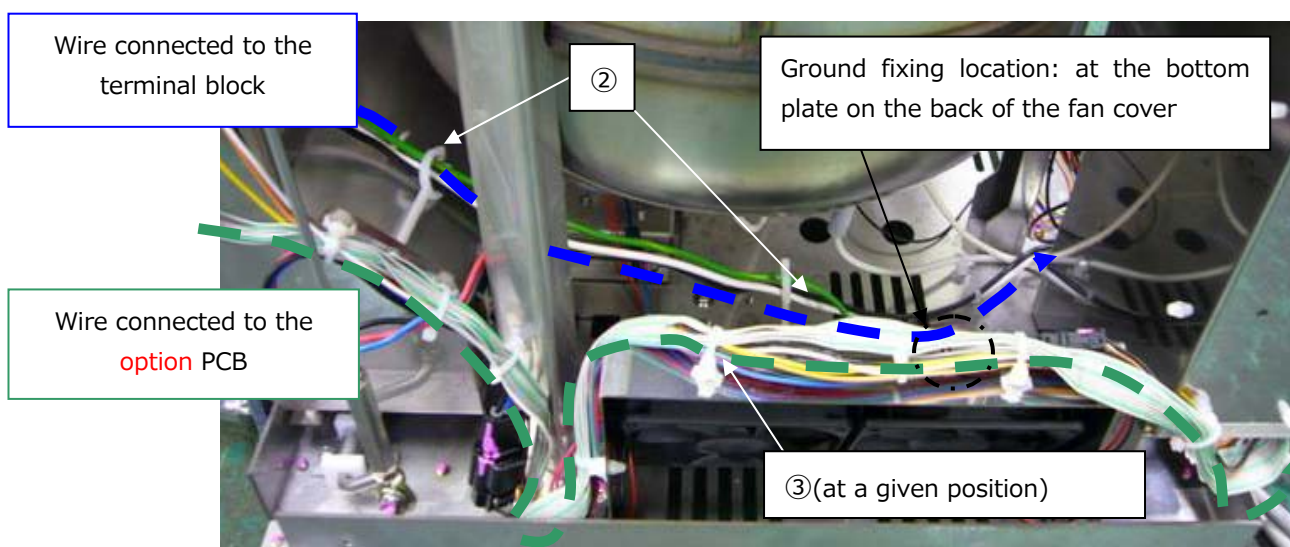
- 1) Remove the left side panel of the main unit.
- 2) Temporarily place the front panel of the printer ① near its final mounting location and connect each harness coming out of the front panel.

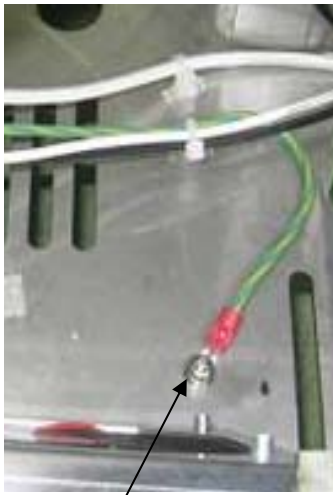
(Refer to the SX-300/500/700 and SX-300E/500E/700E wiring diagram.)



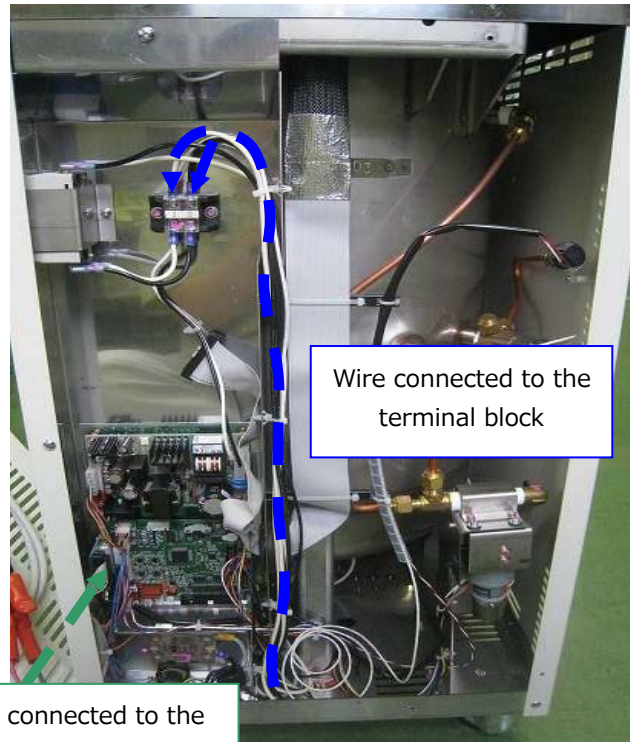
3) Bundle wires

- *Insert one harness lifter ② into the exhaust bottle cover and another lifter into the bottom plate, then pass the harness through the lifter. Secure the wiring harness along with a power supply line harness using a push mount tie to the electric chassis.
- *Run the wire connected to the **option** PCB along the exhaust bottle cover and fan cover, and then secure it with the junction harness using the push mount tie.





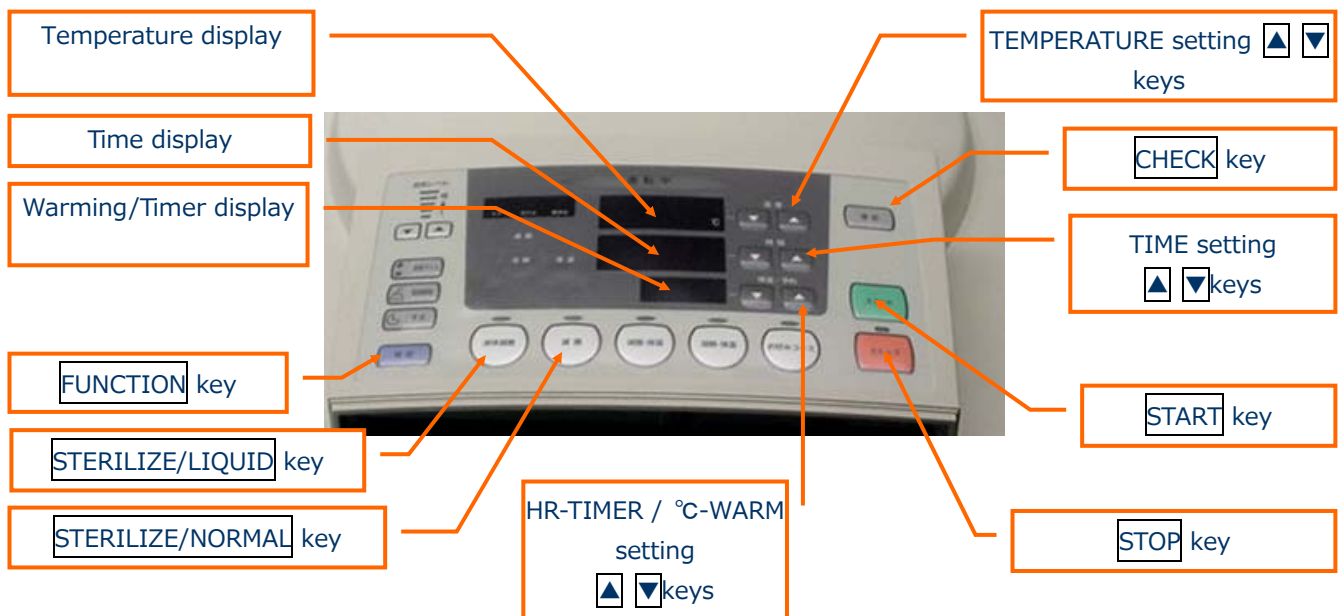
Destination of the ground wire from the printer's front panel



Wire connected to the terminal block

Wire connected to the option PCB

5. Pressure display and adjustment



1) Turn on the power switch while pressing the **FUNCTION** , **STERILIZE/LIQUID** and **STERILIZE/NORMAL** keys at the same time.

As you make an adjustment of pressure, the lid opens before the maintenance mode.

2) Selecting Maintenance code [C 02]

3) Confirm that the lid opens before and no pressure in the chamber

And Press the **START** key while more than 2 seconds. When the buzzer sounded, Offset is updated.

4) Press the **STOP** key or the **CHECK** key, return to the normal mode.

Offset is updated.

6. Selecting the printer

- a.) Turn the power switch on while pressing down the **FUNCTION** , **STERILIZE/LIQUID** ,and **STERILIZE/NORMAL** keys simultaneously to activate the maintenance mode.
- b.) Using the temperature setting **▲** and **▼** keys, select the maintenance code [*C10*] (change of system parameters) and press the **START** key.
- c.) Using the temperature setting **▲** and **▼** keys, select the system parameter [*P57*] (with or without a printer) and press the **START** key.
- d.) Using the time setting **▲** and **▼** keys, display [*1*] and hold down the **START** key.
- e.) Press the **STOP** key.

7. Setting the manufacture's serial number (the first five or les digits.)

- a.) Turn the power switch on while pressing down the **FUNCTION** , **STERILIZE/LIQUID** ,and **STERILIZE/NORMAL** keys simultaneously to activate the maintenance mode.
- b.) Using the temperature setting **▲** and **▼** keys, select the maintenance code [*C16*] (change in the first five digits of the serial number) and press the **START** key.
- c.) Using the temperature setting **▲** and **▼** keys, set a manufacturing time (first two digits of the serial number) and press the **START** key.
- d.) Using the time setting **▲** and **▼** keys, set a model code (next three digits of the serial number) and press the **START** key.
- e.) Press the **STOP** key.

8. Setting the manufacturer's serial number (the last 6th – 9th digits)

- a.) Turn the power switch on while pressing down the **FUNCTION** , **STERILIZE/LIQUID** ,and **STERILIZE/NORMAL** keys simultaneously to activate the maintenance mode.
- b.) Using the temperature setting **▲** and **▼** keys, select the maintenance code [*C17*] (change in the 6th – 9th digits of the serial number) and press the **START** key.
- c.) Using the temperature setting **▲** and **▼** keys, set a three-digit sequential serial number (the 6th – 8th digits of the serial number) and press the **START** key.
- d.) Using the time setting **▲** and **▼** keys, set a one digit serial number (the 9th digit of the serial number) and press the **START** key.
When a manufacturer's serial number consists of eight digits, having a sequential serial number of only three digits, the last 9th digit is set to " –".
- e.) Press the **STOP** key.

9. Setting the Print date and time

- a.) Press and hold down the **FUNCTION** key for approximately two seconds while the ready lamp is illuminated.
"F01" will start flashing in the temperature display.
- b.) Press the temperature setting **▲** and **▼** keys until the code of a desired setting item shows in the display. The time display will show the code of a desired setting item.

CODE	SETTING ITEM	SETTING RANGE
<i>F09</i>	YEAR	00-99
<i>F10</i>	MONTH	01-12
<i>F11</i>	DAY	01-31
<i>F12</i>	HOUR	00-23
<i>F13</i>	MINUTE	00-59

* To set the year, enter the last two digits of the year.

- c.) Press the **START** key. The time display will start flashing.
- d.) Press the time setting **▲** and **▼** keys until the display shows a desired set value.
- e.) Press the **START** key again to enter the value.

*When the set value for the minutes is entered, seconds are set as 00.

10. Checking operations

a.) Operate the autoclave under any given condition and check that the printer prints out the operating result.

Reference : The illustration on the right indicates a printed image.

b.) Make sure that the serial number, date and time set according to the procedure 4. are correct.

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▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲
TOMY SEIKO CO.,LTD.
Model : SX-500E
S/N : 123456789
Date : Jan. 10, 2008
Time : 12:00
Work : No. 00001

---Setting---
Mode : STERILIZE-WARM
Ext. Temp. Sensor : Used
Sterilizing Temp. : 121° C
Sterilizing Time : 0:20
Warm Temp. : 60° C
Warm Time : 1hour
Exhaust Speed : 5
Cooling FAN : 2
Memo:

---DATA---
<Time> Time [hour:minute'second]
<TC> Chamber Temp. [° C]
<TE> External Temp. [° C]
<P> Chamber Press. [MPa]

-<Time>-<TC>-<TE>-<P>-
Temperature raising
00:00 25 25 0.000
00:03 27 26 0.000
00:06 29 27 0.000
:
Temperature & pressure raising
(00:10' 35)
00:06 100 80 0.005
:
00:35 121 119 0.103
Sterilizing
(00:37' 40)
00:38 121 121 0.104
00:39 121 121 0.104
00:40 121 121 0.104
:
Count start
(00:57' 20)
00:58 121 121 0.104
:
Temperature & pressure reduction
(01:17' 20)
01:18 117 119 0.100
:
Temperature reduction
(01:17' 20)
01:31 117 119 0.104
:
Warming
(01:27' 20)
Complete
(02:17' 20)

Setting was changed on the way.
-Sterilizing Temp.

Sign. _____
▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲

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11. Completing and returning the validation report to TOMY

**To: Quality Assurance Department,
Tomy Kogyo Co., Ltd.**

Custom Product Description		Issued by
Tomy Kogyo Co., Ltd.		
Control number for custom products	Model	Serial number
Custom details		
The printer function is added.		
Instructions at the time of delivery		
All work must be done according to the work procedure instruction sheet.		
Make sure that the product functions normally.		

Validation Report		
To: TOMY Digital Biology Co., Ltd.		
I hereby represent that we have validated the custom product for its compliance with the custom details described above at user's site, and report the validation result.		
Model name :	Serial number :	(year/month/day)
		Approved by
		Validated by
Remarks		

Return is approved by

(year/month/day)

Head of the Quality Assurance Department

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