

# Statim 2000 & 5000

## Rev. 7 PCB



# Field Training Manual

## Statim Rev. 7 PCB User Setup

**User setup mode** – To initially setup your Statim

**Hold down the Stop button and turn the unit ON.**

>Time/Date Setup Language Setup
------------------------------------

Unit ID Setup \*  
Water Quality  
Last Printout \*  
RS232 \*  
End Of Line CR/LF \*  
Serial Port Bit rate \*  
Printer user ° char \*  
Save and Exit  
Exit

**\* Only used when Statim is connected to a Printer or Data Logger**

**Keypad:**

Unwrapped	Select next item in the menu
Wrapped	Select previous item in the menu
Rubber and Plastics	Enter the indicated sub menu selection
Stop	Exit menu to normal mode of operation

**Time/Date Setup Mode** – Set the proper time and date

18:00	07/09/2008
HH:MM	MM/DD/YYYY

**Keypad:**

Unwrapped	Increase current field (the flashing value on the display)
Wrapped	Decrease current field (the flashing value on the display)
Rubber and Plastics	Select next field
Stop	Save & exit menu to normal mode of operation

**Language Setup** – Display information in your desired language

N. A. ENGLISH

**Available Languages**

- N. A. English (North American English)
- U. K. English (United Kingdom English)
- Francais (French)
- Deutsch (German)
- Espanol (Spanish)
- Italiano (Italian)
- Dansk (Danish)
- Portugues
- Nederlands
- Japanese
- Svenska (Swedish)
- Polski (Polish)
- Magyar (Hungarian)
- Cesky (Czech)
- Norsk (Norwegian)
- Islenska (Iceland)
- Slovincina (Slovak)
- Eesti (Estonian)
- Japanese (Sterimaster)
- Romana (Romanian)
- Lietuviuk (Lithuanian)
- Slovenian (Slovenia)

**Keypad:**

- Unwrapped                      Select next language
- Wrapped                        Select previous language
- Rubber and Plastics        If Repeater mode is ON, this key will scroll through all the available display messages of the chosen language.
- Stop                              Save & exit menu to normal mode of operation

**Unit ID Setup** – Associate unit with an ID number (**Used with printer**)

Unit # :  
000

**Keypad:**

- Unwrapped                      Decrease current field (the flashing value on the display)
- Wrapped                        Increase current field (the flashing value on the display)
- Rubber and Plastics        Select next digit
- Stop                              Save & exit menu to normal mode of operation

**Water Quality** – Display detected water quality

>Water Quality  
 CD= x.xuS/NNN/y.yppm

**Screen Representation**

x.x	Water conductivity in uS (micro-Siemens)
NNN	Water conductivity in ADC (Analog to Digital converter) counts (0...255)
y.y	Water quality in ppm (parts per million)

**Keypad:**

Rubber and Plastics	Return to main menu
Stop	Exit menu to normal mode of operation

**Last Printout** – Printer reprints last cycle and unit returns to normal mode of operation  
**(Used with printer)**

**RS232** – To select which serial device to attach **(Used with printer)**

>RS232  
 N/A

Serial Printer  
 USB FLASH/MSD

**Keypad:**

Unwrapped	Move to next option, second line shows the new value
Wrapped	Move to previous option, second line shows the new value
Rubber and Plastics	Save and return to main menu
Stop	Exit menu to normal mode of operation without saving

**End of Line CR/LF** – Configure the printout layout (**Used with printer**)

>End Of Line CR/LF  
CR/LF

-  
CR  
This only needs to be set if a serial printer is attached to the serial port.

**Available options:**

- No line terminator is sent after each line. To be used with printer that accepts only 20 characters per line and automatically advances to next line. **Should be used with the STATprinter.**
- CR A <CR> is sent at the end of the line. To be used with printers that advance to beginning of next line when a CR is received.
- CR/LF A <CR><LF> is sent at the end of the line. To be used with printers that translate advance to beginning of next line only when LF is received.

**Keypad:**

- Unwrapped Select next option. Second line shows the new value
- Wrapped Select previous option. Second line shows the new value
- Rubber and Plastics Save & exit to main menu
- Stop Exit and return to normal mode of operation

SciCan Suggested External Printers	End Of Line CR/LF	Serial Port Bit Rate	Printer user ° char
Epson TM-U220D C31C515603)	CR/LF	9600	248 [0xF8]
Citizen IDP-3110-40 RF 120B	CR	9600	N/A
Star Micro SP212FD42-120	CR	9600	210 [0xd2]
Star Micro SP216FD41-120	CR/LF	9600	210 [0xd2]
Star Micro SP512MD42-R	CR/LF	9600	210 [0xd2]

**Serial Port Bit Rate** – Choose bit rate for device connected to the serial port (**Used with printer**)

Serial Port Bit Rate 9600
------------------------------

19200  
57600  
115200  
300  
1200  
2400  
4800

If USB FLASH/MSD is selected as the RS232 device, a Serial Port Bit Rate selection of 9600 will be required for the Data Logger to be operational.

**Keypad:**

Unwrapped	Select next value
Wrapped	Select previous value
Rubber and Plastics	Save & Return to main menu
Stop	Exit without saving and return to normal mode of operation

**Printer user ° char** – Setting to print a °C sign (**Used with printer**)

Printer user ° char 32 [0x20]
----------------------------------

32 decimal value for selected char-default 32  
20 hex value for the selected char-default 20

**Keypad:**

Unwrapped	Increase value by one
Wrapped	Increase value by ten
Rubber and Plastics	Select and return to main menu
Stop	Exit without saving and return to normal mode of operation

**Save and Exit** – Saving settings and return to normal mode of operation

Upon selection, current settings are saved and unit restarts in normal mode of operation

**Exit** – Exit menu without saving settings

Upon selection, current settings are discarded, not saved and unit restarts in normal mode of operation

## Statim Rev. 7 PCB Service Setup

**Service setup mode** – To enter the **Service Setup Mode**, turn power switch ON while holding down Unwrapped and Wrapped buttons.

The **Service Setup Mode** is password protected, a password must be entered to continue. The default password is, Unwrapped, Wrapped, Rubber and Plastics, Stop buttons pressed in this order. If the password has been changed the backdoor password is, Unwrapped, Wrapped, Unwrapped, Wrapped buttons pressed in this order.

>Calibration  
Time/Date Setup

Language Setup  
 Unit ID Setup \*  
 Set cycle counter  
 Conductivity Setup  
 Water Cnd Tmp. Comp  
 Last Printout \*  
 Stored CF Printouts \*  
 Clear CF Printouts \*  
 Display last CF#  
 Devices Test On/Off  
 Temperature Offset  
 Validation Offset  
 Voltage Calibration  
 Voltage setup  
 Repeater mode  
 RS232 \*  
 End of Line CR/LF \*  
 Serial Port Bitrate \*  
 Printer user ° char \*  
 Factory default  
 Change Password  
 Backup NVRAM  
 Restore NVRAM  
 Save and Exit  
 Exit  
 Water Pump Type  
 Production Cycle

**\* Only used when Statim is connected to a Printer or Data Logger**

**Keypad:**

Unwrapped	Select next item in the menu
Wrapped	Select previous item in the menu
Rubber and Plastics	Enter the indicated sub menu selection
Stop	Exit menu to normal mode of operation

**Calibration** – Select calibration to run validation thermocouple calibration cycle only.

**Note: See page 19 for validation thermocouple calibration procedure.**

**Time/Date Setup Mode** – Set the proper time and date

18:00	07/09/2008
HH:MM	MM/DD/YYYY

**Keypad:**

Unwrapped	Increase current field (the flashing value on the display)
Wrapped	Decrease current field (the flashing value on the display)
Rubber and Plastics	Select next field
Stop	Save & exit menu to normal mode of operation

**Language Setup** – Display information in your desired language

N. A. ENGLISH
---------------

**Available Languages**

N. A. English (North American English)  
 U. K. English (United Kingdom English)  
 Francais (French)  
 Deutsch (German)  
 Espanol (Spanish)  
 Italiano (Italian)  
 Dansk (Danish)  
 Portugues  
 Nederlands  
 Japanese  
 Svenska (Swedish)  
 Polski (Polish)  
 Magyar (Hungarian)  
 Cesky (Czech)  
 Norsk (Norwegian)  
 Islenska (Iceland)  
 Slovencina (Slovak)  
 Eesti (Estonian)  
 Japanese (Sterimaster)  
 Romana (Romanian)  
 Lietuviuk (Lithuanian)  
 Slovenian (Slovenia)

**Keypad:**

Unwrapped	Select next language
Wrapped	Select previous language
Rubber and Plastics	If Repeater mode is ON, this key will scroll through all the available display messages of the chosen language.
Stop	Save & exit menu to normal mode of operation



**Unit ID Setup** – Associate unit with an ID number (**Used with printer**)

Unit # :	000
----------	-----

**Keypad:**

Unwrapped	Decrease current field (the flashing value on the display)
Wrapped	Increase current field (the flashing value on the display)
Rubber and Plastics	Select next digit
Stop	Save & exit menu to normal mode of operation

**Set cycle counter** – Adjust the recorded number of cycles ran

Cycle Number	000000
--------------	--------

**Keypad:**

Unwrapped	Decrease current digit
Wrapped	Increase current digit
Rubber and Plastics	Select next digit
Stop	Save & exit menu to normal mode of operation

**Conductivity Setup** – To display detected water quality

CD= x.xuS/NNN/y.yppm
L=LL.L H=HH.H G=G.GG

If Statim has a Float Switch and Water Quality Sensor display below will appear.

CD= x.xuS/NNN/y.yppm
FLOAT H=HH.H G=G.GG

**Screen Representation**

x.x	Water conductivity in uS (micro-Siemens)
NNN	Water conductivity in ADC (Analog to Digital converter) counts (0...255)
y.y	Water quality in ppm (parts per million)
LL.L	Lower value threshold (No water threshold) <b>default 0.3uS</b> Values lower than this trigger “No water refill reservoir” error
FLOAT	Indicates the reservoir has both a Float Switch & Water Quality Sensor
HH.H	High value threshold (Bad water threshold) <b>default 10uS</b> Values larger than this trigger “Bad water quality” error
G.GG	Water conductivity circuit gain <b>default 1.00</b>

**Note: Distilled water readings should be between Low and High thresholds.  
Go to Water Conductivity Circuit Calibration to adjust readings.**

**Keypad:**

Unwrapped	Increase current field
Wrapped	Decrease current field
Rubber and Plastics	Move to next field
Stop	Exit menu to normal mode of operation

**Note: To perform Water Conductivity Circuit Calibration see page 18.**

**Water Cnd Tmp Comp** - To enable or disable water conductivity temperature compensation

```

>Water Cnd Tmp Comp
On
Off
    
```

**Keypad:**

Unwrapped	Select next option Second line shows the new value
Wrapped	Select previous option. Second line shows the new value
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

**Last Printout** – Printer reprints last cycle and unit returns to normal mode of operation

**(Used with printer)**

**Stored CF Printouts** – Printer prints saved cycle fault printouts and unit returns to normal mode of operation.

The saved CF printouts are sent to the printer or data logger only when either one is attached and configured. The following types of errors are saved:

- CF's
- Water quality or Water level low errors
- Cycle interrupted due to errors (##)

**Clear CF Printouts** – Reset Cycle Fault printout list **(Used with printer)**

```

>Clear CF Printouts
No
Yes
    
```

**Keypad:**

Unwrapped	Select next option Second line shows the new value
Wrapped	Select previous option. Second line shows the new value
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

**Display last CF#** - Show the last Cycle Fault that occurred

```

>Display last CF#
## (#####)
    
```

**Screen Representation**

##	Value of last recorded CF
(#####)	Cycle counter for last CF

**Keypad:**

Rubber and Plastics	Return to main menu
Stop	Exit to normal mode of operation

**Devices Test On/Off** – Toggle the unit’s devices on or off

```
>Devices Test On/Off
Pump Off
```

- Valve Off
- Compressor Off
- Yellow LED Off
- Extra 1L Off
- Extra 2L Off
- Drawer Relay Off

**Keypad:**

- |                     |   |
|---------------------|---|
| Unwrapped           | Select next option. Second line shows the new value     |
| Wrapped             | Select previous option. Second line shows the new value |
| Rubber and Plastics | Toggle On/Off selected device                           |
| Stop                | Return to main menu                                     |

**Chamber Temperature Offset** – View the offset of the chamber thermocouple

```
>Temperature Offset
##
```

**Screen Representation**

## Offset value

**Keypad:**

- |                     |                                  |
|---------------------|----------------------------------|
| Rubber and Plastics | Return to main menu              |
| Stop                | Exit to normal mode of operation |

**Validation Offset** – View the offset of the validation thermocouple

```
>Validation Offset
##
```

**Screen Representation**

## Offset value

**Keypad:**

- |                     |                                  |
|---------------------|----------------------------------|
| Rubber and Plastics | Return to main menu              |
| Stop                | Exit to normal mode of operation |

**Voltage Calibration** – Adjust voltage offsets (**not used for Statim 2000 & 5000**)

```

>Voltage Calibration
V = VVV  VCal = CCC
    
```

**Screen Representation**

VVV	Voltage measured by unit
CCC	Voltage calibration offset. This should be adjusted so that the VVV value is the same as the line voltage measured by the voltmeter.

**Keypad:**

Unwrapped	Increase current field
Wrapped	Decrease current field
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

**Voltage Setup** – Select input voltage of unit (**not used for Statim 2000 & 5000**)

```

>Voltage Setup
115V
230V
    
```

**Keypad:**

Unwrapped	Select next option. Second line shows new value
Wrapped	Select previous option. Second line shows new value
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

**Repeater mode** – Enable or disable unit to run cycles continuously

```

>Repeater mode
On
Off
    
```

**Note: Repeater Mode must be turned OFF when testing is complete**

**Keypad:**

Unwrapped	Select next option. Second line shows new value
Wrapped	Select previous option. Second line shows new value
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

**RS232** – To select which serial device to attach (**Used with printer**)

>RS232 N/A
---------------

Serial Printer  
USB FLASH/MSD

**Keypad:**

Unwrapped	Move to next option, second line shows the new value
Wrapped	Move to previous option, second line shows the new value
Rubber and Plastics	Save and return to main menu
Stop	Exit menu to normal mode of operation without saving

**End of Line CR/LF** – Configure the printout layout (**Used with printer**)

>End Of Line CR/LF CR/LF
-----------------------------

-  
CR  
This only needs to be set if a serial printer is attached to the serial port.

**Available options:**

-	No line terminator is sent after each line. To be used with printer that accepts only 20 characters per line and automatically advances to next line. <b>Should be used with the STATprinter.</b>
CR	A <CR> is sent at the end of the line. To be used with printers that advance to beginning of next line when a CR is received.
CR/LF	A <CR><LF> is sent at the end of the line. To be used with printers that translate advance to beginning of next line only when LF is received.

**Keypad:**

Unwrapped	Select next option. Second line shows the new value
Wrapped	Select previous option. Second line shows the new value
Rubber and Plastics	Save & exit to main menu
Stop	Exit and return to normal mode of operation

SciCan Suggested External Printers	End Of Line CR/LF	Serial Port Bit Rate	Printer user ° char
Epson TM-U220D (C31C515603)	CR/LF	9600	248 [0xF8]
Citizen IDP-3110-40 RF 120B	CR	9600	N/A
Star Micro SP212FD42-120	CR	9600	210 [0xd2]
Star Micro SP216FD41-120	CR/LF	9600	210 [0xd2]
Star Micro SP512MD42-R	CR/LF	9600	210 [0xd2]

**Serial Port Bit Rate** – Choose bit rate for device connected to the serial port (**Used with printer**)

Serial Port Bit Rate 9600
------------------------------

19200  
57600  
115200  
300  
1200  
2400  
4800

If USB FLASH/MSD is selected as the RS232 device, a Serial Port Bit Rate selection of 9600 will be required for the Data Logger to be operational.

**Keypad:**

Unwrapped	Select next value
Wrapped	Select previous value
Rubber and Plastics	Save & return to main menu
Stop	Exit, without saving, and return to normal mode of operation

**Printer user ° char** – Setting to print a °C sign (**Used with printer**)

Printer user ° char dd [0xhh]
----------------------------------

dd decimal value for selected char-default 32  
hh hex value for the selected char-default 20

**Keypad:**

Unwrapped	Increase value by one
Wrapped	Increase value by ten
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, and return to normal mode of operation

**Factory default** – Reset to factory default settings

>Factory default No
------------------------

Yes, Reset NVRAM

This function resets the NVRAM to factory default settings. The chamber and voltage calibration offsets and conductivity settings will be reset. The cycle counter will not be reset.

**Keypad:**

Unwrapped	Select next option. Second line shows the new value
Wrapped	Select previous option. Second line shows the new value
Rubber and Plastics	Save and return to main menu
Stop	Exit, without saving, and return to normal mode of operation

**Change Password** – Change the password required to access the service menu

The unit will query for a 4 key password

Type New Password ****
---------------------------

The unit will require that the user re-enter the same 4 key password

Type New Password ****
---------------------------

The unit will confirm that the password has been changed or if changing the password failed, the unit will again query for a new 4 key password

Password Changed
------------------

In case the changed password is lost a backdoor password can be used: Unwrapped, Wrapped, Unwrapped, Wrapped in this order.

**Backup NVRAM** – Saves a copy of the unit’s current settings

>Backup NVRAM No
---------------------

Yes

**Keypad:**

- |                     |   |
|---------------------|---|
| Unwrapped           | Select next option Second line shows the new value      |
| Wrapped             | Select previous option. Second line shows the new value |
| Rubber and Plastics | Select and return to main menu                          |
| Stop                | Exit, without saving, to normal mode of operation       |

**Restore NVRAM** – Restores the previously saved unit settings into the NVRAM

>Restore NVRAM No
----------------------

Yes

**Keypad:**

- |                     |   |
|---------------------|---|
| Unwrapped           | Select next option Second line shows the new value      |
| Wrapped             | Select previous option. Second line shows the new value |
| Rubber and Plastics | Select and return to main menu                          |
| Stop                | Exit, without saving, to normal mode of operation       |

**Save and Exit** – Saving settings and return to normal mode of operation

Upon selection, current settings are saved and unit restarts in normal mode of operation

**Exit** – Exit menu without saving settings

Upon selection, current settings are discarded, not saved and unit restarts in normal mode of operation

**Water Pump Type** – Used to select which manufacture's Water Pump is installed in unit

All USA models use Ulka Pump at this time

>Water Pump Type Invensys Ulka
--------------------------------------

**Production Cycle** – For manufacturing use only

all-guides.com



## Statim Rev. 7 PCB Revision 600 Software Low Threshold Water Conductivity Setup To correct Refill Reservoir/Empty Waste Bottle message

1. Turn power switch ON while holding down Unwrapped and Wrapped buttons to enter **Service Mode**.
2. The **Service Mode** is password protected, enter password to continue, default password is: Unwrapped, Wrapped, Rubber and Plastics and Stop buttons pressed in this order.

### Keypad function at this time:

Unwrapped Key:           Select next item in the menu  
 Wrapped Key:             Select previous item in the menu  
 Rubber and Plastics Key: Enter current selection

3. Press the Unwrapped Key until **Conductivity Setup** appears on the top line of the display, then press the Rubber and Plastics Key.
4. Display should be similar to the example below.

**CD=xx.xuS/NNN/y.yppm**  
**L=LL.L   H=HH.H   G=G.GG**

### Screen Representation

xx.x       Water conductivity in uS  
 NNN       Conductivity measurement in ADC (Analog to Digital) counts (0...255)  
 y.y       Water conductivity in ppm (parts per million).  
 LL.L       Lower value threshold in uS (No water threshold), **default 0.3uS**.  
 HH.H       High valve threshold (Bad water threshold), **default 10uS**.  
             Values larger than this trigger “Water Quality is Not Acceptable” error.  
 G.GG       Water conductivity circuit gain  
 Note: Distilled water readings should be between low and high thresholds.

### Keypad functions in Conductivity Setup screen:

Unwrapped Key:           Increase current field (the flashing value on the display)  
 Wrapped Key:             Decrease current field (the flashing value on the display)  
 Rubber and Plastics Key: Move to next field  
 Stop Key:                 Exit

5. Adjust the low threshold value to the **0.1 uS**.
6. A cursor will be flashing in the lower left corner of the display on the LL.L value.
7. Press the Wrapped Key to lower the value to **0.1 uS**.
8. Press the Rubber and Plastics Key to accept the setting.
9. Press the Wrapped Key until Save and Exit appears on the top line of the display.
10. Display should be similar to the example below.

**>Save and Exit**  
**Exit**

11. Press the Rubber and Plastics Key.
12. **Drain the Water Reservoir and verify that the Statim says “Refill Reservoir/Empty Waste Bottle” when the water level in the Water Reservoir is below the Water Quality Sensor.**

## Statim Rev. 7 PCB Water Conductivity Circuit Calibration

1. Disconnect conductivity sensor wires (J4-3 & J4-4).
2. Using a wire, short together the float pins (J4-5 & J4-6).
3. Turn power switch ON while holding down Unwrapped and Wrapped buttons to enter **Service Mode**.
4. The **Service Mode** is password protected, enter password to continue, default password is: Unwrapped, Wrapped, Rubber and Plastics and Stop buttons pressed in this order. If password has been changed backdoor password is: Unwrapped, Wrapped, Unwrapped and Wrapped buttons pressed in this order.

### Keypad function at this time:

Unwrapped Key: Select next item in the menu  
 Wrapped Key: Select previous item in the menu  
 Rubber and Plastics Key: Enter current selection

5. Toggle through the menu selections using the keypad to reach **Conductivity Setup** and press the Rubber and Plastics key.
6. Display should be similar to one of the examples below.

<p>CD=xx.xuS/NNN/y.yppm          L=LL.L H=HH.H G=G.GG</p>
---

<p>CD=xx.xuS/NNN/y.yppm          FLOAT H=HH.H G=G.GG</p>
--

### Screen Representation

xx.x Water conductivity in uS.  
 NNN Conductivity measurement in ADC (Analog to Digital) counts (0...255)  
 y.y Water conductivity in ppm (parts per million).  
 LL.L Lower value threshold in uS (No water threshold), **default 0.3uS**  
 FLOAT Indicates reservoir has both a Float & Water Quality Sensor  
 HH.H High valve threshold (Bad water threshold), **default 10uS**  
 Values larger than this trigger "Water Quality is Not Acceptable) error.  
 G.GG Water conductivity circuit gain, **default 1.00**  
 Note: Distilled water readings should be between low and high thresholds.

7. Check/adjust low and high threshold values to the default ones.
8. By pressing the Rubber and Plastics Key the selection moves between LO, HI and G.
9. Select "G" Water conductivity circuit gain (flashing value on the display), by pressing the Rubber and Plastics Key.
10. Adjust G.GG value so the conductivity in ADC counts (NNN) shows **186±1 count**.
11. Press Stop Key to exit the Water conductivity mode and save displayed thresholds "HH.H", "LL.L" and "G.GG" and enter normal mode of operation, "Select a Cycle" screen.

### Keypad functions in Conductivity Setup screen:

Unwrapped Key: Increase current field (the flashing value on the display)  
 Wrapped Key: Decrease current field (the flashing value on the display)  
 Rubber and Plastics Key: Move to next field.

## Statim Rev. 7 PCB Validation Thermocouple Calibration

1. Turn power switch ON while holding down Unwrapped and Wrapped keys to enter **Service Mode**.
2. The **Service Mode** is password protected, enter password to continue, default password is: Unwrapped, Wrapped, Rubber and Plastics and Stop keys pressed in this order.

### Keypad function at this time:

Unwrapped Key: Select next item in the menu  
 Wrapped Key: Select previous item in the menu  
 Rubber and Plastics Key: Enter current selection

3. Toggle through the menu selections using the keypad to reach **Calibration** and press the Rubber and Plastics key.
4. Display should be similar to the example below.

25.5	FE	24.1	F9
			1.4

### Screen Representation

25.5 Validation thermocouple reading  
 FE Validation thermocouple hexadecimal offset compared with chamber reading  
 24.1 Chamber temperature in °C  
 F9 Chamber thermocouple hexadecimal offset  
 1.4 Difference between validation thermocouple and chamber thermocouple in °C

5. Start a Validation thermocouple self-calibration cycle. Press and **hold** the Unwrapped key and at the same time press the Start key. The Validation thermocouple hexadecimal offset will change to 00 and the character “\*” will appear after the 00. The display should be similar to the example below. The 00\* on the display indicates the Validation thermocouple calibration cycle is running. **Note: If there is no cassette in the unit, the water quality is unacceptable or the water level is low the Validation thermocouple calibration cycle will not run**

25.5	00*	24.1	F9
			1.4

6. Allow the Validation thermocouple self-calibration to complete. The temperature within the chamber will rise to sterilization temperature. Wait until the sterilization phase of the calibration cycle ends automatically. The **00\*** value will change to a new offset value. The unit will vent automatically. After the unit has vented press the Stop key to end the calibration cycle. **Note: Backup NVRAM after calibration is complete.**