



**ThermoWorks**

# PTR/DTR

Printing Thermometer Software



**Software User Manual**

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## INTRODUCTION

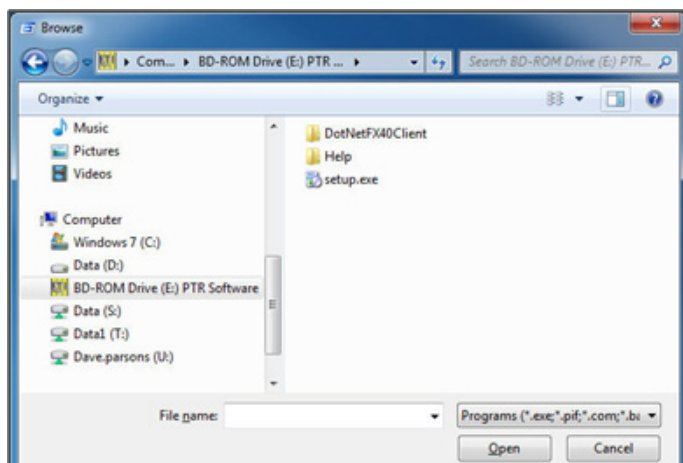
The PTR/DTR printing thermometer PC software is used to configure the thermometer and retrieve stored readings from it.

The PTR has 4 inputs that can be renamed (user selectable). Each input has an assigned high and low limit (user selectable). The DTR can store up to 4 labels (user selectable). Each label has an assigned high and low limit (user selectable). When a temperature is taken the label and limits will be printed on the ticket and stored with the readings.

The following pages explain how to adjust the user selectable information shown on the PTR/DTR display and the printed ticket and retrieve the stored readings. Place the CD in the CD drive.

## TO INSTALL THE PTR/DTR PC SOFTWARE

The CD will auto-run. (If it does not, click 'Start', 'Run...', browse to the CD drive and click 'Setup.exe'



or double click the 'My Computer' icon on the Desktop and double click the CD drive.



When the 'Printing Temperature Recorder Setup Wizard' box appears click the next button.

The program files will be installed by default to...

"C:\Program Files\ETI Ltd\Printing Temperature Recorder\" (Recommended).

The 'Browse' button can be used to install to an alternate location (Advanced Users).

The 'Disk Cost' button will show the space on available drives and the amount required.

The software may be installed for the current user or all users of the PC. The default installation is 'Everyone'. Select the alternate button for 'Just me' (Advanced Users).

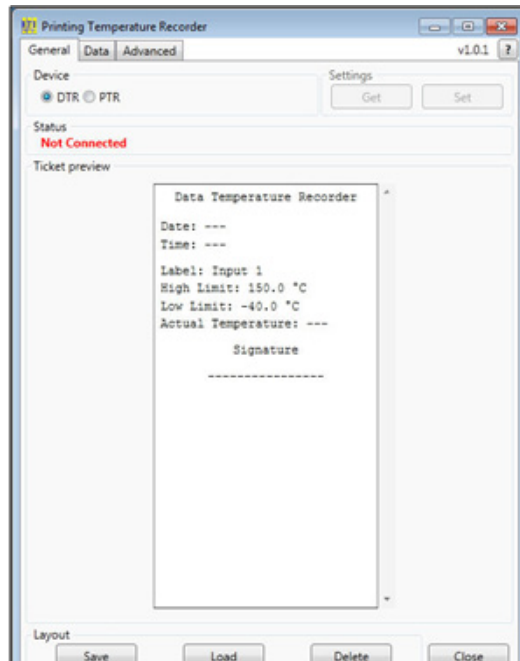
The final installation dialogue box gives a last opportunity to go back and revise the installation settings. Click the 'Next' button to install the software. A moving bar will show the installation progress.

Click the 'Close' button to exit the installation procedure.

An icon for the Printing Temperature Recorder will be placed on the desktop.

A Printing Temperature Recorder shortcut will be placed in 'Start menu' - 'Programs' - 'ETI Ltd'.

## GENERAL TAB



### DEVICE

When working on ticket layouts without a device connected to the PC select DTR or PTR. When devices are plugged into the PC USB sockets this box will contain a drop down list of all the available PTR/DTR units.

### SETTINGS

GET - retrieves current settings and ticket layout from the PTR/DTR.

SET - configures the PTR/DTR with selected settings and ticket layout.

### STATUS

Displays the number of readings stored in PTR/DTR memory and the time the PTR/DTR was synchronised.

### TICKET PREVIEW

Allows the 'Ticket layout' to be modified in 'what you see is what you get (WYSIWYG)' style. Edit mode is entered by hovering the mouse cursor over the fields within the ticket area. All user-selectable fields and their descriptions appear. Leaving the ticket area, disables the edit mode and the actual ticket layout is shown.

## LAYOUT

SAVE – saves the current ticket layout to the PC.

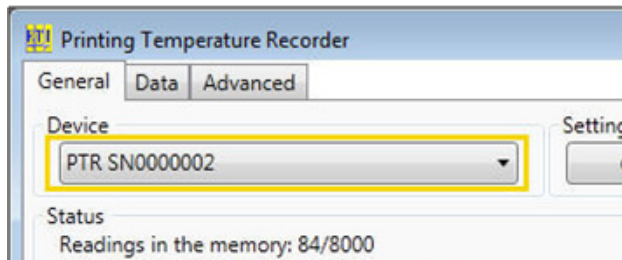
LOAD – loads saved ticket layout from the PC.

DELETE – deletes a saved ticket layout.

CLOSE – closes the software.

## SELECTING A PTR/DTR

If more than one PTR/DTR device is plugged into the PC, use this drop-down list to select the appropriate one.

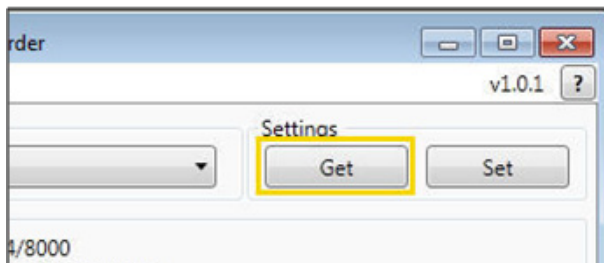


When a PTR/DTR is selected, the settings stored in it will be downloaded automatically.

**WARNING:** any changes made to the currently displayed ticket layout or settings will be overwritten.

## GETTING SETTINGS FROM THE DEVICE

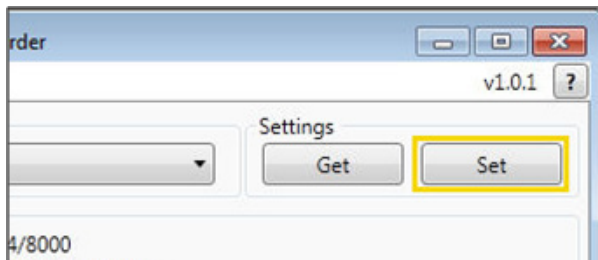
To retrieve the ticket layout and settings stored on the PTR/DTR device, click the 'Get' button in the 'Settings' section.



Do not disconnect device from the PC until operation complete.

## CONFIGURING THE PTR/DTR

To configure the PTR/DTR with the current ticket layout and settings, click the 'Set' button in the 'Settings' section.

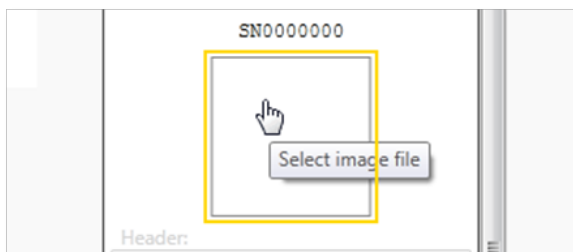


Do not disconnect device from the PC until operation complete.

## MODIFYING THE TICKET LAYOUT

### SELECTING AN IMAGE

To select an image to be displayed on the ticket, hover the mouse cursor over the image area or existing image in the 'Ticket layout' section. The cursor will change to a hand shape and clicking on the area or image will show the 'Select image' dialogue box.



Select an image file from the PC and click 'Open'.

The PTR/DTR can only print black and white so the image will be converted to black and white. If contrast adjustment is needed, use the slide control. To make the image lighter slide the control to the left. To make the image darker slide the control to the right.





To erase the existing image, click the 'X' button at the top right corner of the image area.



## EDITING USER FIELDS

A DTR ticket has eight user selectable fields on the layout: 'Header', 'User Fields 1-3' and 'Footers 1-4'.

A PTR in 'Log' mode has only the 'Header' field appear.

A PTR in 'Summary' mode has 'Header' and 'Footers 1 – 4'.

A PTR in non-logging mode has eight user selectable fields on the layout: 'Header', 'User Fields 1-3' and 'Footers 1-4'.

Hover the mouse cursor over the corresponding field to highlight and click on it to modify.

If a field is left empty, it will not be displayed on the 'Ticket layout' when the edit mode is exited (and therefore, will not be printed).

## CHANGING THE DATE/TIME FORMAT

To change the Date/Time format to either UK (dd/mm/yy hh:mm:ss) or US (mm/dd/yy hh:mm:ss), hover the mouse cursor over the 'Date/Time' field in the 'Ticket layout' area. The cursor will change to a hand shape and clicking on the area shows the format pop-up box. Select the required format from the pop-up box.

Header

Date/Time

Date: 20/06/2012

Time: 11:51:00

User Line 1

Date/Time format ☒ UK ☐ US

## DEFINING THE LABELS AND LIMITS - DTR

The DTR has 1 input and up to four labels can be defined for use. These labels can each have their own high and low limits.

Each reading taken by the device is assigned the label selected at the time. The reading's alarm state is determined by its label's high and low limits.

To change the name of a label and its limits, click on the Labels field on the ticket layout area.

Labels

Label: Input B

High Limit: 150.0 °C

Low Limit: -40.0 °C

Labels

Label: Input B

High Limit: 150.0 °C

Low Limit: -40.0 °C

Temperature

Actual Temperature

Sign

Footer 1

Eastin

Label	High limit	Low limit
<input type="radio"/> Freezer	150.0 °C	-40.0 °C
<input checked="" type="radio"/> Input B	150.0 °C	-40.0 °C
<input type="radio"/> Input C	150.0 °C	-40.0 °C
<input type="radio"/> Input D	150.0 °C	-40.0 °C

Radio buttons on the left determine the selected label on instrument start-up. The high and low limits are selected from the drop-down boxes. The high limit must be greater than the low limit and vice-versa.

## DEFINING THE LABELS AND LIMITS – PTR

The PTR has 4 inputs. To define inputs and their high and low limits simply hover the mouse cursor over the 'Inputs' field on the 'Ticket layout' area. Clicking on it will show the 'Inputs' pop-up box. Edit the Input name and select the high and low limits from the appropriate scroll lists.

The screenshot shows a 'Ticket layout' area with four footer sections. A yellow box highlights the 'Inputs' field in the first footer section. A pop-up box is displayed over it, showing the following data:

Input	High limit	Low limit
<input checked="" type="checkbox"/> Input A	1372.0 °C	-200.0 °C
<input checked="" type="checkbox"/> Input B	1372.0 °C	-200.0 °C
<input checked="" type="checkbox"/> Input C	1372.0 °C	-200.0 °C
<input checked="" type="checkbox"/> Input D	1372.0 °C	-200.0 °C

Measurement in ☒ °C ☐ °F

## CHANGING THE TEMPERATURE UNITS

To change temperature units to either °C or °F, hover the mouse cursor over the 'Inputs' field on the 'Ticket layout' area. The cursor will change to a hand shape and clicking on it will show the input pop-up box. Select the required measurement units from the pop-up box.

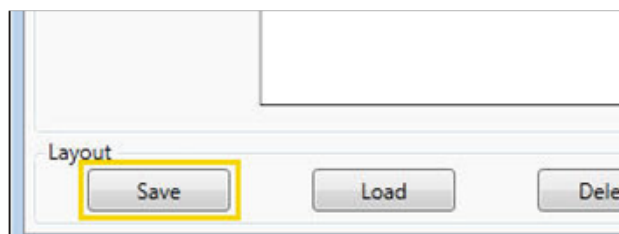
The screenshot shows the same 'Inputs' pop-up box as before, but with the measurement unit selection highlighted. The unit is currently set to °C, and the cursor is hovering over the °F option.

Input	High limit	Low limit
<input checked="" type="checkbox"/> Input A	1372.0 °C	-200.0 °C
<input checked="" type="checkbox"/> Input B	1372.0 °C	-200.0 °C
<input checked="" type="checkbox"/> Input C	1372.0 °C	-200.0 °C
<input checked="" type="checkbox"/> Input D	1372.0 °C	-200.0 °C

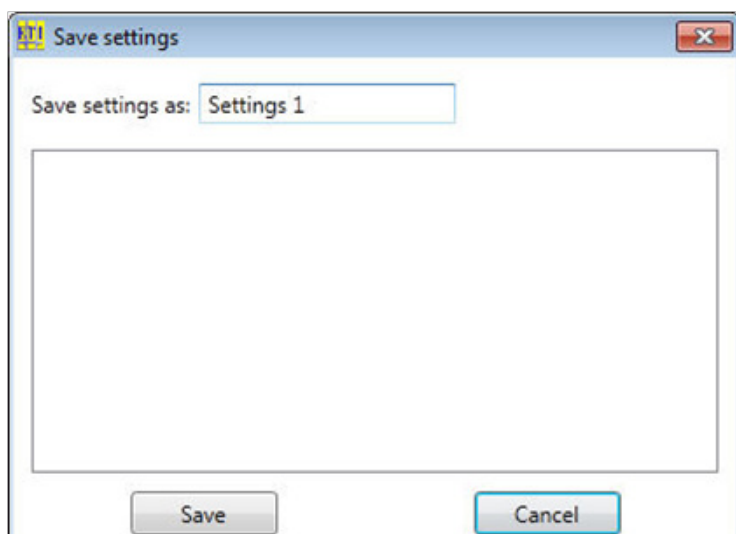
Measurement in ☒ °C ☐ °F

## SAVING THE TICKET LAYOUT AND SETTINGS TO THE PC

To save the current 'Ticket layout' to the PC, along with the selected settings, click the 'Save' button in the 'Layout' section.

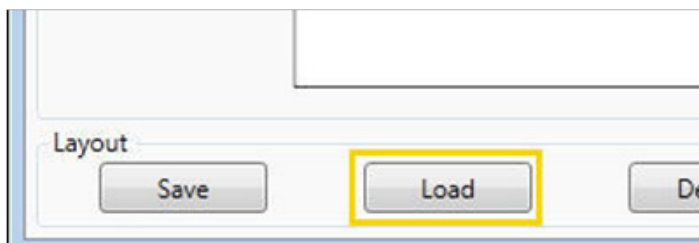


To save the settings to a new name type the name in the 'Save settings as' dialogue box. To overwrite settings that have already been saved, select a name from the list below the 'Save settings as' dialogue box.



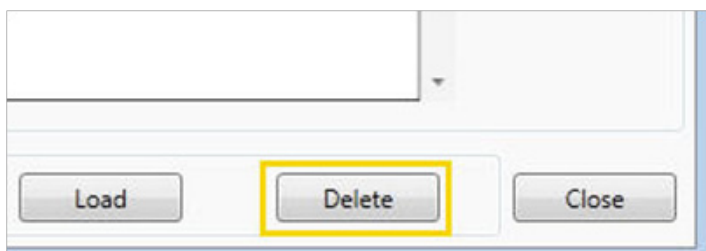
## LOADING THE TICKET LAYOUT AND SETTINGS FROM THE PC

To load previously saved settings from the PC, click the 'Load' button in the 'Layout' section and select the settings from the list in the 'Load' settings dialogue box.



## DELETING SAVED TICKET LAYOUT AND SETTINGS

To delete previously saved settings click on the 'Delete' button in the 'Layout' section and select the settings from the list in the 'Delete' settings dialogue box.



## DATA TAB

#	Date/Time	Reading	High Limit	Low Limit	Label
1.1	30/05/2012 10:02:03	22.9 °C	27.0 °C	-3.5 °C	Freezer
1.1	30/05/2012 10:02:03	23.0 °C	1372.0 °C	-200.0 °C	Input B
1.1	30/05/2012 10:02:03	23.0 °C	1372.0 °C	-200.0 °C	Input C
1.1	30/05/2012 10:02:03	22.7 °C	1372.0 °C	-200.0 °C	Input D
1.2	30/05/2012 10:02:09	22.9 °C	27.0 °C	-3.5 °C	Freezer
1.2	30/05/2012 10:02:09	23.0 °C	1372.0 °C	-200.0 °C	Input B
1.2	30/05/2012 10:02:09	23.0 °C	1372.0 °C	-200.0 °C	Input C
1.2	30/05/2012 10:02:09	22.7 °C	1372.0 °C	-200.0 °C	Input D
1.3	30/05/2012 10:02:15	22.9 °C	27.0 °C	-3.5 °C	Freezer
1.3	30/05/2012 10:02:15	23.2 °C	1372.0 °C	-200.0 °C	Input B
1.3	30/05/2012 10:02:15	23.2 °C	1372.0 °C	-200.0 °C	Input C
1.3	30/05/2012 10:02:15	22.7 °C	1372.0 °C	-200.0 °C	Input D
1.4	30/05/2012 10:02:21	22.9 °C	27.0 °C	-3.5 °C	Freezer
1.4	30/05/2012 10:02:21	23.4 °C	1372.0 °C	-200.0 °C	Input B
1.4	30/05/2012 10:02:21	23.5 °C	1372.0 °C	-200.0 °C	Input C
1.4	30/05/2012 10:02:21	22.7 °C	1372.0 °C	-200.0 °C	Input D
1.5	30/05/2012 10:02:27	23.0 °C	27.0 °C	-3.5 °C	Freezer
1.5	30/05/2012 10:02:27	23.5 °C	1372.0 °C	-200.0 °C	Input B
1.5	30/05/2012 10:02:27	23.6 °C	1372.0 °C	-200.0 °C	Input C
1.5	30/05/2012 10:02:27	22.7 °C	1372.0 °C	-200.0 °C	Input D
1.6	30/05/2012 10:02:33	23.0 °C	27.0 °C	-3.5 °C	Freezer
1.6	30/05/2012 10:02:33	23.3 °C	1372.0 °C	-200.0 °C	Input B
1.6	30/05/2012 10:02:33	23.4 °C	1372.0 °C	-200.0 °C	Input C
1.6	30/05/2012 10:02:33	22.7 °C	1372.0 °C	-200.0 °C	Input D

Readings

Get Erase Export Close

### RETRIEVING STORED READINGS FROM THE PTR/DTR

To sort the readings by heading, click on a column header.

#### READINGS:

GET – retrieves all readings stored in the PTR/DTR.

ERASE – erases all readings stored in the PTR/DTR.

EXPORT – export downloaded readings to Excel format.

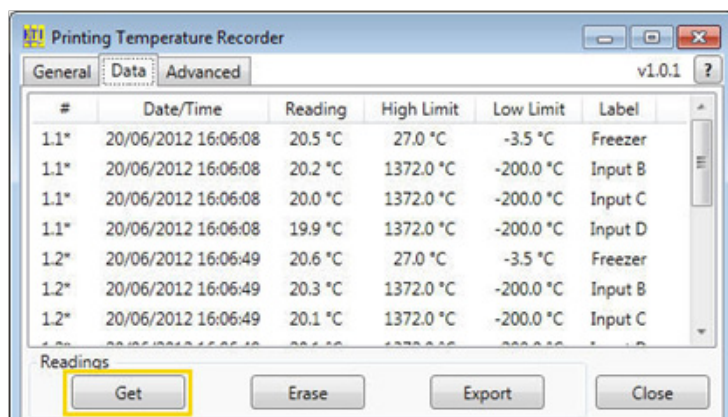
CLOSE – closes the software.

### DOWNLOAD READINGS FROM THE PTR/DTR

Click the 'Get' button in the 'Readings' section.

**WARNING:** Previously downloaded readings will be overwritten.

**WARNING:** Do not disconnect the PTR/DTR while readings are being transferred from it.



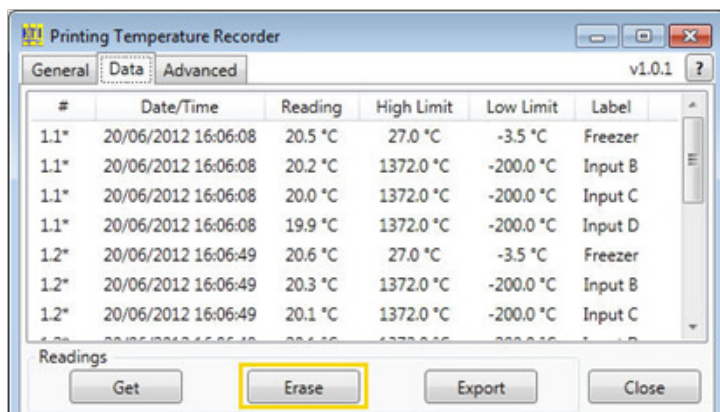
Information displayed in the list are Reading Number (#), Date/Time, Reading, High Limit, Low Limit and Label. Readings can be sorted in ascending or descending order by clicking the appropriate column header.

Data from a DTR has reading numbers of 1, 2, 3 etc.

Data from a PTR has reading numbers of 1.1, 1.2, 1.3 etc. This is because it is possible to have data from more than one logging session stored on the PTR.

## ERASING READINGS FROM THE PTR/DTR

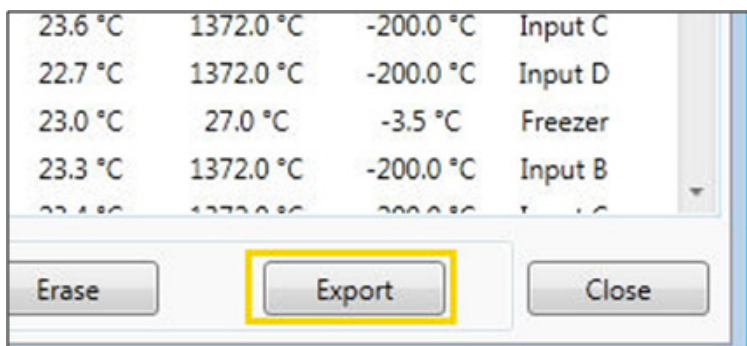
To clear all readings, click on 'Erase' button in 'Readings' section.



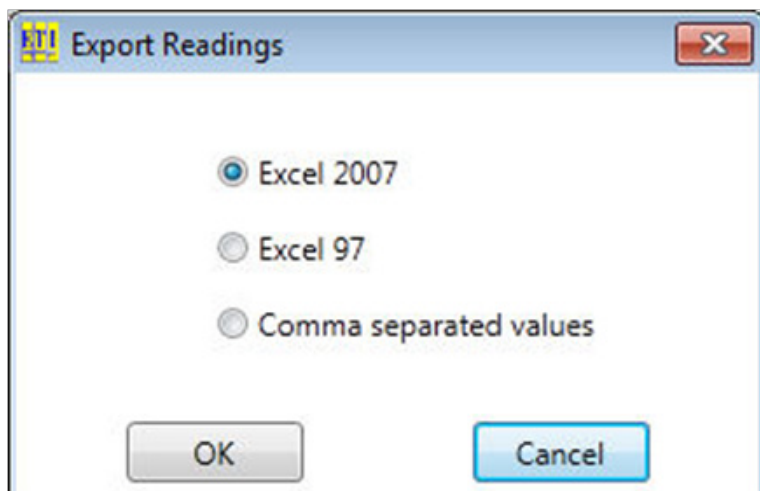
**WARNING:** once erased, readings cannot be restored.

## EXPORTING READINGS TO EXCEL FILE

Downloaded readings can be exported to an 'Excel' file. To do so, click on the 'Export' button in 'Readings' section.

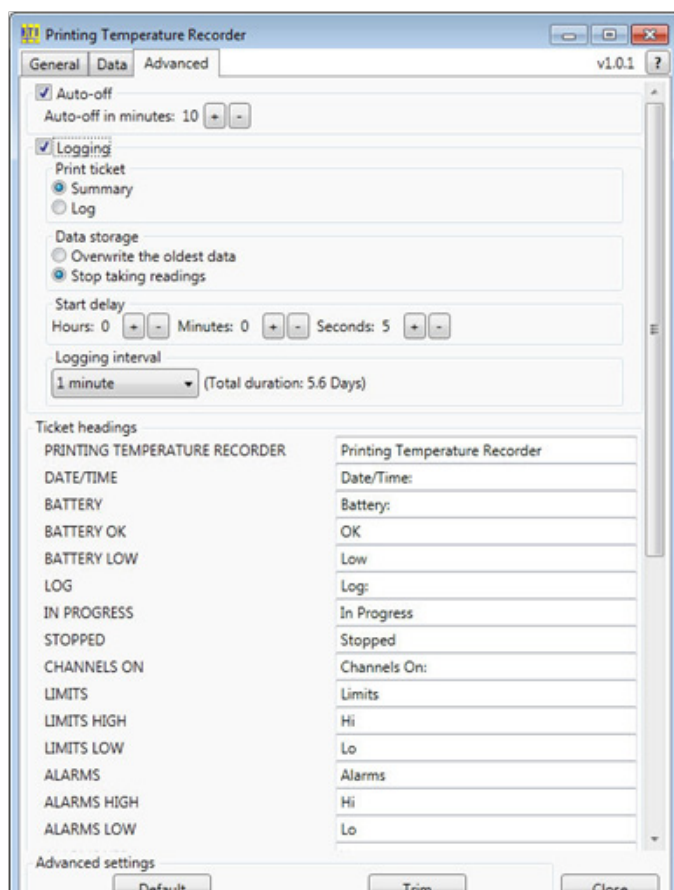


In the open dialogue box, select appropriate format, click 'OK' and then type the file name or select an 'Excel' file to overwrite in the 'Save' file dialogue box.





## ADVANCED SETTINGS TAB – PTR



### AUTO-OFF

To maximise battery life, the DTR can be set up to switch off automatically after given period of time when idle. To enable this feature, tick the 'Auto-off' checkbox in the 'Auto-off' section. To disable 'Auto-off', de-select the checkbox. The auto-off time can be set from 1 to 30 minutes. The value cannot be changed when the 'Auto-off' feature is disabled.

## MODE OPTIONS

PTR instrument has three modes of operation: On Demand printing, Logging and Log Summary. The set-up of these is achieved using the 'Advanced settings' tab.


### 'ON DEMAND' MODE

In 'On demand' mode the user can press the print button to obtain a printout of the current temperatures and the alarm status of each input. The ticket information can be customised by the user if required using the following section of the 'Advanced settings' tab.

### TICKET HEADINGS – ON DEMAND MODE

Ticket headings	
PRINTING TEMPERATURE RECORDER	Printing Temperature Recorder
READING NUMBER	Reading #
DATE	Date:
TIME	Time:
ERROR	ERROR
HI	HI
LO	LO

Printing Temperature Recorder	
SN00000002	
Reading # 1	
	
ETI Ltd	
Date: 19/04/2012	
Time: 17:04:36	
Location	
-----	
Operator	
-----	
Production Area	
-----	
Input A : 33.3 °C	
Input B : 33.0 °C	
Input C : 32.7 °C	
Input D : 31.9 °C	
Easting Close	
Worthing	
West Sussex	
BN14 8HQ	

The information in the heading fields of the printed ticket can be changed to suit the user requirements. These can be changed in the 'Ticket headings' section of the Advanced Tab.

To enable either of the logging modes click the 'Logging' tick box. Select the button for either Summary or Logging in the 'Print ticket' box.

### 'SUMMARY' MODE

In Summary mode the print button is pressed to obtain a ticket showing a summary of the log. The information displayed includes the date and time, battery status, log status, number of channels active, channel limits and alarms.


The instrument can be configured to stop logging when the memory is full or to

overwrite the oldest data in memory but selecting the appropriate option in the 'Data storage' section of the Advanced tab.

## TICKET HEADINGS – SUMMARY MODE

Ticket headings		
PRINTING TEMPERATURE RECORDER	Printing Temperature Recorder	Printing Temperature Recorder
DATE/TIME	Date/Time:	
BATTERY	Battery:	
BATTERY OK	OK	
BATTERY LOW	Low	
LOG	Log:	
IN PROGRESS	In Progress	
STOPPED	Stopped	
CHANNELS ON	Channels On:	
LIMITS	Limits	
LIMITS HIGH	Hi	
LIMITS LOW	Lo	
ALARMS	Alarms	
ALARMS HIGH	Hi	
ALARMS LOW	Lo	
ALARMS YES	Yes	
ALARMS NO	No	

Printing Temperature Recorder
SN00000002

ETI Ltd
Date/Time: 21/06/2012 17:00:12
Battery: OK
Log: Stopped
Channels On: I1 I2 I3 I4
Limits Lo Hi
Input A 27.0 °C -3.5 °C
Input B 1372.0 °C -200.0 °C
Input C 1372.0 °C -200.0 °C
Input D 1372.0 °C -200.0 °C
Alarms Hi Lo
Input A Yes No
Input B Yes No
Input C Yes No
Input D Yes No
Easting Close
Worthing
West Sussex
BN14 8HQ

The information in the heading fields of the printed ticket can be changed to suit the user requirements. These can be changed in the 'Ticket headings' section of the Advanced Tab.

## 'LOGGING' MODE

In Logging mode the instrument prints at a regular interval selected by the user. During the initial printing the instrument serial number, a logo and a header can be printed. Subsequent prints at each timed period contain the date, time, temperatures and Hi/Lo Alarm status.

A start delay for the log can be set using the plus and minus buttons in the 'Start delay' section of the 'Advanced' tab. A delay of up to 23 hours, 59 minutes and 59 seconds can be set. Setting 0 hours, 0 minutes and 0 seconds will give an immediate start when the 'START' button is pressed.


The log interval can be set from 6 seconds to 255 minutes using the drop down box in the 'Log interval' section of the 'Advanced' tab. The total log duration is calculated by the software each time the log interval is changed.

## TICKET HEADINGS – LOGGING MODE

Ticket headings	
PRINTING TEMPERATURE RECORDER	Printing Temperature Recorder
ERROR	ERROR
HI	HI
LO	LO

The information in the heading fields of the printed ticket can be changed to suit the user requirements. These can be changed in the 'Ticket headings' section of the Advanced Tab.

Printing Temperature Recorder  
330000002

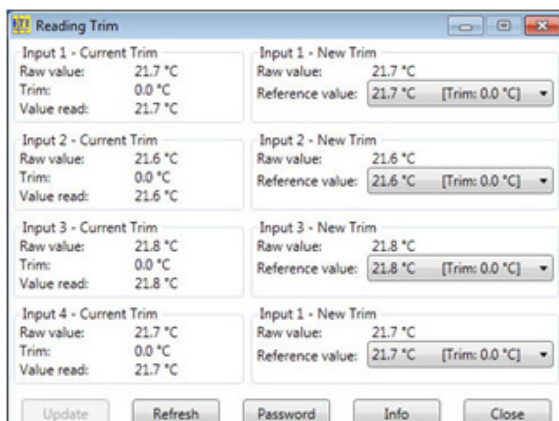


ETI Ltd

Date/Time: 21/06/2012 17:00:12  
Input A: 33.3 °C  
Input B: 33.0 °C  
Input C: 32.7 °C  
Input D: 31.9 °C

## READING TRIM

Each input can have a  $\pm 2.0$  °C (3.6 °F) trim value applied to it. This is to allow for variations in individual thermocouple probe accuracies. Apply the probes to a known temperature source and adjust the trim values so that the instrument reading matches the temperature source value. (Use a temperature source value in the region of the anticipated measurement values).



The 'Reading Trim' dialog box is used to adjust the trim values for four inputs. It is divided into two columns: 'Current Trim' and 'New Trim'. Each input has a 'Raw value' and a 'Value read' field. The 'Reference value' field is used to set the trim value, which is displayed in a dropdown menu next to it. The trim value is currently set to 0.0 °C for all inputs.

Input	Current Trim	New Trim
Input 1	Raw value: 21.7 °C Trim: 0.0 °C Value read: 21.7 °C	Raw value: 21.7 °C Reference value: 21.7 °C [Trim: 0.0 °C]
Input 2	Raw value: 21.6 °C Trim: 0.0 °C Value read: 21.6 °C	Raw value: 21.6 °C Reference value: 21.6 °C [Trim: 0.0 °C]
Input 3	Raw value: 21.8 °C Trim: 0.0 °C Value read: 21.8 °C	Raw value: 21.8 °C Reference value: 21.8 °C [Trim: 0.0 °C]
Input 4	Raw value: 21.7 °C Trim: 0.0 °C Value read: 21.7 °C	Raw value: 21.7 °C Reference value: 21.7 °C [Trim: 0.0 °C]

Buttons: Update, Refresh, Password, Info, Close

For best accuracy the temperature the instrument and temperature source must be at equilibrium. The source value should be read from a certified thermometer. The trim value is changed using the drop down box adjacent to the input name.

The trim operation can be password protected. To set a password the user must have administrator privileges for the computer.

## ADVANCED SETTINGS TAB - DTR

The screenshot shows the 'Printing Temperature Recorder' application window with the 'Advanced' tab selected. The window title bar includes the application name and version 'v1.0.1'. The 'General' tab is also visible. The 'Operation of the probe button' section contains settings for 'Printing delay in seconds' (set to 10) and 'Number of copies to be printed' (set to 0). The 'Auto-off' section has a checked checkbox and 'Auto-off in minutes' set to 10. The 'Ticket headings' section is divided into two columns: the left column lists fields like 'DATA TEMPERATURE RECORDER', 'READING NUMBER', 'DATE', 'TIME', 'LABEL', 'HIGH LIMIT', 'LOW LIMIT', 'ACTUAL TEMPERATURE', 'ERROR', 'ACCEPT', 'REJECT', and 'SIGNATURE'; the right column provides input fields for each of these. The 'Messages on the device display' section lists 'PRINTING', 'COPY', 'PAPER OUT', and 'SWITCH OFF' on the left, with corresponding input fields on the right. At the bottom, there are buttons for 'Default', 'Print', and 'Close'.

## OPERATION OF THE PROBE BUTTON

### PRINTING DELAY TIME FOR REMOTE PROBE BUTTON

To increase or decrease the printing delay time for prints taken with the remote button (on the probe handle) click the '+' or '-' boxes respectively. The boxes are located next to 'Printing delay in seconds' text in the 'Operation of the probe button' section. The minimum value is 0 seconds (printing starts immediately) and the maximum value is 30 seconds (default = 10 seconds).

## NUMBER OF COPIES TO BE PRINTED USING THE REMOTE BUTTON

To increase or decrease the number of copies to be printed when pressing the remote button click the '+' or '-' boxes. The boxes are located next to 'Number of copies to be printed' text in the 'Operation of the probe button' section. The minimum number is 0 (no copies to be printed, just the original ticket) and the maximum is 3 (default = 0).


## AUTO-OFF

To maximise battery life, the DTR can be set up to switch off automatically after given period of time when idle. To enable this feature, tick the 'Auto-off' checkbox in the 'Auto-off' section. To disable 'Auto-off', de-select the checkbox. The auto-off time can be set from 1 to 30 minutes. The value cannot be changed when the 'Auto-off' feature is disabled.

## TICKET HEADINGS - DTR

Ticket headings	
DATA TEMPERATURE RECORDER	Data Temperature Recorder
READING NUMBER	Reading #
DATE	Date:
TIME	Time:
LABEL	Label:
HIGH LIMIT	High Limit:
LOW LIMIT	Low Limit:
ACTUAL TEMPERATURE	Actual Temperature:
ERROR	ERROR
ACCEPT	ACCEPT
REJECT	REJECT
SIGNATURE	SIGNATURE

Data Temperature Recorder  
SM0000000  
Reading # 1



ETI Ltd  
Date: 19/04/2012  
Time: 17:04:36  
customer  
-----  
Label: Label 4  
High Limit: 150.0 °C  
Low Limit: -40.0 °C  
Actual Temperature: ---  
Signature  
-----  
Easting Close  
Worthing  
West Sussex  
BN14 5ND

The information in the heading fields of the printed ticket can be changed to suit the user requirements. These can be changed in the 'Ticket headings' section of the 'Advanced' tab and are shown in the ticket layout on the 'General' tab.

Messages on the device display	
PRINTING	Printing...
COPY	Copy?
PAPER OUT	Paper Out
SWITCH OFF	Switch Off

## **RESETTING THE ADVANCED SETTINGS TO 'DEFAULT' VALUES**

To reset all advanced settings ('Operation of the remote button', 'Auto-off', 'Ticket headings' and 'Messages on the PTR/DTR display'), click on the 'Default' button in the 'Advanced Settings'.

***WARNING:*** resetting 'advanced settings' to default is an irreversible action.

## **NOTES**



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