HTD 1.0

User's guide

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Technical support and product information

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INTRODUCTION

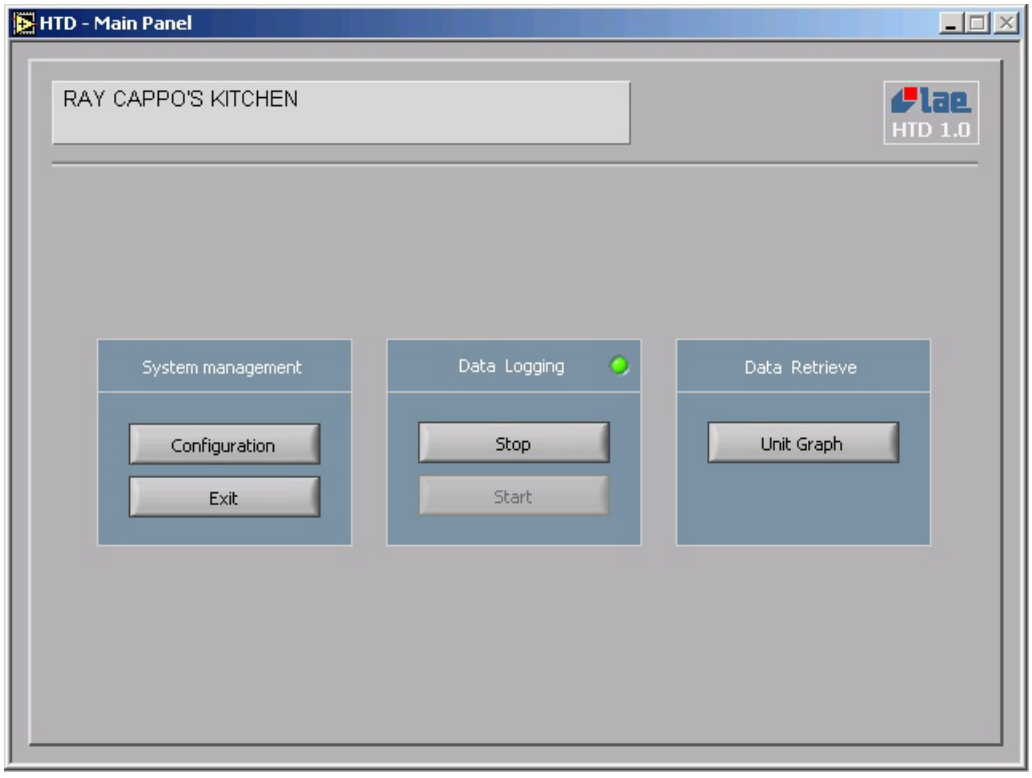
HTD is a data logger for LAE instruments which are connected to a computer through serial line.
The HTD allows up to 200 instruments of different types to be interfaced. The data the instruments measure and transmit to the HTD are stored indefinitely and they can then be displayed and analysed on the screen, printed out or exported to other applications.
The operation of the HTD is described in the following chapters:
1. CONFIGURATION
2. DATA MONITORING AND LOGGING
3. LOGGED DATA DISPLAY AND PRINTOUT

SYSTEM REQUIREMENTS

- Computer with Windows 95/98/NT/2000/XP operating system installed and running properly, minimum processor and memory as required from Windows version – Mouse – CD-ROM drive
- 640x480 pixel screen resolution, 16-bit colour
- 100MB Hard Disk space available for software installation
- RS232 serial port (COM)
- RS485 converter mod. SBC485 with modem type serial cable

INSTALLATION

Before proceeding to the installation of HTD, close all running tasks. Insert the CD into the CD-ROM drive and run *x:\HTD\Setup\English\setup.exe*, where x is the drive letter for your CD-ROM drive. Then follow instructions given by the installation program.
After the installation has been performed successfully, the "HTD – Data logging by LAE" group will be found in the program start menu; in here, select "HTD" to start the program.



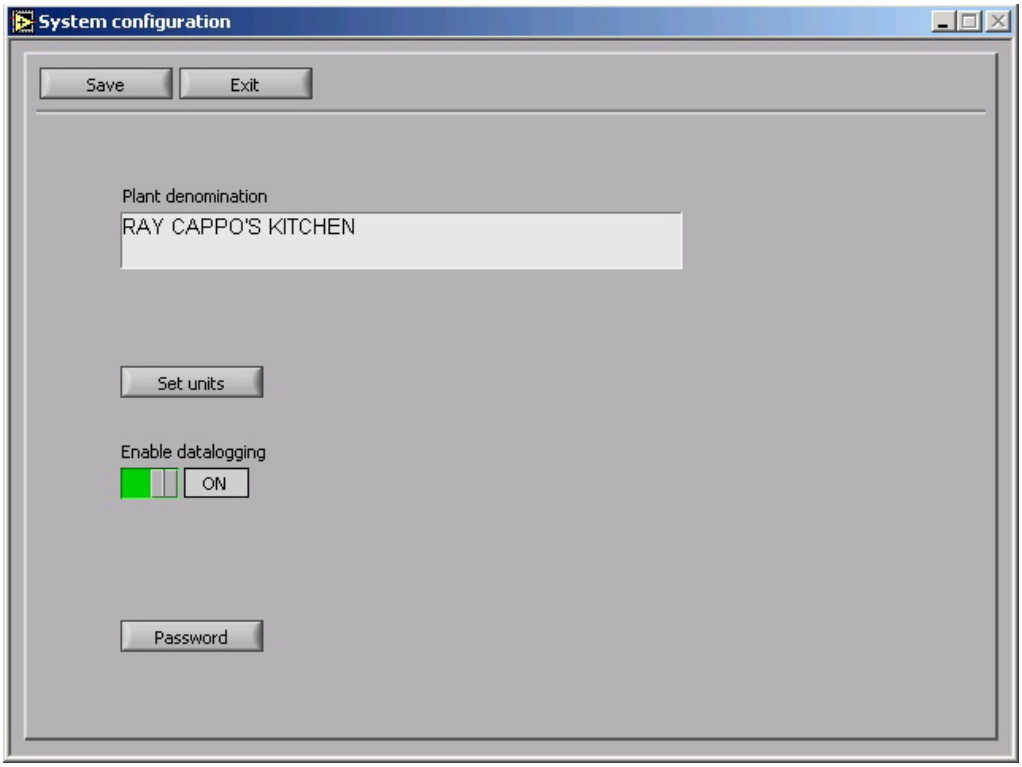
1. CONFIGURATION

The first operation to be performed, after the installation is over, is to configure the HTD in such a way as to meet the user's needs and in order for it to be able to identify the instruments belonging to the system.

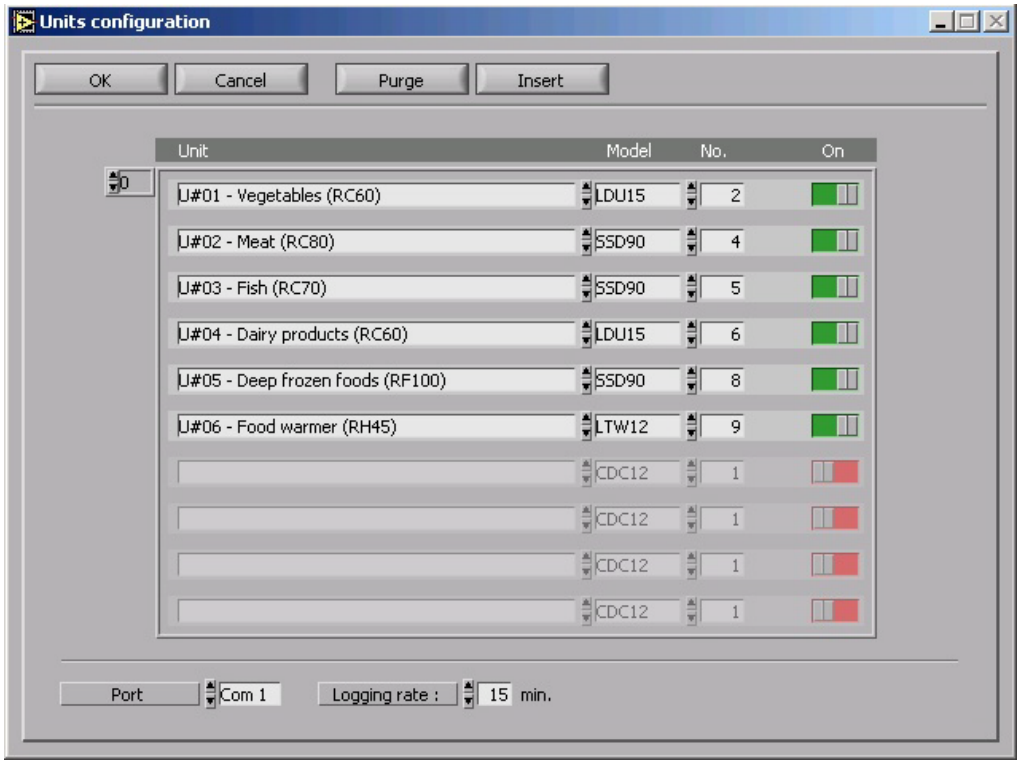
Each single instrument must be programmed with a unique peripheral address, between 1 and 200.
From *Main Panel* , start the configuration function with Configuration and digit the password.
As default configuration, after the installation, no password is set; in order to protect the system, it is necessary to set it.

PASSWORD
From *System Configuration* window, it is possible to modify the password, which is necessary for program configuration and termination. Once the new password has been input and confirmed, it is stored, there's no need to either save the rest of the configuration, or restart HTD.

PLANT CONFIGURATION
At the top of *System configuration* window, you must input the plant name, i.e. a description enabling you to identify the plant.
Move the switch Enable datalogging on "ON" position to enable data logging function.
Click on Set Units to open the window *Units configuration* .

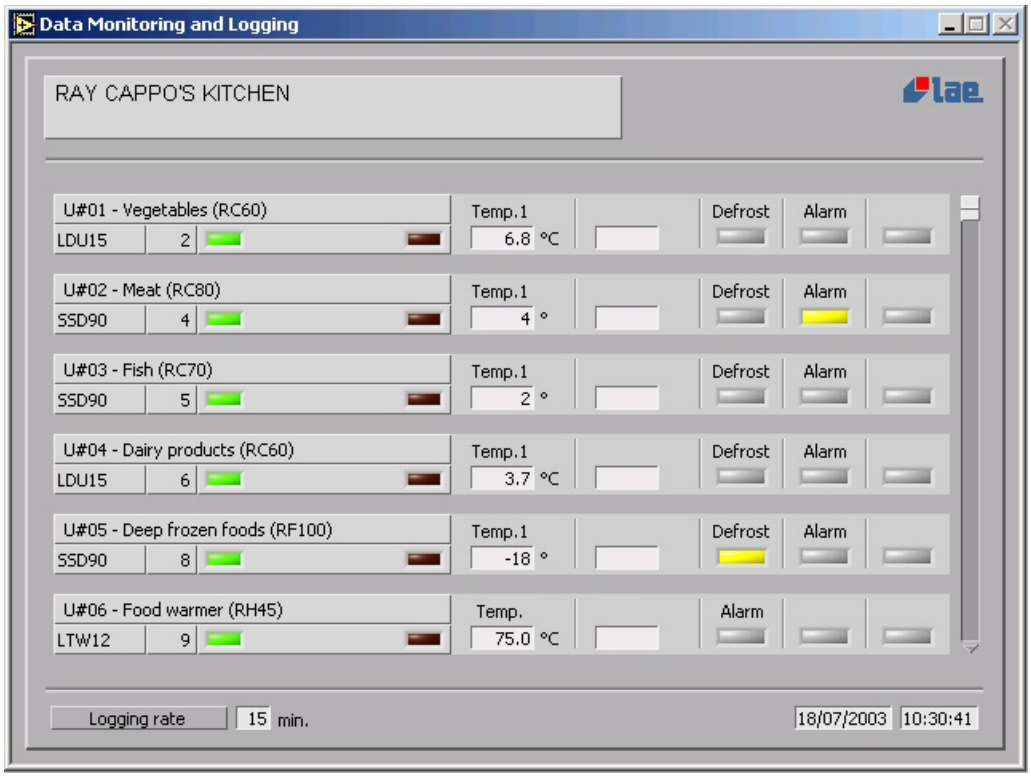


In this window you define all instruments belonging to the plant, with which the HTD will communicate. You must associate a description to each individual instrument, so that you will be able to identify the unit in which the instrument is fitted and the function performed (ex. refrigerating counter, cold room, heated cupboard).
Insert, into every row, unit description, instrument model, peripheral number and, with its switch, enable or inhibit the controller from data logging task (this is advisable when a unit or an instrument is switched off).
To scroll the unit rows within the displayed area, use the row-pointer located on the upper left corner to digit the row number or to move in single steps with ⬍.
From this window it's also necessary to select the serial port (COM1…COM4) used for communication with the instruments and the logging rate (5, 10…30 minutes). The logging rate is the saving rate on hard disk of the data read on the enabled peripherals.
If you need to remove a unit once for all, it's necessary to erase all the text in the "Unit" field, then click on Purge.
Whenever you must insert a new unit not at the array end but between two already programmed rows, with the row-pointer first of all move the insertion point at the window top row, then click on Insert.
When the configuration has been completed, return to previous window by clicking on Ok.
Now save data on hard disk with command Save and quit from configuration with Exit.
To make the new configuration operative, close HTD and restart it.
To exit from the HTD, press Exit and input the password.



2. DATA MONITORING AND LOGGING

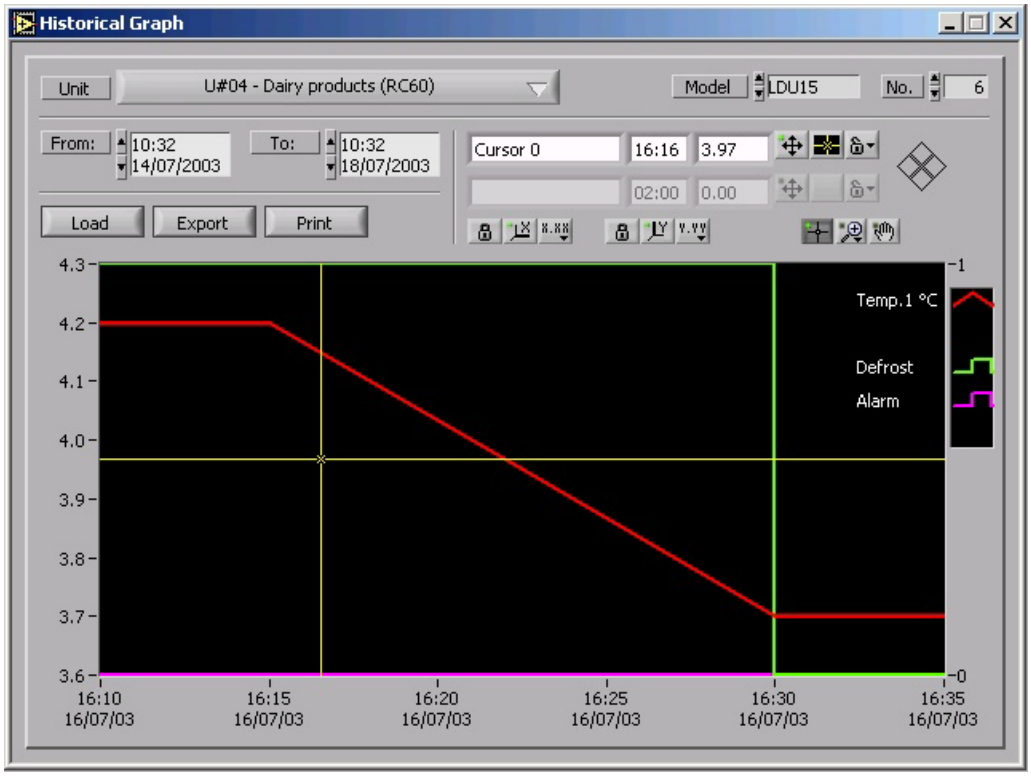
The data logging starts automatically with HTD and its flashing signal in *Main Panel* shows you that it's active. From this window, clicking on Stop and digiting the password halts the data loggers, or if they have been stopped already, clicking on Start re-starts them.



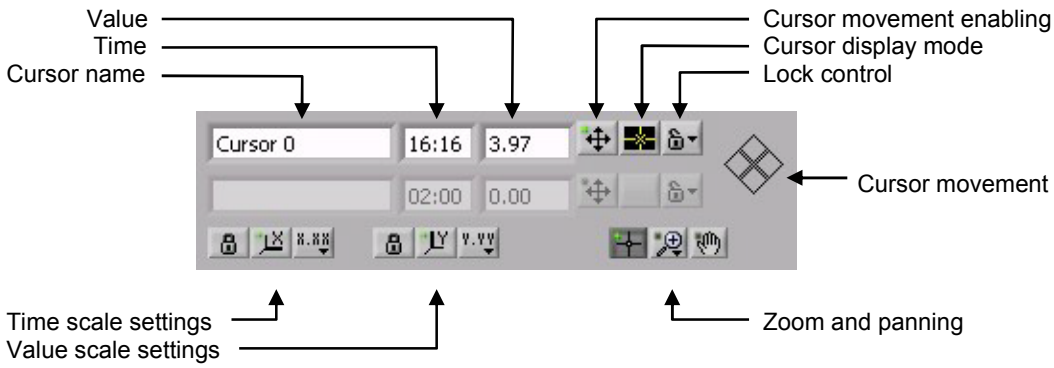
For every single instrument added in the configuration, the HTD stores up to 2 meaningful values and up to 3 meaningful on/off status indicators permanently on the hard disk.
The same data are also displayed on real time in the window *Data Monitoring and Logging*.
In this window, all units are listed and you can scroll through, via the slider on the right-hand side or the page up/page down arrows on the keyboard. For every single unit, on the left-hand side of the screen there are the meaningful data defined in the plant configuration and in addition a red LED indicating communication failure, if any. On the right-hand side, the values measured are displayed.

3. LOGGED DATA DISPLAY AND PRINTOUT

From *Main Panel* by clicking on Unit Graph within the "Data Retrieve" area, you have got access to the graphic representation of the data stored by HTD. From *Historical Graph* window you must first select the controller concerned in "Unit", then input starting and ending times, now click on Load to retrieve data.



The curves representing a value refer to the scale on the left, while those representing an on/off status refer to scale on the right (0=off , 1=on).
By clicking on Export, the loaded data can be saved in a text format readable from Excel or other programs.
By using the tools here below, you can choose the portion of graph to be displayed and you can use one or two cursors to read data more easily.



By clicking on the right hand legend, you can modify the outlook of the various curves.
The displayed graph can be hardcopied by clicking on Print. A preview window opens up, from which you can again choose the type of line, colour and other features of the curves in such a way as to obtain the best result according to the type of printer used (for example, although it's always preferrable to use a colour printer, if you have a monochromatic printer you can have the various curves distinguished by choosing dotted lines).

Troubleshooting

The communication error indicator remains red

1. Check that the SBC485 is powered correctly (on LED lit).
2. If the on LED is lit but the other LED's of the SBC485 never light up, check that the selected PC COM port actually corresponds to the one connected to the SBC, that it's not used for other tasks, that the cable is correct (of the type used for the modems, with RX→RX TX→TX straight connections).
3. If the yellow LED only never lights up, check the device connections (the signals A and B of the RS-485 line could be inverted) and the address on HTD and peripherals.

The texts within the windows are incomplete or superposed

If the monitor resolution is set at 800x600 or higher, from display properties set character size at Small or Normal.