



**EaziVal 2 Software User Manual.
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ANVILLE INSTRUMENTS LTD

EAZIVAL 2

Guide Manual

The ANVILLE INSTRUMENTS EAZIVAL software is specifically designed with the engineer in mind. It is easy to use and even if the engineer is not computer literate he should not find too much difficulty in mastering the system. The system is laid out so a natural path is followed to the machine to be tested with every click of the mouse.

The hospital engineer in particular will find that all the tests contained in HTM2010 and HTM2030 are included within the software. These include weekly, quarterly and yearly test sheets for the following machine types: -

Porous load sterilizer.
Unwrapped Instrument sterilizer.
Washer Disinfector machines.

The system has the ability to calculate holding and equilibration times for all machine types and sterilizing bands. Compile reports including machine identification details, thermometric charts, data listings and test sheets. Reports can be printed out or sent to other recipients using e-mail.

Manual written by A.Gillespie & J.Stutters
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Getting started

Before installing EaziVal 2

Please shut down all running programs.

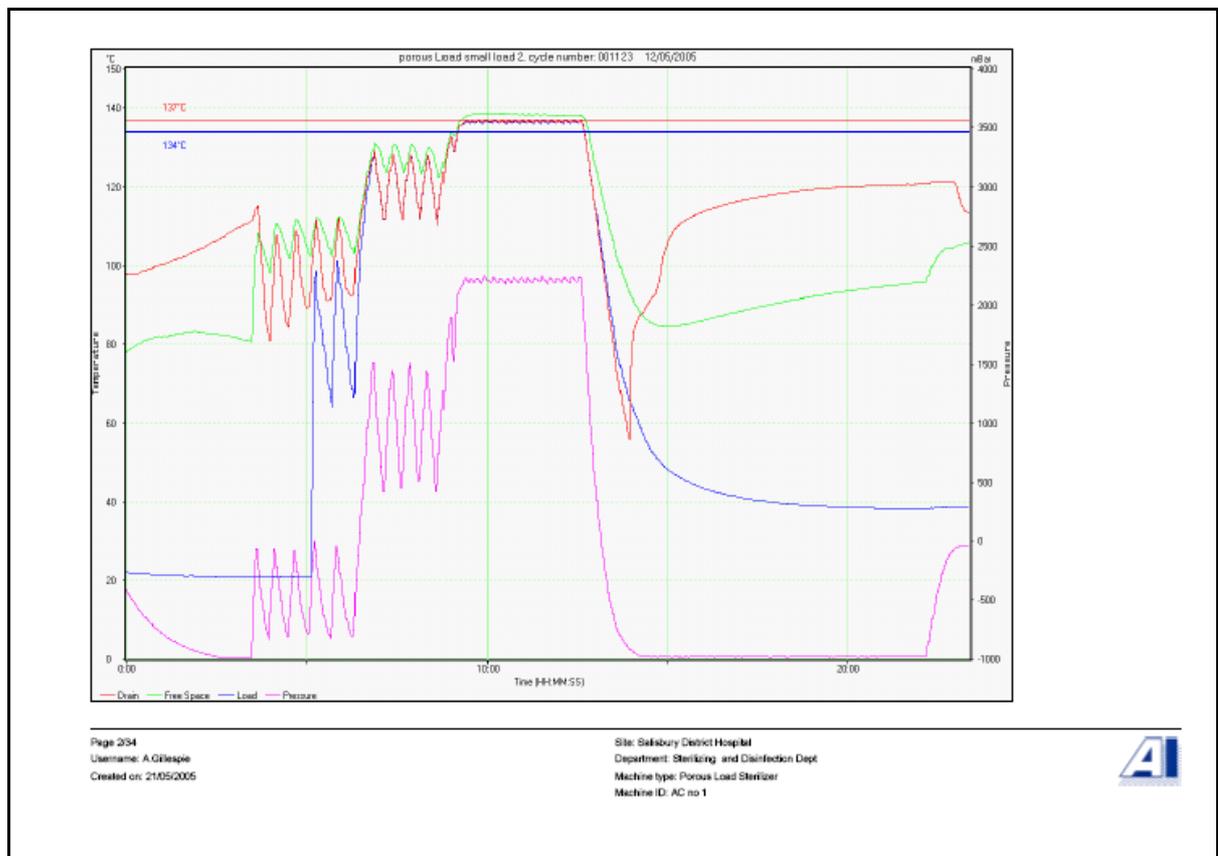
Software installation

Place the EaziVal 2 CD in your computers CD ROM drive. If you have auto run then the installer will start automatically.

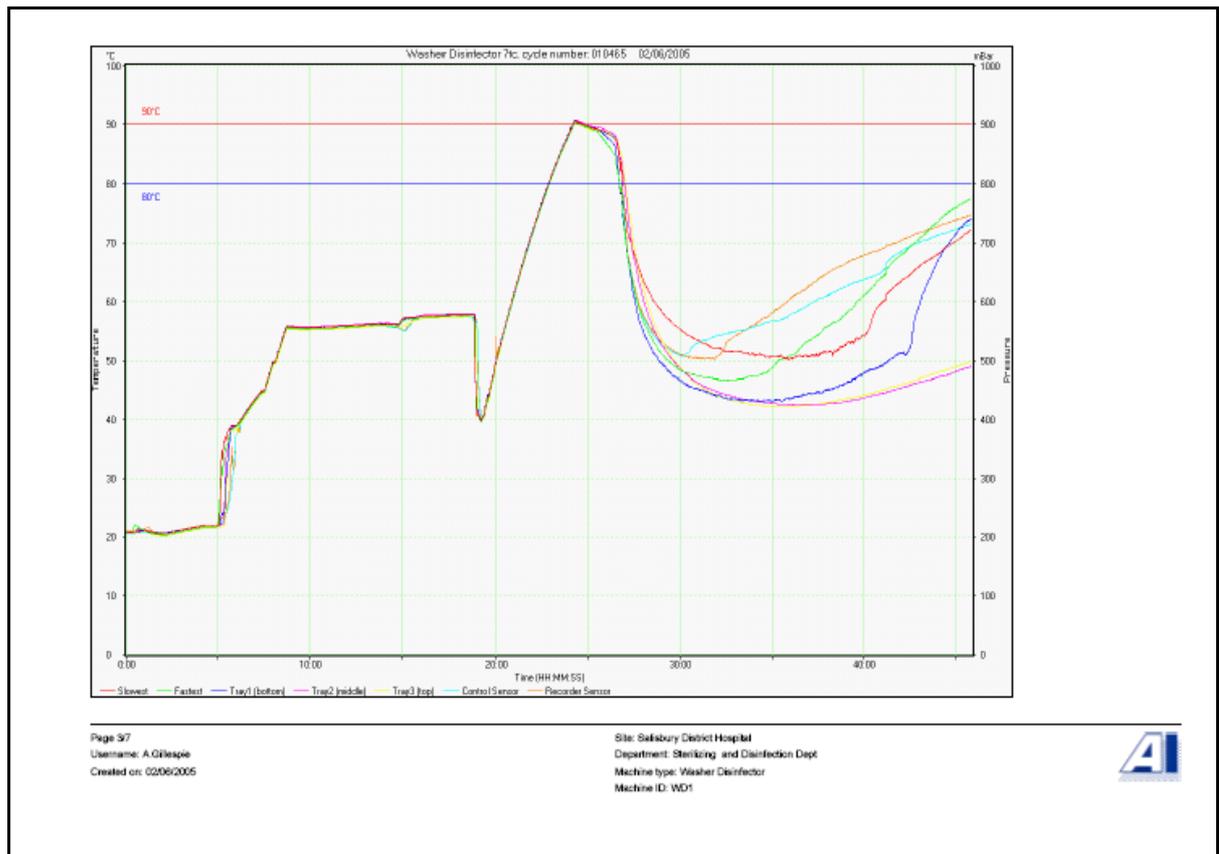
Follow the instructions given by the set-up program to complete the installation of EaziVal 2 on your system.

If the installation does not start automatically then you should open My Computer. Double click the CD ROM drive to display its contents.

Once the contents of the CD are displayed locate the Setup.exe program and double click it. After this follow the instructions from the set-up program.



E.g.: - Porous load cycle.



E.g.: - Washer disinfector cycle.

Password

On starting the program you will automatically be asked for a password.

The initial password when first starting the software is: -

User name = new user

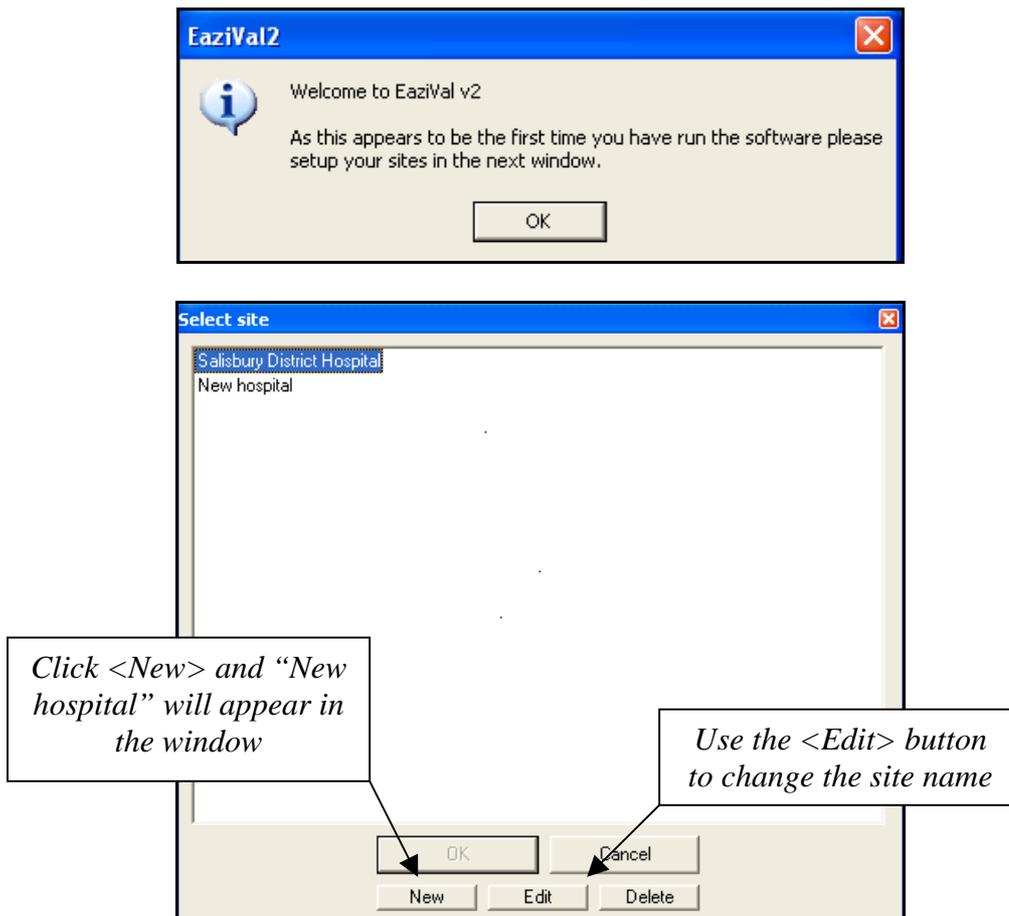
Password = password

These are case sensitive and are in lower case. Once you are in the program you will be able to set up user accounts and passwords.

The password has two levels, “supervisor” or “user”. In the “supervisor” level user accounts and security can be managed. The “user” level can only perform tasks allowed by the user.

Later in this manual there is instruction on changing passwords, setting up users and setting user access levels. This can be found in the chapters “user management” and “user capabilities”.

Site window and machine selection



In this section you are able to list all the sites where you have machines to be tested. The levels range from site (being the hospital or clinic), department, and machine type, right down to the actual machine.

The menu in this window is in a tree format. It is easy to follow; as you click on the site it will automatically lead you onto the next level in the tree.

When the site window first appears it will be blank and the first sites need to be entered. Click on the <New> button and “New hospital” will appear in the site window. Click on the site to highlight it. With the site highlighted the name of that site can be edited by clicking on the <Edit> button. Delete the words “New hospital” and enter the name required.

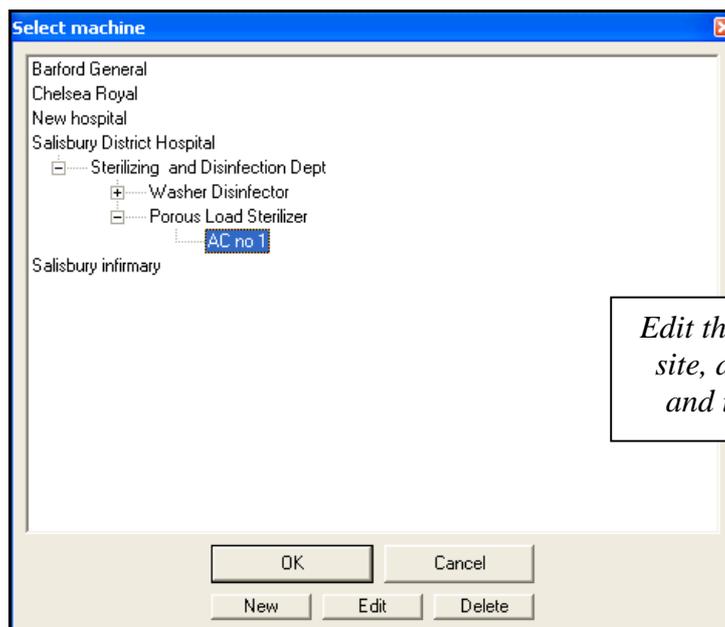
The first title is for the sites where the machines are situated i.e. Hospitals, clinics etc. This same procedure is followed through all the folders. So you can easily name the site, the individual name of the department within that site and so on. Each time a new site needs to be added highlight a site and click on <New>.

- The first “new” site must be edited before you can add further sites.

Once you have named your hospital the next stage is to give the department a title. Just click on the hospital, this opens a new section. Title the department in the same way as you did for the hospital.

Click on the department and this will then bring you to “machine” types. This could be just the one type, for example “Autoclaves”, or you can have as many as you wish. All you do to add more is click on the <New> button when you have an existing type highlighted. You can, as with the other titles change the words “New type” to suit the machine type you are testing. Clicking on the machine type will bring you to the next level, this one is where you title the individual machines, e.g.: - by serial number, department number and so on.

Once you have entered the details of each site you will find it is very quick to access each machine to be tested without the need to repeatedly enter details. Every time you do a test on a particular machine all the results will go back to the folder on your PC allocated to that machine.



Edit the tree so that you have the site, department, machine type and then the actual machine.

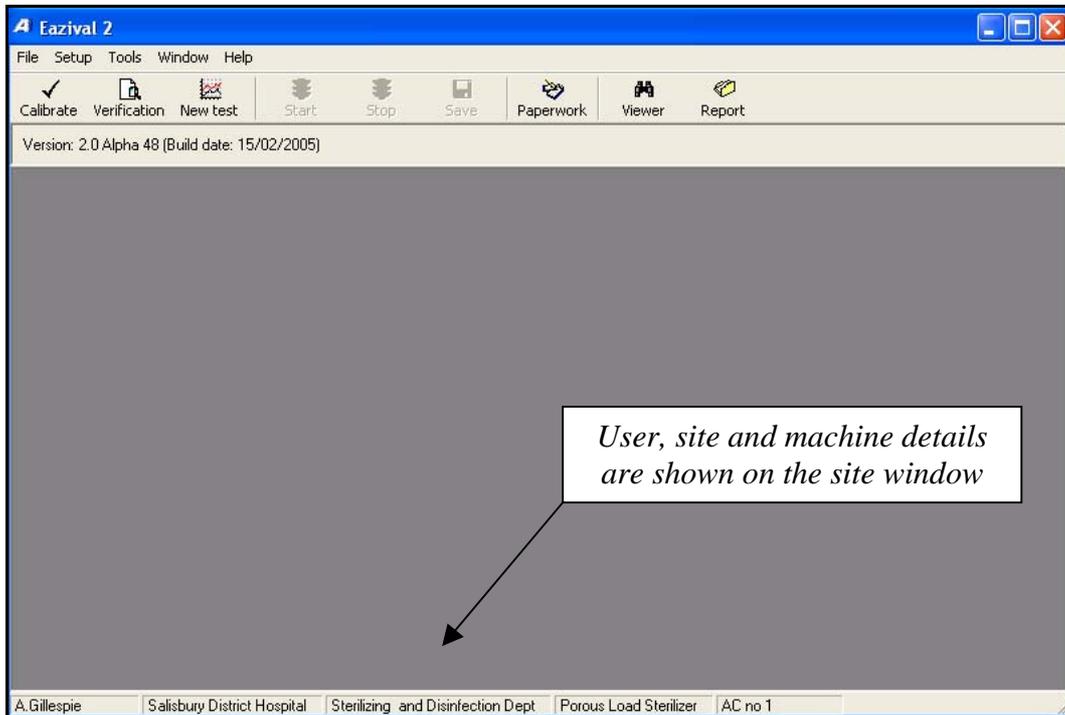
Deleting unwanted sites and machines

When a site is no longer wanted in the program there is a path that you need to follow in order to remove it. You must first of all delete the machine itself and then work your way back to the site by deleting the machine type and then the department. You will need to delete all the items in each section before you can delete the section itself. To delete an item simply highlight it and then click on the <Delete> button.

- The system will position the site window at the site that was last used when you next log on. If that site is not required simply select the site that is and click<OK>.

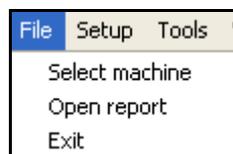
- The site location, or machine, can easily be changed without the need to log off the system. Select the “Select machine” button from the “File” drop down menu. The site window opens, simply select the site etc and click on <OK>.

The main EaziVal 2 window



The main window has a number of menu’s and toolbar containing a row of buttons. The menu’s contain options used during the set-up of EaziVal 2 and the creation of logger and test set-up files.”

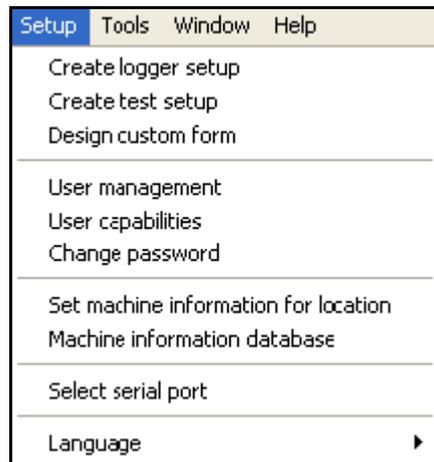
File menu



The file menu has different uses depending on the task being carried out and at what stage of the software is being used. In the main window the file menu has three functions.

- Select machine: Click on this button to open the initial site window and to change location without the need to close the program.
- Open report: Click on this button to open reports that have been assembled and saved for the machine that you have logged onto.
- Exit: Click on this button to exit the program.

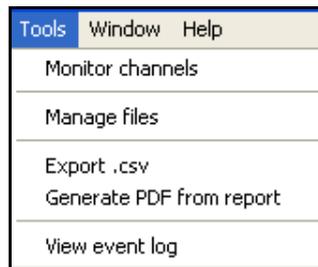
Set-up menu



Clicking on the Set-up menu reveals a drop down menu. All these features are explained in greater detail in there relevant chapters later in the manual.

- Create logger set-up: The type of Anville logger being used, type and quantity of thermocouples and pressure transducers are set up using this button.
- Create test set-up: Types of tests with positions of sensors, chart configuration and sterilizing bands for the logging are set up here.
- Design custom form: Personalised test sheets can be designed to suit the machine and cycle being tested.
- User management: New users can be added and the level of use can be set.
- User capabilities: Allows a “supervisor” to change the tasks that can be performed by an engineer logged on at “user” level.
- Change password: Simply change your password.
- Set machine information for location. Enter all the machine details into the form. Including Manufacturer, serial number, department identification etc.
- Machine information database: Ideal for machines that might be moved to different locations and cannot be located easily in the site window.
- Select serial port: You can select the active port on your PC to connect the data logger to.
- Language: There is a choice of languages in which to use EaziVal 2.

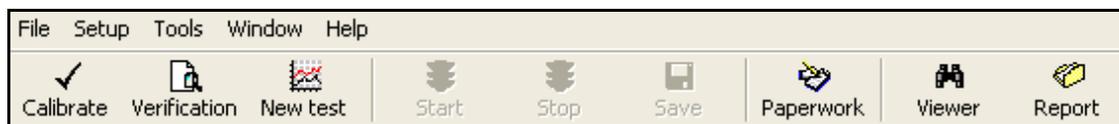
Tools menu



The Tools menu reveals a drop down menu. All of these features are explained in greater detail in their relevant chapters later in the manual.

- **Monitor channels:** The sensor readings can be viewed to aid positioning.
- **Manage Files:** Using this feature will enable you to access all saved files easily by using the site list or by browsing the type of file. Files can be deleted here.
- **Export .CSV:** This is used to export logging data in the CSV format. Programs such as Microsoft Excel can read this data.
- **Generate PDF from report:** A PDF file can be made of a saved report and can then be e-mailed to another pc.
- **View event log:** The event log is a record of all access to the software and actions performed by EaziVal 2 users that change the configuration of the software or the files on disk.

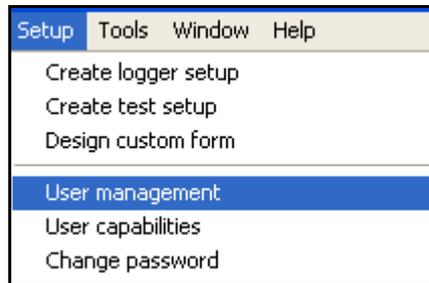
The toolbar contains buttons to access the most frequently used operations in EaziVal 2. The functions are explained further in the relevant chapters.



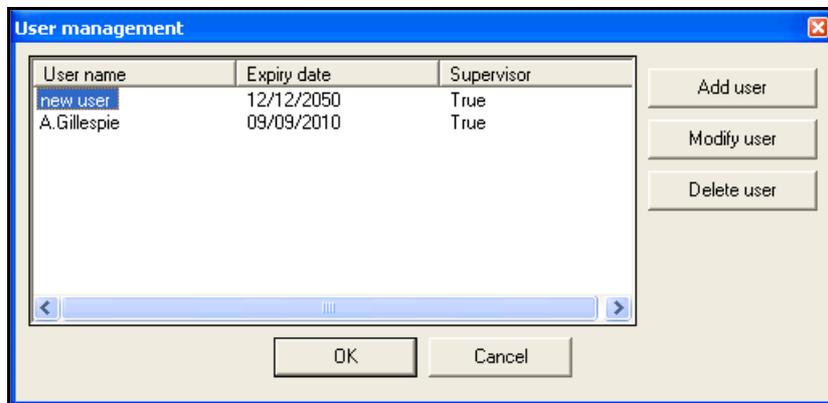
- **Calibrate:** The calibrate button opens the calibration window for calibrating the sensors.
- **Verification:** The verification button is used to verify the calibration of the sensors after testing is complete.
- **New Test:** The new test button is used for each test. Test set-ups and calibration files can be selected for each individual test.
- **Start, Stop and Save:** These buttons become active once the logging facility is being used.
- **Paperwork:** Tests sheets for report building can be found here.
- **Viewer:** Charts from logged tests can be view and edited here.
- **Report:** Report bundles can be assembled to suit each test type, e.g.: - weekly, quarterly and yearly.

User management

To add or delete users with access to the program open the user management window from the set-up drop down menu.



The user management window has three functions: add user, modify user and delete user.



To add a new user, click on the <Add user> button. This will open the user settings window where you need to enter the new users name, the length of time the user has access to the system and whether or not they are to have access at supervisor or user levels.



- It is worth remembering that the user name is case sensitive and will only be recognised when logging onto the system if entered exactly the same as it is written in the user management.

Clicking on the date box menu button enters the expiry date for the new user. The calendar will open and you simply select the expiry date by using the directional buttons and then highlighting the day of that particular month.



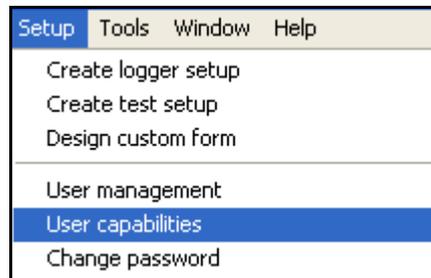
Once the exact day has been selected that date is inserted into the expiry box. These details are saved to the user list by clicking on <OK>.

The expiry date and user status of users can be changed at any time by clicking on the <Modify user> button. The user settings box is then opened and the settings can be entered in the same way as in “Add user”.

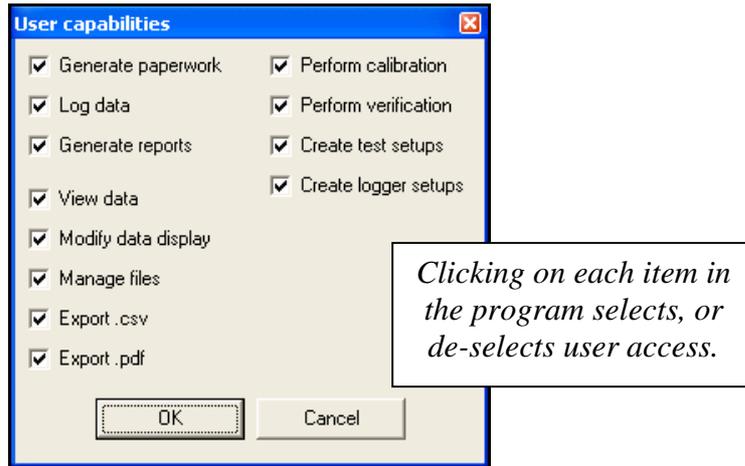
To delete a user highlight the unwanted user and click the <Delete user> button. That user is then removed from the program and can no longer log on.

User capabilities

In user capabilities it is possible to limit areas in the program that any person that logs on at “user” level can access. Any person that logs on in “supervisor” mode is able to edit the user capabilities.



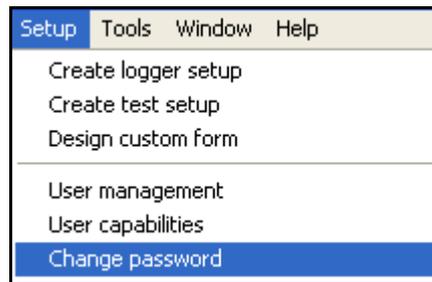
User capabilities are accessed from the set-up drop down menu, highlight and click. When the user capability box opens you will see a comprehensive list of actions that can be performed in EaziVal 2. By simply clicking on each one you can either select or de-select access.



Once the user access has been edited click on the <OK> button to save the settings.

Change password

For security reasons it will be necessary to change each users password from the default password used to open the program for the first time. The program can be opened at any time using the default of: - new user and the password of: - password. The default user can be removed by editing it out in “user management”. The default password will still apply to all new users.

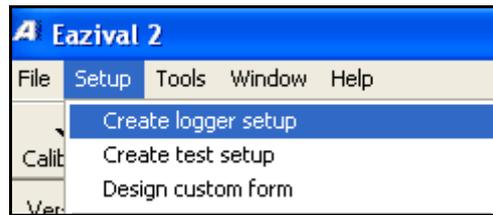


Select “change password” from the set-up drop down menu.

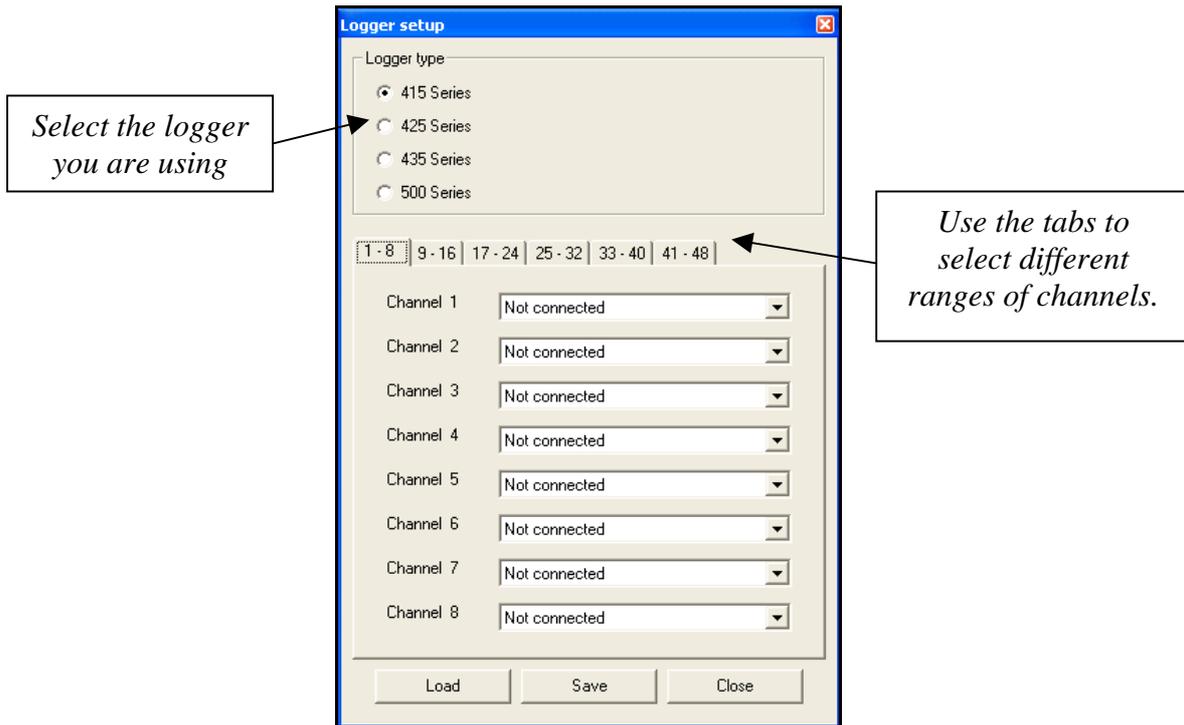


In the “Change password” box enter the current password, the new password and then repeat the new password in the “Confirm new password” box. Clicking on <OK> saves the new password.

Logger set-up



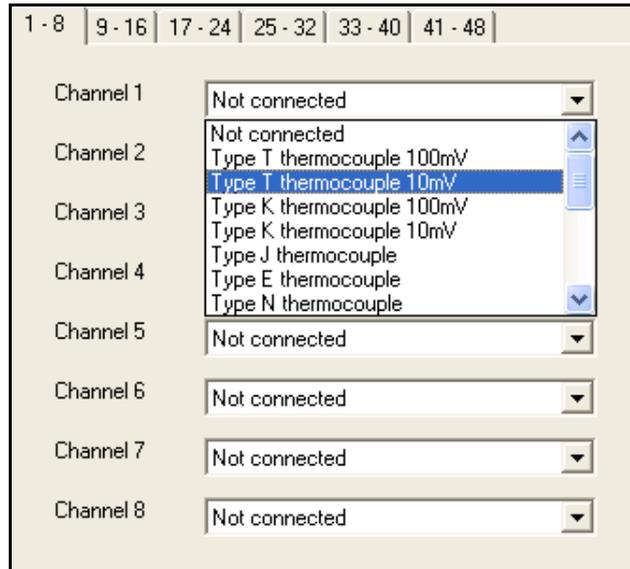
Select “Create logger set-up” from the set-up drop down menu.



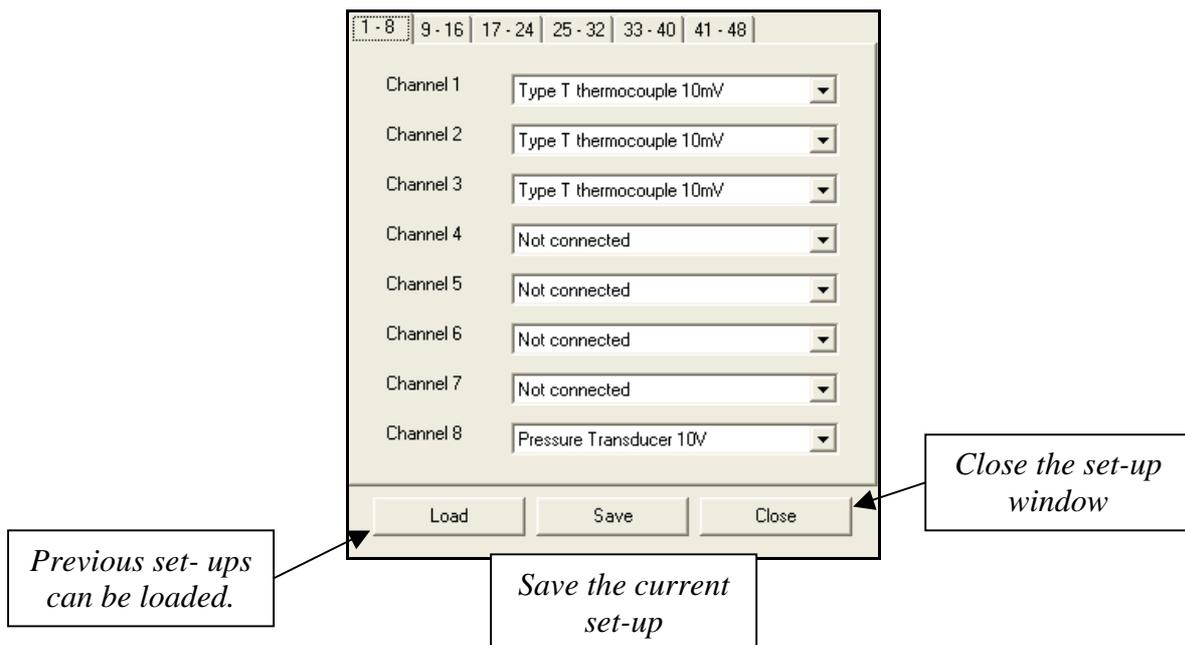
The logger set-up window will open. First you need to select the logger type that you are using from the list at the top of the window. Simply clicking on the corresponding logger does this.

Depending on the test being carried out effects the number of channels, or sensors being used. Each tab reveals the next eight channels. If however a 16-channel logger has been selected then further channels from 17 on will be greyed out and will not be able to be selected. Do not select more channels than you are going to use.

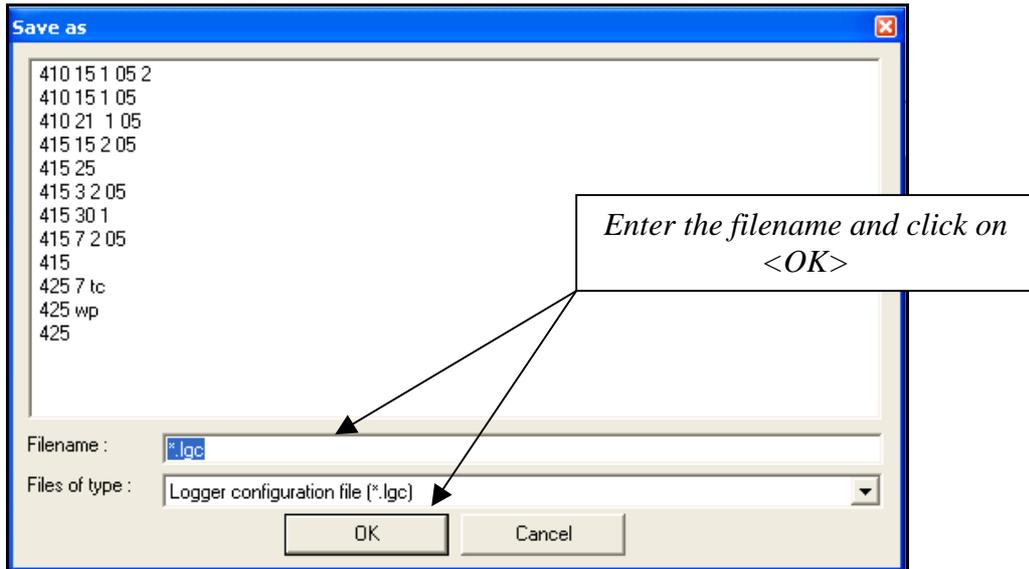
Once the logger and number of channels and have been decided you need to select the sensor type for each channel. Each channel has a drop down menu with a list of all compatible sensor types.



Click on the relevant channel to reveal the drop down menu. Highlight the sensor being used and then click on it. The sensor type will then be loaded. The method is the same for temperature and pressure channels.

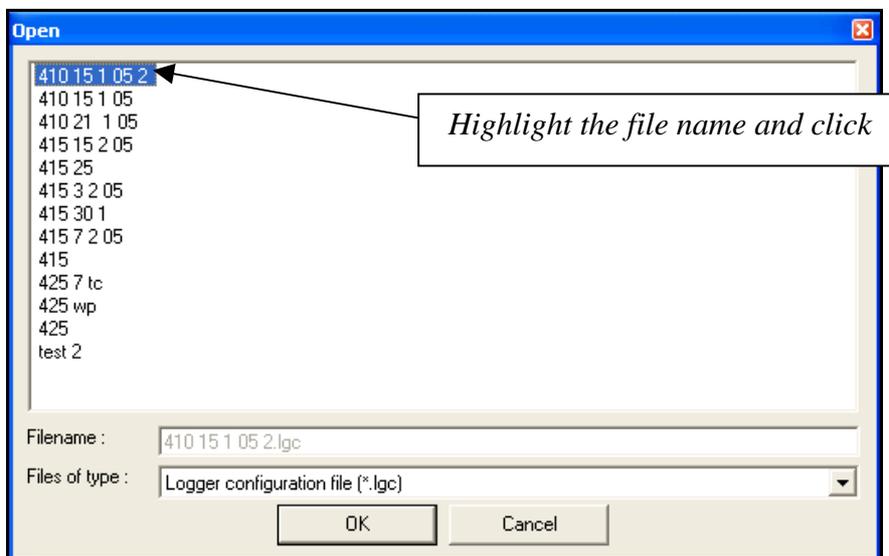


Once the set-up is complete click on the <Save> button, the set-up is then saved for future use.



The set-up can be saved using your personal filenames. Once the filename has been entered click on <OK>. The “save as” window will close. To close the “Set-up” window simply click on close. If the close button is selected before the set-up has been saved then a warning will prompt you to either cancel, so you can go back and save the set-up. Or you can click on <OK> to delete the set-up. The warning will not appear when closing set-ups that have been loaded from previously saved files as these are always saved.

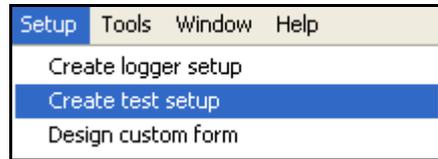
To load previously saved set-ups, click on the <Load> button in the set-up window.



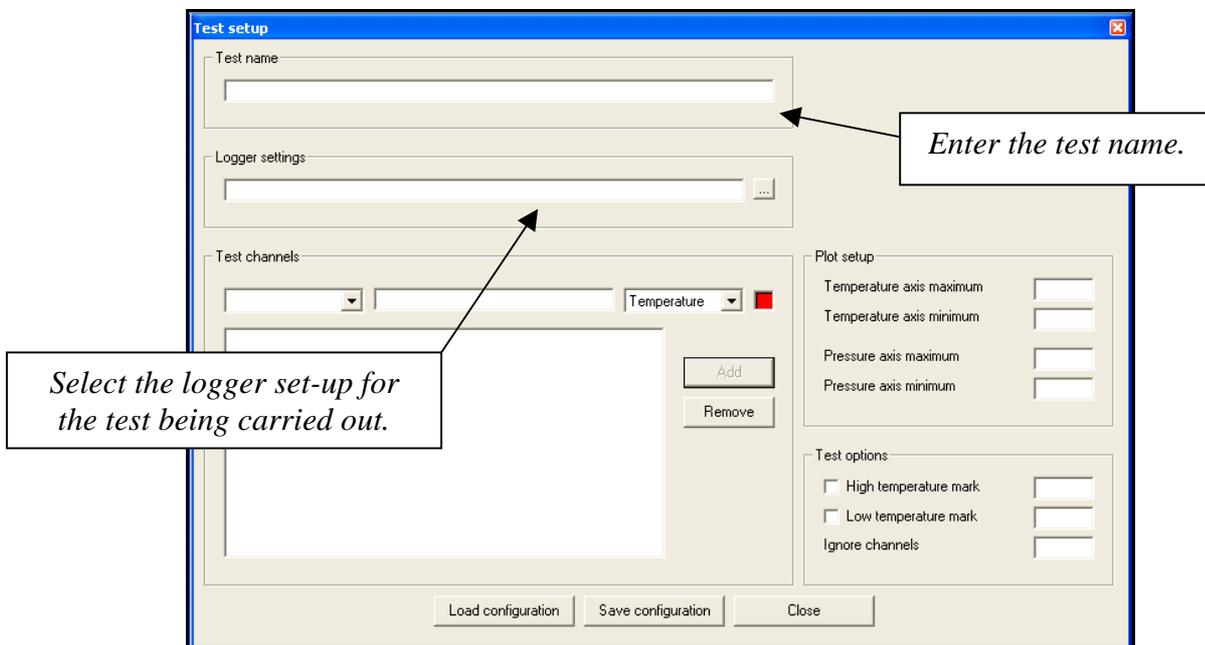
A similar window opens as to the “Save as” window titled “Open”. Highlight and click on the file you wish to load. The file name will be inserted into the filename; click on <OK> and the set-up will automatically be loaded into the logger set-up.

Create test set-up

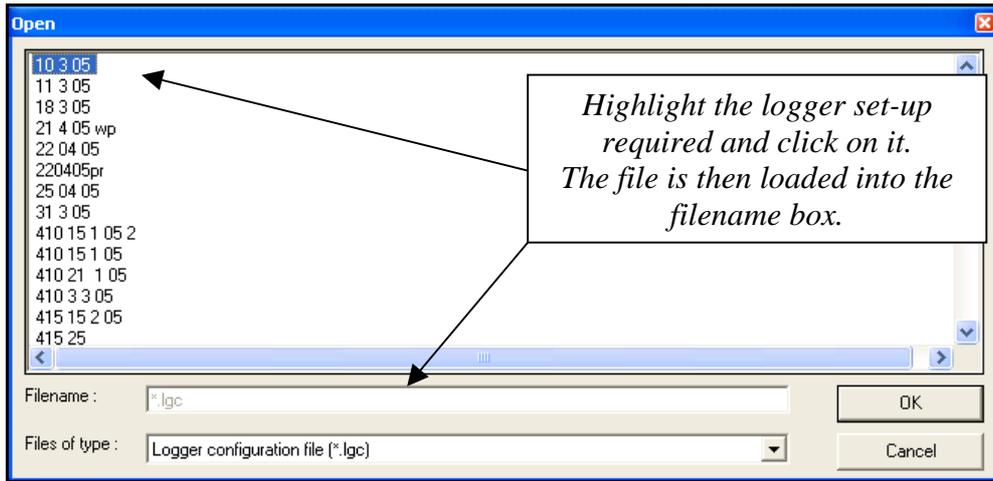
A test set-up will have to be assembled for any different tests that are required. The Set-ups are saved and can be used time and again. Select “Create test set-up” from the set-up drop down menu.



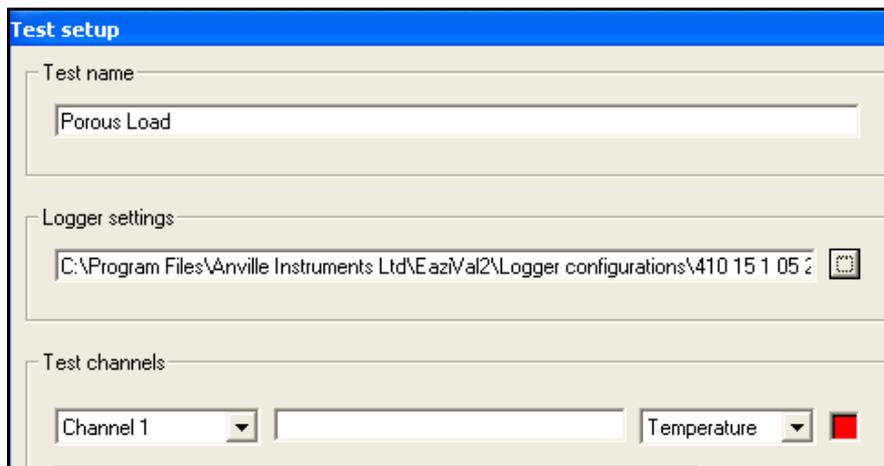
It is easier to view the “Test set-up” window as five separate sections. In the first section enter the test name. This can be anything you wish e.g.: - Porous load, Media cycle or any name you wish to use. All users are able to access the saved test set-ups, creating uniformity in testing methods.



The logger set-up is taken from the file created while setting up the logger configuration. Click on the button at the end of the “Logger settings” box to open the logger set-up folder. Highlight the file required from the set-ups saved and click on it. The file name is then loaded. Click on <OK> to load the set-up into the test set-up.

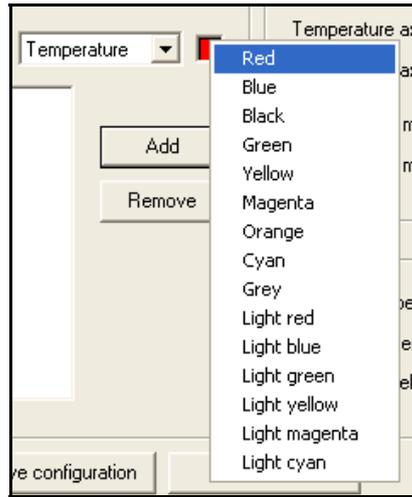


Once the logger set-up has been selected the “Test channels” section becomes active. This section allows you to label, colour and position all the sensors being used. The test channels section will only show channels that were originally entered into the logger set-up.



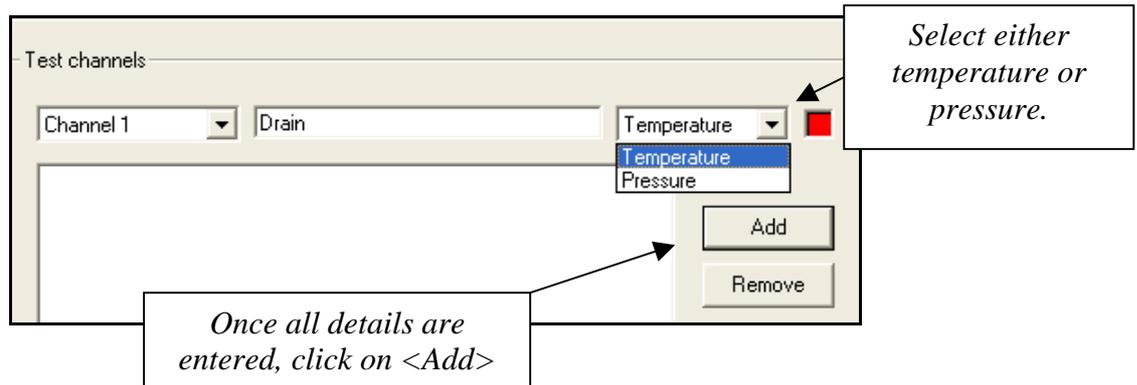
Enter the position of the first channel.



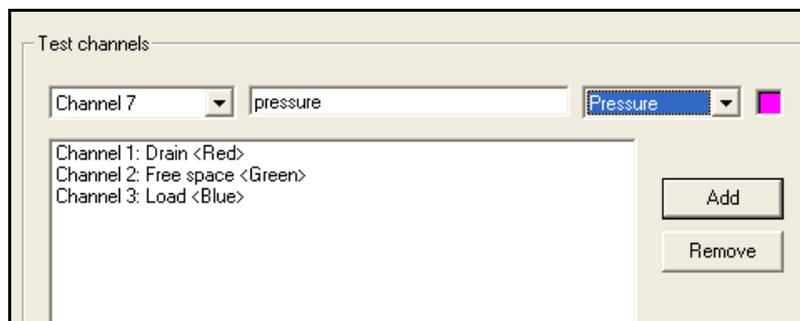


To select the Colour for the sensor, click on the coloured box. This reveals the list of colours available. Simply highlight and click on the desired colour. The coloured box will change to the colour selected.

Select the correct sensor type from the drop down menu, either temperature or pressure.



After all the details have been entered for each sensor click on the <Add> button. The next channel number then appears in the channel box, the same procedure is followed until all channels have been added.



To delete a channel, simply highlight it and click the <Remove> button.

The fourth section of the test set-up window is the “plot set-up” and is centred on the chart configuration for the logging window. Details entered here will determine the temperature and pressure axis on the chart.

Plot setup	
Temperature axis maximum	150.0
Temperature axis minimum	0.0
Pressure axis maximum	4000
Pressure axis minimum	-1000

Temperature Axis maximum and minimum is the range you wish the chart to have. For example on a porous load test where the temperatures have a wide range from ambient to around 140°C a range from 0-150°C would provide a well-balanced chart. Washer disinfectors, where the temperatures being recorded are a lot lower, the chart would benefit from having a range from 0-100°C. A hot air sterilizer reaches much higher temperatures so a maximum axis of 200°C would be required, these settings are only an example and any setting required can be used.

The same principle applies to the pressure settings. Where a vacuum is being measured use a minus symbol.

The final section of the “create test set-up” window is the “test options”. Here you are able to set out the sterilizing band on the chart. The sterilizing band is also very important for the “cycle information”, i.e.: - the equilibration time etc. Cycle information is explained later in the logging section of the manual.

Test options	
<input checked="" type="checkbox"/> High temperature mark	137.0
<input checked="" type="checkbox"/> Low temperature mark	134.0
Ignore channels	2

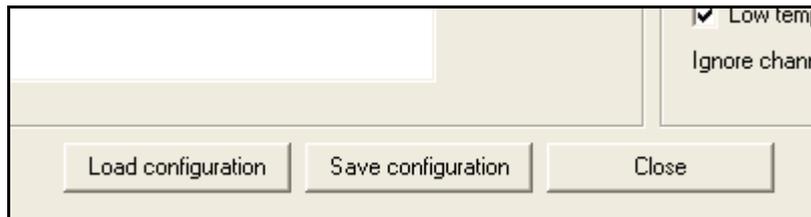
The high temperature mark is the top of the sterilizing band with the low temperature mark being the bottom. I.e.: - on a porous load test the sterilizing band would be 134 - 137°C.

“Ignore channels” is very important for the “Cycle information” during the logging of a porous load cycle. The free space channel needs to be ignored so as a correct calculation is possible for the equilibration time. As we have set up a sterilizing band it is very likely that a thermocouple measuring the free space temperature will pass through that band before the drain and load thermocouples. If the free space channel is not ignored then the software will use the data collected from this channel and hence most of the calculations in the cycle information will be wrong. Ignoring the

free space channel will only affect the cycle information; all data from this channel will still be recorded and stored in the data listing.

- Any number of channels can be ignored. Enter the channel numbers separated by commas.

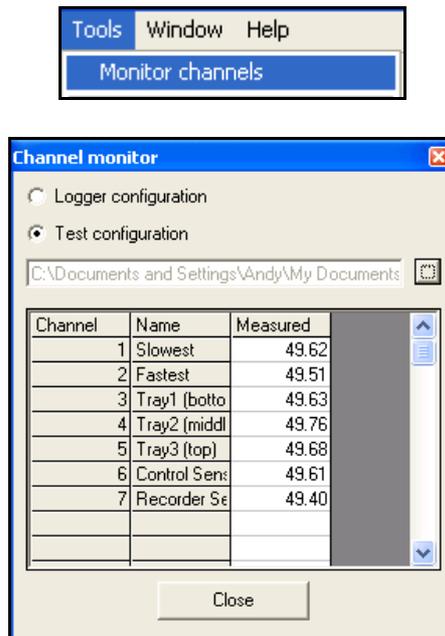
Once a test set-up has been created it can be saved for use over and over again. Click on the <Save configuration> button, a save as window opens and the test can be named and saved.



Monitor channels

It is possible to view the readings from the sensors before the logging stage. This is ideal for location purposes and also ensures the sensors are not faulty.

Select the <Monitor Channels> button from the “Tools menu”.

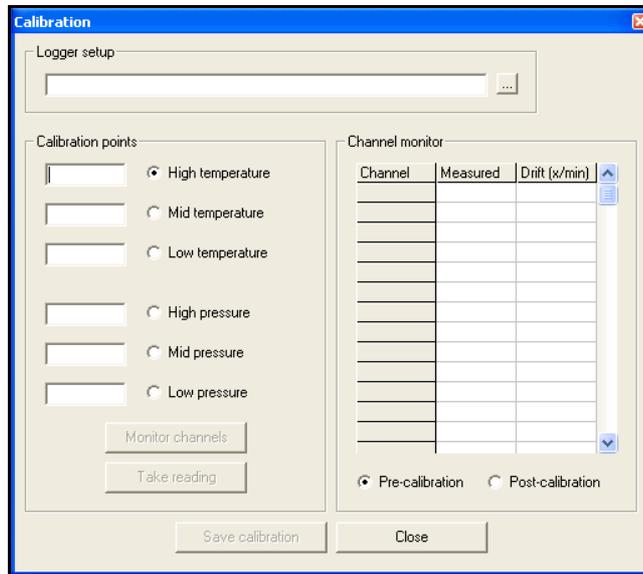


The channel monitor window opens. Select either a logger configuration or test configuration by checking the box required. Click on the locate button and select the set-up file. The readings from the sensors will appear in the “Measured” column.

- Note: These readings are not calibrated.

Calibration

Click the <Calibrate> button on the main EaziVal toolbar to open the calibration window.



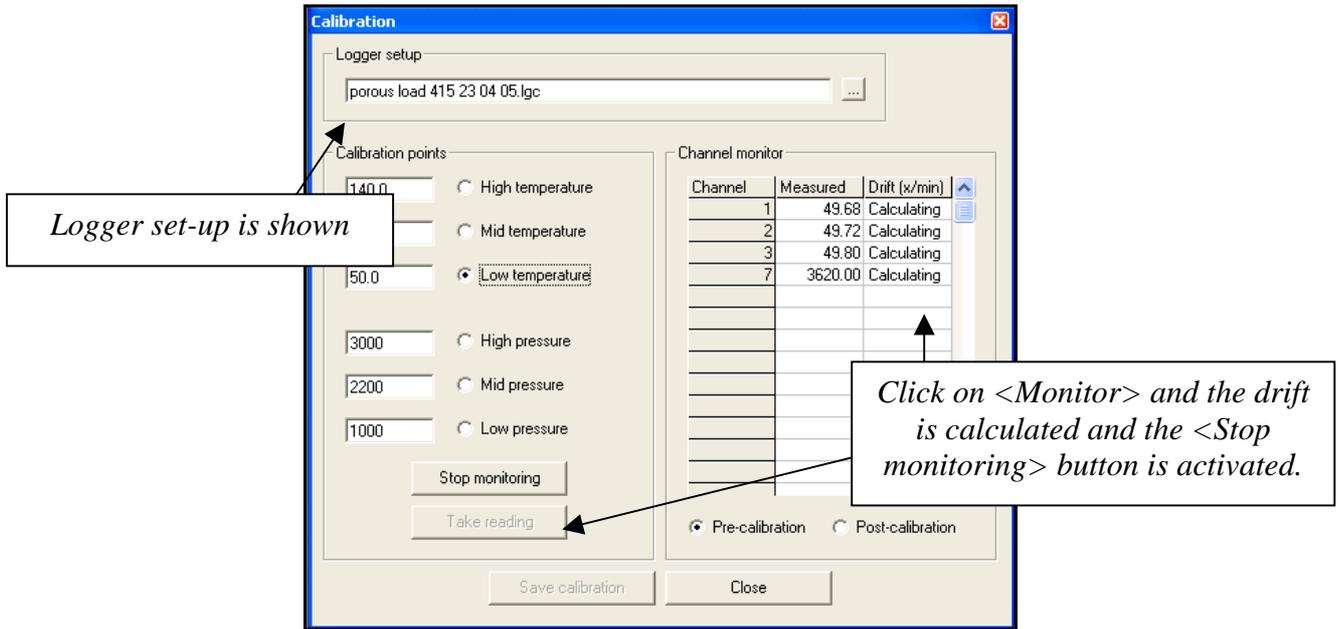
The first thing you need to do in the calibration window is to load a logger set-up. The logger set-up is taken from the list of set-ups already created; clicking on the button next to the probe set-up box accesses these. Highlight the set-up required and click on <OK>.



- All calibrations carried out on a particular logger set-up are stored against that set-up. This means, as a logger set-up is included in the “Test set-up”, that when a test set-up is selected in the “New test” window any calibration carried out can be used. This is explained further in the “new test” chapter later in the manual.

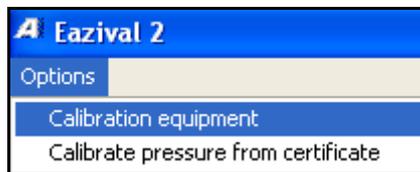
Once a logger set-up file has been selected click on <Monitor channels>. A reading will appear in the boxes relating to channels in the set-up. When monitor channels is first selected “calculating” will appear in the drift (x/min) column. The software is calculating the rate that the readings are drifting and after a short time readings will appear in this column. Monitor the drift to determine when the readings have stabilized to a level where a reliable reading can be taken.

- Note: Pressure transducers respond very quickly so the drift from these channels can be ignored at the users discretion.

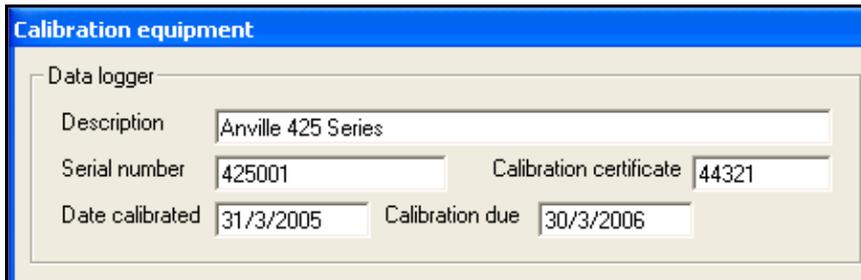


Calibration equipment

With the calibration window open it is possible to open the calibration equipment window. This is accessed by clicking on the <Options> menu at the top of the calibration window tool bar.



Simply type in all the details of the data logger, temperature measurement, temperature source, pressure source and millivolt source. There is also a space to enter the calibration details of each piece of equipment, such as date calibrated, the date it is due for calibration and the calibration certificate number. The details entered will be printed in the report with the calibration record.



Once all the details have been entered click on <OK>.

Calibrating the sensors

The first thing you need to do when calibrating is to select the sensors you are going to calibrate first, temperature or pressure. If you have just placed your temperature sensors in the heat source and you are waiting for them to stabilize then you can do the pressure transducer while you are waiting. You can also cross over from temperature calibration to pressure calibration if you are waiting for the temperature to stabilize in your heat source from, for example from low point to high point. Do your pressure calibration then return to the temperature sequence.

Pressure calibration

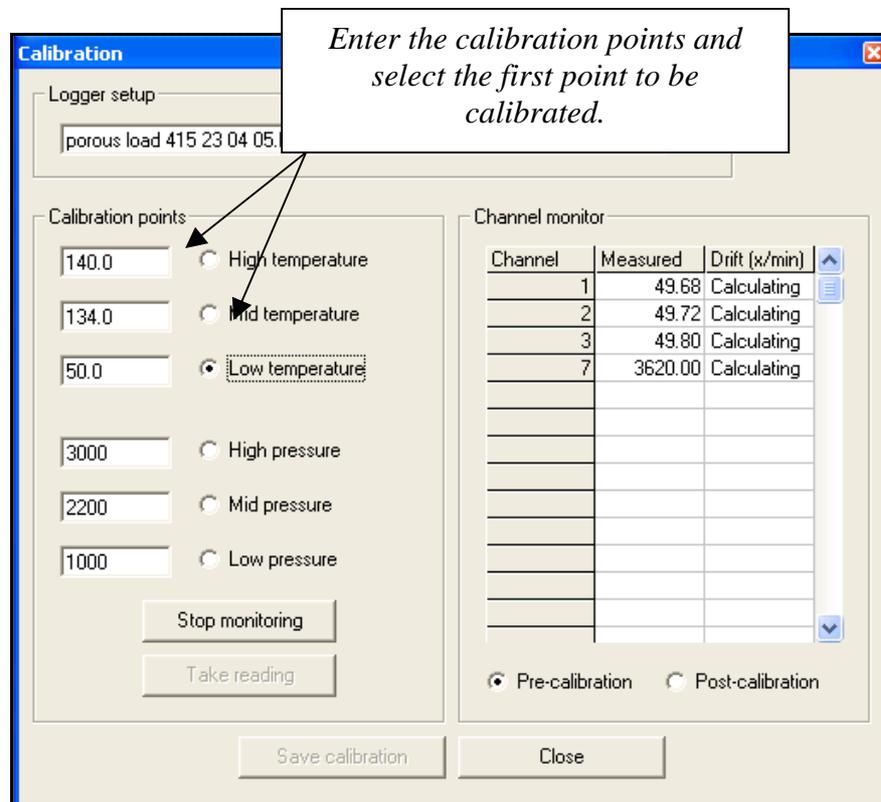
Select the pressure inputs in the calibration window. Move the cursor down the window and click in the low reference box. All the reference settings in the pressure section need to be entered in milli-bar.

For a low reference setting 1000mb would be ideal when testing sterilizers. High reference could be 3000mb and the checkpoint reference would be 2000mb.

Using a pressure-calibrating device set at the low reference point and with that point selected in the window, click on the <monitor> button. You will see a reading in the box, which corresponds to the sensor number you, connected your pressure transducer to. As soon as you are happy with that the reading has settled, which you can confirm by using the reading in the “drift” column, click on the <Stop monitor> button. When you do this the <Take reading> button becomes active. Click on the <take reading> button, after a short wait you will see the low reference box change to green. Calibration of the low reference is now complete.

The process is now repeated for the high-pressure reference and the pressure reference checkpoint. Reset the pressure calibrator at each point and wait for the reading to settle before clicking on <Take reading>.

- The reading that you see while monitoring the pressure channels is an arbitrary value, not the actual pressure being measured. The calibration can be confirmed by switching to “Post calibration” and clicking on <Monitor> after all three points have been calibrated.



Temperature calibration

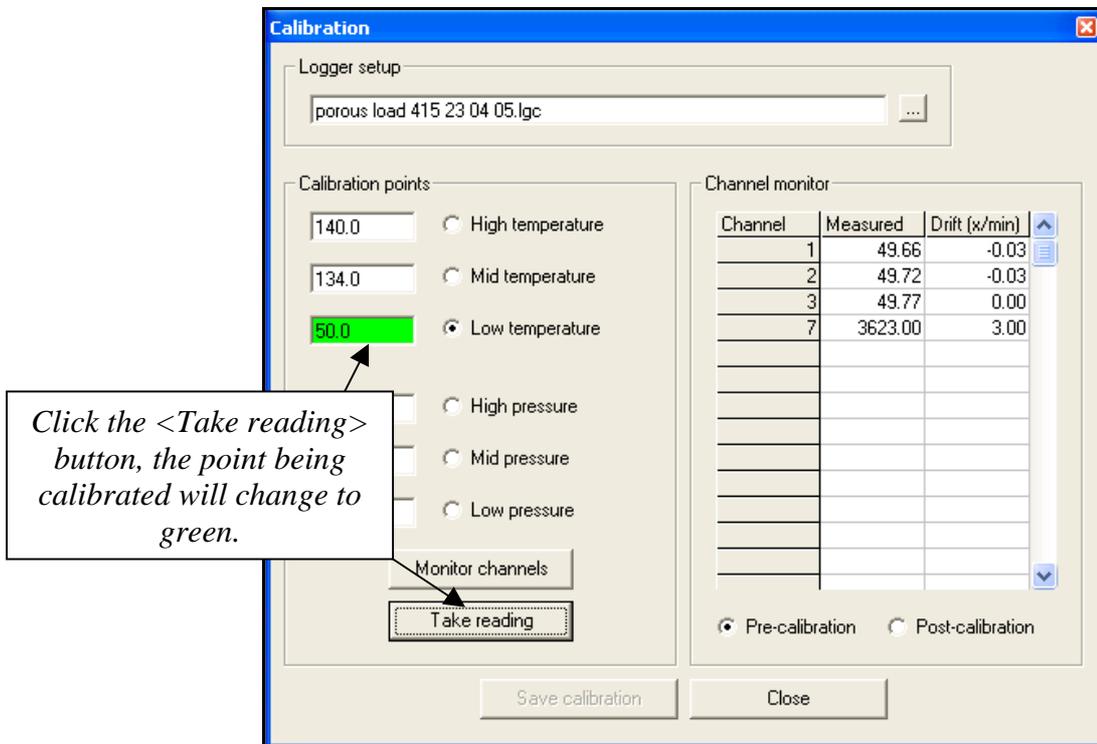
Temperature calibration is done in precisely the same way as with the pressure calibration. This time entering in the low reference, high reference and check point reference. Use three temperatures that are relevant to the test that you are doing.

For example if you are testing a porous load sterilizer the reference points would be ambient or 50°C for the low point, 140.0°C for the high point and then use the sterilizing temperature of 134.0°C for your reference. These are guide settings and can be changed to suit individual requirements. If you are using additional equipment to corroborate your heat source then you can set the calibration points to suit. These set points can be altered right up to the moment you click the <Take reading> button.

Choose a set of temperatures to suit the cycle you are testing. Washer disinfectors with a disinfecting temperature of 80°C, use ambient for a low reference and 90°C for a high reference. The system is very accurate and the accuracy of your entries in the reference boxes will be repeated in your calibration.

If you only have one temperature reference you will have to wait for stabilization between your settings, as with pressure, you can monitor what is happening by using the “Drift” column. As each reference point settles click on <Take reading>, wait for the box being calibrated to change to green. When it has that point is calibrated.

- It is recommended that an external temperature reference is used to corroborate a heat source and that the reading taken is from the external temperature reference.



- If the low and high temperature set points used is too close together then the software will not be able to calibrate properly. The cycle being tested and the data to be recorded should determine the settings being used when calibrating.
- If while calibrating the <Take reading> button is clicked on the wrong setting, then calibration must be started again to ensure the correct results.

Clicking on the <Post calibration> button, and then clicking on <Monitor> can check calibration. The reading displayed in the measured column will be the calibrated reading.

Calibration

Logger setup
porous load 415 23 04 05.lgc

Calibration points

140.0 High temperature
134.0 Mid temperature
50.0 Low temperature

3000 High pressure
2200 Mid pressure
1000 Low pressure

Stop monitoring
Take reading

Channel monitor

Channel	Measured	Drift (w/min)
1	134.02	0.01
2	133.96	-0.04
3	133.99	-0.02
7	1001.26	-0.63

Pre-calibration Post-calibration

Save calibration Close

Calibrated readings shown in measured column

With all set points calibrated, check by using the <Post calibration> button, then click on <Monitor>

Calibration summary

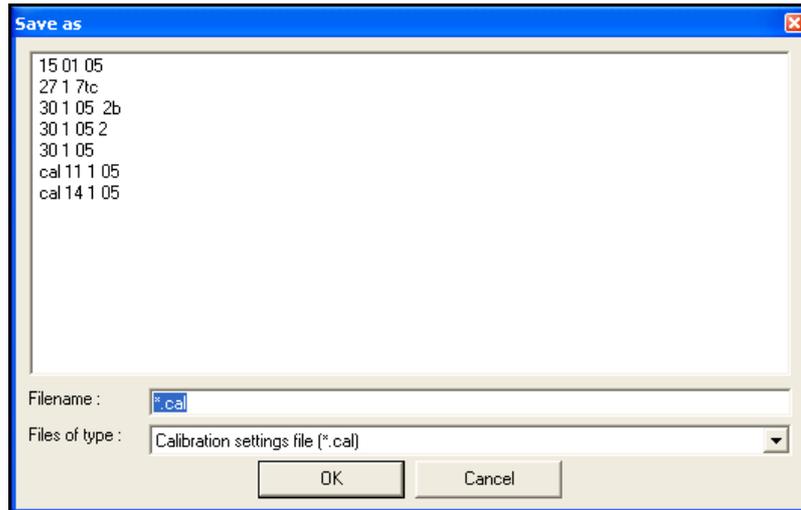
Channel	Low applied	Low offset	Low post ca	Mid applied	Mid offset	Mid post cal	High applic	High offset	High post ca
1	50.00	0.35	49.65	0.00	0.00	0.00	140.00	0.27	139.73
2	50.00	0.28	49.71	0.00	0.00	0.00	140.00	0.24	139.76
3	50.00	0.24	49.77	0.00	0.00	0.00	140.00	0.25	139.75
7	1000.00	-4244.00	999.37	2200.00	-4947.00	2200.00	3000.00	-5415.00	3000.63

OK

A summary of the calibration that has been carried out will automatically appear once the <Save calibration> button has been clicked. These readings will be shown in full when the calibration report is included in the test report. Clicking on <OK> closes the summary window.

Saving the calibration

The calibration can be saved and then loaded for future use. To save a calibration set, click on the <Save calibration> button. The calibrations “Save as” window opens enter the filename for the calibration set into the filename box. Then click on <OK>.



Re-loading calibration sets

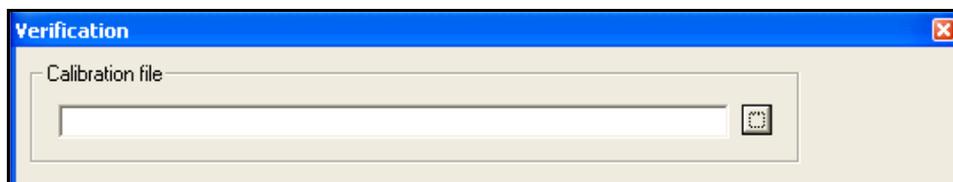
Calibration sets can be re-used for a number of reasons and loading and checking them is very simple. When in the new test window, the calibration file required could be loaded, more can be found later in the manual under “New Test”.

Verification

The best way to prove an old calibration is still good is in the “verification” mode. This procedure should also be carried out after thermometric tests to prove calibration on either side of your test. This is done in the main EaziVal 2 window, click on the <Verification> button.



The verification window opens. Similarly to calibration you need to select a file to be verified. This time it is a calibration set and not a logger set-up. Click on the <filename> button and the file folder opens.



The calibration folder is the same as all the other folders in EaziVal 2 simply highlight and click on the file required.

Once the file has been loaded you can start checking the calibration by entering the input settings and then clicking on <Monitor>. This is the same procedure as in the calibration window. As each set point settles click on <Stop monitoring> and then <Take reading>. The related box will change to green when the reading has been successfully recorded. The reading that is taken at this point has not been calibrated at

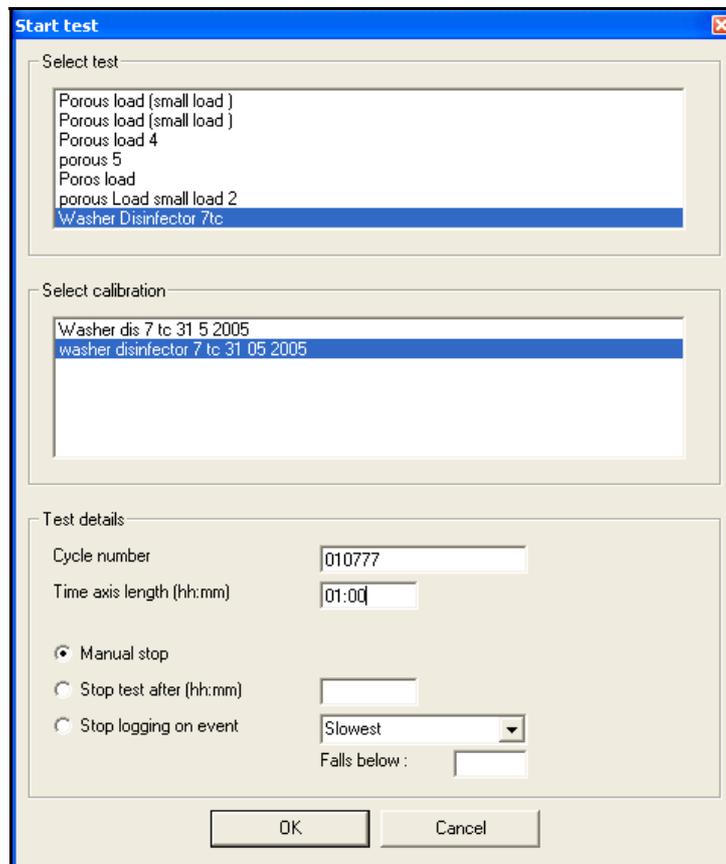
this time. When used in the report builder it will show a direct comparison between the input temperatures or pressures, and what the test equipment is measuring.

- Using the verification mode is a good way of checking the calibration of re-loaded calibration files. If all the readings are within the parameters allowed then you do not need to calibrate again. The original calibration and the new verification report will show a date and time to prove calibration.
- A second verification would need to be carried out after the logging is complete to prove calibration during the test.
- The verification can be saved after any number of set points have been tested

New test



The new test window is where you select the type of test being carried out and a calibration set to use. The length of the time axis in the logging display and the settings for automatically stopping the logging can also be adjusted at this point.



Firstly highlight the test required in the “Select test” box. This will be one of the tests that were set-up in the “create test set-up” earlier in the program. When a test set-up has been selected all the calibration sets that have been carried out against that set-up will appear in the “Select calibration” box. Highlight the calibration set required.

- This is the point where any calibration set can be used. I.e.; - if calibration was not carried out for this particular test, then any set can be used, then by using the calibration verification mode the calibration can be proven.
- Calibration files are stored against logger set-ups. Hence the “Logger set-up” that has been included in the “Test set-up” will produce a list of calibration files to select from.

With the test and calibration set highlighted the next section in this window is the test details.

Firstly enter the cycle number followed by the estimated time of the cycle. This time must be entered in hours and minutes. The time entered will determine the length of the time axis of the logging chart. If the cycle runs for longer than the length set for the time axis then the time interval displayed will automatically advance and logging will continue uninterrupted. The software will not allow the time axis to be set to longer than 8 hours 59 minutes, however this does not define the maximum length of time that logging may continue for.

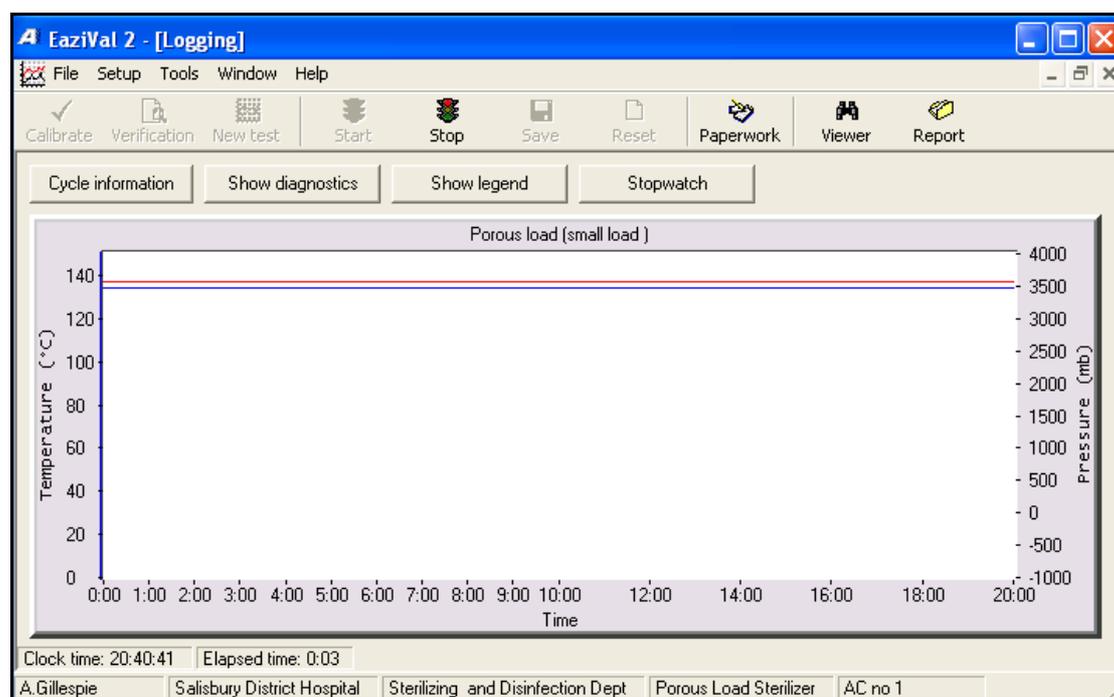
There is the facility for the logging to be stopped automatically. If this is not required simply select the <manual stop> button. To automatic stop logging the <Stop test after (hh:mm)> is selected. The time entered must exceed the estimated cycle time and be entered in hours and minutes. It is recommended that you manually log off to prevent the loss of data.

Another feature for stopping the logging automatically is if a particular sensor falls below a set point. Select the <Stop logging on event> button. From the drop down menu select the sensor, which is to be monitored. Then in the “Falls below:” box enter the set point at which you would like the logging stopped. Once that sensor reaches that point the logging will be stopped.

- After any of the automatic logging stops has been activated, using the logging <Start> button can restart logging.

When all details have been entered click on <OK> and the main logging window will open

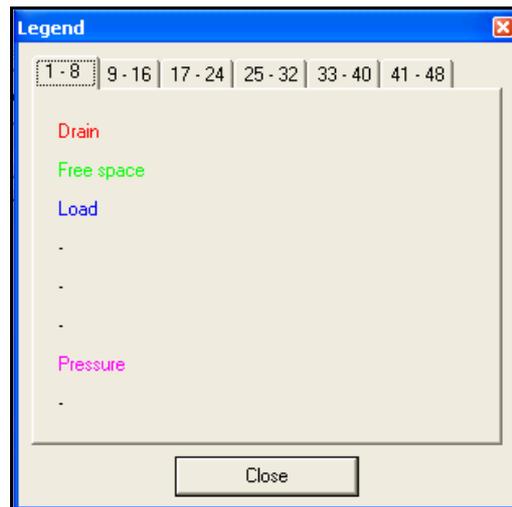
The logging window



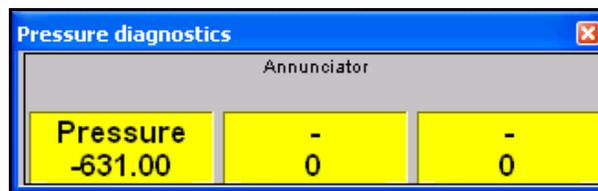
The layout of the logging window has been determined by settings entered in previous sections of the program. The temperature and pressure axis were set-up in the “Create test set-up” and the time axis was set in “New test”. The sterilizing temperature band is also included.

There are six buttons used in logging. On the main EaziVal 2 toolbar there is “Start, Stop and Save”. In the logging window there is “Cycle information, Show Diagnostics and Show Legend”.

The first button used is the show legend button. Click on this button to reveal the logger set-up. It confirms that you have the correct sensor set-up before commencing logging.



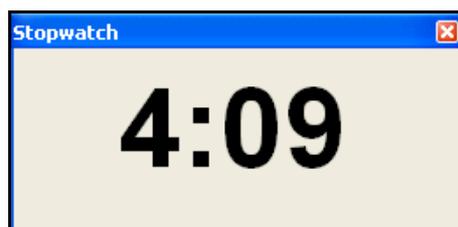
The next button used would be the <Show Diagnostics>. The diagnostics read as soon as this box is opened.



The pressure diagnostics are viewed by clicking on the <Diagnostics> button when logging is running. The diagnostics windows can be closed and opened again anytime during logging.

- Use the “Show diagnostics” feature when placing thermocouples in their required positions. Each thermocouple is easily identifiable by its temperature change.

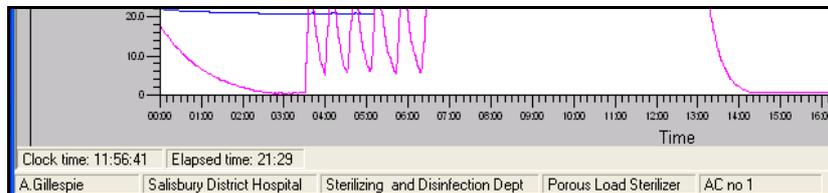
There is a stopwatch available by clicking on the <Stopwatch> button. The stopwatch starts automatically when the logging is started.



The only other button that is active at this point is the <Start> button. Once you click on this button the logging will start. It is therefore important to be ready with all aspects of the test before proceeding. If <Start> is pressed accidentally then using the <Stop> button will stop the logging. The trace is then re-set by closing the window and then starting again from the “New test” section.



Once the <Start> button is clicked and the logging starts the stopwatch at the bottom of the screen is activated.



The clock time is the real time the logging started and the elapsed time is the length of time since logging commenced. By starting the logging at the precise time as starting the machine it will be very easy to separate certain stage times of the cycle when report building in the viewer section of the program. I.e.: - Negative pulsing, positive pulsing etc.

The cycle information button becomes active in logging and this box contains a lot of useful information.

Maximum temperature:	137.24
Time maximum temperature occurred:	12:36
High temperature exceeded:	True
Time first channel attained sterilization temperature:	9:12 (Channel 1)
Time last channel attained sterilization temperature:	9:13 (Channel 3)
Equilibration time:	0:01
Time first channel left sterilization band:	12:41 (Channel 1)
Time last channel left sterilization band:	12:48 (Channel 2)
Holding time:	3:28
Minimum pressure attained:	-962
Maximum pressure attained:	2240

All the information that appears in the “Cycle information” window will be reproduced in the report when the data listing from the cycle is included.

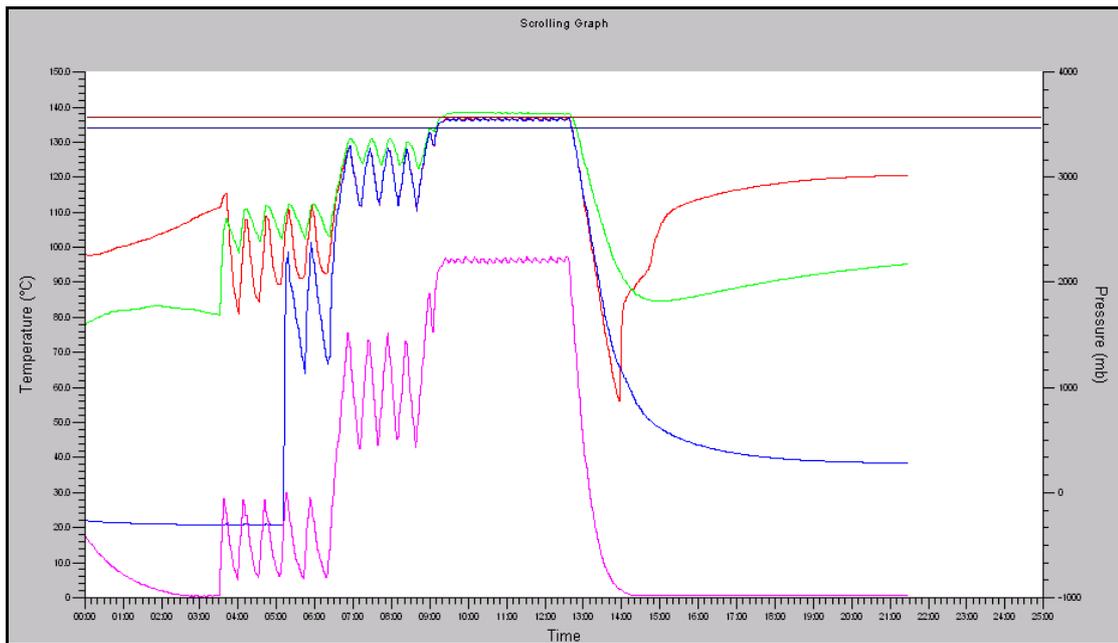
The “Cycle information” window shows: -

- The maximum temperature reached during the logging session.

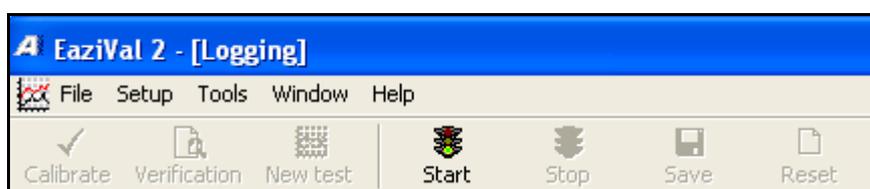
- The time that maximum temperature was reached.
- If the high temperature point was exceeded. I.e. the high point that was entered in the “test set-up” window.
- The time the first and last channel attained sterilizing temperature. These are the points between the low and high temperature band entered into the “Test set-up” window. I.e.: - the sterilizing band. This feature can also be used on other machines to determine holding times such as washer disinfectors.
- Equilibration time. The time difference between the first and last channel entering the sterilizing band.

Note: - It is very important that the correct channel is ignored in the “Test set-up” window for this facility to work correctly. E.g. the free space channel on a porous load cycle needs to be ignored as it reaches the sterilizing band much sooner than the drain or load channels. If this channel is not ignored the reading given will be taken from the time the free space went over 134°C and not when the drain reached 134°C.

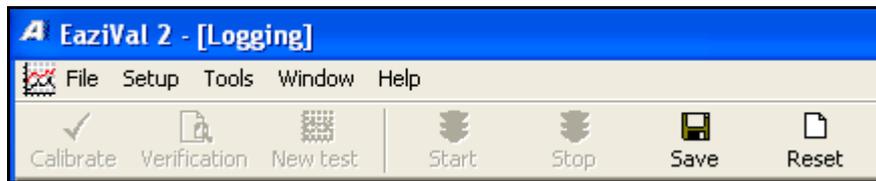
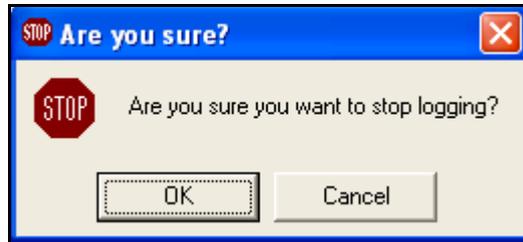
- The time the first and last channels left the sterilizing band. The time the first channel leaves the sterilizing band will determine the holding time. Add the holding time to the equilibration time and the plateau period is reached.
- The minimum and maximum pressures reached during the logging session.



Once logging has been started it will continue until the <Stop> button is clicked or if the “Auto-log off” facility is activated by the settings entered into the “New test” window.



When logging has been stopped the <Save> button is activated and the <Start> button is reactivated. If logging is stopped accidentally it is possible to re-start by clicking on the start button, although stage times etc will be affected.



To save the data click on the “Save” button. You will be asked for a password. This is the same password used when logging on to the software.



Entering the password and clicking on <OK> saves and gives the data logged a digital signature. Clicking on <Skip> will still save the data, but without the digital signature.



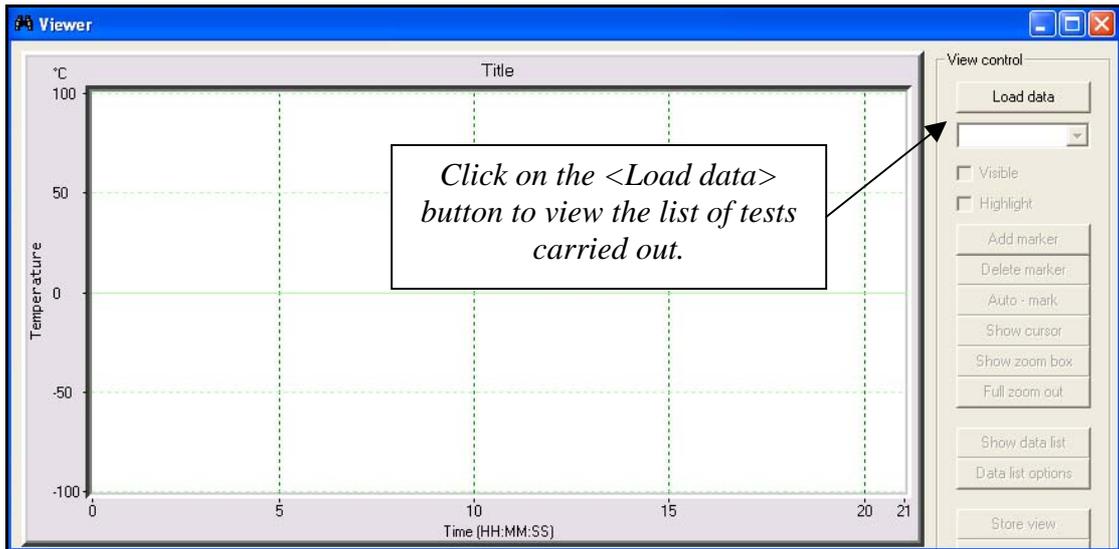
The plot can be reset without the need to leave the logging window. This is useful if the logging has been started accidentally. To reset the plot the logging needs to be stopped. Click on the <Rest> button. The user will have the choice of either saving the data or not, a warning window will remind you. Once the plot has been reset logging can then be started again by clicking the <Start> button.

The trace on the chart can be reset. To do this stop the logging, save the trace as described, then click on the <Reset> button. The trace can also be reset without saving if logging was started accidentally.

Viewer

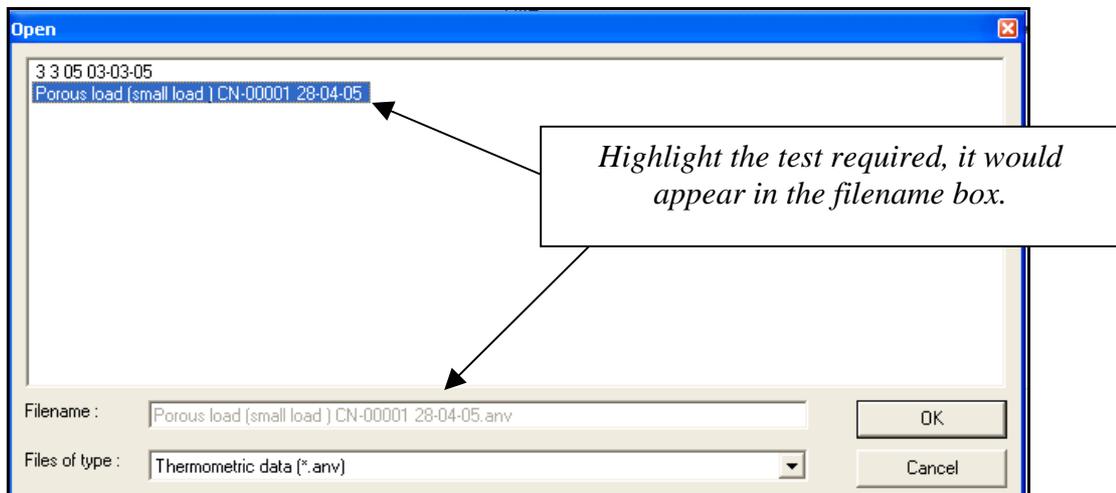


The viewer is where the chart and data can be edited for the report and viewed for purposes of analysing tests. To open the viewer window click the <Viewer> button on the main EaziVal 2 toolbar.



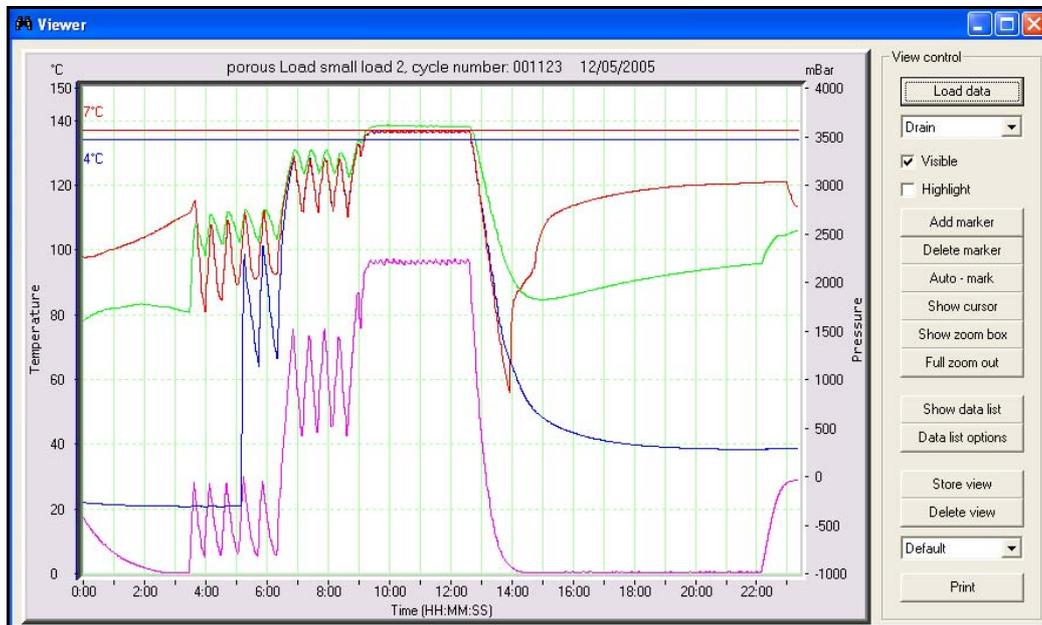
When the viewer window opens the only button that is active is the <Load data> button. Click on this button to access all tests that have been carried out and saved for the machine that you are currently logged onto.

- If you need to view charts or data from other machines you will need to “change location” as described the file button section of this manual. It is also possible to view files through the file manager.

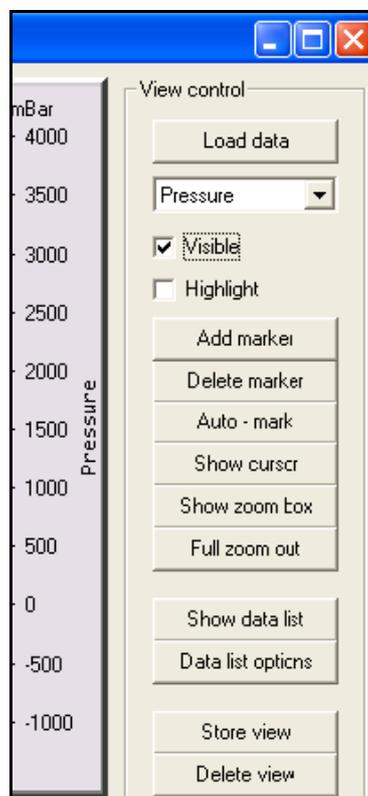


From the list of tests carried out select the one required to view by highlighting and clicking on <OK>.

The title of the test is governed by the title of the test in the “Test set-up” and the cycle number entered in the “New test”. Each test is dated.



The selected trace will be loaded into the viewer window. Also at this point all the other buttons in the viewer control will become active.

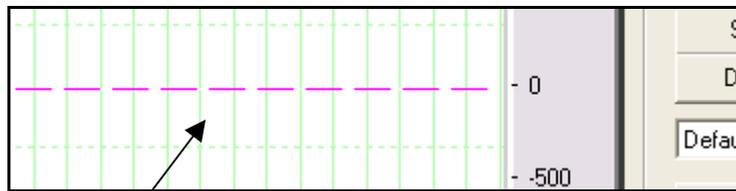
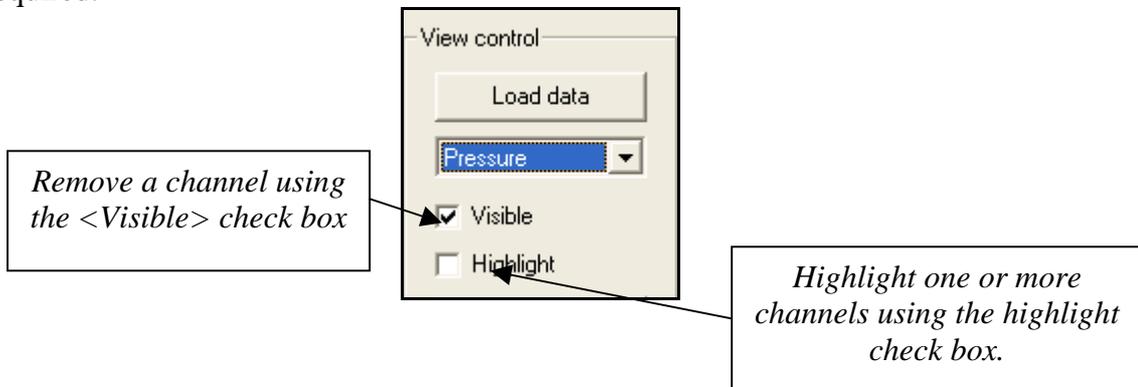


Working from the top of the viewer control the first button is a drop down menu with a list of sensors used on the chart being displayed. This drop down menu works in conjunction with the “Visible” and “Highlight” buttons.



Each sensor can toggled on or off on the chart. If a particular sensor trace is not required you can remove it from the chart by selecting that sensor in the drop down menu. To hide sensors uncheck the visible button. When the visible button has been un-checked that sensor will be removed from the trace. The data that has been recorded for that sensor will not however be removed from the data list. The trace with the edited sensors can be saved for printing in a report by using the <Save view> button which will be explained later in this chapter.

The highlight button enables the user to view a particular sensor easier. When the highlight button has been checked that trace will pulse making it easier to view in a group of sensors reading similar temperatures or pressures. Any number of channels can be highlighted at any one time, simply use the highlight button on each channel required.



The highlighted channel will pulse for better visibility

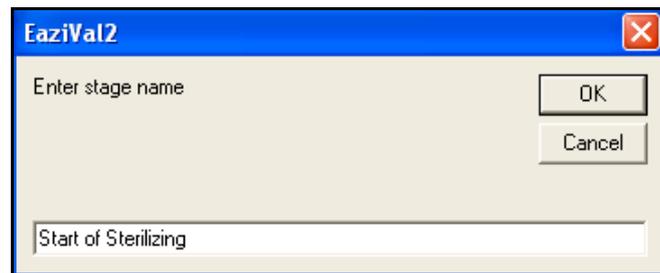
Entering stages

The next three buttons down the viewer control allow you to add stage lines to the chart. Each stage through a cycle can be identified such as negative pulsing, positive

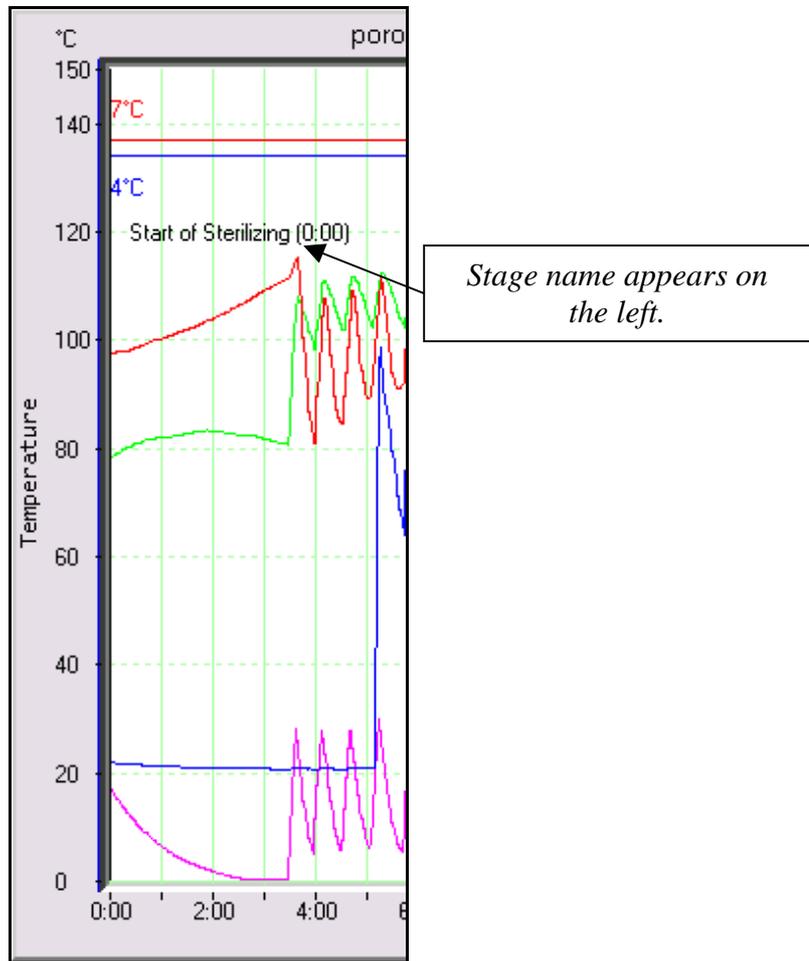
pulsing, heat up, sterilizing and drying etc. Whatever the cycle type, the stages can be customised to suit.



The first button in this facility is the <Add marker>. This allows you to add a marker at any point you wish to. When you click on the <Add marker> button you will be asked to enter the name of the stage.



Enter the name required and click on <OK>. A data line will appear on the left of the chart with the stage name attached.



To get the stage data line into the correct position on the chart it needs to be dragged. This is done by clicking on the stage name and holding down the left or right hand button on the mouse. With this done drag the data line to the correct position. The time on the trace is shown next to the data line to enable accurate placing. If the logging was started at exactly the same time as the cycle on the machine then the stage lines can be placed very accurately and easily in their correct place. The stage name can also be moved up and down its axis so as not to interfere with other stage names.

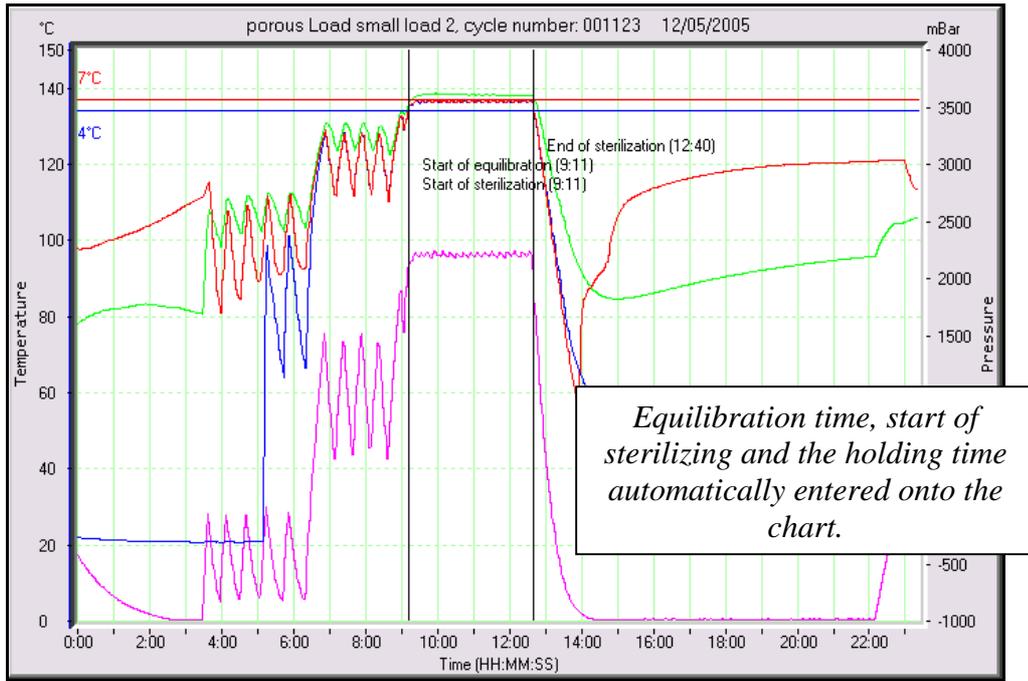


Delete marker

The delete marker button simply removes any unwanted data lines that have been placed on the chart. Click on the data line to be removed and then on the <delete marker> button. The data line will then be removed from the chart.

Auto-mark

The Auto-mark button will place markers at the following points. Time the first sensor reached the sterilizing band, time the last sensor reached the sterilizing band and the time the first sensor left the sterilizing band. These positions are taken directly from the recorded data and will automatically mark out the equilibration and holding times. When Auto-mark is used to mark these stages they are not adjustable. Only the position of the stage name along its axis is adjustable so as not to interfere with other stage names.



Data lines that have been inserted using the auto-mark can be deleted in the normal way using the delete marker button.

Show data list

Click on the <Show data list> button to view the complete data stored from the viewed test. The data listing is displayed at 1-second intervals.

Time	Drain	Free Space	Load	Pressure
0:00	97.83	78.04	22	-417
0:01	97.83	78.04	22	-417
0:02	97.72	78.45	21.96	-439
0:03	97.72	78.45	21.96	-439
0:04	97.64	78.62	21.88	-458
0:05	97.64	78.62	21.88	-458
0:06	97.71	78.8	21.84	-476
0:07	97.71	78.8	21.84	-476
0:08	97.81	79.05	21.83	-493
0:09	97.81	79.05	21.83	-493
0:10	97.81	79.05	21.83	-493
0:11	97.94	79.25	21.79	-511
0:12	97.94	79.25	21.79	-511
0:13	97.87	79.46	21.76	-528
0:14	97.87	79.46	21.76	-528
0:15	97.88	79.74	21.74	-544

Add stage here

Entering stages into the data list

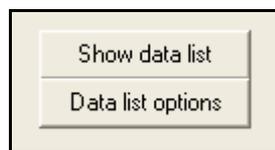
Stages can be inserted using the data list. The stages will be placed onto the chart in the exact position selected on the data list. Decide exactly where the stage starts and highlight the row on the data list. Click on the <Add stage here> button and the “enter stage name” box opens. Enter the stage name and click on <OK>. The data line and stage name will appear on the chart.

Data list options

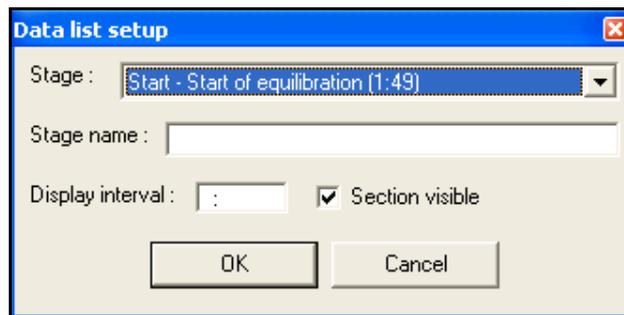
Data list options allows you to adjust how much data is listed in your report. It is possible to show the data listed every 1-second or every 60 seconds; it is up to the user. This is very useful when testing long cycles and a report is being printed. A report of a long cycle containing data recorded every second can be very bulky when printed so reducing the frequency of the data is a great advantage.

For example the negative pulsing could be changed from every second to every 20 seconds. The positive pulsing stage the same, but when the data needs to be more detailed during the sterilizing stage, the data could be displayed every 10 seconds. The times and frequency are under the users control.

When included in a saved report the data listing will appear in the new format in the report. However the data listing originally recorded while logging will not be affected and can always be referred to.



After entering all the data lines required to the chart click on the <Data list options> button to open data list set up window.



In the stage box you will see the first stage as entered onto the chart. The name of the stage will correspond to that which was given when entering the data line stages to the chart. Enter the stage name, as you would like it to appear in the data listing.

The display interval is the frequency that you wish the data to be listed. The default interval is every 1-second. If a long cycle has been logged, and the data listing was to be included in the report without changing the interval settings, the report could become very large. Stages of a cycle, such as air removal and drying may not have to show the data as frequently as the sterilizing time. The interval time is set in minutes and seconds and can be edited for each stage. Edit each stage by highlighting it in the drop down menu. When the display interval has been set for all the stages click on <OK>.

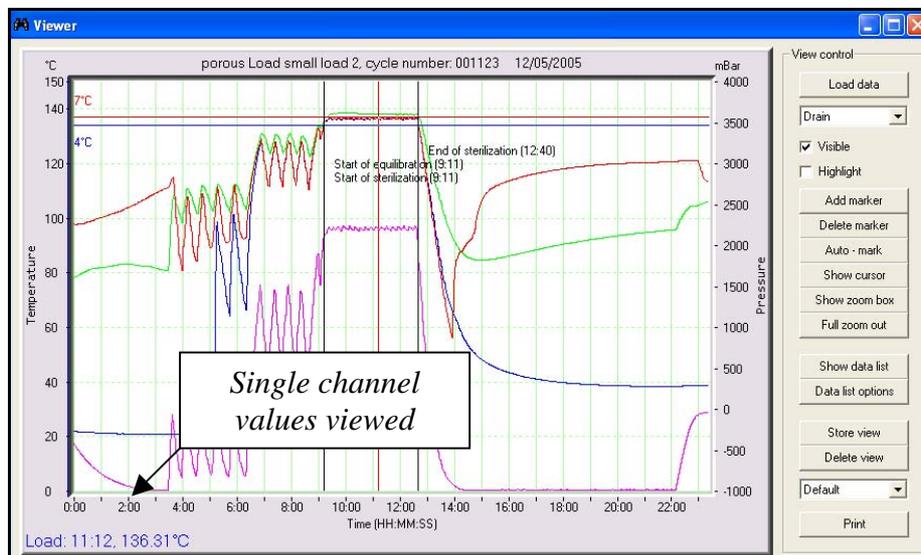
The edited data listing is saved by storing the view. This is explained in the “Saving a view” section in this manual.

Show cursor

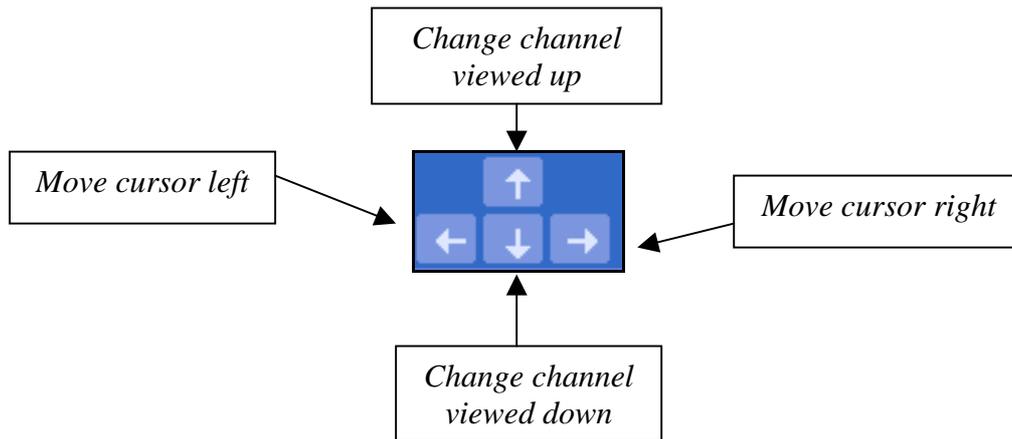
Channel va...	
Drain	92.61
Free Space	104.29
Load	68.68
Pressure	-809

All channels viewed at the same time using the channel values widow.

The cursor allows you to follow any of the data traces to accurately see a reading at any given point. Clicking on the <Show cursor> button opens the channel values window and also places the red cursor onto the chart. The channels values window allows you to easily follow the readings on the chart as you follow the trace using the cursor.



The cursor appears on the chart as a single vertical red line on the chart. There are two methods of moving it along the trace. It is possible to move the cursor using the mouse click and drag method. Simply left click and hold down the mouse on the cursor line and drag it to the position required. The second way of moving the cursor is to use the arrow keys on the keyboard.

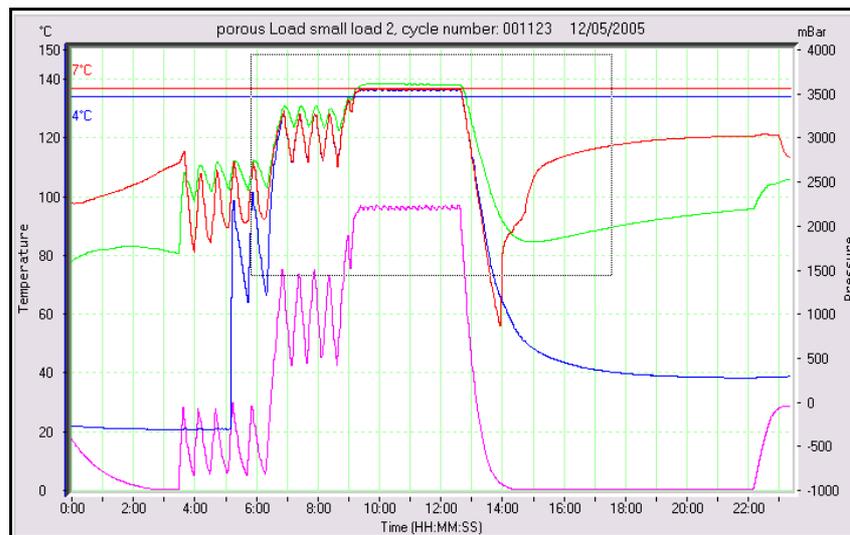


When the cursor has been selected the reading from one of the channels will be shown in the bottom left hand corner of the viewer screen. As the cursor is moved along that channel the time and value will change. It is possible to view each of the channels in this way. To change the channel that is shown simply use the up and down arrow keys on your keyboard. The channel will be shown using the name and colour given to that channel in the “Test set-up” section.

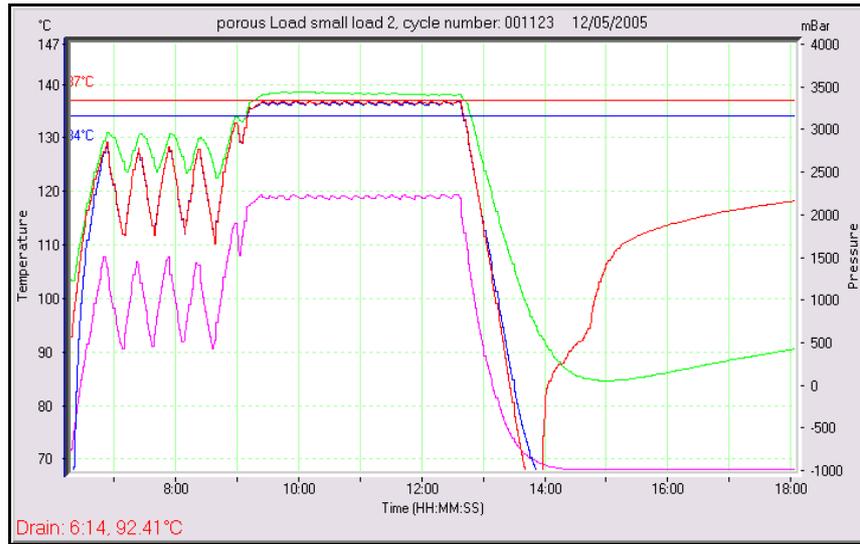
To follow the path of the channel with the cursor using the arrow keys on the keyboard simply press either the right or left directional keys.

Zoom facility

Click on the <Show zoom box> button to place the zoom box onto the chart. The zoom box can be moved to any part of the chart using the arrows keys on the keyboard in the same way as with the cursor in the cursor section.



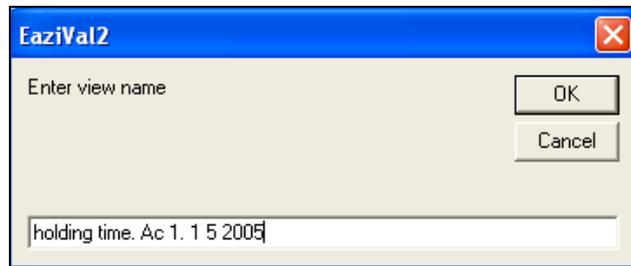
To zoom in on any area, simply place the zoom box over that area and press the return button on the keyboard.



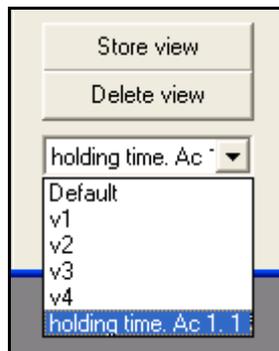
Continue to click the <Show zoom box> and that area of the chart can be zoomed in to see in great detail how the cycle has performed. To zoom out, simply click the <Full zoom out> button. The zoomed in area can be saved and printed in the report by storing the view.

Saving views

Many changes can be made to charts and any number of views of a particular chart can be saved without interfering with the default chart. E.g.: - for a report the default chart may be required along with a chart with all the stages indicated and a zoomed chart to show the holding time. All three views would be stored under the heading of the default view using the <Store view> button.



After clicking the <Store view> button enter the name you would like to store the view under. Then click on <OK>.



The view will then be stored in the drop down menu located the bottom of the “viewer control” toolbar. To view a saved chart at future dates, select the default view and then select the required view from the drop down menu.

- When closing the viewer window, you will be asked, “save changes to this data”? <Yes> must be clicked. If <No> is clicked then any changes made to views will not be saved.



Print a view

By clicking on the <Print> button in the viewer, a view can be printed off independently of any other paperwork.

Paperwork

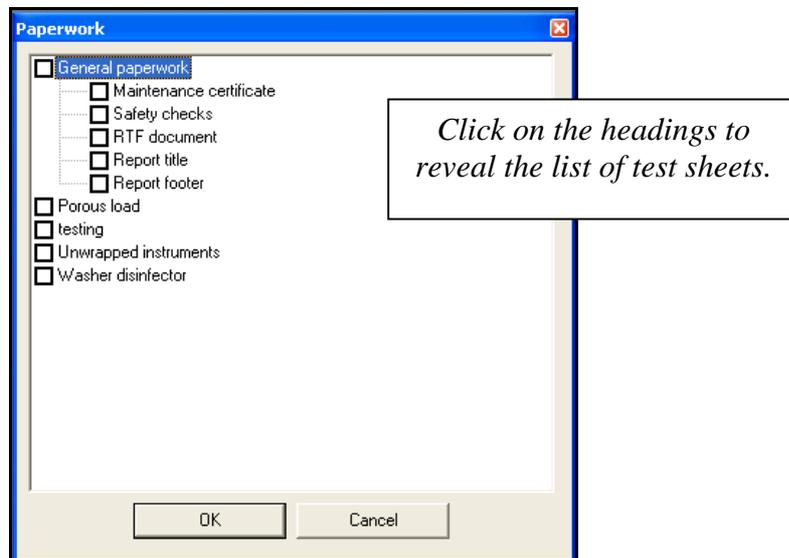
Incorporated in EaziVal 2 is a selection of test sheets that can be used when carrying out the weekly, quarterly or yearly tests on porous load and bench top sterilizers. The sheets are also included to carry testing on washer disinfectors.

EaziVal 2 has three methods to work with additional paperwork required for reporting. If you are able to you should use the built in paperwork as this offers a higher degree of integration with other parts of the program. For longer text based documents EaziVal 2 is able to import documents in the RTF format. To include shorter forms based on tables it is recommended that you use the custom form design functions of EaziVal 2.

- The test sheets contained in the program can be completed and saved while the logging process is running.

EaziVal test sheets

To access the test sheets contained in the program click the <Paperwork> button.

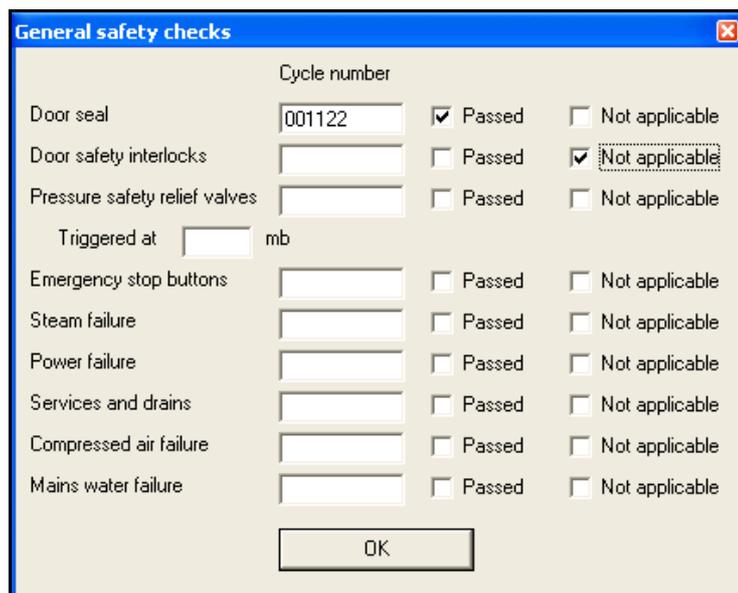


The paperwork window opens showing a list of test sheets. The initial list shown contains the default sheets contained in the program; any test sheets manufactured in the design section will be added to the list.

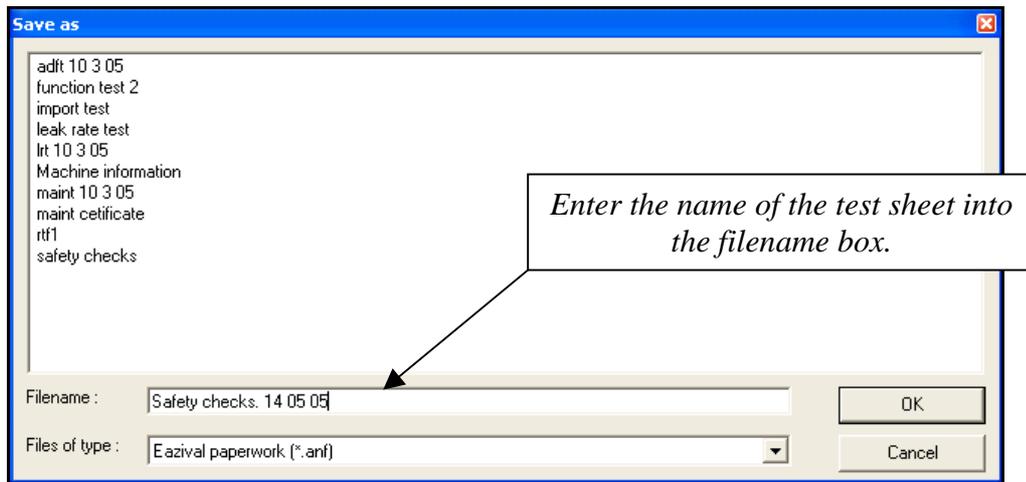
- Completing test sheets in the paperwork section can be done before, during and after logging.

General paperwork

The general paperwork list contains sheets that are applicable to tests on all types of machines. All the sheets are completed and saved in the same way. To open a sheet, tick the checkbox and click <OK>.



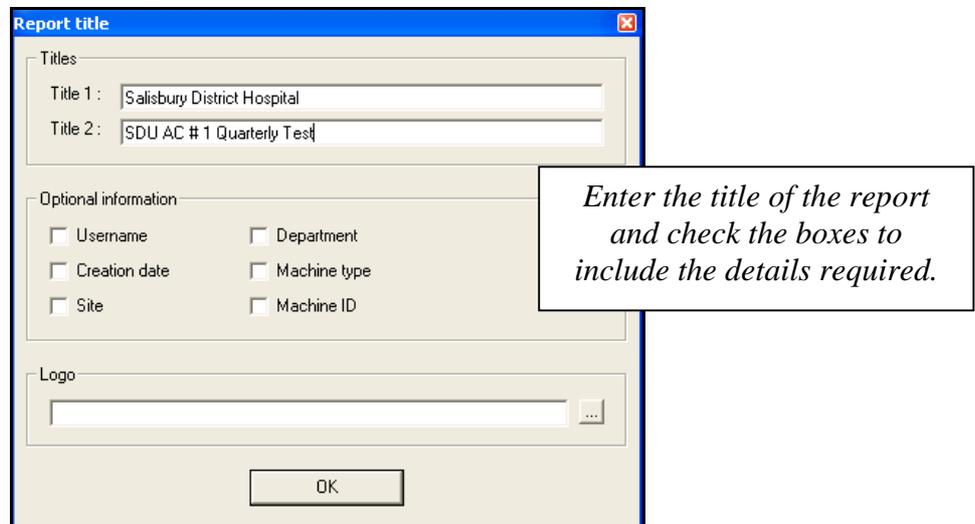
Enter the details required into the relevant boxes. When all details are entered, click on <OK>.



The “Save as” window opens and to save the sheet you need to enter the filename and click the <OK> button. The sheet can then be used in the report building section. You can also recall the sheet to view it at anytime in the manage files section.

Report title and footers

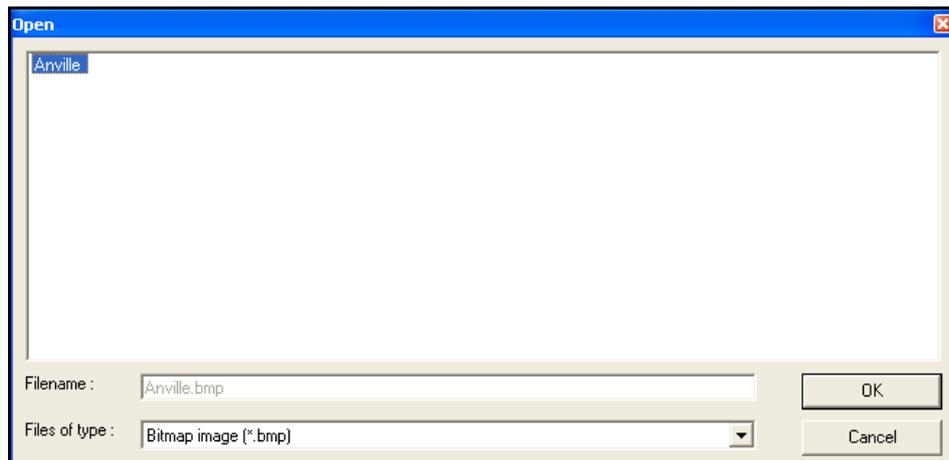
The report title and footers for the report pages are prepared in the paperwork section. In the “general paperwork” tree you will find the heading for “Report Title” and “Report Footer”. To open each one in turn, check the box and click on <OK>.



The details entered into the two title boxes are completely down to the user. The information included from the list of check boxes would have been entered earlier in the program.

Included in any report title can be a company logo. The image should be saved in bitmap (BMP) format. Any logo's that you wish to use need to be entered into the main EaziVal 2 data folder. This is found at: -

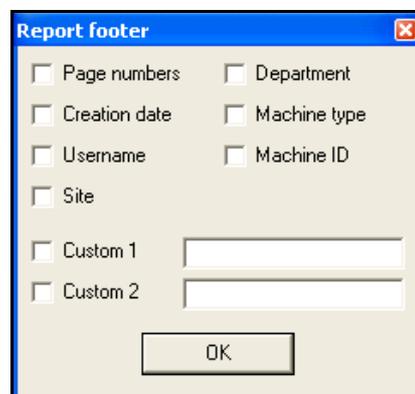
My Documents/EaziVal2/Data/Images. Once this has been done it can be included in the header or footer by clicking on the button in the logo box and selecting it.



A list of all logo's included in the image folder will be shown and you simply highlight the image required so it appears in the filename box and click on <OK>. The filename will appear in the logo box. When all the editing of the report title or footer window is complete click on <OK> and the "Save as" window opens.



Simply enter the filename that you wish to give the report title or footer. Click on <OK> and the set-up is saved. How to use the header and footers in your report is explained in the report building section of this manual.

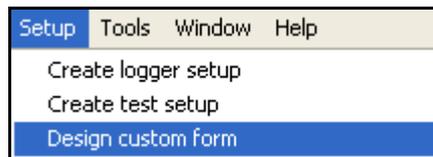


The footer window is slightly different to the report title in what is included. The difference being that two customized comments, company names etc can be added.

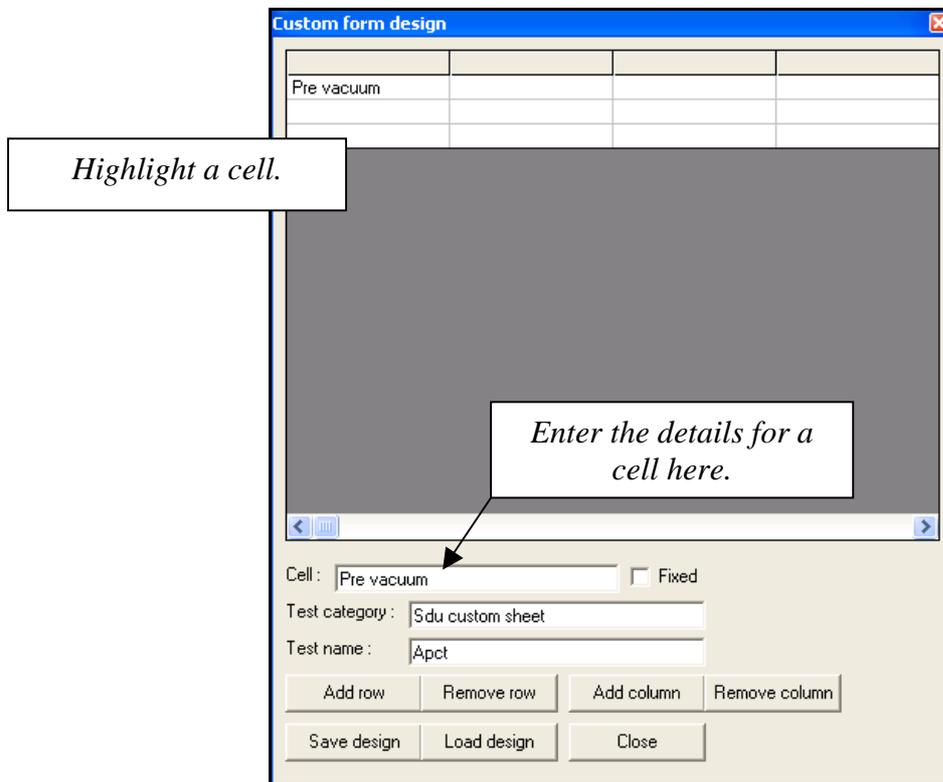
Simply enter the company name etc into the custom box and check the box. The set-up is saved in the same way as the report title. Page numbers will appear as page 1 of etc. Save the set-up in the same way as with the report title.

- The report title will appear on the front of the report. The footers will appear on all pages.

Design custom form



The Design custom form facility allows you to create your own test sheets to suit the type of machine and cycle being tested. Click on the <Design custom form> button, this is found in the “Set-up” drop down menu.



In the “Custom form design” window there is a default number of cells, three horizontal rows and four vertical rows columns.

To enter a title into a cell e.g.: - Neg pulsing, sterilizing etc, highlight the cell and then enter the title into the “Cell:” box. As the title is entered it will appear in the highlighted cell. Leave a cell blank if there are details to be entered during a test. To change what is written in a cell, highlight it and then edit it in the “Cell:” box.

The “Test category” is the folder in the paperwork window where the custom-made test sheet will appear. If you wish to place it in one of the folders that already exist

then type the name of that folder in the box. I.e.: - Porous load or washer disinfecter. If a new category name is typed then a new folder will appear in the paperwork window.

The “Test name” box is the title you wish to give the custom sheet i.e.: - automatic process control test etc.

Pre vacuum			
Neg Pulsing	Max		Min
		mins	
Pos pulsing	Max		Min
		mins	

To add extra columns to the custom sheet click on the <Add column> button, a column will be added on to the end column. To remove columns, click on the <Remove column> button. Adding rows is done in the same way by clicking on the <Add row> button, a row will be added under the bottom row. To delete a row, click on the <Remove row> button.

Max		Min	
	mins		
Max		Min	
	mins		

New rows and columns added.

Pre vacuum			
Neg Pulsing	Max		Min
		mins	
Pos pulsing	Max		Min
		mins	
Stage time		mins	
Heat up		mins	
Sterilizing	Start		1 min 2
Indicated Press			
Indicated Temp			
Recorded Press			
Recorded Temp			
Time above 134		mins	
Stage time			
Drying	Vacuum switch point		mb
	max vacuum		mb
Stage time		mins	
Time to atmospheric		mins	

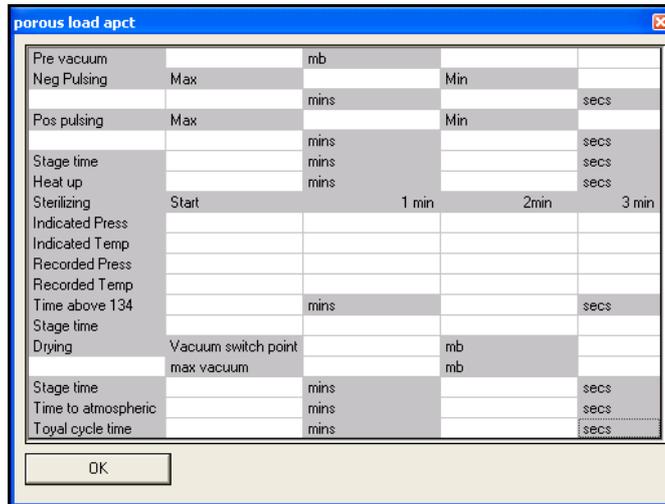
Cell: Fixed

Test category: Custom test sheets sdu

Test name: Acpt

Check the Fixed box to lock the cells.

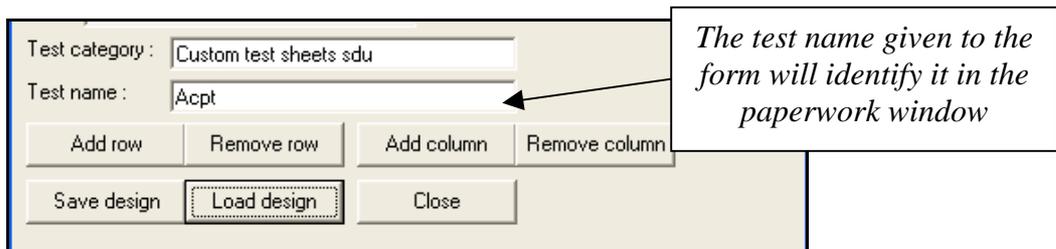
To lock the cells so that they cannot be edited in the paperwork section check the “Fixed” box. Only the empty cells will be able to have data entered into them.



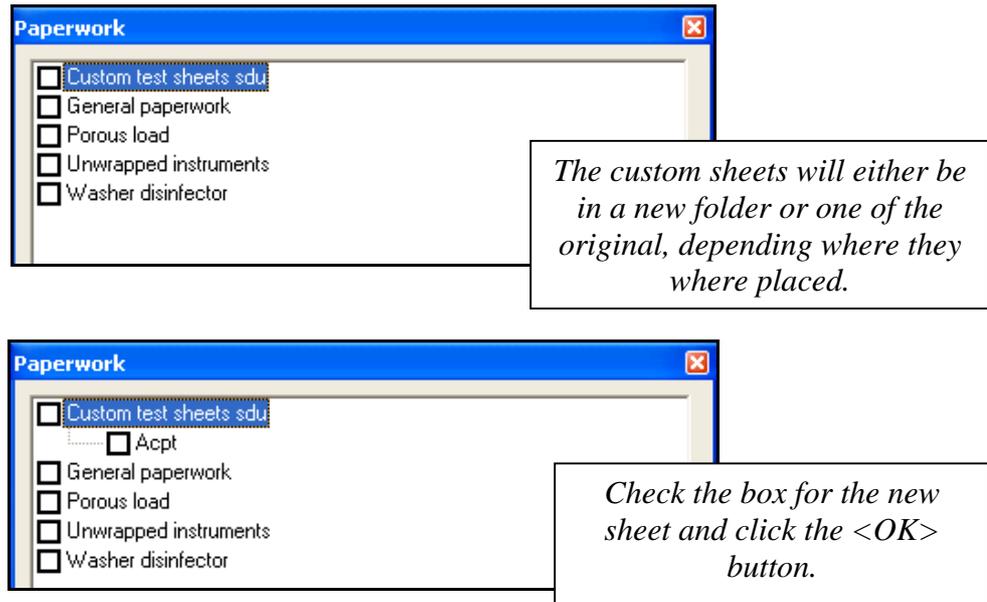
Once all the details have been loaded into the design it can be permanently saved. Click on the <Save design> button, enter a title into the filename box and click <OK>.



Previous custom sheet designs can be loaded into a new design and then edited. This is useful if the new custom design is very similar to a design previous loaded and saved. Click on the <load design> button and the custom designs file window will open. Simply highlight the design required, and click on the <OK> button. The design will automatically be loaded into the new sheet.



To open the custom test sheet, click on the <Paperwork> button.



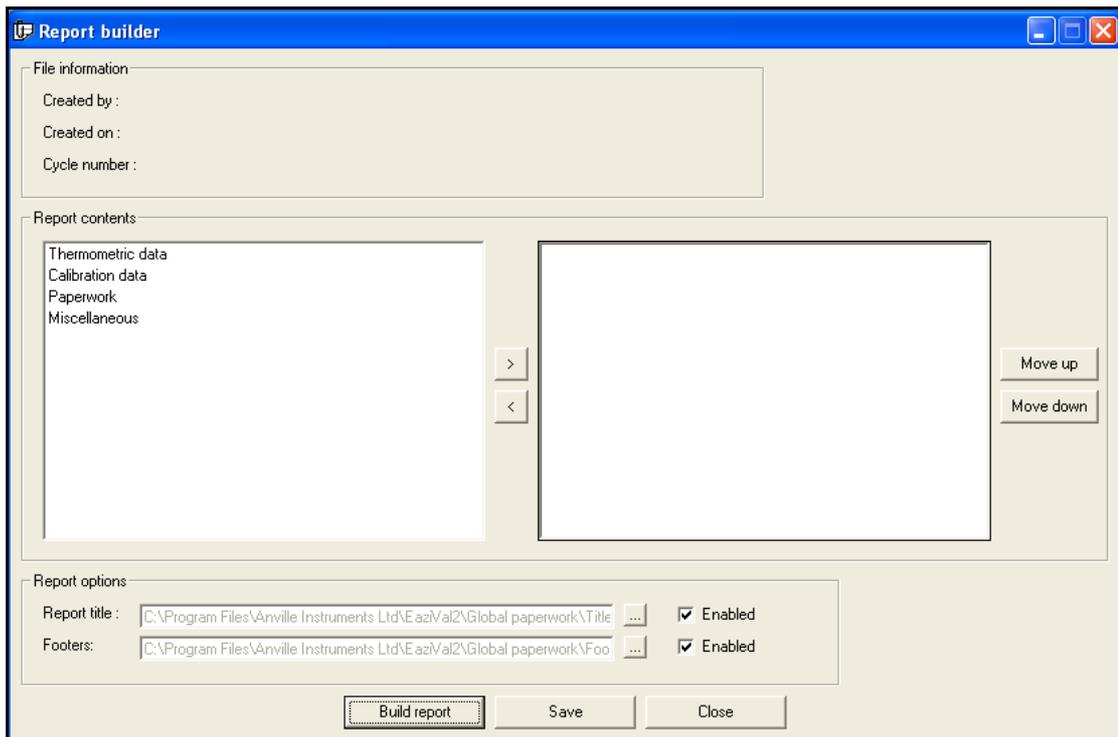
Check the box next to the custom made sheet and click on the <OK> button. The sheet will then open and can be completed, and saved in the same way as the other sheets in the program. The custom design sheets can also be used in building reports.

Report building

EaziVal 2 has the ability to build a complete report for weekly, quarterly and yearly tests to meet the requirements of HTM's 2010 and 2030.

Click on the <Report> button on the main toolbar.

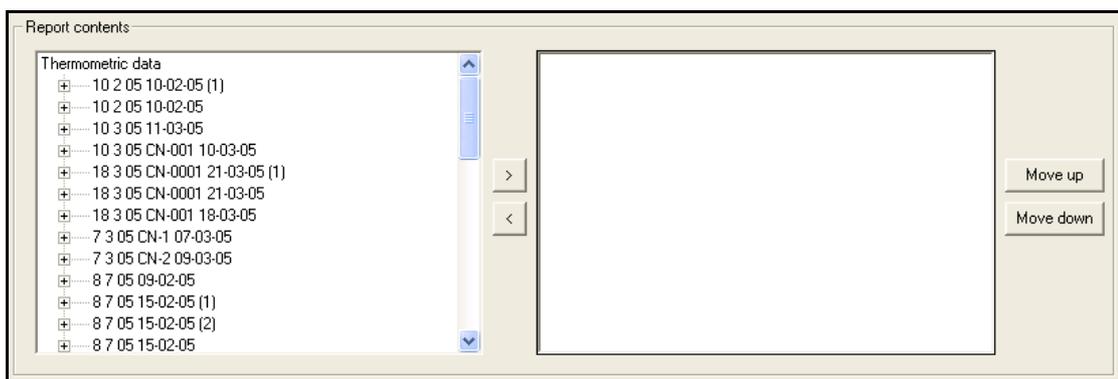




The report builder window is made up of three main sections.

- **File information:** Who created the file, when it was created and the cycle number are shown here. This helps to identify the correct file as it is loaded into a report.
- **Report contents:** The thermometric data, calibration data, paperwork and miscellaneous files are listed.
- **Report options:** The headers and footers can be included in the report by checking the boxes.

Most of the report building is carried out in the “Report contents” section.



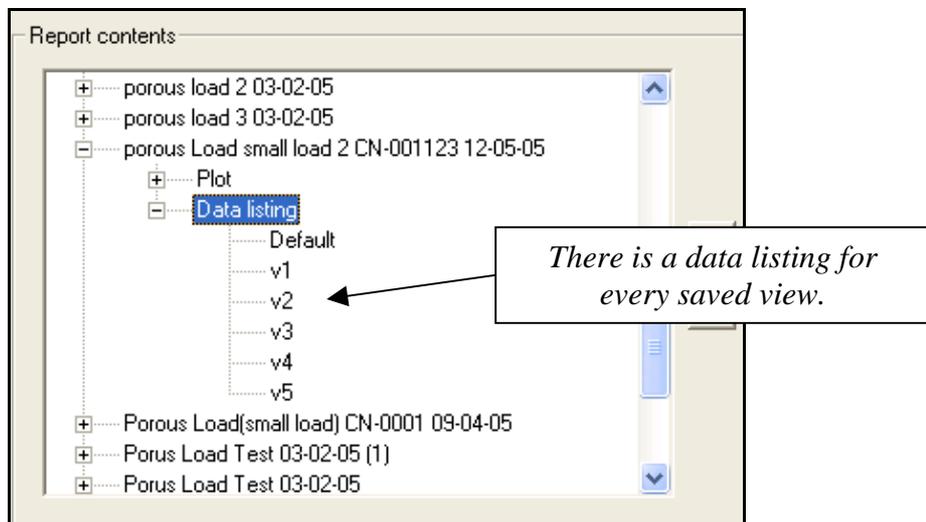
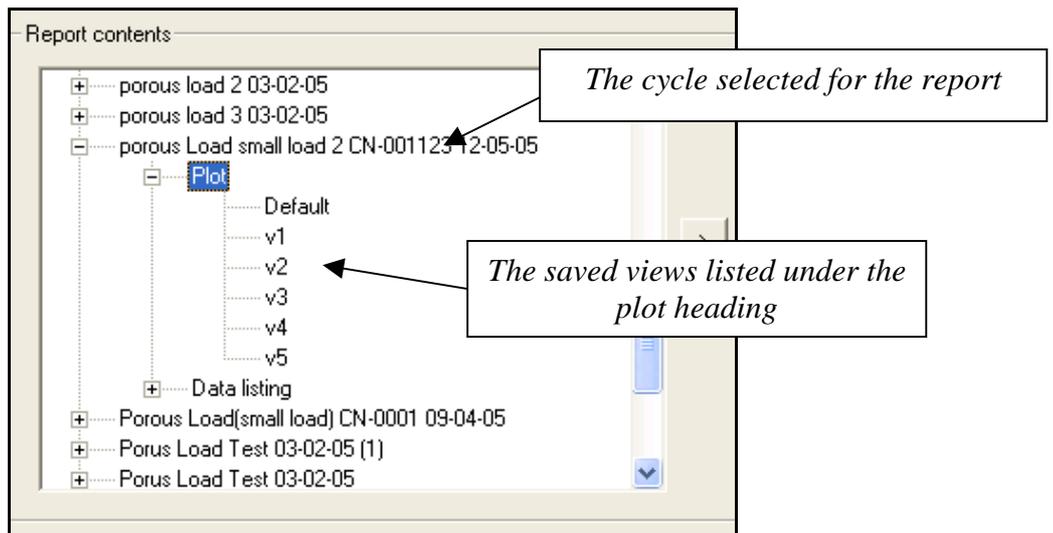
Select the thermometric data that is required for the report. Any number of data sets can be included in a report.

- The settings in the “Data list options” in the viewer section regarding the frequency that the data is displayed will have an effect on the size of the report.

With the thermometric data selected the “file information” section will automatically be completed.



Each set of thermometric data will consist of the original plot logged, listed as the default plot, and any additional plot views, which have been edited, and saved, in the viewer section. I.e.: - zoomed views. The original data listing, which is listed as the default, and data listings for each saved views, which would include data listings, which have been edited to include stages etc.

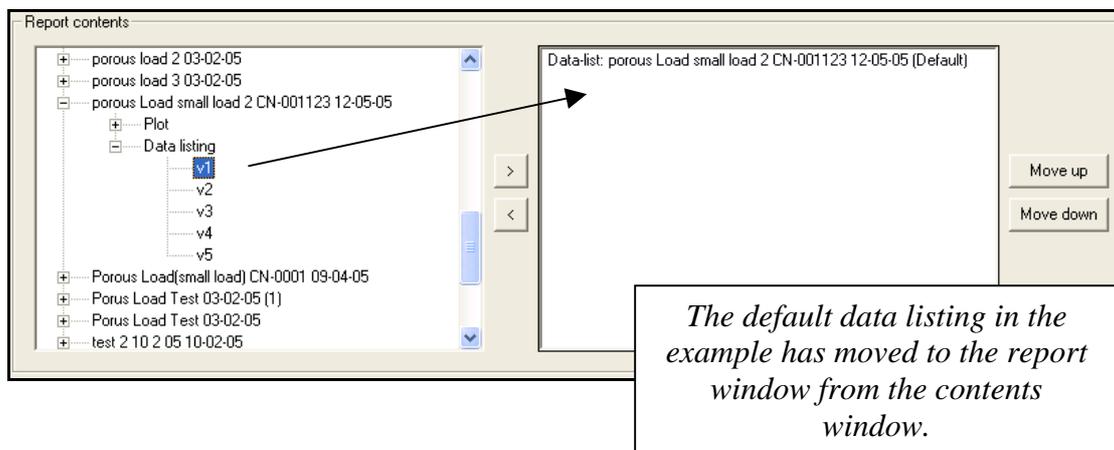


There is a data listing for every saved plot and a plot for every saved data listing. This means if a zoomed view has been saved it will be listed under the plot heading. Automatically another data listing will be saved with it. This will appear under the data-listing heading. The same will happen if a data listing has been edited to include stages, when it is saved the plot is saved as well.

The plot and the data listing used in a report do not have to be from the same view.

To include any piece of information in a report i.e. – plot, data listing, paperwork etc, there are two ways of doing it. The information can be dragged or the information can be moved using the arrow buttons in the report builder.

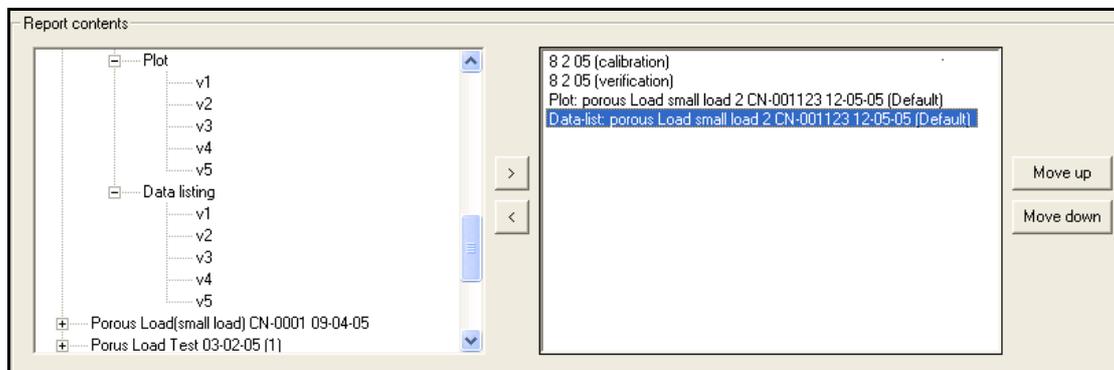
Dragging the information is simply done by clicking on the information required and holding down the left hand mouse button, a hand will appear, move the hand over to the report window and release the mouse button.



The information will appear in the report window, it will no longer be in the contents window. The procedure is the same for all pieces of information that you wish to include in the report. Information can be removed from the report by dragging in the opposite direction back to the contents window.

The alternative way of transferring the information into a report is to highlight it and then click on the directional button. To remove information from the report, highlight it and click on the directional arrow to send it back to the contents window.

Information can be loaded into the report in any order, as there is the facility to move items up or down so that they are placed from the front to the back of the report in the order required.

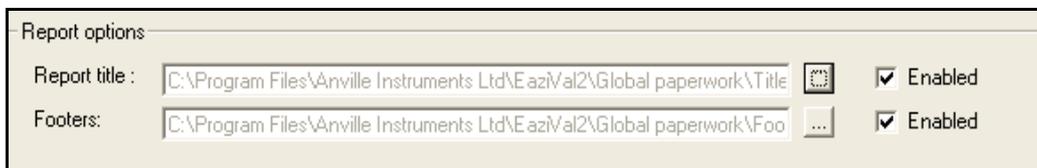


To move an item up or down in the list simply highlight it and click on the <Move up> button or <Move down> button.

This is particularly useful when including page breaks. Page breaks can be used to provide a blank page in a report so that machine printouts can be included for example. Any number of page breaks could be placed in a report and then placed where required. A page break can also be used before a test sheet if the sheet is split between two pages and would be better complete on a single page.

- Page breaks can be found in the miscellaneous folder and are useful for including blank pages in a report.

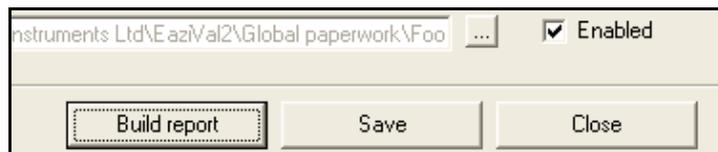
Once the contents of a report have been assembled the next section in the report builder is the report options, which refers to the report title and footers. Click on the button at the end of either the report title or the footer filename box. The report title or footer saved files window will open, click on the file required to highlight it, and then on the <OK> button. The file name will appear in the filename box.



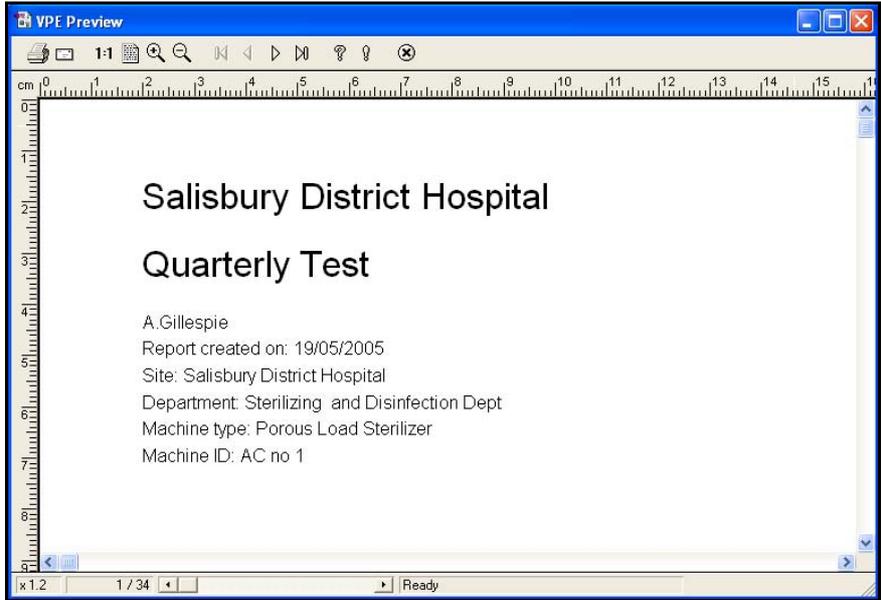
Check the <Enabled> checkbox for the header and footer to be included in the report. The report title will appear on the front page of the report only; the footers will appear on all pages.

Previewing the report

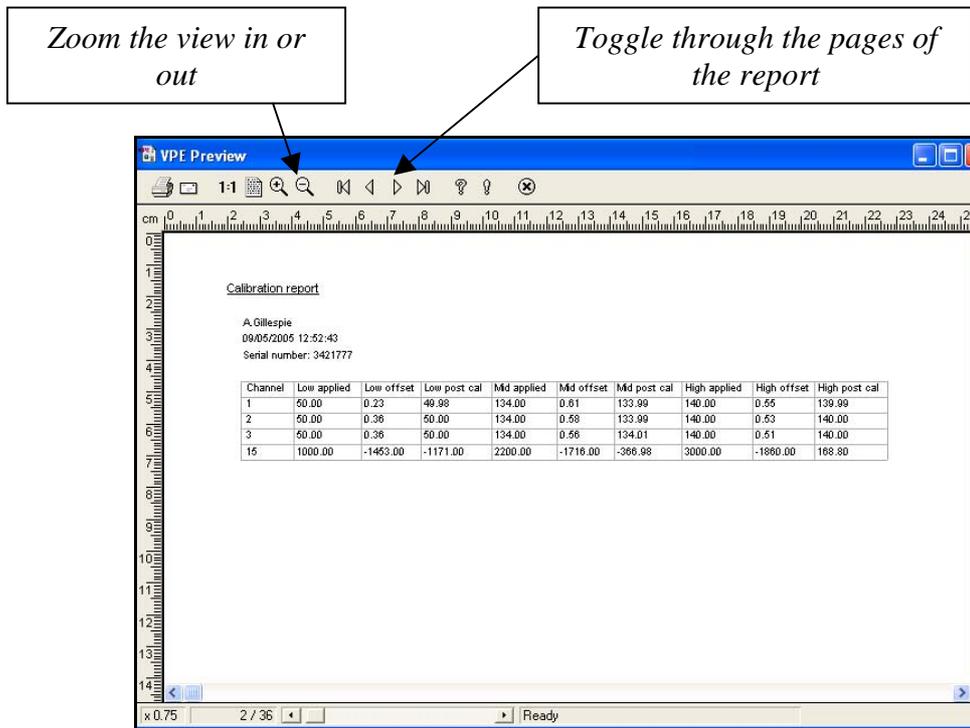
The report can be previewed before saving so that adjustments can be made if necessary.



Click on the <Build report> button and the VPE viewer will open.

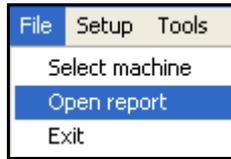


Using the VPE Viewer the report can be previewed to enable you to check that the layouts of all the pages are, as you would like them. If the layouts of pages need to be changed, close the VPE viewer and edit the report again in the report builder. When the changes have been made open the edited report by using the <Build report> button.



When you are happy with the layout of the report close the VPE viewer, return to the report builder and save the report. Simply click on the <Save> button. A “Save as” window opens, name the report, i.e. Sdu AC 1 Quarterly and then click on <OK>.

Reports can be opened easily from the main EaziVal 2 toolbar.

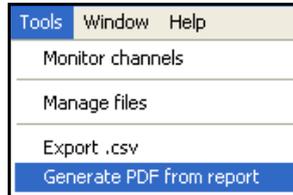


From the “file” drop down menu, select the <Open report> button. The report folder will open and simply select the required report and click on <OK>. The VPE viewer will open displaying the selected report.

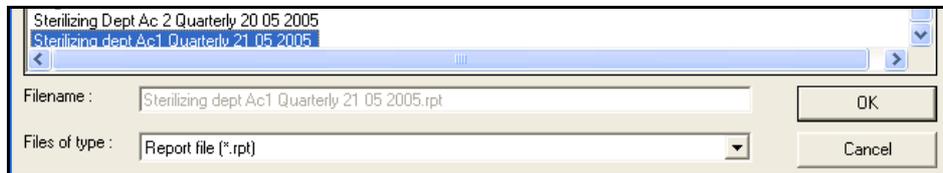
Generating PDF's from reports

Reports can be converted easily into PDF files and sent via e-mail. When a report is sent via e-mail in this form the recipient does not need to have EaziVal 2 software on their PC. Adobe Reader or another PDF viewer is all that is required to open and read the report.

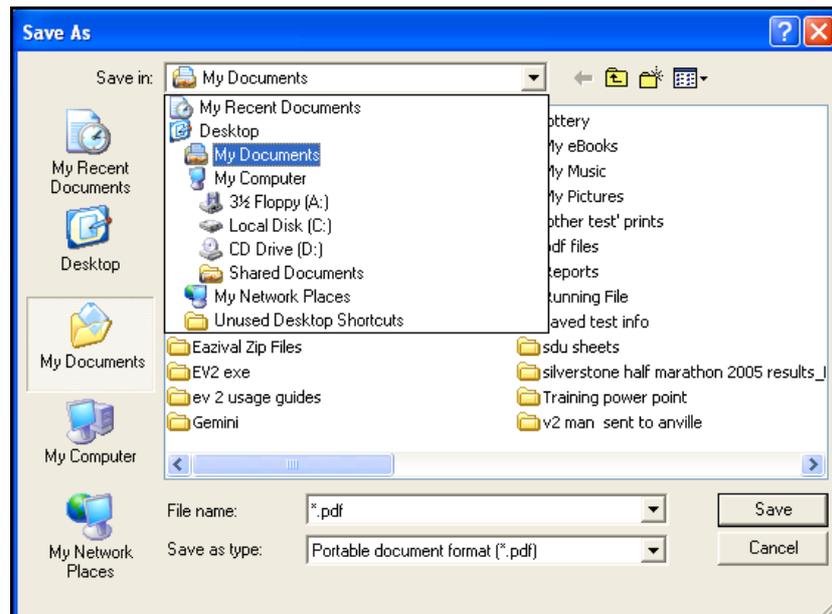
Every part of the report that is assembled in EaziVal 2 can be converted to PDF.



Click on the <Generating PDF from report> button found in the “Tools” drop down menu.



The reports folder opens showing a list of saved reports. Click on the report to be converted so that it appears in the filename box. Click on <OK>.



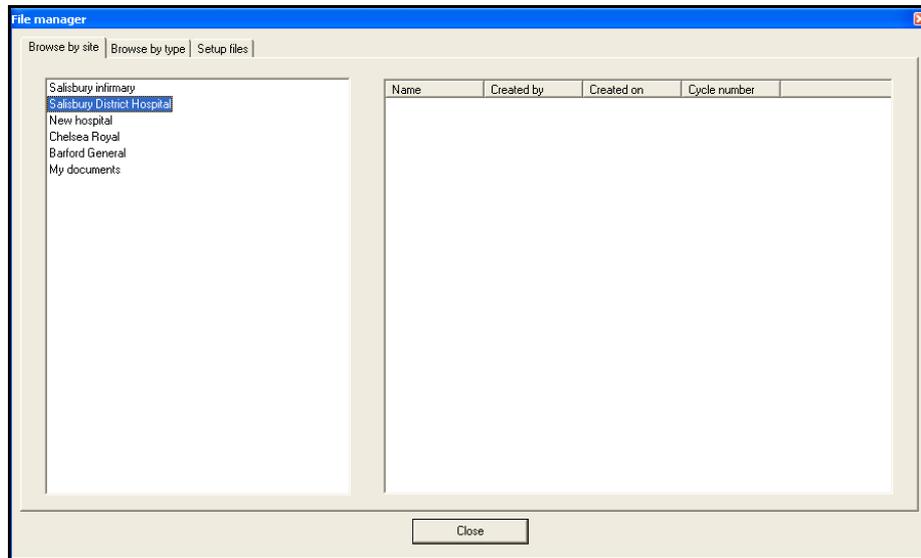
The windows “Save as” window opens and you can save the PDF file. From the windows drop down menu click on the destination required. I.e.: - My documents. When the destination folder has been selected enter the title of the report into the filename box and click on <Save>. The report will be converted and then saved to the selected destination.



The PDF file will appear as shown and can be sent via e-mail to any PC. To open the PDF files Adobe Acrobat Reader is required.

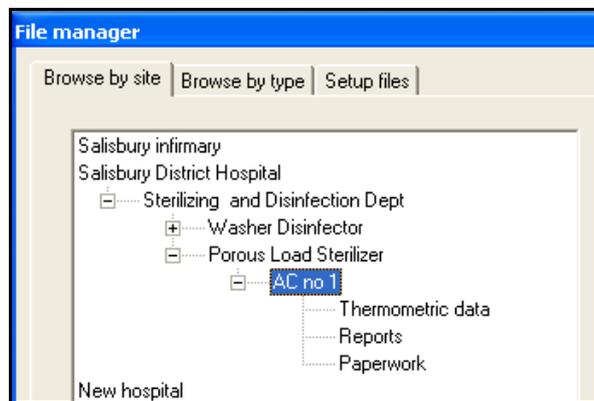
Manage files

Manage files is a way of viewing all the files that have been created using EaziVal 2. Click on the <manage files> button found in the “tools” drop down menu.

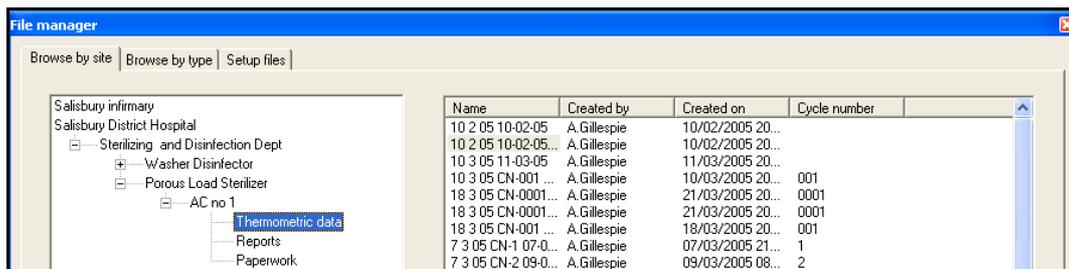


The files can be browsed by Site. Select a machine and all the files related to that machine can be viewed. These files are divided up into three sections.

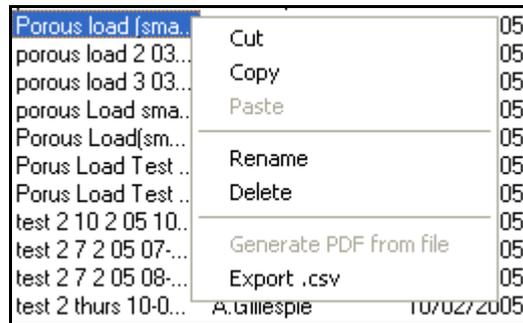
- Thermometric data, charts and data listings.
- Reports, the complete reports assembled for the machine.
- Paperwork. All the paperwork that has been completed, and saved for the machine selected.



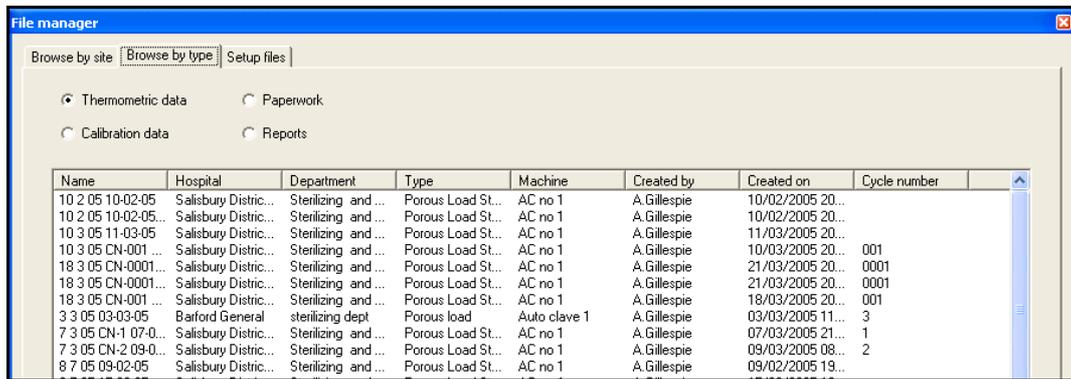
To view the files of a particular type highlight the appropriate heading.



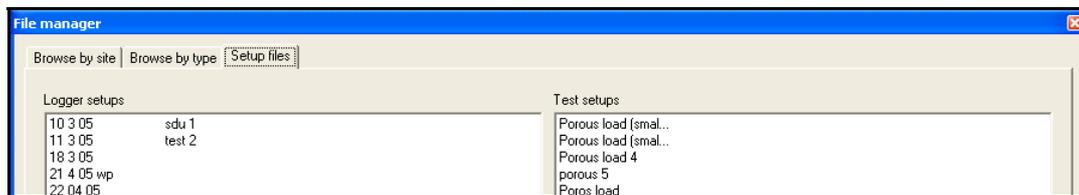
There are some useful functions accessible by right clicking on the mouse in the file manager. Files can be deleted, copied, pasted, re-named, Export CSV and when the report list is showing, generate PDF's.



A complete list of files will be displayed, by clicking on a file the VPE viewer will open and the file can be viewed. This can be done on all files with the exception of the set-up files, which are not viewable.



Browsing by Type allows you to view all files of the same type from all the machines on EaziVal 2. Simply check the box for the file type you wish to view. Double click on a file to open it.

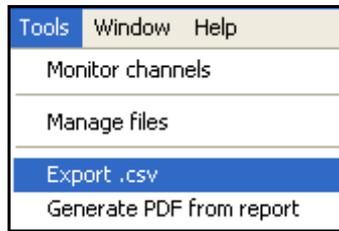


The set-up files differ slightly from the other files in that they cannot be viewed. The set-up files contain the logger and test set-ups. These are global and the list will be the same no matter what machine location has been selected.

Files can be deleted in this window; this is useful if a set-up file is no longer used. Click on the file to be deleted and when it is highlighted delete it using the delete button on the keyboard.

Export CSV

Data logging files can be exported in CSV format and applications such as Microsoft Excel can read them.



Click on <Export.CSV> from the “Tools” drop down menu. The data file connected to the current machine that you are logged onto opens. From the list of data select the required file.

The main “windows save as” window opens and you can decide on a destination for the CSV file.

Once you have decided on a destination, name the file and click on <OK>. The “save as” window closes and the CSV file has been exported to it’s chosen destination.



The CSV files appear as shown and double click to open it. The file opens in Microsoft Excel.

	A	B	C	D	E	F	G	H	I
1	Washer Disinfector 7tc								
2	10465								
3	Jun 2 2005								
4									
5	Time	Slowest	Fastest	Tray1 (bott	Tray2 (mid	Tray3 (top)	Control Se	Recorder	Sensor
6	00:00	20.81	20.88	20.91	20.88	20.88	20.59	21.03	
7	00:01	20.81	20.88	20.9	20.89	20.88	20.6	21.05	
8	00:02	20.8	20.88	20.89	20.87	20.88	20.6	21.04	
9	00:03	20.79	20.86	20.88	20.86	20.82	20.58	21.02	
10	00:04	20.8	20.88	20.93	20.87	20.81	20.58	21.05	
11	00:05	20.8	20.88	20.92	20.86	20.8	20.58	21.03	
12	00:06	20.83	20.88	20.93	20.87	20.81	20.6	21.04	
13	00:07	20.81	20.88	20.92	20.88	20.79	20.59	21.03	
14	00:08	20.8	20.89	20.93	20.88	20.8	20.58	21.03	
15	00:09	20.8	20.88	20.91	20.88	20.82	20.58	21.03	
16	00:10	20.8	20.89	20.9	20.88	20.8	20.59	21.05	
17	00:11	20.82	20.92	20.91	20.88	20.8	20.58	21.03	
18	00:12	20.8	20.91	20.88	20.87	20.78	20.58	21.02	
19	00:13	20.8	20.92	20.88	20.87	20.79	20.58	21.03	
20	00:14	20.82	20.95	20.9	20.88	20.79	20.58	21.05	
21	00:15	20.82	20.94	20.88	20.89	20.79	20.58	21.04	
22	00:16	20.82	20.94	20.88	20.89	20.79	20.58	21.04	
23	00:17	20.81	20.94	20.88	20.89	20.8	20.59	21.06	
24	00:18	20.82	20.93	20.88	20.88	20.8	20.59	21.06	
25	00:19	20.81	20.93	20.87	20.88	20.78	20.57	21.03	

The data appears as in the example and all the features of Microsoft Excel can be used on the data list.

Saving files in a different location

All the files that are in Eazival2 can be copied to another location on your PC. For example if you wish ensure the safety of data that has been recorded so it is not lost should a fault occur on your PC. Most of the Eazival2 files can be copied by simply locating the files in Eazival2 data in My Documents. Right click on the files required and select copy. All that needs to be done then is to decide where you wish to store the files; this could be on the C drive. This is found in My Computer, then select the C drive. Right clicking on the mouse and clicking on <Paste> will then place a copy of the file in the C drive.

Appendix 1

USB-RS232 converter cable connection details

Follow the instructions that come with the converter or follow the installation instructions below.

Installation instructions

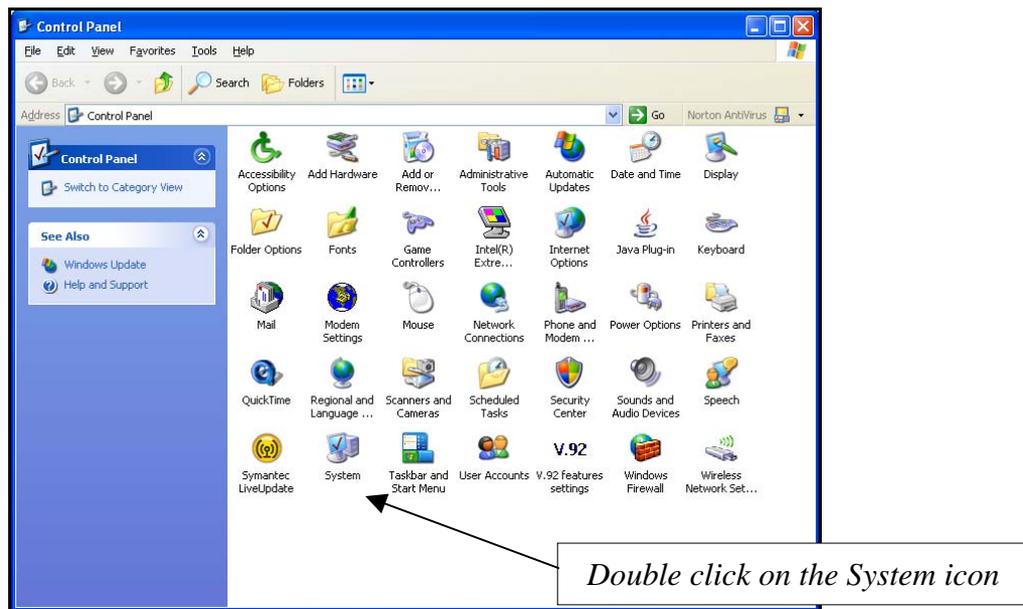
Before plugging the cable into your PC please insert the cable's CD into your PC's CD ROM drive. A menu window will open showing a list of installation guides for different versions of Windows. Follow the guide for Windows 2000 or XP as appropriate for your system.

Following the instructions in the installation guide, plug the USB cable into one of the USB ports on your PC. Follow the on screen instructions while installation takes place.

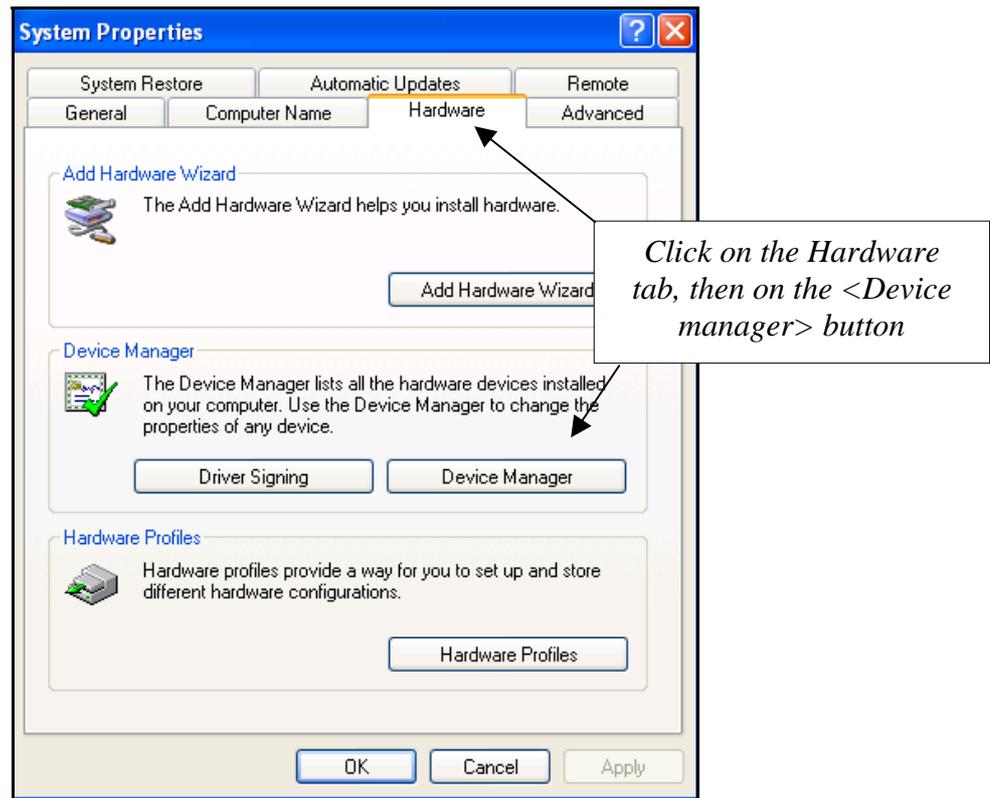
Identifying COM port number

It is necessary to know the serial port number to run EaziVal 2 on your PC. Windows will allocate this number during installation of the converter driver.

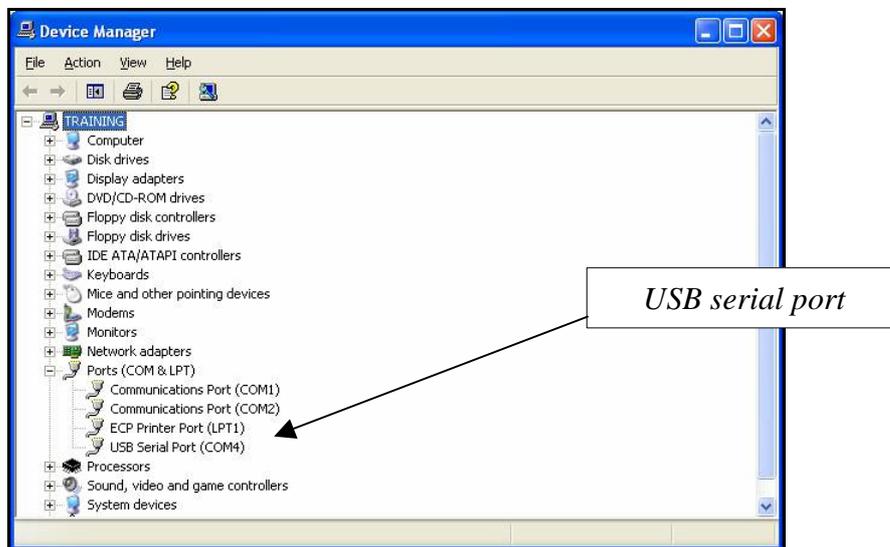
Click on <Start> on your PC and then on <Control panel>.



Double click on the System icon to open the System properties window. Click on the Hardware tab and then the <Device manager> button.



Locate the entry “Ports (COM & LPT)” from the list shown. Click the + sign which will show a list of ports installed in your system. Note the number for the USB serial port.



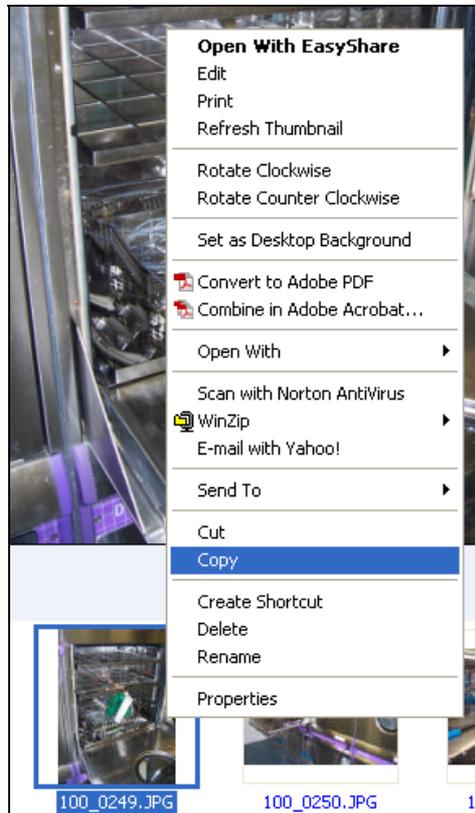
- Note: Occasionally when the USB cable is plugged into a different USB port, Windows may allocate a different COM port. This will be apparent if EaziVal 2 cannot communicate with the logger and a communication error message is displayed. To find the ‘new’ serial port number repeat the identification procedure described above.

Appendix 2

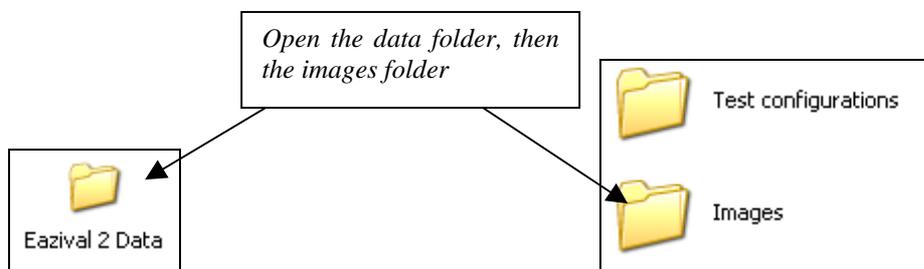
Importing photographic images

Photograph files in j.peg format can be imported into reports. This is particularly useful when carrying out a residual soil test on a washer disinfector for example.

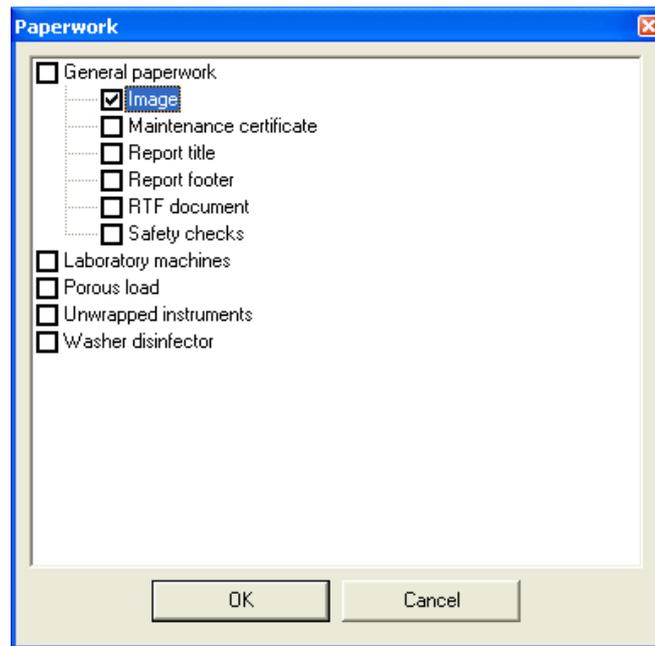
Select the j.peg you wish to import from the picture file on your PC. These are usually found in “My documents/my pictures”.



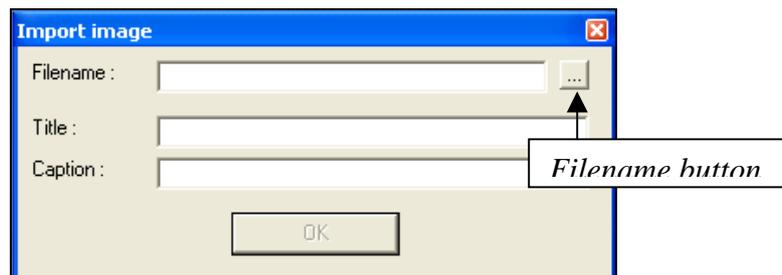
<Right click> on the image required, select copy from the menu. The image now has to be placed in the eazival2 data folder. In My documents, select eazival 2 data. Then open the images folder.



The images folder is the same as the pictures file opened earlier, with your cursor along the line of images already in the folder <right click> and select paste. The image will then appear in the folder and will be available in the general paperwork section within eazival2 itself.



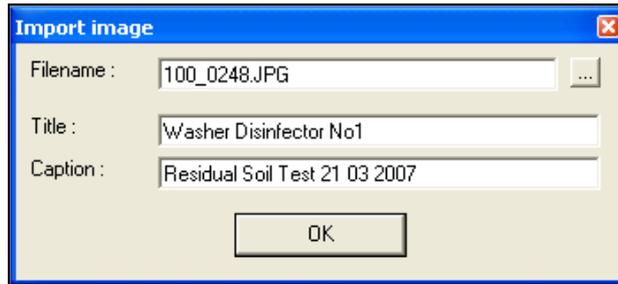
Select paperwork from the main toolbar, the paperwork window will open, click on <General paperwork>. You will see in the drop down menu, image. Select image and click on <OK>.



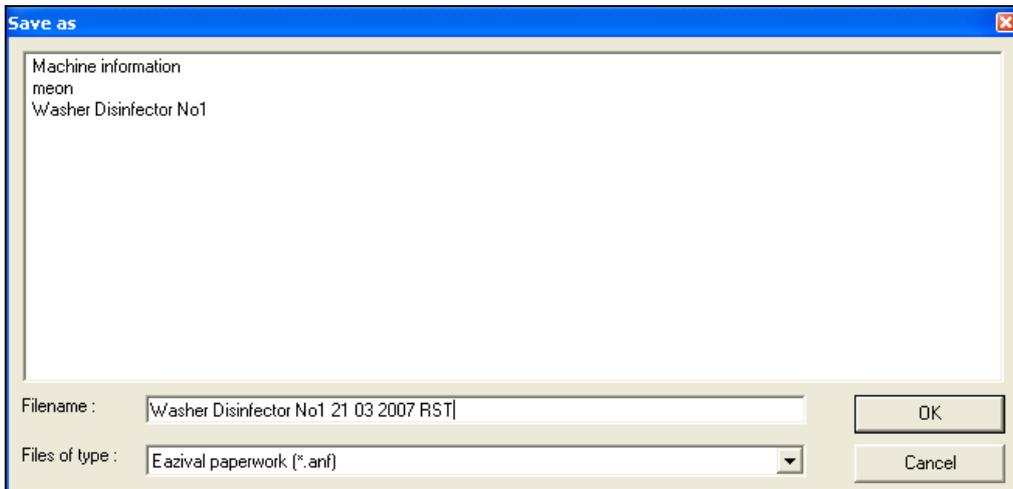
Select the image required by clicking on the filename button.



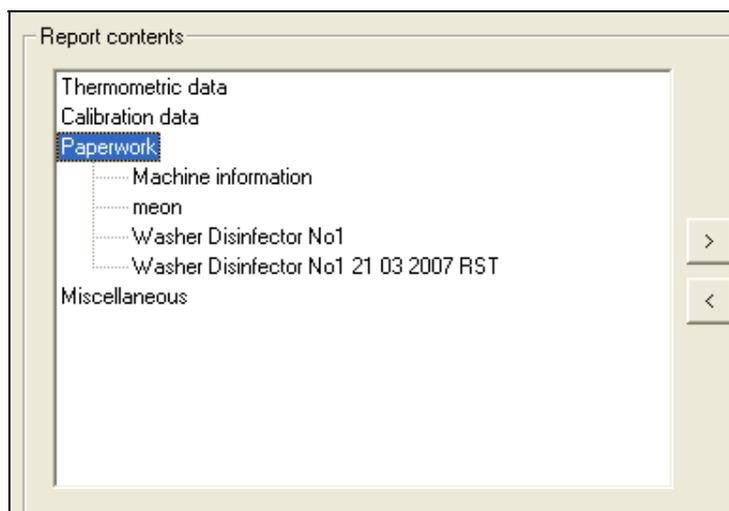
Highlight the image required and click on <OK>.



The image will appear in the “filename box”. You are able to give the image a title; this will appear above it in the report. Simply enter the details into the title box. The same can be done for a caption, which will appear below the image in the report. Then click on <OK>.



The “Save as” window will open, enter the details for the picture in the “filename” box and click on <OK>. The image with its title and caption are saved and will appear in the paperwork menu when building your report.



To include the image in the report you simply double click on the one required, highlight it and use the directional arrows or you can highlight and drag it.



The image title and caption automatically appear in the report. Any editing to the image itself must be carried out before the image is imported into the eaziva2 data folder.



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