USER'S MANUAL

# Omni4000
# User's Manual

## SCOPE

This User Manual provides information on how to install, configure and use the Omni 4000 Critical Events Monitor.

## MANUAL REVISION HISTORY

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| | | |

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# 1. Getting started with Omni4000

## 1.1 Getting Started

This manual describes the detailed operation of Omni4000 as a Critical Events Monitor application. Figure 1 below shows a typical Omni 4000 system and the configuration steps required. All configuration is done using the 'Omniflex Alarm and Events System Configurator' Excel spreadsheet (OAESC).

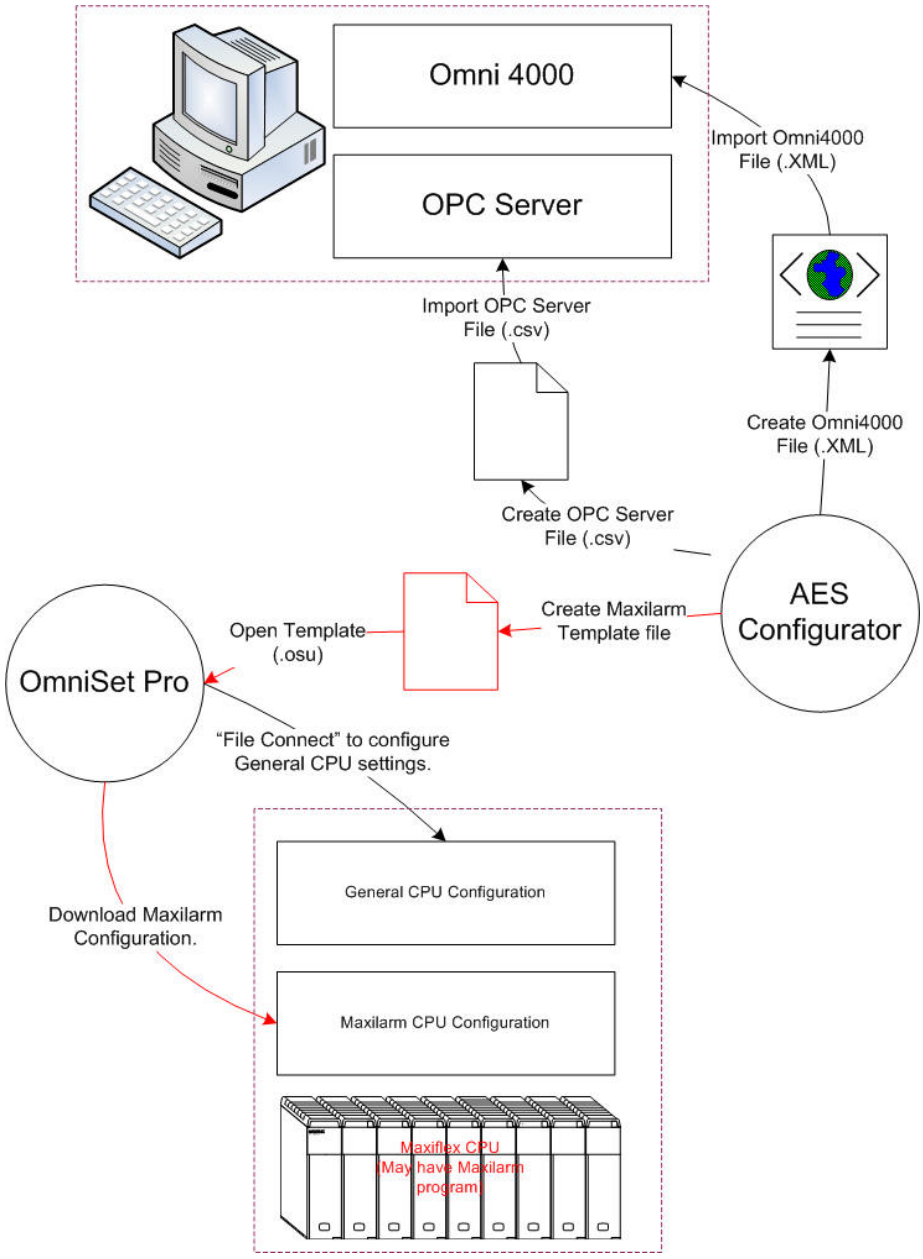



***Figure 1:*** *Block diagram of a typical Omni4000 system.*

Once the system has been designed and configured in the 'Omniflex Alarm and Events System Configurator' (OAESC), two files need to be generated in order to connect a Maxiflex node to an Omni4000 system.

The first file is a '.csv' file generated to configure the OPC server. For detailed help on importing tag configuration into the OPC server please see Section 1.2: 'Importing Tags to the OPC Server'.

The second file is a '.XML' file generated to configure Omni4000.

The first time Omni4000 is started, it will run in 'Operator Mode' and no tags will be configured. Before any configuration can be done, a new user needs to be created. To configure a new user please see the Section 3.2.1: 'Managing Users'.

Once a user has been created, with access to the Database menu, tag configuration can be imported from the '.XML' file into Omni4000. To do this, please see Section 3.5.1: 'Import Tags into Omni4000'.

After Omni4000 configuration is imported successfully, Omni4000 will start to run.

## 1.2 Importing tags to the OPC server and Omni4000

Conet OPC server tag Configuration is done through the 'Omniflex Alarm and Events System Configurator' (OAESC) spreadsheet. A '.csv' file will be generated and then imported into the Conet OPC server.

* Conet OPC server tag configuration import should always be done before Omni4000 configuration import.

1. Open Conet OPC Configurator.
2. Click on **File**, select **New.**
3. Specify a Database name and click **Save**.
4. Click on **File**, select **CSV Import** and select **ALL**.
5. Browse to the location of your *.csv file, select it and click **Open**.
6. Verify the port and device settings are correct and close the configurator.
7. Click **yes** to set the edited database as the current active database when prompted.
8. Start Omni4000.
9. Push **F9** or click on the **Mode** tab to access the login page.
10. The first time Omni4000 is started, a new user needs to be created before logging into engineering mode.
11. Once logged into engineering mode, click on **Database** and select **Import from XML**.
12. Select the XML file to import and click the **Open** button.

13. The entire tag configuration created in the "Omniflex Alarm and Events System Configurator" will is imported into Omni4000.

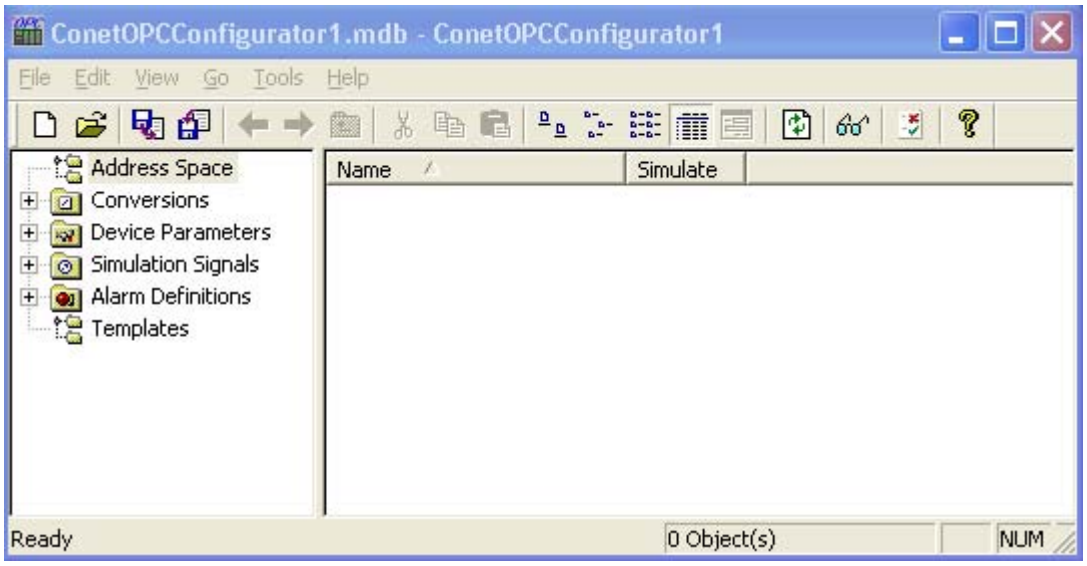



***Figure 2:*** *Conet OPC configurator.*

### 1.3 State machine and event numbers

Figure 3 below, shows a flow chart of the Omni4000 state machine. A tag can exist in one of 6 states. These states are SHELVED, NORMAL, HORN/ALARM, SILENCE, ACKNOWLEDGED and RESET. These states are depicted in figure 3 as the rectangular boxes. An event occurs either when a tag changes value or when a Push Button is pressed. When an event occurs, the tag starts at its current state and will either stay in the same state or jump to the next state according to the logic applied in between states. Every possible event is allocated an Event Number which is depicted by the green circles in figure 3.

For example, a tag will begin in the NORMAL state. An event occurs (Tag value changes to '1'). This changes the state of the Tag to state ALARM/HORN. The event is given an *Event Number = 2.*

Then another event occurs (silence push button is pressed). This changes the state of the Tag from ALARM/HORN to SILENCE. The event is given an *Event Number = 3.*

Then another event occurs (Tag value changes to '0'). The tag will remain in the SILENCE state. This event is given an Event Number of 8. This shows that a Tag value changed while the tag was in the SILENCE state.

Every tag in the system has a state machine and will therefore always be in one of the 6 states. When a Tag is SHELVED (not shown in figure 3 below), it does not change state, but when its value changes, that change in value is recorded as an event and is given an Event Number = 1. This will not cause an alarm condition but it will be logged and can be optionally printed to an online printer.

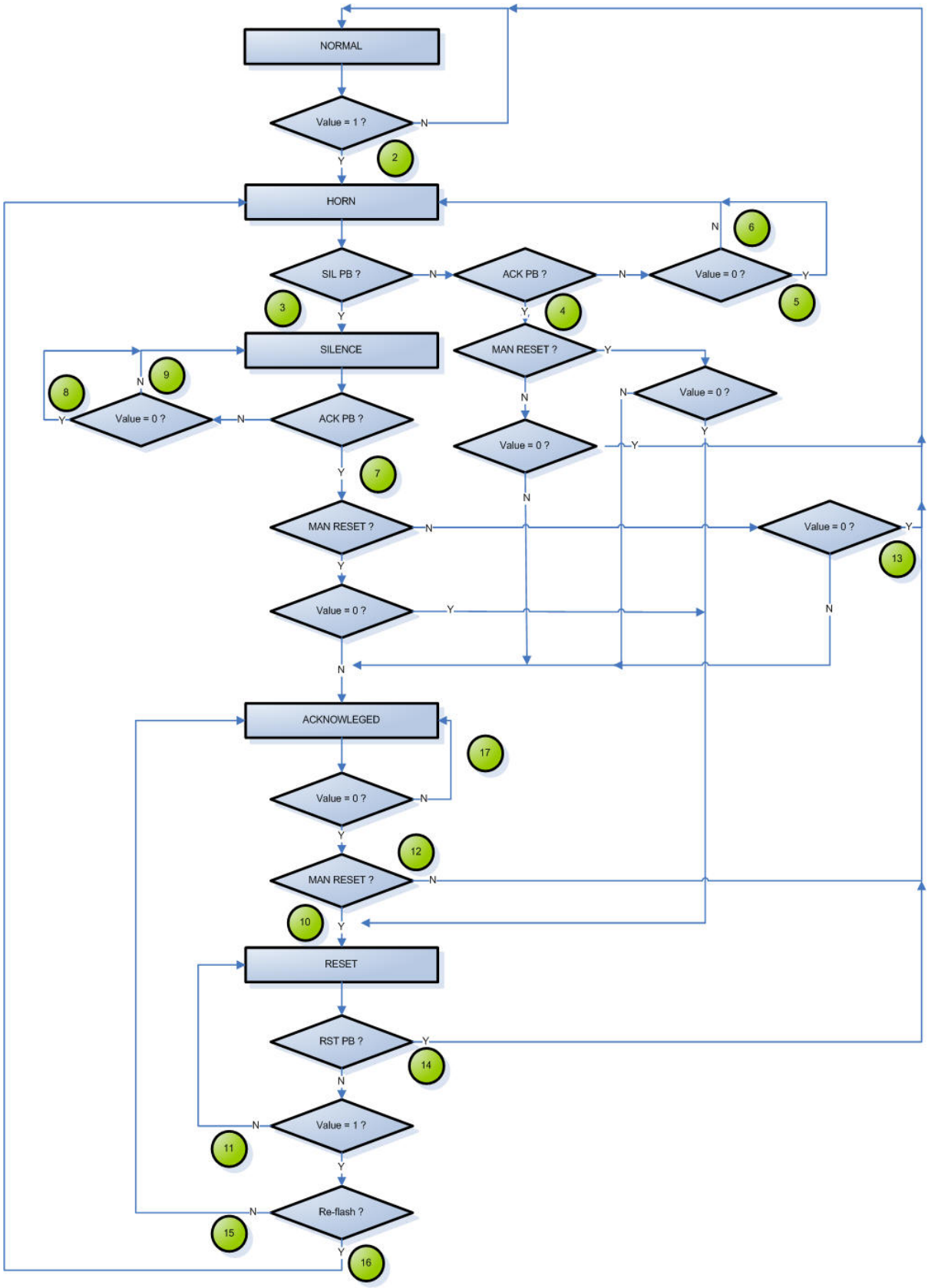



***Figure 3:*** *Omni4000 state machine.*

All the events are described in Table 1 below:

| Event Number | Event Description |
|---|---|
| 1 | Tag's value changed while in SHELVE state. |
| 2 | Tag's value changed from 0 to 1 while in the NORMAL state. [NORMAL -> ALARM/HORN] |
| 3 | Silence button pressed while tag is in the ALARM/HORN state. [ALARM/HORN -> SIL] |
| 4 | Tag was acknowledged while in the ALARM/HORN state. [ALARM/HORN -> ACK] |
| 5 | Tag's value changed from 1 to 0 while in the ALARM/HORN state. [ALARM/HORN -> ALARM/HORN] |
| 6 | Tag's value changed from 0 to 1 while in the ALARM/HORN state. [ALARM/HORN -> HORN] |
| 7 | Manual Reset Tag was Acknowledged (ACK button pressed) while in the SIL state. [SIL -> ACK] |
| 8 | Tag's value changed from 1 to 0 while in the SIL state. [SIL-> SIL] |
| 9 | Tag's value changed from 0 to 1 while in the SIL state. [SIL -> SIL] |
| 10 | Manual Reset Tag's value changed from 1 to 0 while in the ACK state. [ACK-> RST] |
| 11 | Tag's value changed to 0 while in the RST state. [RST-> RST] |
| 12 | Auto Reset Tag's value changed from 1 to 0 while in the ACK state. [ACK -> NORMAL] |
| 13 | Auto Reset Tag's was acknowledged, while its value was 0 in the SIL state. [SIL -> NORMAL] |
| 14 | Reset button pressed while Tag is on the RST state. [RST -> NORMAL] |
| 15 | Global Re-flash = ON; Tag's value changed form 0 to 1 while in the RST state. [RST -> ACK] |
| 16 | Global Re-flash = OFF; Tag's value changed form 0 to 1 while in the RST state. [RST -> HORN] |

***Table 1:*** *Event descriptions*

# 2. Operator Mode

## 2.1 Operator Mode Overview

Operator mode consists of a number of operator Fascia screens which provide concise information on the operational status of the plant being monitored. The operator can use the function keys on the keyboard or a mouse to invoke the various operator screens.

Each of the 10 function keys have a specific function allocated to it. The 'Operator' can move from one function to the other directly. For example, if while viewing the Alarm List the 'Operator' wishes to view the Reports, the operator will simply press {F5} and the display will change to the Reports display.

The 'Operator mode' Main Fascia display at start-up is shown in Figure 4 below.

***Figure 4:*** *Operator mode main fascia screen.*

The function keys are summarised as follows:

| | | |
|---|---|---|
| F1 | Help | View help screen |
| F2 | Fascia | Display of alarms fascia |
| F3 | Alarm List | Display list of filtered alarms |
| Shift + F3 | View Events | Display events list |
| F4 | Faults | Display critical tags & associated events |
| F5 | Reports | Compile and print reports |
| F6 | Silence | Silence pushbutton |
| F7 | Acknowledge | Acknowledge pushbutton |
| F8 | Reset | Reset pushbutton |
| F9 | Mode | Access to Engineer mode |
| F10 | Shelve | View Shelved Tags |

***Table 2: Function Keys***

***Note:*** *the function key legend is displayed along the top of the screen. The {SHIFT}{F3} key is represented by {SF3}'. The legend for the {F1} key (Help) is not displayed on the screen due to lack of space.*

## 2.2 F2 – Fascia

### 2.2.1 F2- Main Fascia Display

The Main Fascia screen is the main overview of the system or plant. It shows the current status of each Tag/Alarm in the system. The Fascia screen consists of 1200 lamp positions (a mimic of actual fascia lamps). A zoom facility is provided, so that starting at the top level (main fascia display), zooming down is possible to the actual Tag details.

There are 3 levels to the fascia display:

- Main Fascia display (In figure 5 below)
- Annunciator Fascia display
- Panel Fascia display (Line view)

At the top of the screen, the current fascia page is displayed ‘Fascia Page 01'. The colour of each lamp indicates its current status. The colour of the lamps and background can be customised from the engineering menu to suit the application. Not all of the positions need be used, so there may be a number of unused lamp positions on the display (which will all be the same colour).

This main Fascia screen is further divided into 15 Annunciator blocks, consisting of 80 tags each. Annunciator blocks are grouped in sections of four columns and 20 rows. The cursor box (in grey) can be used to select one of these 15 annunciation blocks to zoom on. The cursor box can be moved with the arrow keys or the mouse. As each Annunciator block is selected the name changes in the top right corner from `Annunciator 01' to `Annunciator 02' etc. By pressing the {ENTER} key or double clicking the mouse on the highlighted block, the fascia display will change to the Annunciator level. The name of each Annunciator block can be changed by clicking on it, and entering a new name.

***Figure 5:*** *Main fascia display.*

While on the Main Fascia display page, alarms can be silenced, acknowledged or reset. This is done by moving the cursor box over the Annunciator panel that the alarm is in and clicking on the SIL, ACK or RST tab (can also be done by pressing function keys {F6}, {F7}, {F8}). All 80 tags which are selected by the cursor box will be silenced, acknowledged or reset at the same time.

The status bar on the bottom of the page shows the current page name ('Fascia Page'), the user that is logged in ('Operator') and the current system time and date.

Refer to Section 4.2.5: ‘Groups and Priorities’ for description of status symbols.

### 2.2.2 F2- Annunciator Fascia Display

This screen is a more detailed view of an Annunciator block. It is accessed from the Main Fascia display by moving the cursor box over the desired Annunciator panel and either double clicking on it or by pressing the {ENTER} key. This screen displays the Tag names for the 80 tags in the current Annunciator panel. The colour of each tag indicates its current status. The screen is divided into another 4 Panel blocks of 20 Tags each.

The cursor box can again be used to select one of these blocks to zoom in on and to see more tag details. Double click on the current block or press the {ENTER} key to show the Panel fascia level display.

The cursor box can also be used to select a Panel and silence, acknowledge or reset all the tags inside the selected panel at the same time.

The name of the selected Annunciator block ('Annunciator 1') is displayed and can be changed by clicking on it, and entering a new name.

Refer to Section 4.2.5: 'Groups and Priorities' for description of status symbols.

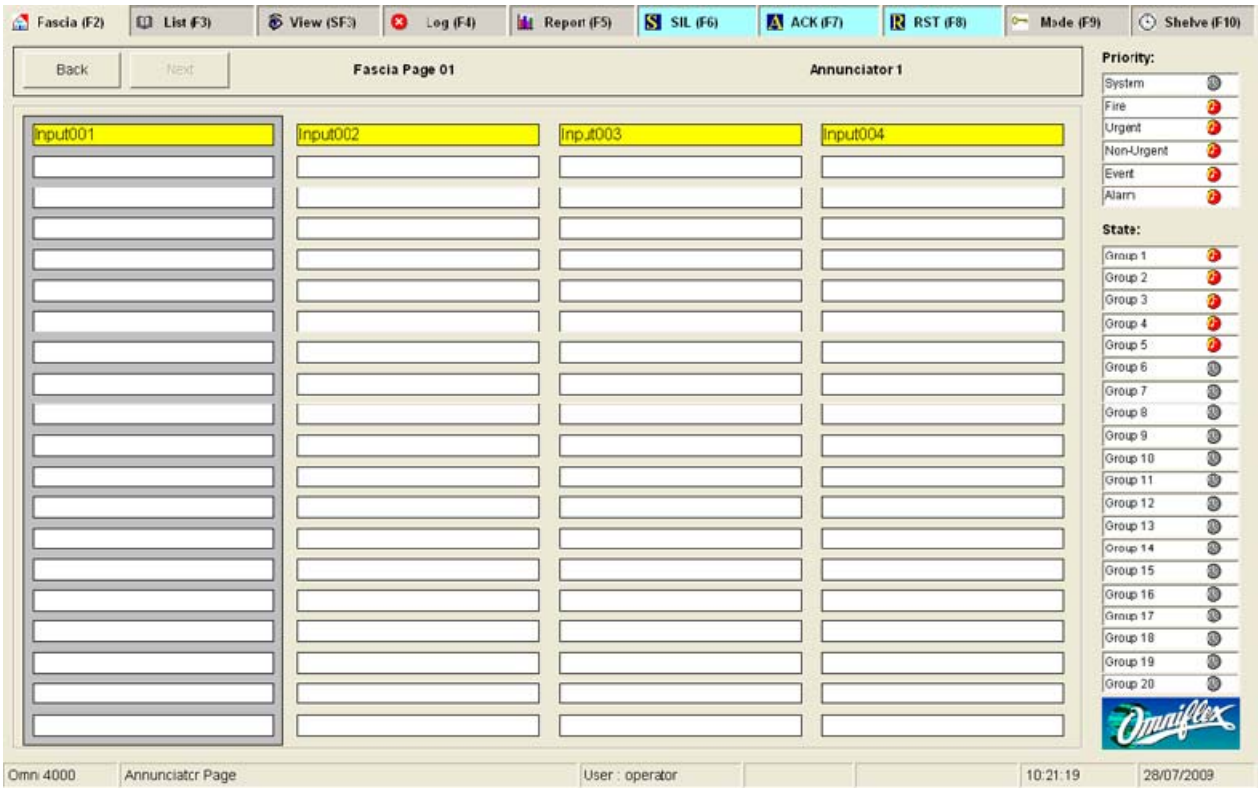



***Figure 6:*** *Annunciator fascia display.*

### 2.2.3 F2- Panel Fascia Display (Line view)

This screen is a more detailed view of a Panel in the Annunciator view. It is accessed from the Annunciator Fascia display by moving the cursor box over the desired Panel and either double clicking on it or by pressing the {ENTER} key. This screen displays the Tag names, the Tag description, the priority level, and the timestamp of the alarm for the 20 tags in the current Panel. The colour of each tag indicates its current status. This is the lowest level of zoom on the fascia. To zoom back out of this display, use the {ESC} key or click on the {Previous} button.

The cursor box can be used to select a single tag and silence, acknowledge or reset a single tag at a time. Navigation is done with the mouse or the arrow keys on the keyboard.

The name of the selected Annunciator block ('Annunciator 1') is displayed and can be changed by clicking on it, and entering a new name.

Refer to Section 4.2.5: 'Groups and Priorities' for description of status symbols.

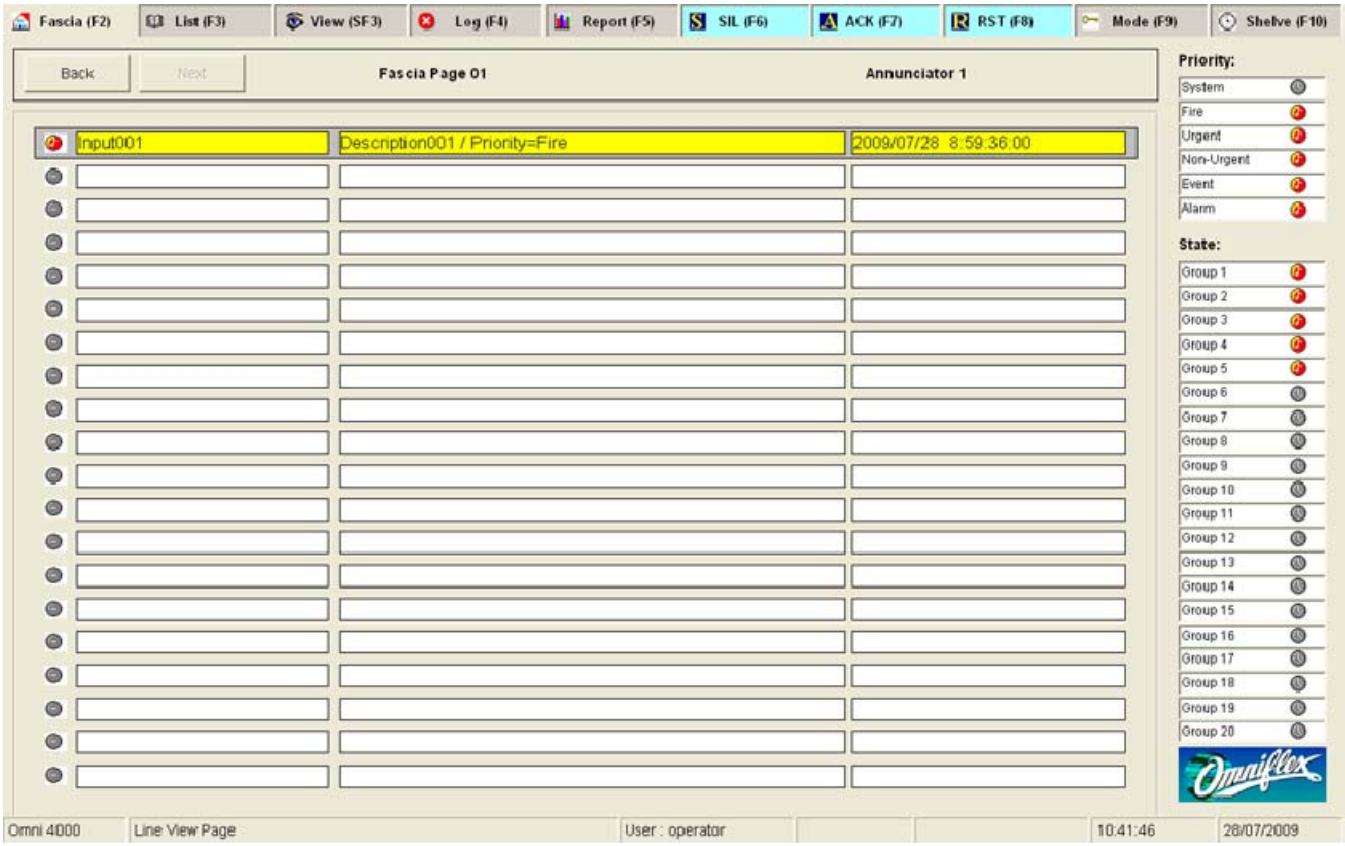



***Figure 7:*** *Panel fascia display.*

## 2.3 F3- Alarm List

The Alarm List screen is one of the main diagnostic tools in the system. It is a list of all Tags entering the system, in chronological order.

When a Tag goes into alarm, it is added to the list, and remains on the list until it returns to the normal state. The time at which it went into alarm is shown.

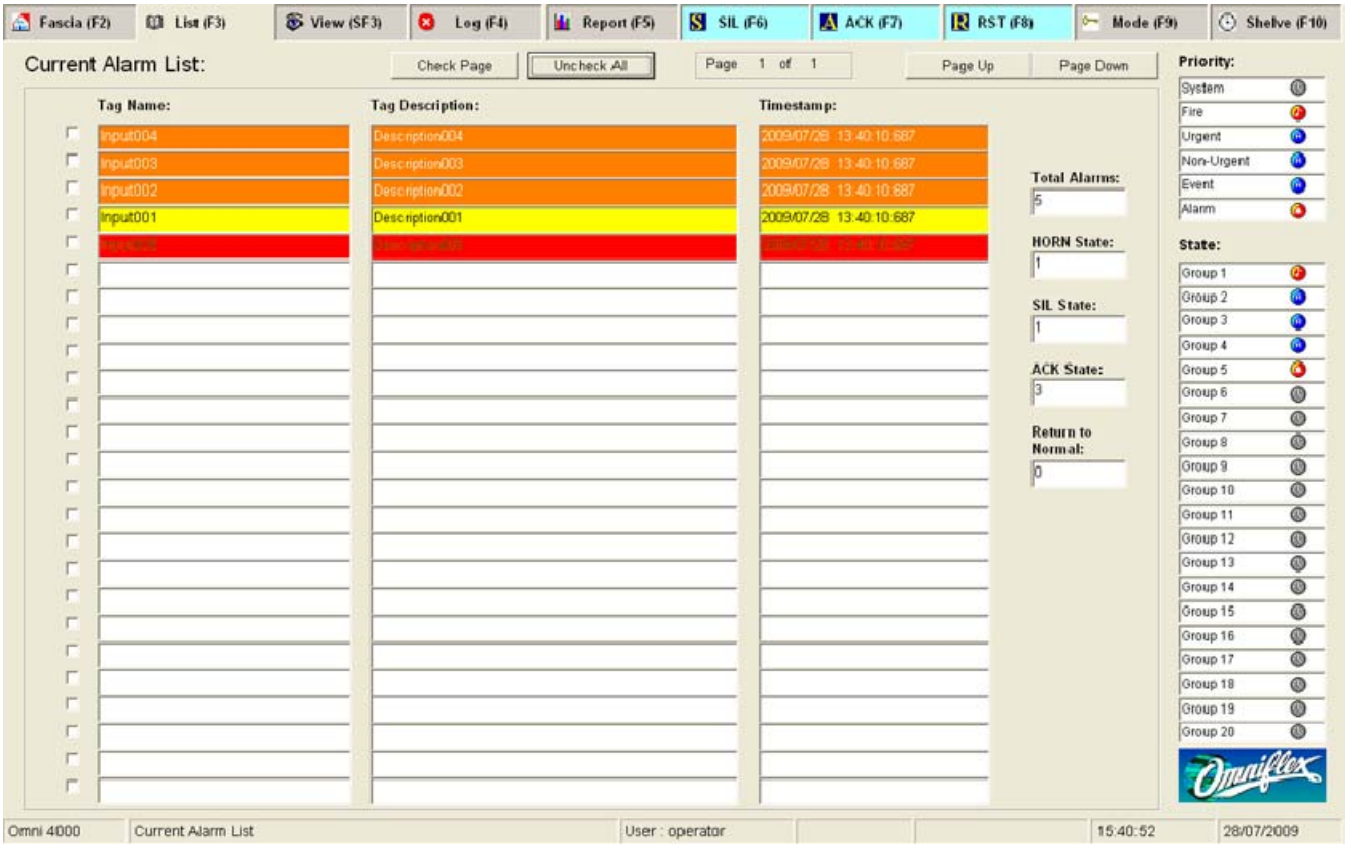



***Figure 8:*** *Alarm list.*

On the right of the list, statistics are shown about the entries in the list. The total number of Tags in the ALARM/HORN, SILENCED, ACKNOWLEDGED and RESET (Returned to normal) states are shown, as well as the total entries in the list.
Each page contains 25 Alarms. The number of Alarm pages is shown above the list, and scrolling through the list is achieved by clicking on the {Page Up} and {Page Down} buttons or using the {PgUp}/{PgDw} keys on the keyboard. The {SIL}, {ACK}, {RST} buttons will only operate on alarms that are checked. It is possible to check the whole page by pushing the {Check-Page} button. This will only check all the alarms on the visible page. The {Uncheck All} button will uncheck all alarms across all pages.
The main purpose of this screen is to quickly identify a new alarm entering the system and to get a quick overview of the whole system. New alarms always appear at the top of the page.

Refer to Section 4.2.5: ‘Groups and Priorities’ for description of status symbols.

All alarms are recorded into the Alarm Database.

## 2.4 SF3 Event List

The 'View Events' screen is a real time events display. It is a scroll window, through which all Tags entering the system are shown. Only one screen full is kept. All Tag **changes of state** go through this display. The latest event is at the top of the screen and the oldest event is at the bottom of the screen.

The main purpose of this screen is to view data entering the system. It differs from the Alarm List in that all states are shown on this screen, and data is not kept, it simply scrolls through the display.

An example of a sequence of events is shown below. Starting at the red arrow and moving up...

It starts at the red arrow with Input005, 1, 2, 3, 4 going into Alarm. The status picture shows the current state (ALARM). The description shows the 'Tag Description' and the 'Alarm Description'. The Timestamp shows the time of the event.

A while later, Input001 is silenced. The status picture shows the current state (SIL). The description shows the 'Tag Description' and the 'Action' (SILENCED). The Timestamp shows the time of the event.

A while later, Input001 is acknowledged. The status picture shows the current state (ACK). The description shows the 'Tag Description' and the 'Action' (ACKNOWLEDGED). The Timestamp shows the time of the event.

A while later Input005, 1, 2, 3, 4 return to normal. The status pictures show the current state of each Tag. Because Input001 was acknowledged it moves into the RESET state. The rest of the alarms are in the ALARM state. The description shows the 'Tag Description' and the 'Normal Description'. The Timestamp shows the time of the event.

A while later, the RST button is pushed and Input001 is RESET. The status picture shows the current state (NORMAL). The description shows the 'Tag Description' and the 'Action' (RESET). The Timestamp shows the time of the event.

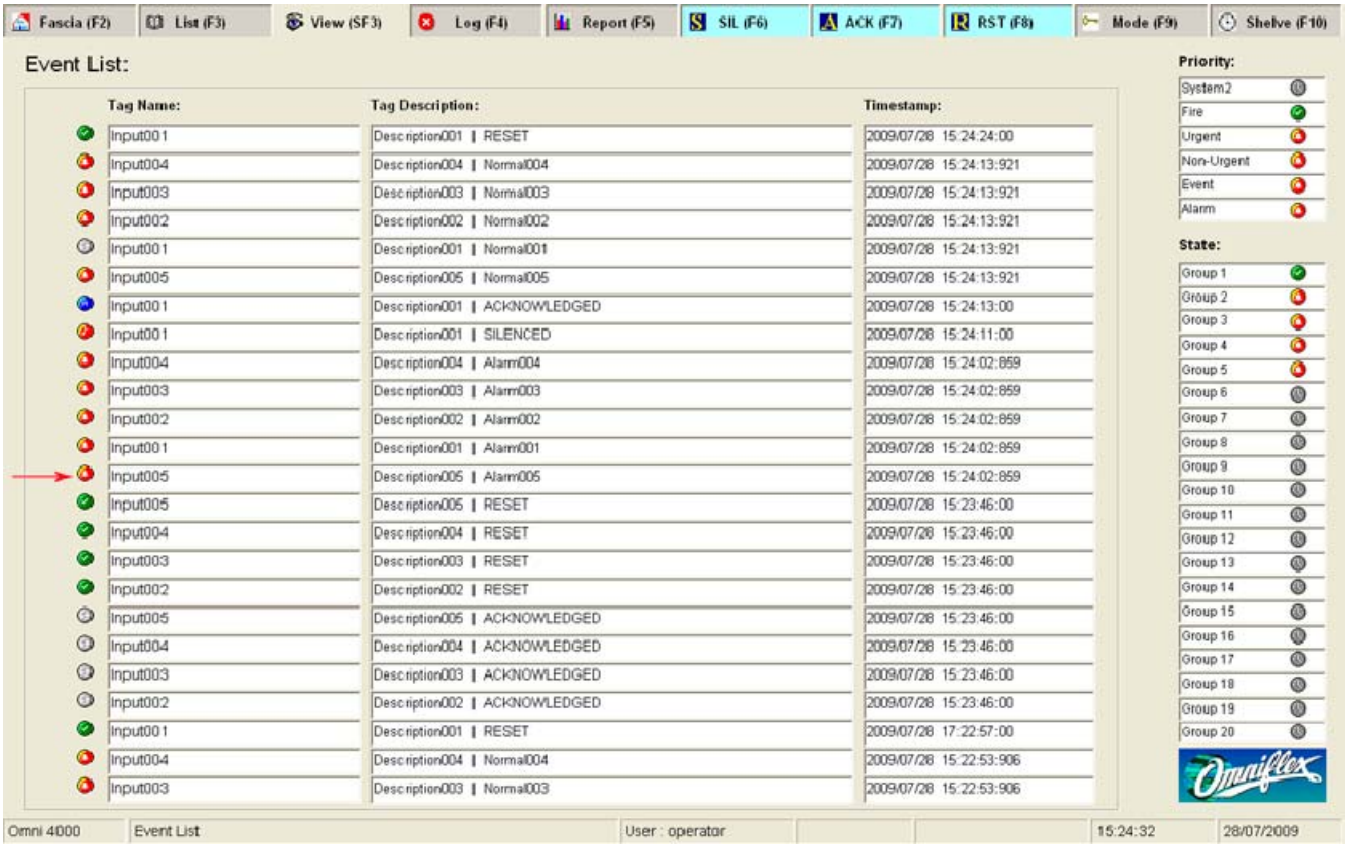



***Figure 9:*** *Event list.*

Refer to Section 4.2.5: ‘Groups and Priorities’ for description of status symbols.

Refer to Section 2.3: ‘State Machine and Event Numbers’ for a description of the state machine.

All events are recorded in the Alarm Database.

## 2.5 F4 System Log

The system log contains a list of system messages, the time that the message was recorded and the user logged in at the time of the message. These messages include Link status, shelving operations, Engineer mode login, as well as any system errors that could occur.

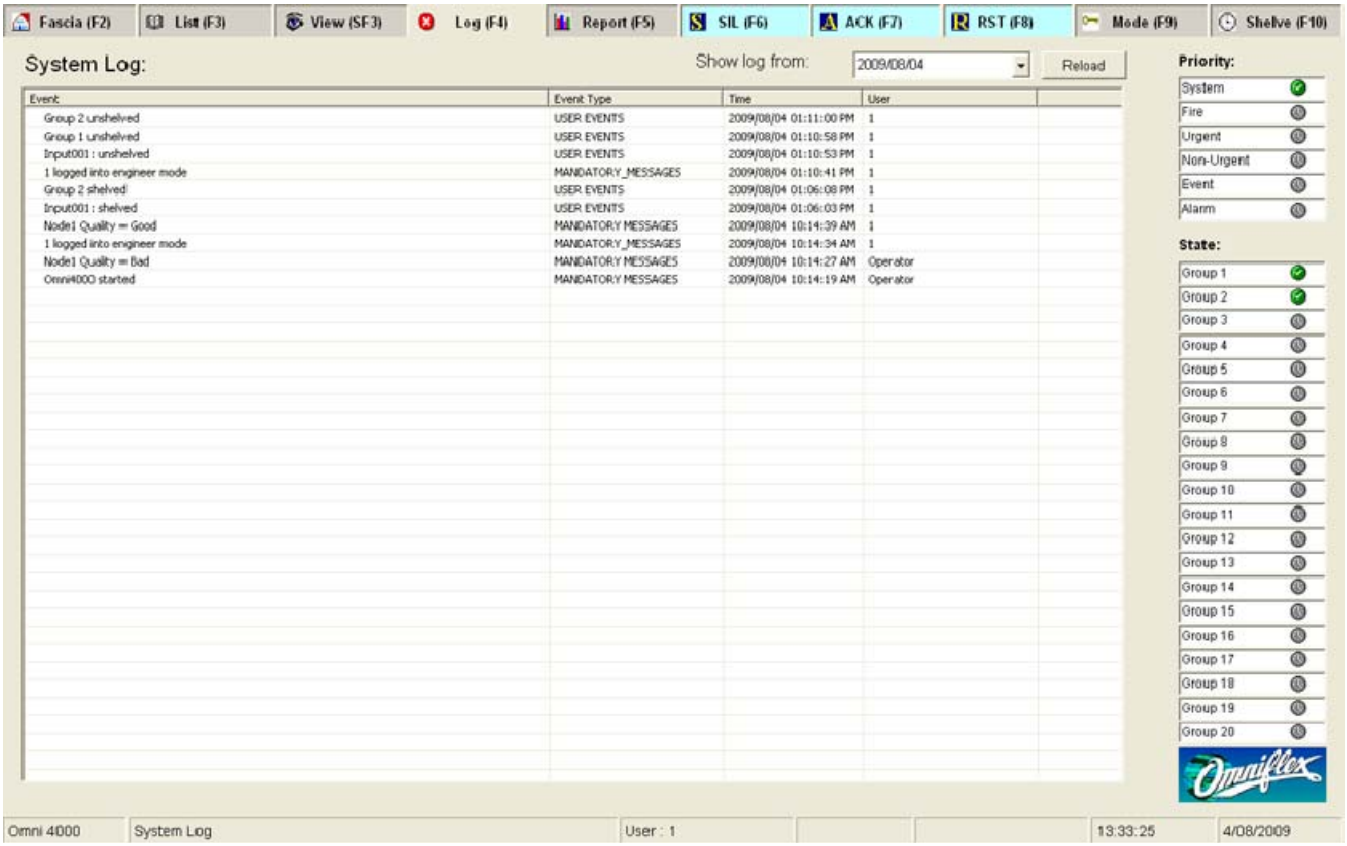
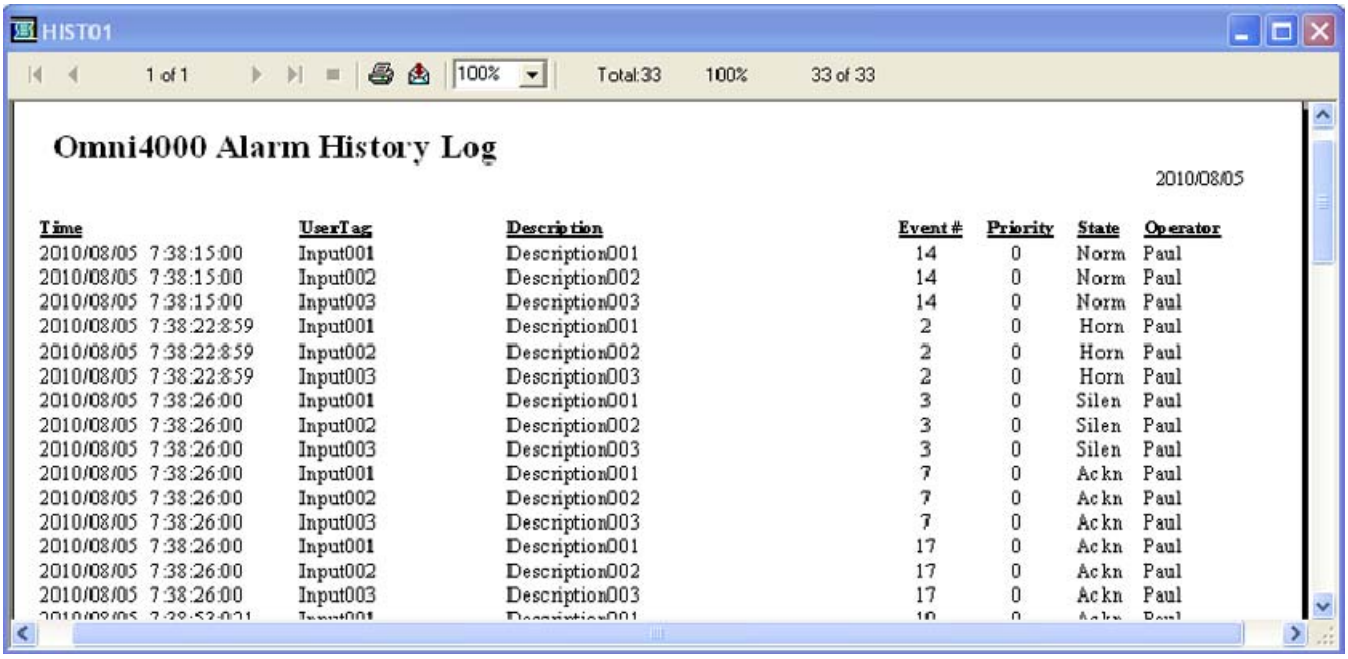



***Figure 10:*** *System log.*

## 2.6 F5- Reports

The report tool is used to generate reports from the data collected in the Alarm/History Database. It provides the means to apply filtering to the Alarm Database and create reports from this filtered data. These reports can then be printed or saved in various formats.

There are 4 Basic History reports available. These are 'HIST01' to 'HIST04' (Portrait Version) and 'HIST05' to 'HIST08' (Landscape Version). To generate a report, simply open the REPORT {F5} screen, select a report, fill in the filter data and click the {Start Report} button. The report will then be generated and displayed on a new window.




| Time | UserTag | Description | Event # | Priority | State | Operator |
|---|---|---|---|---|---|---|
| 2010/08/05 7:38:15:00 | Input001 | Description001 | 14 | 0 | Norm | Paul |
| 2010/08/05 7:38:15:00 | Input002 | Description002 | 14 | 0 | Norm | Paul |
| 2010/08/05 7:38:15:00 | Input003 | Description003 | 14 | 0 | Norm | Paul |
| 2010/08/05 7:38:22:859 | Input001 | Description001 | 2 | 0 | Horn | Paul |
| 2010/08/05 7:38:22:859 | Input002 | Description002 | 2 | 0 | Horn | Paul |
| 2010/08/05 7:38:22:859 | Input003 | Description003 | 2 | 0 | Horn | Paul |
| 2010/08/05 7:38:26:00 | Input001 | Description001 | 3 | 0 | Silen | Paul |
| 2010/08/05 7:38:26:00 | Input002 | Description002 | 3 | 0 | Silen | Paul |
| 2010/08/05 7:38:26:00 | Input003 | Description003 | 3 | 0 | Silen | Paul |
| 2010/08/05 7:38:26:00 | Input001 | Description001 | 7 | 0 | Ackn | Paul |
| 2010/08/05 7:38:26:00 | Input002 | Description002 | 7 | 0 | Ackn | Paul |
| 2010/08/05 7:38:26:00 | Input003 | Description003 | 7 | 0 | Ackn | Paul |
| 2010/08/05 7:38:26:00 | Input001 | Description001 | 17 | 0 | Ackn | Paul |
| 2010/08/05 7:38:26:00 | Input002 | Description002 | 17 | 0 | Ackn | Paul |
| 2010/08/05 7:38:26:00 | Input003 | Description003 | 17 | 0 | Ackn | Paul |

***Figure 11:*** *Report page.*

From this window the report can be printed, and/or saved as different file formats such as .csv, .xls, .doc, .txt, as well as other formats.

**HIST01/HIST05: Alarm Log, sorted by date and time.**
This report provides an interval block from all the data stored in the Alarm Database sorted by date and time. To generate this report, click on HIST01 (or HIST05), select a time period by entering the start date/time and the end date/time and click the "Start Report" button.

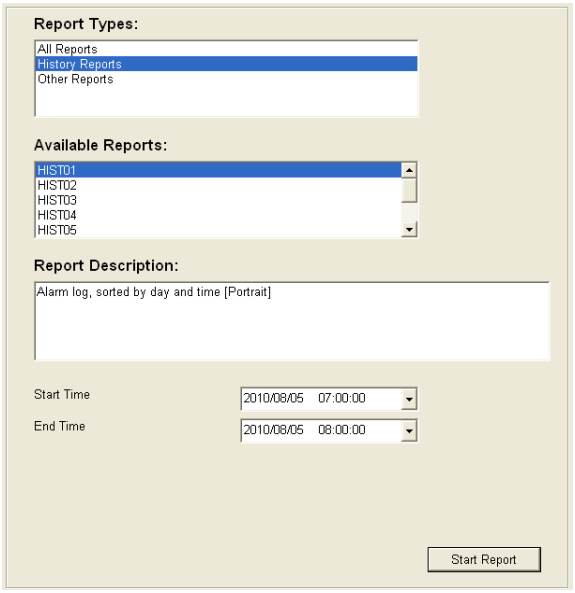



***Figure 12:*** *Alarm log sorted by date and time.*

**HIST02/HIST06: Tag Log, sorted by date and time.**
This report provides an interval block from all the data stored in the Alarm Database sorted by date and time for a particular Tag. To generate this report, click on HIST02 (or HIST06), select a time period by entering the start date/time and the end date/time, select a Tag from the pull down menu and click the "Start Report" button.

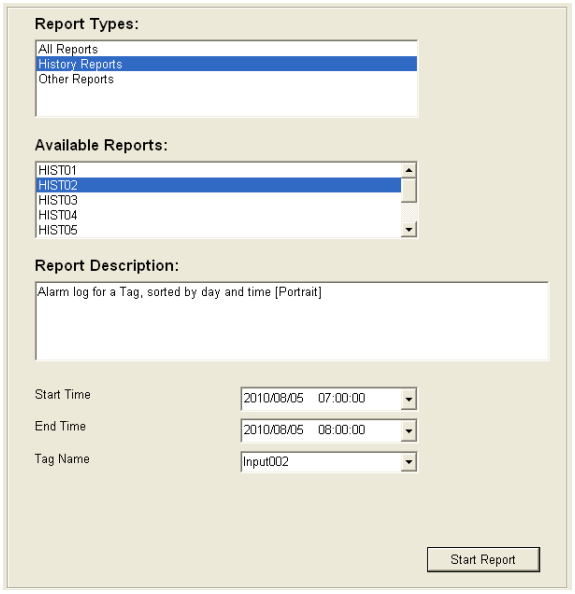



***Figure 13:*** *Tag log sorted by date and time.*

**HIST03/HIST07: User Log, sorted by date and time.**
This report provides an interval block from all the data stored in the Alarm Database sorted by date and time for a particular User. To generate this report, click on HIST03 (or HIST07), select a time period by entering the start date/time and the end date/time, type in the User Name and click the "Start Report" button.

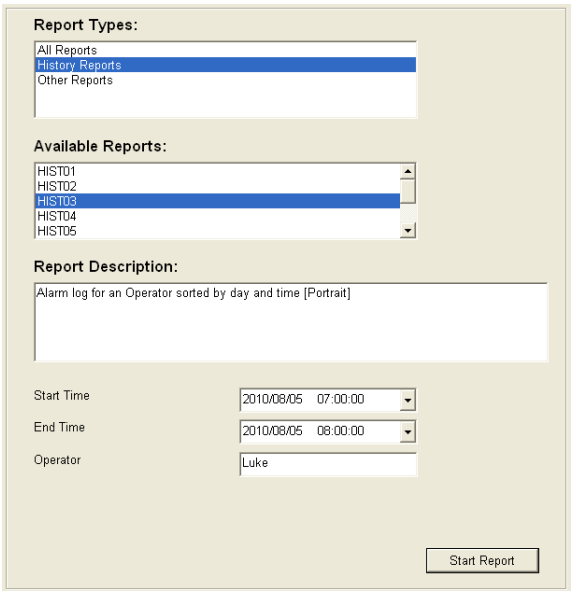



***Figure 14:*** *User log sorted by date and time.*

**HIST04/HIST08: Priority Log, sorted by date and time.**
This report provides an interval block from all the data stored in the Alarm Database sorted by date and time for a particular priority. To generate this report, click on HIST04 (or HIST08), select a time period by entering the start date/time and the end date/time, fill in a priority number (0-5) and click the "Start Report" button.

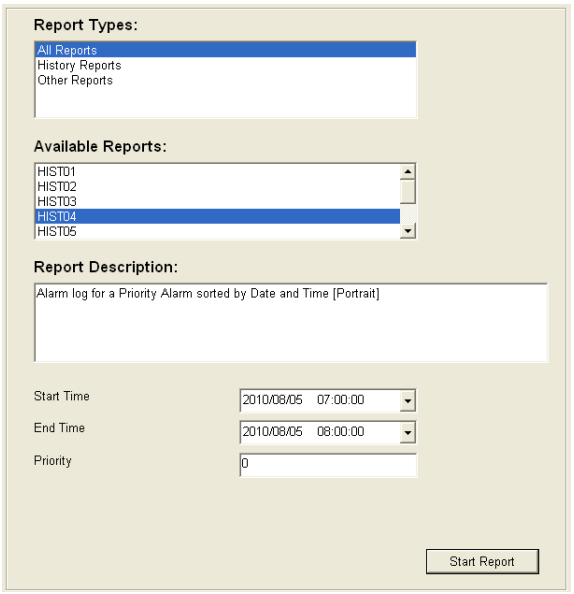



***Figure 15:*** *Priority log sorted by date and time.*

## HIST10: System Log

This report provides all the data stored in the system database. To generate this report, click on HIST10, and click the "Start Report" button.

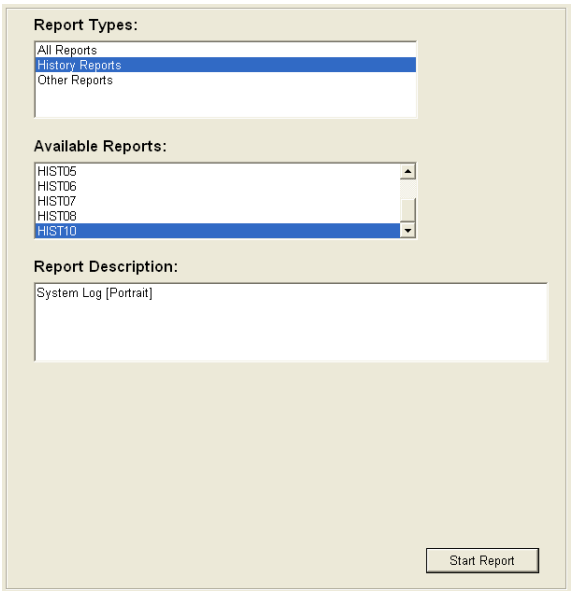



***Figure 16:*** *System log.*

# 3. Engineer Mode

## 3.1 Setup

### 3.1.1 Setup Configuration

**Max Shelve Time:** This sets the maximum time that a user is allowed to shelve a tag for.

**PC Horn ON when Alarm:** Internal PC speaker will sound when an alarm condition exists.

**PC Speaker ON when Alarm:** Audio card speaker will sound when an alarm condition exists.

**SIL ACK RST:** "Beep when pressed" will cause the computer to beep every time the SIL, ACK, RST keys are pressed.

**Event Log Level:** Set the level of system event logging that is required. Levels below 2 are generally not required for an Omni4000 application and they will produce unnecessarily large files.

**Re-Flash Manual Alarm:** If set to {Re-flash to Ack} then a Tag whose value is '0' and is on the RESET state will return to the ACKNOWLEDGED state if its value changes to '1'. If set to {Re-flash to Horn/Alarm} then a Tag whose value is '0' and is on the RESET state will return to the ALARM state if its value changes to '1'. Refer to Section 1.3 : 'State machine and event numbers'.

**Background/Input Box Colour:** This allows the colours of the main Fascia screens to be changed. Clicking the default buttons sets it back to default colours.

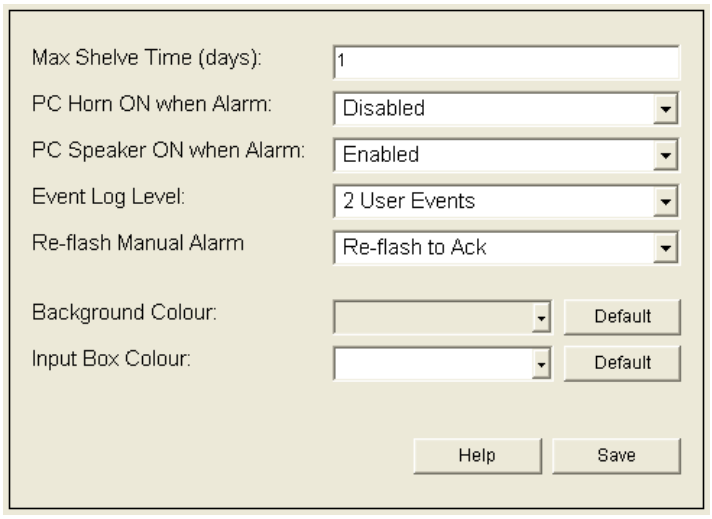



***Figure 17:*** *Setup menu.*

## 3.2 Configure

### 3.2.1 Managing Users

The first time Omni 4000 is started, a new user needs to be created. To create a new user, push the {**F9**} function key or click on the {**Mode**} tab. The first time Omni4000 runs, a **{Create New User}** button will be displayed.

***Figure 18:*** *Login menu*

Clicking on this button will pop up a new form that requires a User Name and a Password to be entered. This must be carefully entered as there is now way to get into the 'Engineer Mode' if this login is lost. It is recommended that the first user created is the user that will be the administrator on the system.

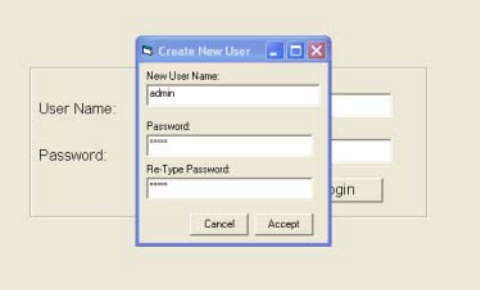



***Figure 19:*** *Create a new user menu.*

Once the user name and password is entered, click the **{Accept}** button. Then click the **{Login}** button to access 'Engineer mode' as this new user.

Once in engineering mode, the next step should be to create the other users in the system. To manage users click (on the menu) **Configure** and select **Passwords**.

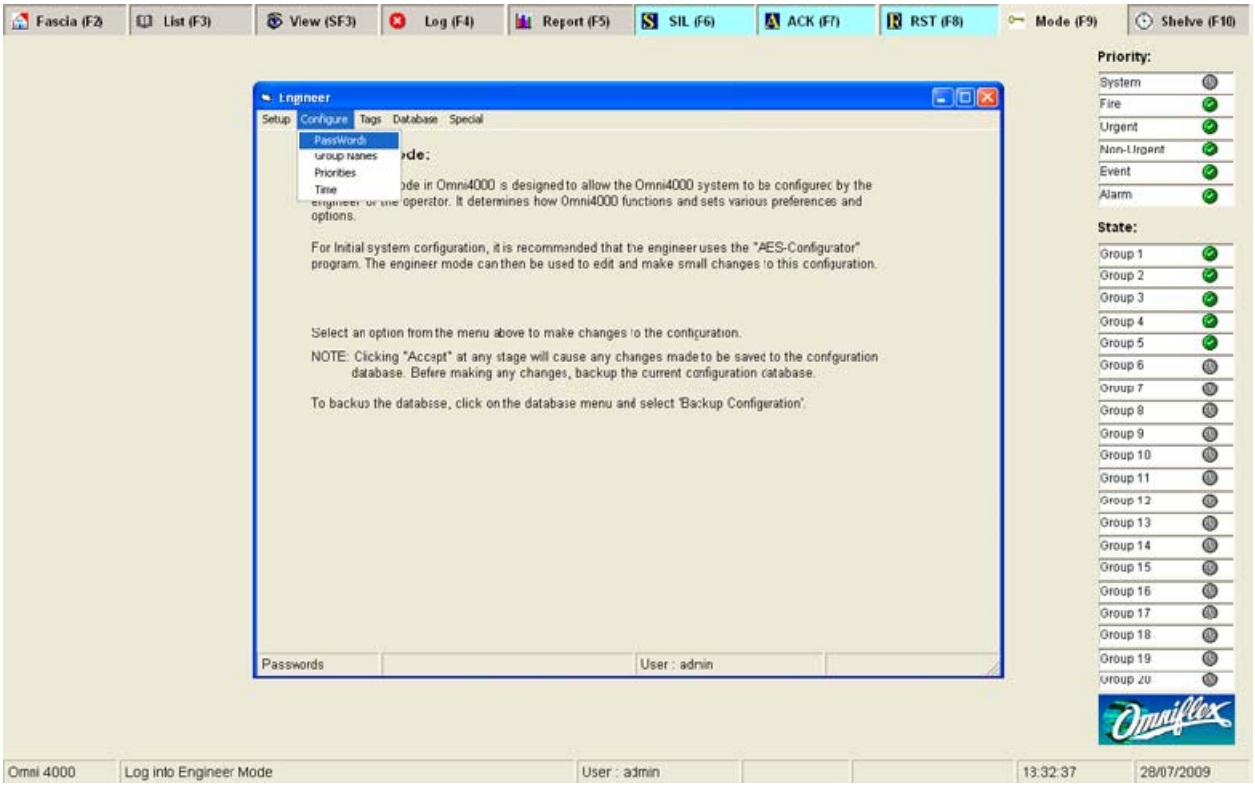



***Figure 20:*** *Configure passwords.*

The user that was just created (admin) will be shown in the passwords page. The next step is to add a new user such as an operator in the system. To do this, type in a user name and click on the passwords box to set a password for this new user.

In the example below, the new user created is called "operator". After a password is entered, select the user rights for the new user and click **Save**. In this example, the user 'operator' will only be able to access the engineering menu to change the system clock and nothing else. By ticking the tick boxes more or less access can be given to the new users created.

In this example 'operator' was not given "Password" rights. This will prevent the operator from coming back into this menu. However logging in as 'operator' and clicking on **Configure** and selecting **Passwords** will allow the user 'operator' to enter a new password. For more information about user rights, see Section 3.2.3: ‘User Access’.

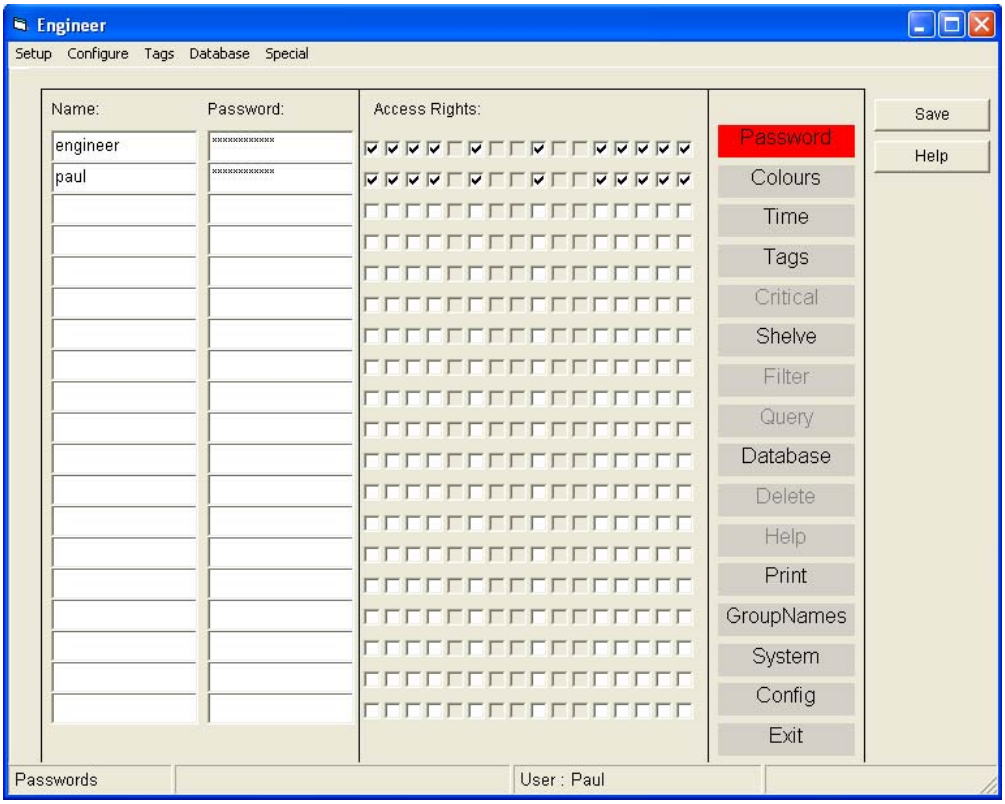



***Figure 21:*** *Set user passwords.*

### 3.2.2 Changing Group Names

Group names can be changed by clicking on **Configure** in Engineer Mode and selecting **Group Names**.

To change a group name, click inside the textbox. Change the names of the groups and click the {Save} button when done.

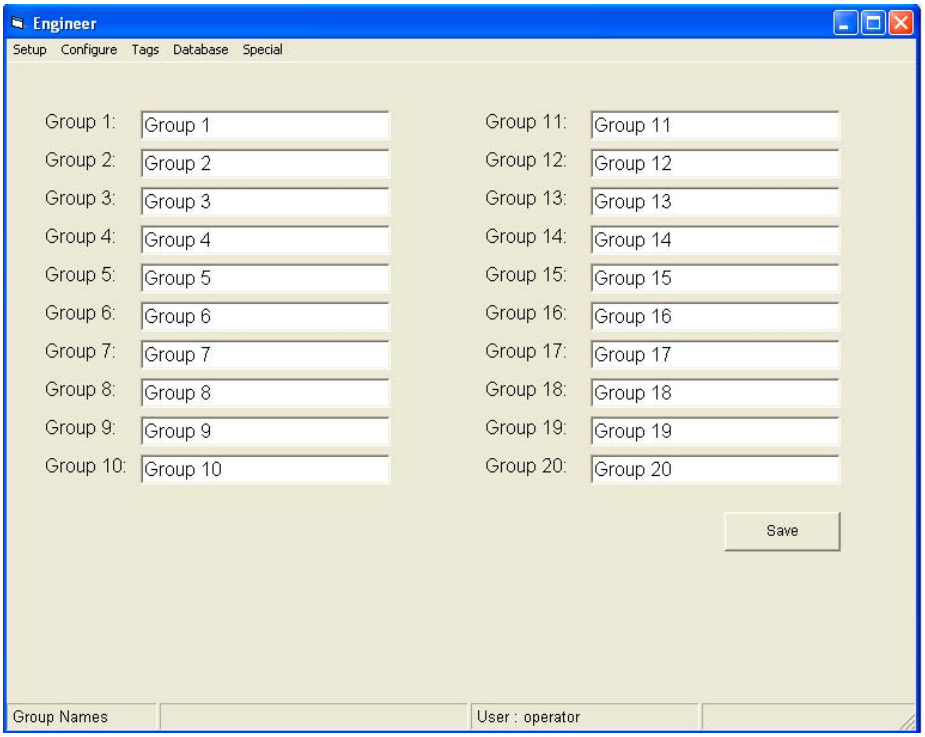



***Figure 22:*** *Set group names.*

### 3.2.3 User Access

User rights are set from the Engineering menu by clicking on **Configure** and selecting **Passwords** and checking the appropriate check box for each user. A user with a disabled option will not be allowed to enter that menu option. A user must have the 'Password' option checked in order to enter this menu and be able to set user privileges.

The options are described in the table below. Greyed out options are unavailable.

| Option | User Access |
|---|---|
| Passwords | Enter this menu, configure new users and set user rights. |
| Colours | Change priority names and state machine colours. |
| Time | Change system time. |
| Tags | View / Edit Tag configuration. |
| Shelve | Shelve / Un-shelve Tags |
| Print | Configure printer options. |
| Database | Perform operations on the databases. |
| GroupNames | Change group names. |
| System | Allows use of windows keys, allow user to access task manager and windows desktop. |
| Config | Change Omni4000 configuration. |
| Exit | Can exit to windows, closing Omni4000. |
| None | Create a support file, check program about info, exit to operator mode |

***Table 3:*** *User Access*

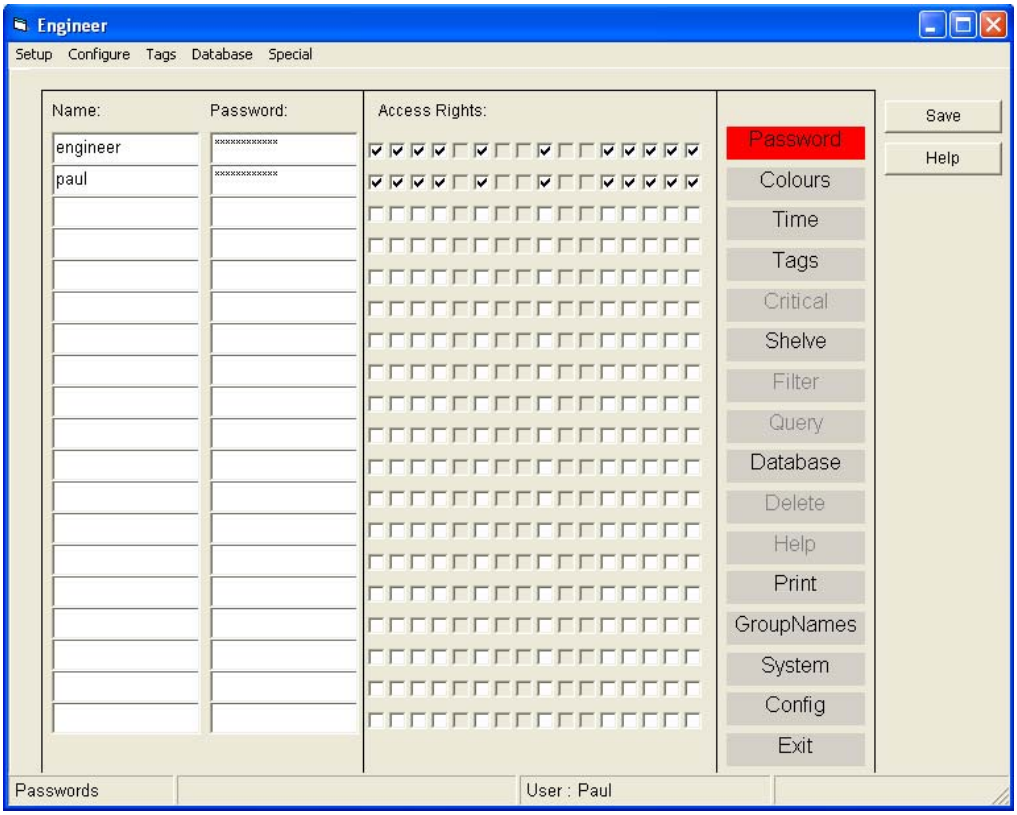



***Figure 23:*** *Set user access rights.*

### 3.2.4 Changing Priority Names and State Colours

Priority names can be changed by clicking on **Configure** in Engineer Mode and selecting **Priorities**.

This will bring up a page as in figure 24 below. By simply clicking inside the priority text box, one can change the names of the priorities. (The most critical priority [0] been on the left and the least critical on the right [5]).

On the same screen, the state machine colours can also be changed. This creates a 6 x 6 Matrix of colour possibilities relating the state and priority of an alarm.

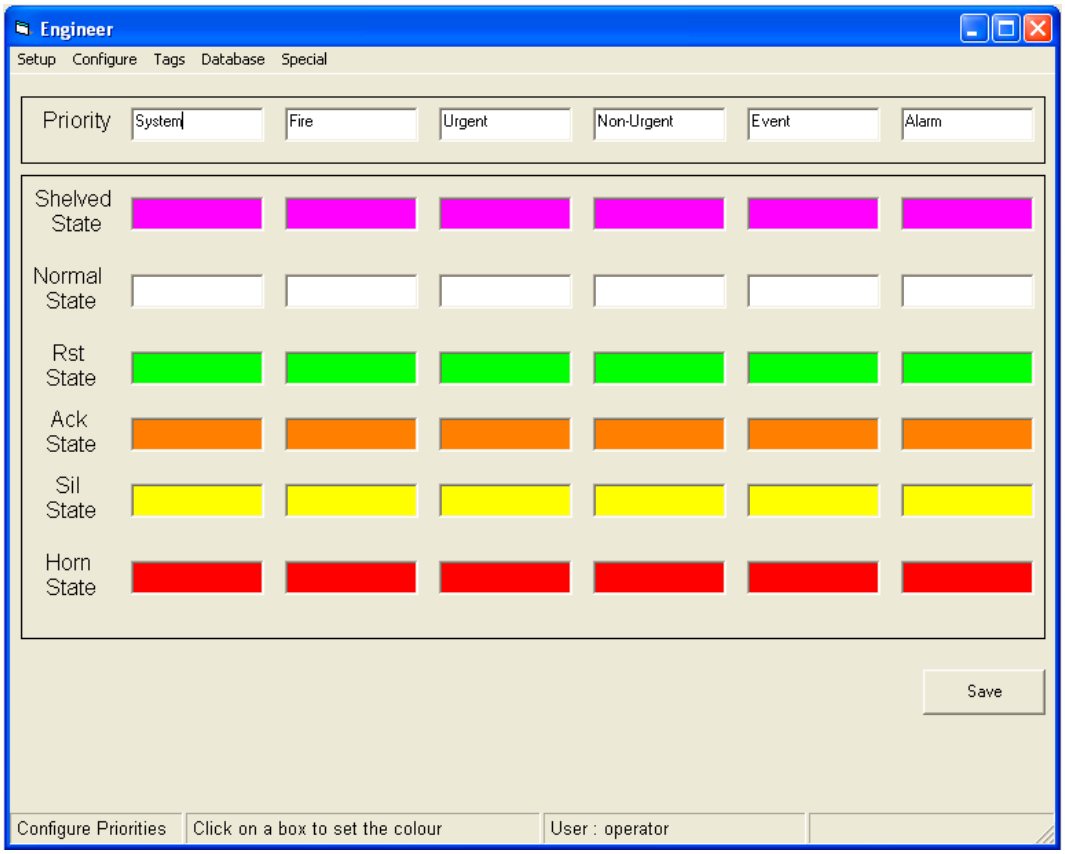



***Figure 24:*** *Change priority names and colours.*

To change the colour of a state, click on the corresponding box, and a menu will pop up where the colours can be changed. If that state requires flashing, then check the 'Flashing' check box and select the "Flash On" and "Flash Off" colours.

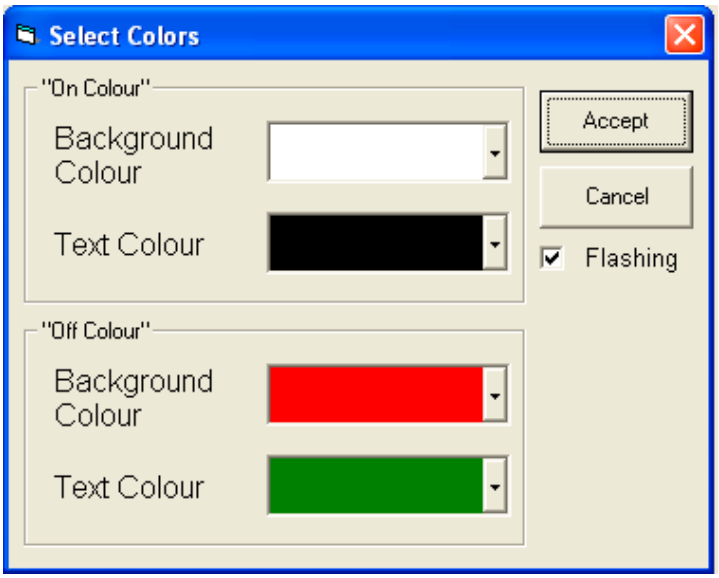



***Figure 25:*** *Configure colours to flash.*

### 3.2.5 Groups and Priorities

On the AES Configurator Excel spreadsheet, it is possible to group tags into groups of similar functionality and priority. There are 20 Groups and 6 Priorities available. Each tag has a single priority but it can belong to any number of groups.

On the right hand side of all the operators screen, all the groups and priorities are listed. Next to each priority and group, there is a 'status picture' that shows the worse state of all the Tags in that group or priority. This provides an operator a quick overview of all the tags in the system and their status and allows the operators to prioritise their actions.

Each status picture depicts the following states:

Shelved

Normal

Cleared

Acknowledged

Silenced

Alarm

The pictures represent the **worst** status of priority alarms and the **worst** status of group alarms respectively.
It is possible to change the default names of the groups and priorities.
For help on changing Group Names, see Section 3.2.2: ‘Changing group names’.
For help on changing Priority Names, see Section 3.2.4: ‘Changing priority names and state colours.

### 3.3 Printer

Omni 4000 supports the printing of events as they occur to an online printer.

The printer options are setup from the engineering menu by selection Configure -> Printer. This will show the menu as seen in figure 26 below. In this menu, the default printer can be selected by choosing the desired printer from the list and clicking on the "Set Default Printer" button. The line printed is as follows:

**TIMESTAMP TAG DESCRIPTION EVENT(EV) PRIORITY(P) STATE USER**

It is possible to control the volume of printing by selecting which event numbers are printed. To select an event number, check the checkbox for the required event and click 'Save'. To disable all printing, uncheck the "Printer Enabled" checkbox and click save.

The header line is printed on every page. To select the size of the page, enter the number of lines in the Lines/Page textbox.

To set up a page, insert the paper into the printer and manually line up the top of the page. Once the top of the page has been lined up, press the "Reset Current Line" button. (Line feeds can be printed by pressing the "Print Line Feed" button).

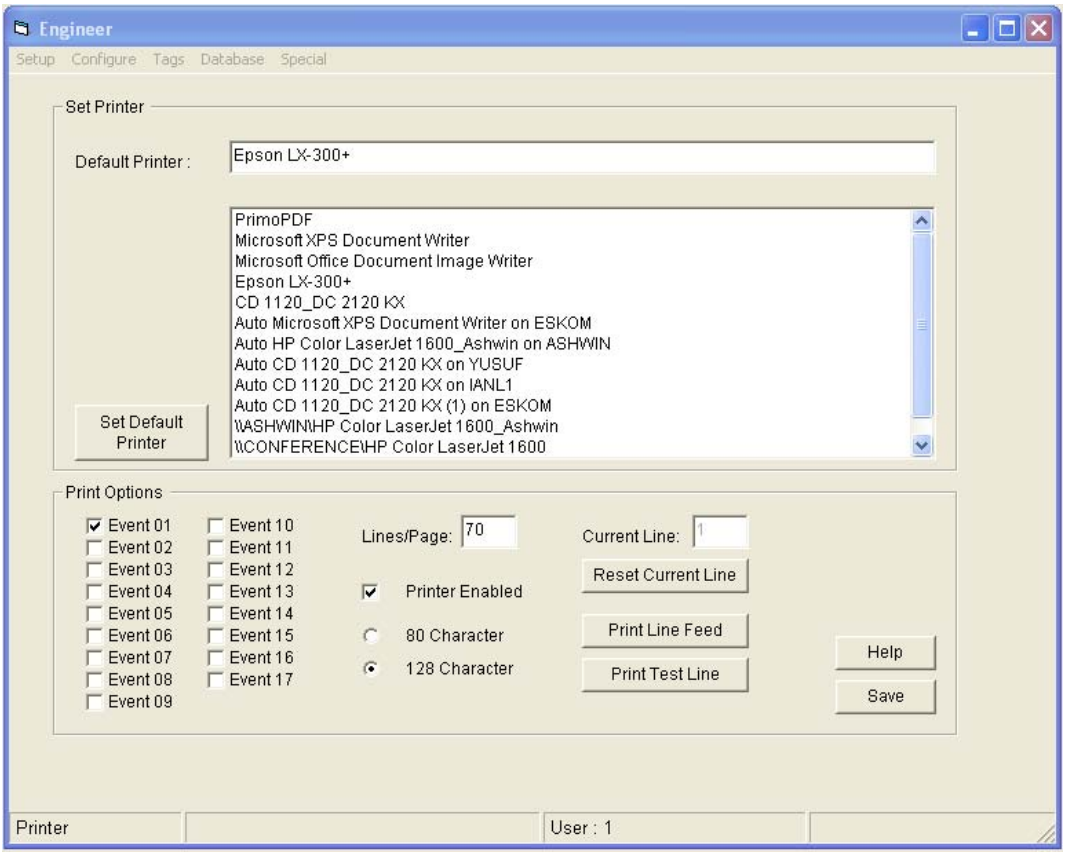



***Figure 26:*** *Set printer options.*

## 3.4 Tags

### 3.4.1 Edit Tags

Tags can only be added to Omni4000 by using the AES Configurator Spreadsheet and creating an XML file to import. It is however possible to edit Tag properties once they have been imported into Omni4000. Tags properties are edited from the Engineering menu by clicking on **Tags** and selecting **Edit**. This will bring up a screen as shown in figure 27 below. A Tag can then be selected and its properties can be changed. Before another tag is selected, the {Save} button must be pressed for the changes to be saved.

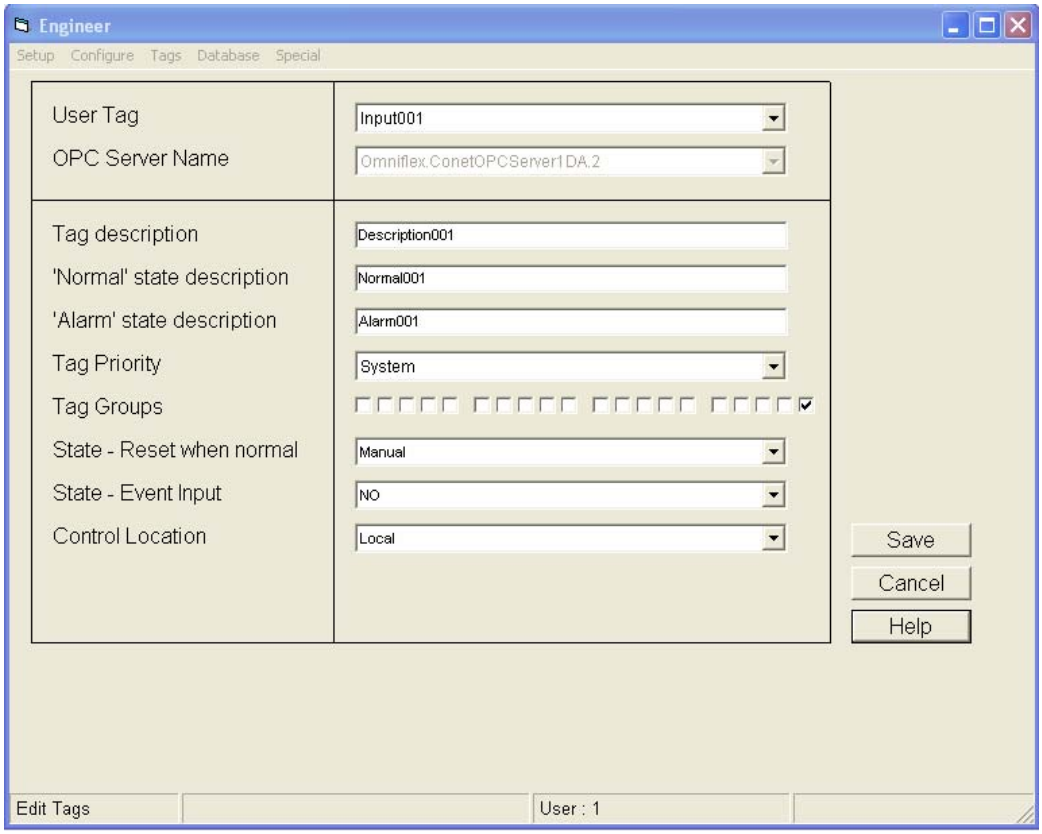



***Figure 27:*** *Edit tag configuration.*

### 3.4.2 Shelve

Shelving is a facility where the operator is able to temporarily prevent a Tag from alarming and being displayed when it is causing a nuisance. A shelved Tag will be removed from the alarm list and will be greyed out from the Fascia screens. It will also stop causing the alarm to sound.

Shelving is a very useful tool as it is inevitable that at some stage some alarms will be of no value. This may be due to instrument malfunction, maintenance or noise causing repeated alarms. Because of the power to 'Hide' alarms, shelving strategies and access should be carefully designed. Shelving is performed from the Engineering menu, by clicking on **Tags** and selecting **Shelve**. This will bring up a screen as shown below. Tags can be shelved individually by selecting {Shelve Tag} or they can be shelved in their groups by selecting {Shelve Group}.

Set a shelving duration (The maximum time allowed for a Tag or Group to be shelved is set in the configuration menu). After the duration time expires, the tag is automatically un-shelved. Lastly a Tag or Group must be selected from the pull down menus and the {Shelve} button pressed for a tag to be shelved. The time that the Tag/Group will be un-shelved is shown in the {Unshelve at...} box.

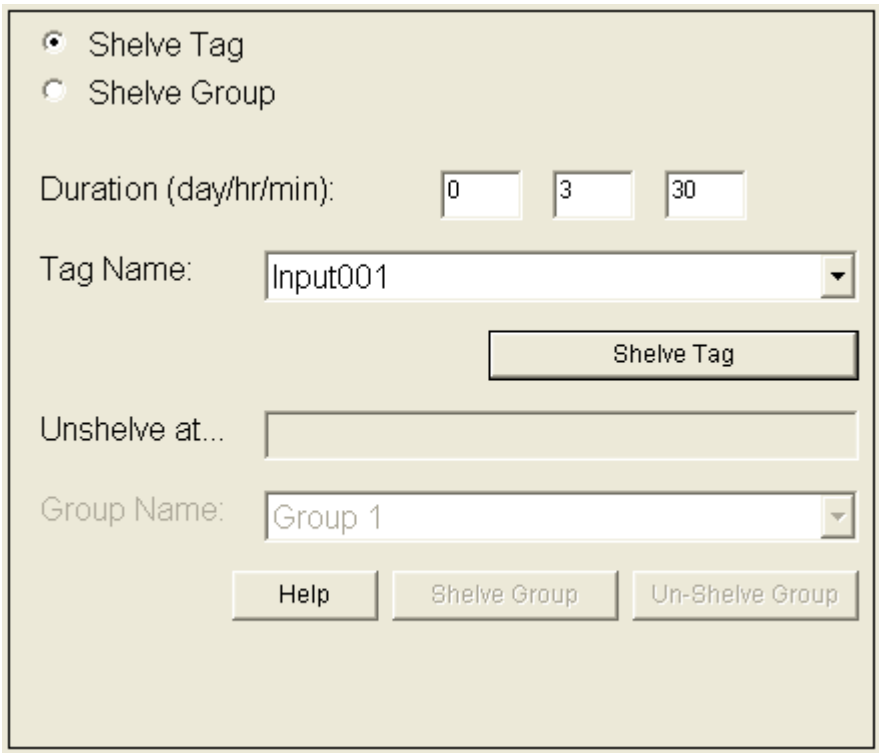



***Figure 28:*** *Shelve tag.*

To Un-shelve a Tag before the set time, one can simply select the Tag or Group and press the {Unshelve} button.

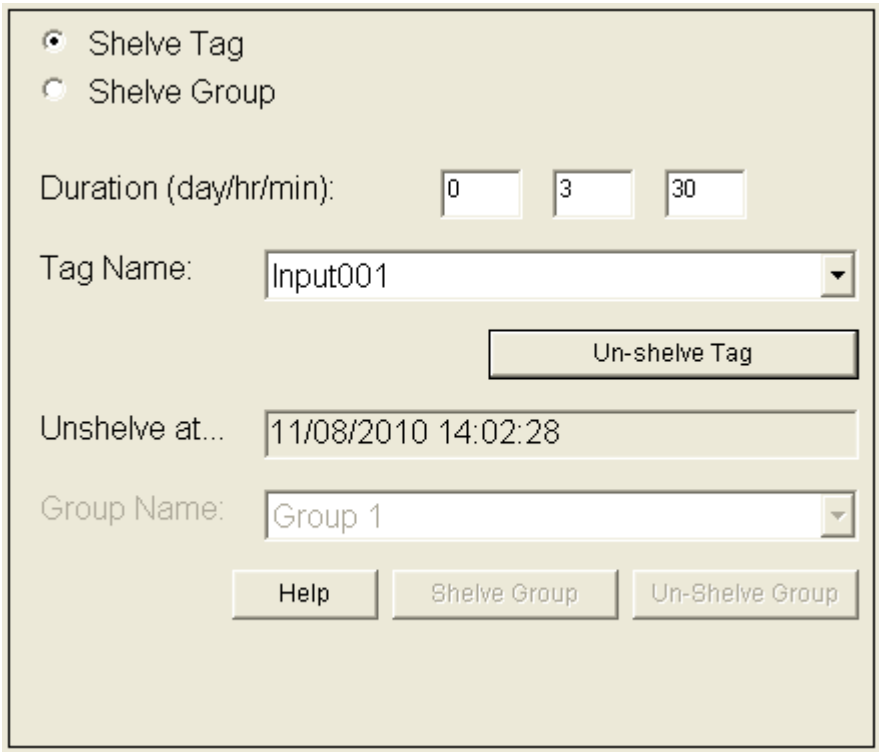



***Figure 29:*** *Un-Shelve tag.*

A list of all the shelved tags and their corresponding time to be un-shelved is shown on the {Shelve F10} Fascia screen.

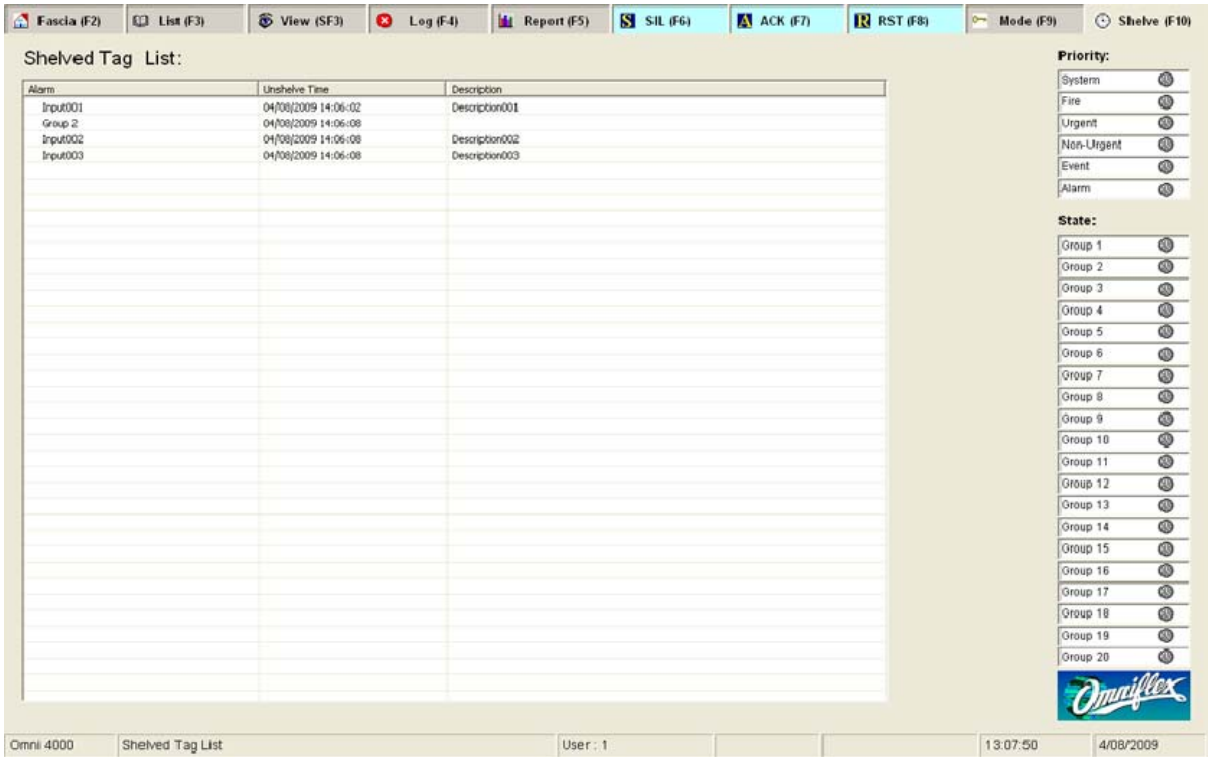



***Figure 30:*** *Shelve list.*

## 3.5 Database

### 3.5.1 Import tags into Omni4000

Once the ".XML" file has been created using the AES Configurator Excel spreadsheet, importing this XML file into Omni4000 is done by clicking on the **Database** menu in Engineer mode and selecting **Import from XML**.
This will prompt the user to browse for the file to import. Once the file is imported, a pop up will verify that the import was successful. If there is an error during the import, then a configuration mistake was made, or the OPC server configuration hasn't been done.
If the import is successful, all the tags will then appear in their configured position on the Main Fascia Display. The Omni4000 state machine will also automatically start to run. Any alarms that occur, will begin to behave as configured and all events will be recorded.

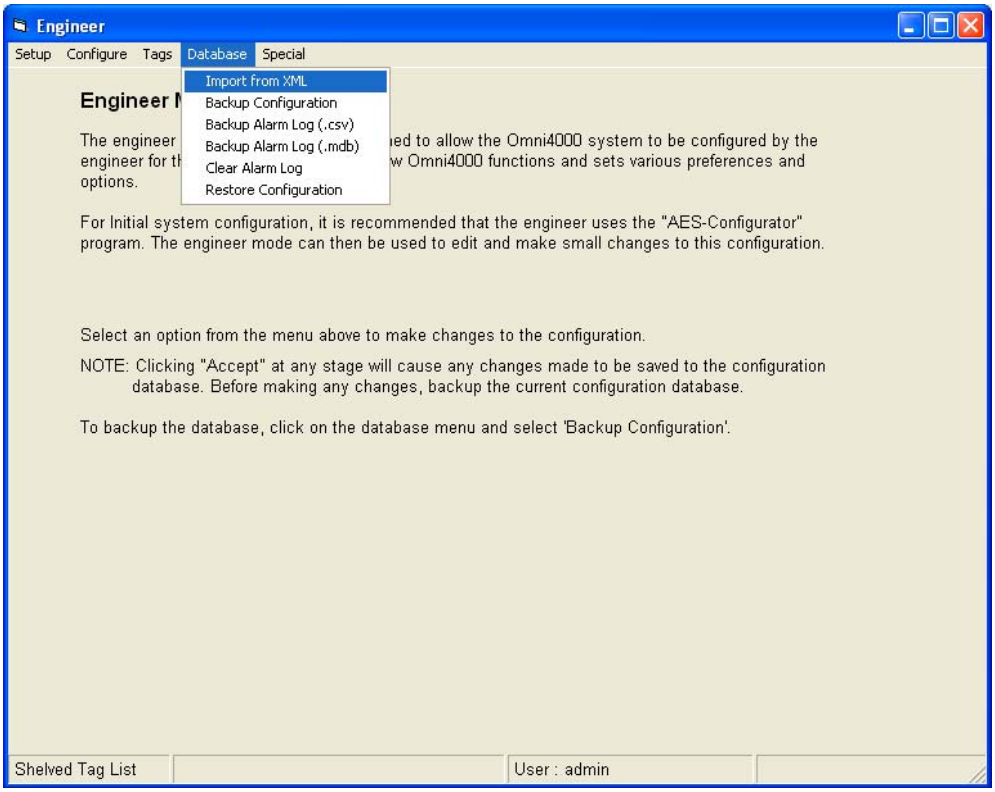



***Figure 31:*** *Import tag configuration from .XML file.*

### 3.5.2 Database Operations

Omni4000 has 3 different sets of Databases where data is stored. These are: the Configuration Database, the Alarm/History Database and the System Database. The Configuration Database contains all Omni4000's configuration information, including the imported tags and all program settings . The Alarm/History Database contains all the Alarm/Event information. All reports are generated from the Alarm/History Database. The System Database contains all system related logs which are shown in the { Log (F4) } screen.

From the Engineer menu, there are several operations that can be performed with the Omni4000 Databases. These operations are explained below:

**Import from XML:** Import configuration data from the AES Configuration Spreadsheet to the Omni4000 Configuration database.

**Backup Configuration:** Backup all Tag and System configuration settings.

**Backup Alarm Log (.csv):** Convert the Alarm Database to a .csv file for further processing, storage or printing.

**Backup Alarm Log (.mdb):** Make a copy of the Alarm Database and store it as a Microsoft Access Database file (.mdb)

**Clear Alarm Log:** Clear all entries in the Alarm Database. *Warning: This operation cannot be undone so ensure that all Alarm data has been backed up or is not needed before performing this operation.*

**Restore Configuration:** Restore all Tag and System configuration settings.

## 3.6 Special

### 3.6.1 Special Menu

The "Special" menu option is one of the Engineer menus and it offers the following options:

**Operator Mode:** Exit the Engineer Menu (log out) and return to the operator Fascia panels. This changes the user to the standard 'Operator' user.

**Help:** Open the help menu.

**Support File:** Option to create a ZIP file containing information that could be useful to e-mail with any support related queries. email: support@omniflex.com

**OPC Server:** View OPC server communication related statistics.

**About:** View Omni4000 version information.

***Figure 32:*** *Omni4000 splash screen.*

**Register:** Register Omni4000. Omni4000 can be used as a trial for 60 days after which it will need to be registered.

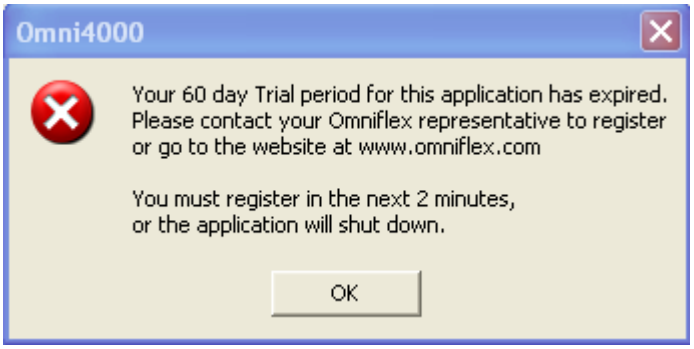



***Figure 33:*** *Registration warning.*

**EXIT:** Shut Down Omni4000 and return to Windows.

# 4. Quick Reference Guide

### 4.1.1 Function Keys

The function keys are summarised as follows:

| | | |
|---|---|---|
| F1 - | Help | View help screen |
| Shift F1 - | Memos | View Memo screen |
| F2 - | Fascia | Display of alarms fascia |
| F3 - | Alarm List | Display list of current alarms |
| Shift F3 - | View Events | Display events list |
| F4 - | Faults | Display critical tags & assoc. Events |
| F5 - | Reports | Compile and print reports |
| F6 - | Silence | Silence pushbutton |
| F7 - | Acknowledge | Acknowledge pushbutton |
| F8 - | Reset | Reset pushbutton |
| F9 - | Mode | Access to Engineer mode |
| F10 - | Shelve | View shelved tags |

### 4.1.2 Navigation Keys

| | |
|---|---|
| Cursor Keys | Up Down Left Right |
| PgUp | Page up the screen |
| PgDn | Page down the screen |
| = Home | Go to beginning of file |
| End | Go to end of file |
| SPACE/Enter | Edit/select field |
| Esc | Back out of option |

### 4.1.3 Control Keys for Report mode

| | |
|---|---|
| SPACE | Edit filter settings |
| Enter | Compile report |
| Delete | Delete compiled report |
| PgUp | View compiled report |
| Ins | Add to print queue |
| Home | Remove from print queue |
| End | Flush the print queue (clear all files) |

### 4.1.4 Status Picture descriptions

| | |
|---|---|
| Shelved | |
| Normal | |
| Cleared | |
| Acknowledged | |
| Silenced | |
| Alarm | |

# 5. Technical Support

Lifetime technical support for all Omniflex products is available by email on techsupport@omniflex.com.

Alternatively, you can check the knowledgebase on the Omniflex web site at www.omniflex.com.