# Chapter 16 Alarm

This chapter describes the alarm elements that the DOPSoft software provides and how to operate Alarm Setup.

◆ Classification of alarm elements:

| | | |
|---|---|---|
| Alarm | | History Alarm Table |
| | | Active Alarm List |
| | | Alarm Frequency Table |
| | | Alarm Moving Sign |

Table 16-1-1 Classification of alarm elements

◆ Common properties of alarm elements

| Alarm | Read Address | Write Address | Style (Background Color/ Style/ Border Color) | Time Format/ Date Format | Alarm Number | Show Alarm Release Items | Display for Count 0 | Time Interval/ Moving Points |
|---|---|---|---|---|---|---|---|---|
| History Alarm Table | ◎ | | ◎ (Only Background Color) | ◎ | ◎ | ◎ | | |
| Active Alarm List | ◎ | | ◎ (Only Background Color) | ◎ | ◎ | | | |
| Alarm Frequency Table | ◎ | | ◎ (Only Background Color) | ◎ | ◎ | | ◎ | |
| Alarm Moving Sign | ◎ | | ◎ | ◎ | ◎ | | | ◎ |

Table 16-1-2 Common properties of alarm elements

## 16-1 Alarm Setup

We will explain how to use the Alarm Setup function before describing the alarm elements. The Alarm Setup is used to set the properties such as reading address, sample time, max. records to be saved and retained area setup needed for display of the alarm. It is also used for the setting of alarm moving sign, output to CSV file and editing of alarm message content to be displayed.

The history buffer data that the user edited will be run using the formula provided by the software. The size data calculated will be stored in the preset retained area. If the data are stored in HMI, the size of the alarm varies depending on the HMI model. For more information, refer to the Hardware Specifications in the HMI Installation Manuel for the description of the non-volatile internal memory. If the data are stored in an external device (such as USB Disk, SD Card), the size of that device prevails

The following alarm formulas are applied to the alarm log file and Alarm Frequency Table. No formula is used for the CSV file because the length of the file is dependent on the size of the message that the user input

1. Alarm log file formula:

$$\{[6\text{Bytes}(a) + 2\text{Bytes}(b)] \times N(c)\} + 6\text{Bytes}(d) = \text{Actual file size Bytes}$$

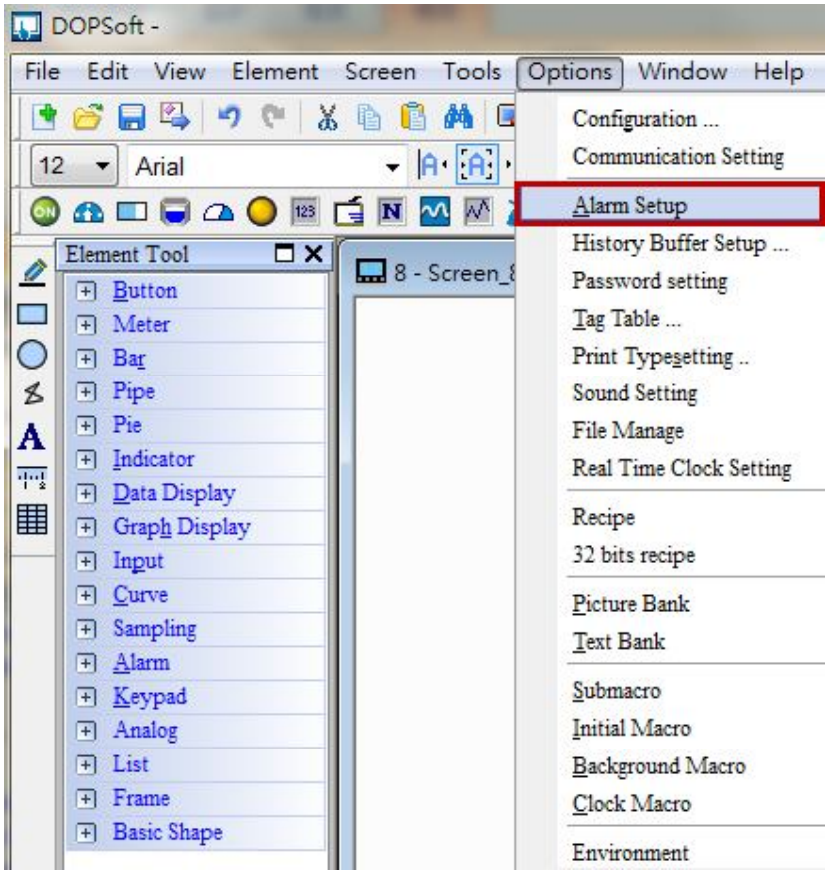
| | |
|---|---|
| a | Time/date data |
| b | Alarm data |
| c | Sampling points |
| d | Header of data file |

2. Alarm Frequency Table formula:

$$2\text{Bytes}(a) \times N(b) = \text{Actual file size Bytes}$$

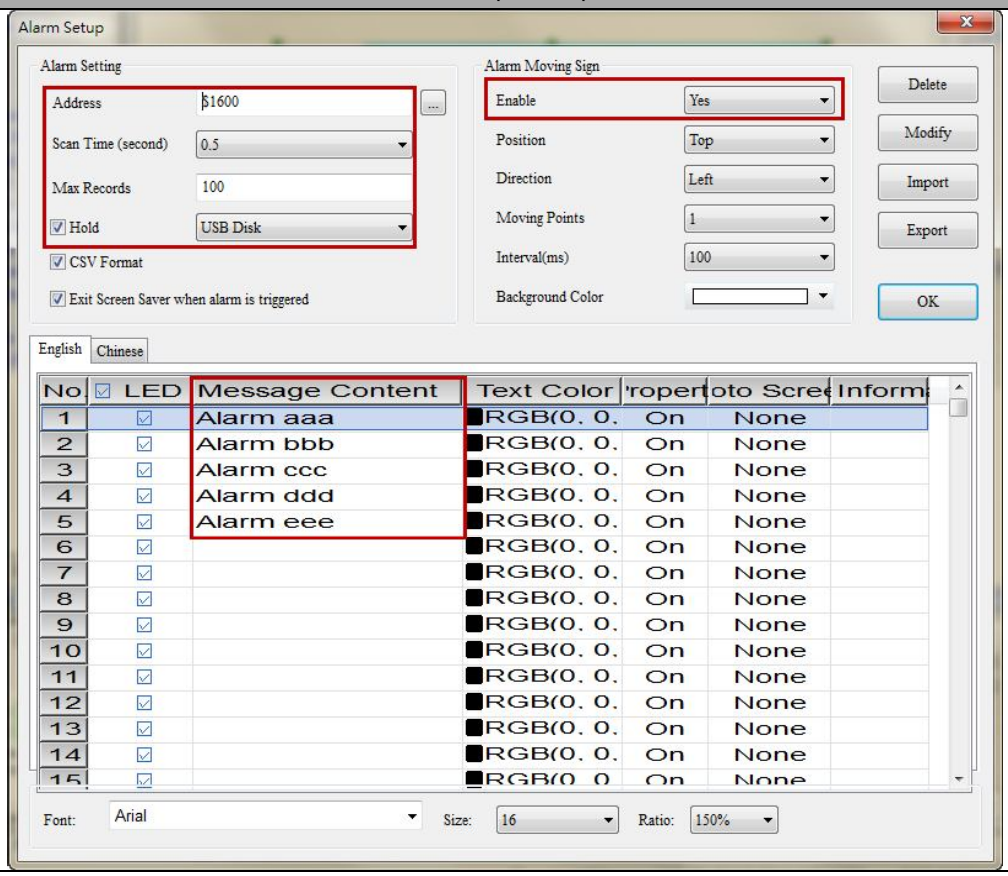
| | |
|---|---|
| a | Alarm frequency data |
| b | Alarm records |

Refer to the Alarm Setup Example in Table 16-1-3.

| **Alarm Setup Example**<br>Table 16-1-3 Alarm Setup Example | |
|---|---|
| Alarm Setup Steps | ➢ Step 1: Enter [Options] → [Alarm Setup] to set up the property of the alarm.<br>  <br><br>➢ Step 2: Set the Read Address to $1600, Sample Time to 0.5 second and max. records to 100. Select HMI as the Retained Area, activate the Alarm Moving Sign and edit the alarm message content to be displayed. After the settings are completed, click OK to leave the Alarm Setup. Refer to the figure below. |

## Alarm Setup Example

Table 16-1-3 Alarm Setup Example

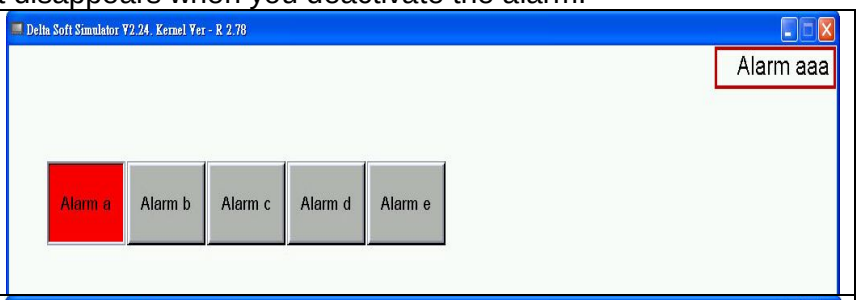
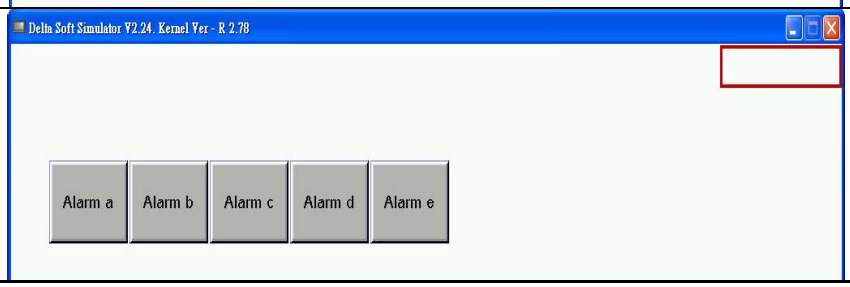



**Create Maintained Button Elements**

- Step 1: Create 5 maintained buttons and set their Write Address to $1600.0~$1600.4 respectively.

- Step 2: Edit the State 0/State 1 text of each maintained button to Alarm 1 ~ Alarm 5. Set the foreground color of State 1 to red indicate the ON state.

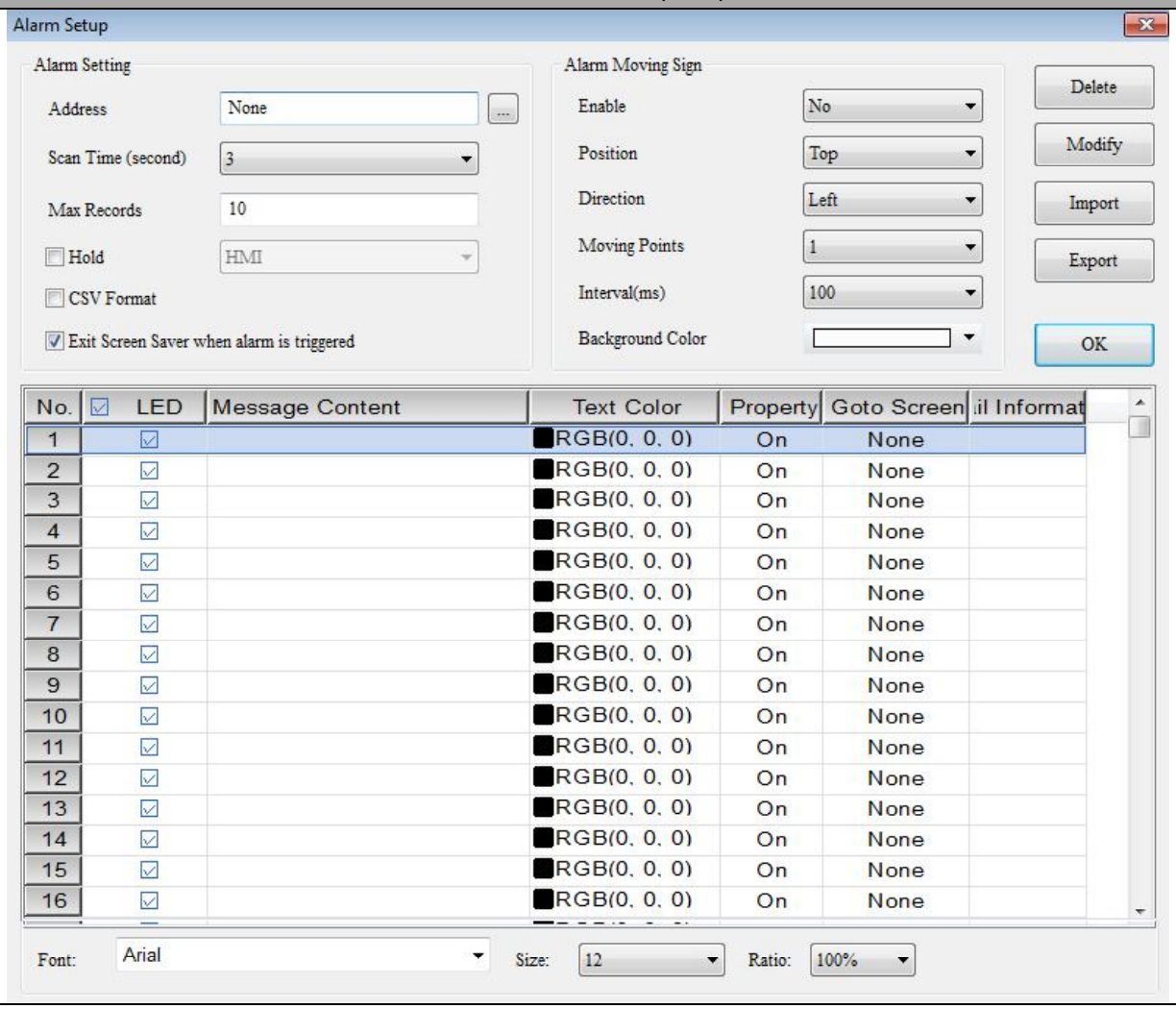
| | | | | | |
|---|---|---|---|---|---|
| **State 0** | W:$1600.0 Alarm a | W:$1600.1 Alarm b | W:$1600.2 Alarm c | W:$1600.3 Alarm d | W:$1600.4 Alarm e |
| **State 1** | W:$1600.0 Alarm a | W:$1600.1 Alarm b | W:$1600.2 Alarm c | W:$1600.3 Alarm d | W:$1600.4 Alarm e |

| **Alarm Setup Example**<br>Table 16-1-3 Alarm Setup Example | |
|---|---|
| Execution Results | ➢ After creation of all elements, perform the compilation and download them to HMI. When you activate the maintained buttons of Alarm 1 ~ Alarm 5, the message of the Alarm Moving Sign will display on the top of the HMI screen. It disappears when you deactivate the alarm.<br>**Alarm ON**  <br>**Alarm OFF**   |

The Alarm Setup properties are described in detail below.

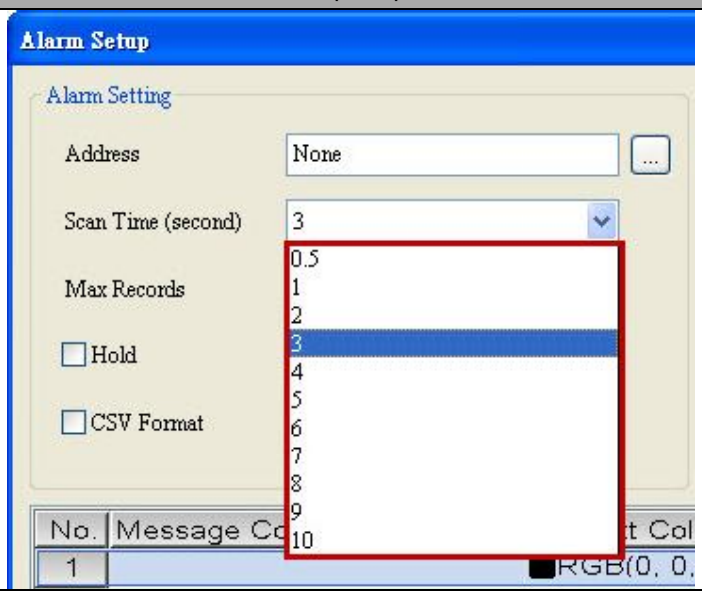
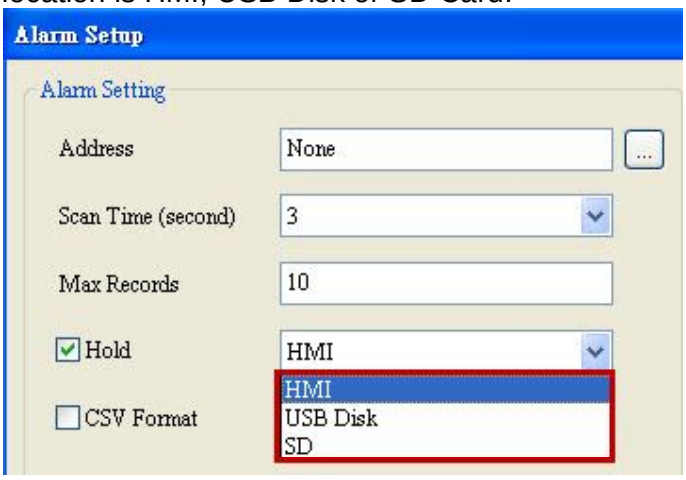
## Alarm Setup Properties

Table 16-1-4 Alarm Setup Properties



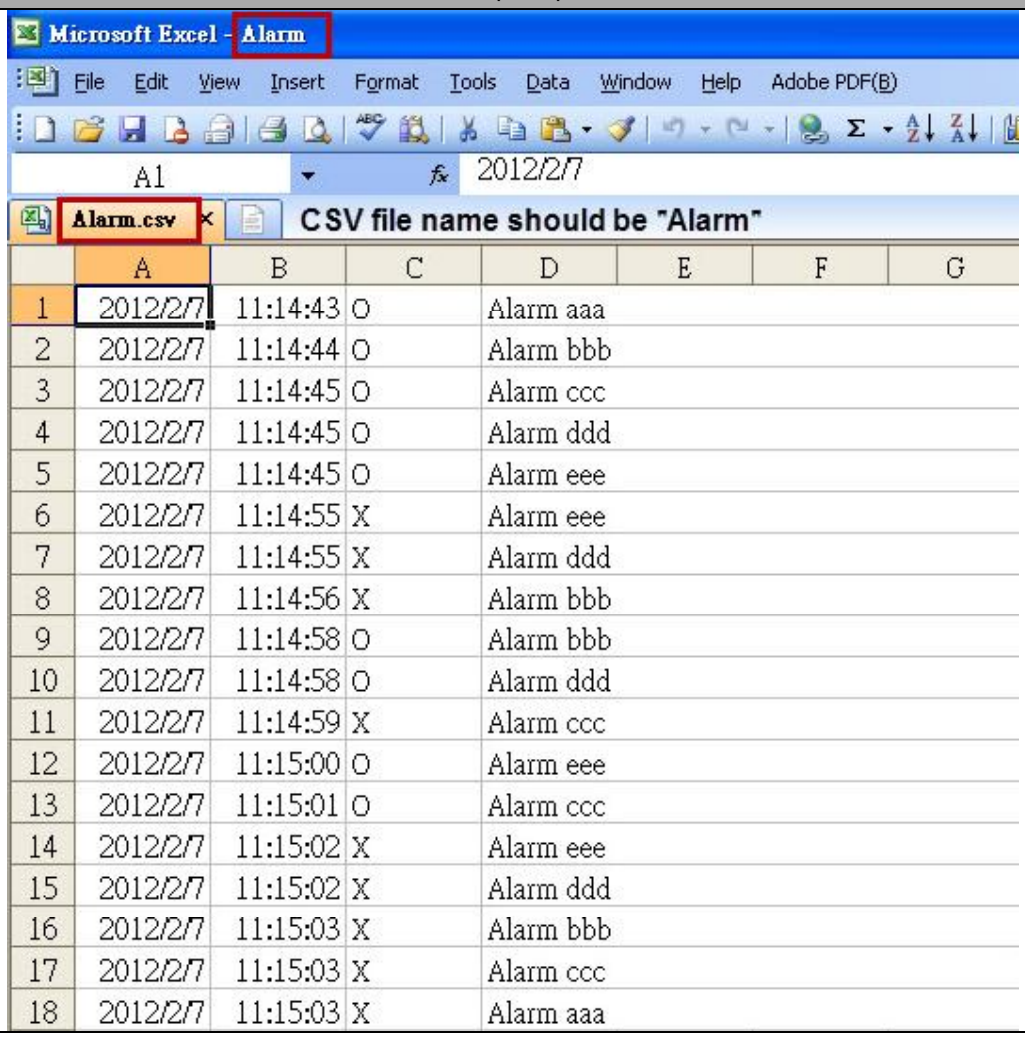

➢ **Alarm Setup**

| | |
|---|---|
| Read Address | ➢ You can select the internal memory or controller register address. The constraint is? When Bit is selected for the Read Address.<br>➢ For selection of the connection name or style, refer to 5-1Button. |
| Scan Time (second) | ➢ Sample Time indicates the interval to take a sampling action. |

| Alarm Setup Properties<br>Table 16-1-4 Alarm Setup Properties | |
|---|---|
| |  |
| Max. Records | ➢ When the records are accumulated to the number as shown in the Max. Records, the recording will start from the first data again and override the previous data.<br>➢ The Max. Records function supports up to 9999 records. |
| Hold | ➢ The data location is HMI, USB Disk or SD Card.<br>  <br>➢ If HMI is checked, data will be recorded in HMI SRAM in case of outage.<br>➢ When the Output to CSV File is selected, select USB Disk or SD Card as the retained area. |
| CSV Format | ➢ When the CSV Format is checked, the alarm message can be saved to a CSV file or stored in USB Disk or SD Card. |

## Alarm Setup Properties

Table 16-1-4 Alarm Setup Properties




| | A | B | C | D |
|---|---|---|---|---|
| 1 | 2012/2/7 | 11:14:43 | O | Alarm aaa |
| 2 | 2012/2/7 | 11:14:44 | O | Alarm bbb |
| 3 | 2012/2/7 | 11:14:45 | O | Alarm ccc |
| 4 | 2012/2/7 | 11:14:45 | O | Alarm ddd |
| 5 | 2012/2/7 | 11:14:45 | O | Alarm eee |
| 6 | 2012/2/7 | 11:14:55 | X | Alarm eee |
| 7 | 2012/2/7 | 11:14:55 | X | Alarm ddd |
| 8 | 2012/2/7 | 11:14:56 | X | Alarm bbb |
| 9 | 2012/2/7 | 11:14:58 | O | Alarm bbb |
| 10 | 2012/2/7 | 11:14:58 | O | Alarm ddd |
| 11 | 2012/2/7 | 11:14:59 | X | Alarm ccc |
| 12 | 2012/2/7 | 11:15:00 | O | Alarm eee |
| 13 | 2012/2/7 | 11:15:01 | O | Alarm ccc |
| 14 | 2012/2/7 | 11:15:02 | X | Alarm eee |
| 15 | 2012/2/7 | 11:15:02 | X | Alarm ddd |
| 16 | 2012/2/7 | 11:15:03 | X | Alarm bbb |
| 17 | 2012/2/7 | 11:15:03 | X | Alarm ccc |
| 18 | 2012/2/7 | 11:15:03 | X | Alarm aaa |

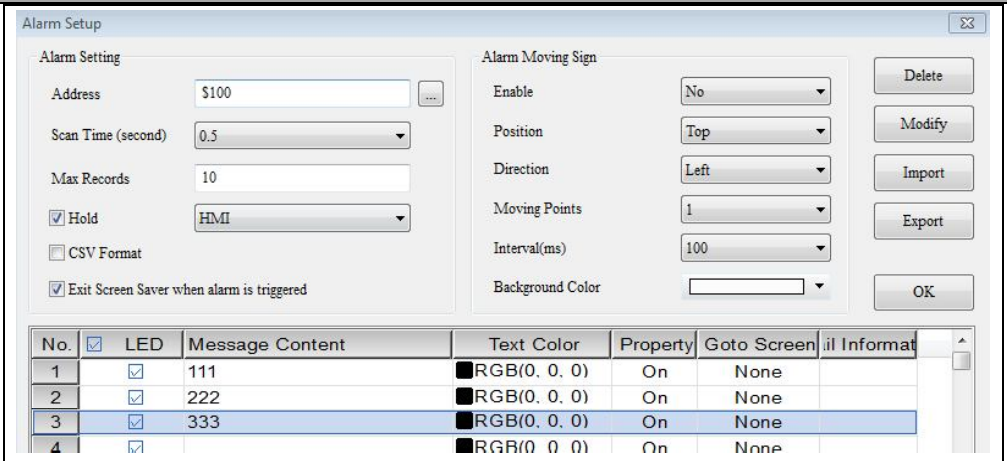
**Exit Screen Saver when Alarm is triggered**

- This function is set with the program of screen saver. The default setting is set to activate.
- Assume the user enables screen saver program and setup the screen of screen saver. If the alarm occurs, HMI will not be in screen saver mode. However, even when the user does not setup the screen for screen saver, HMI will not be in Blue Led mode.
- Disable the function of 【Exit Screen Saver when Alarm is Triggered】. When the alarm occurs for the first time, the system exits screen saver. After that, the system enters screen saver program according to the setting time no matter the alarm is cleared or not.

| Example |
|---|
| ✓ Alarm Setup |

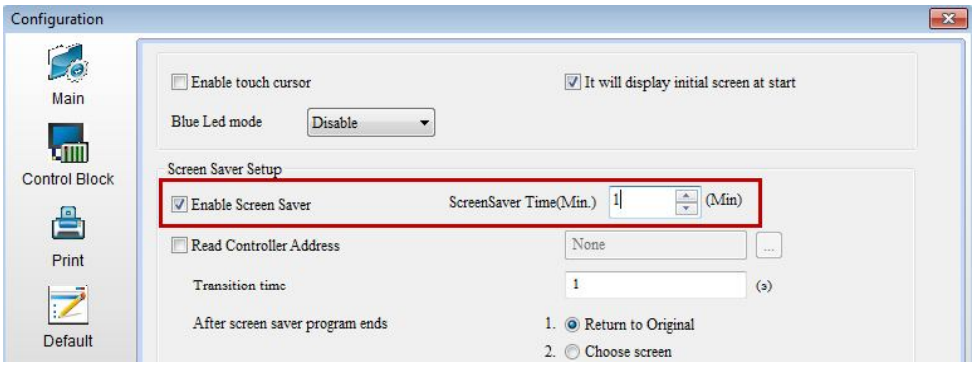
## Alarm Setup Properties

Table 16-1-4 Alarm Setup Properties




✓ Create the numeric entry element as $100.

✓ Screen saver setup



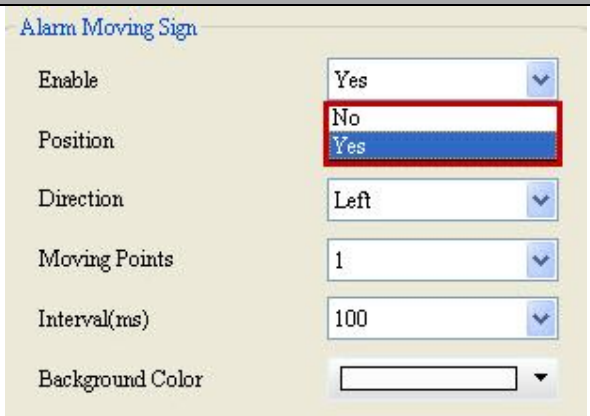
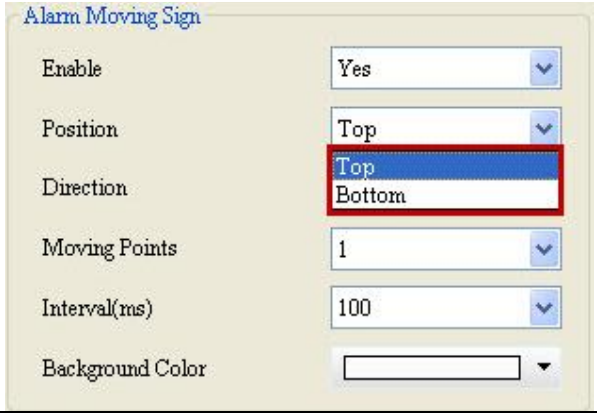
✓ Download the compile project to HMI. Enter 1 to numeric entry element $100 to trigger the alarm. After 1 minute, when screen saver program is activated and the alarm is detected, function of screen saver will be disabled.

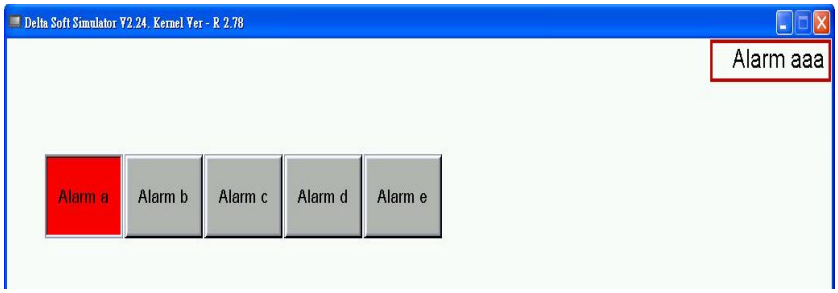
➢ **Alarm Moving Sign**

| | |
|---|---|
| Enable | ➢ Yes and No are selectable for the Start. If Yes is selected, the message of the triggered alarm will be displayed at the specified location on the screen. If No is selected, no alarm message will be displayed. |

**Alarm Setup Properties**

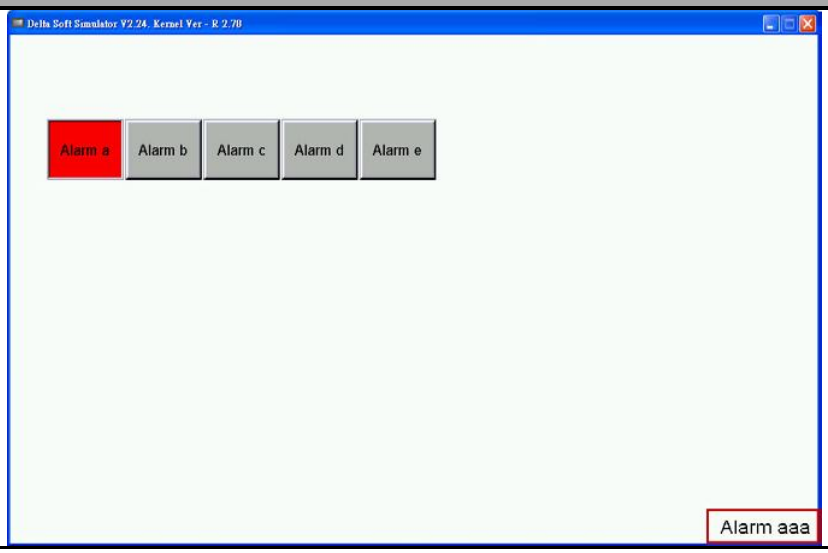
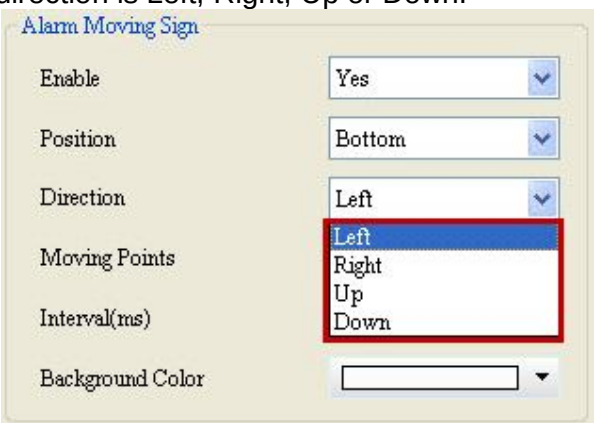
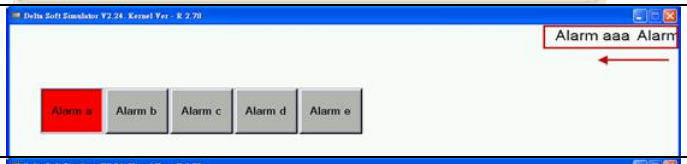
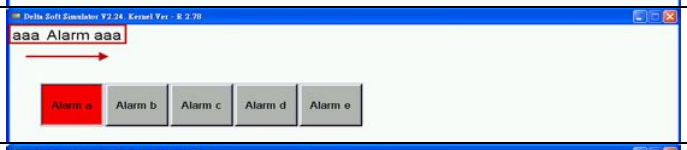
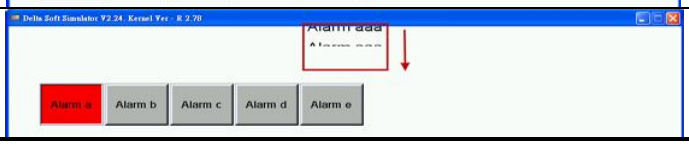
Table 16-1-4 Alarm Setup Properties

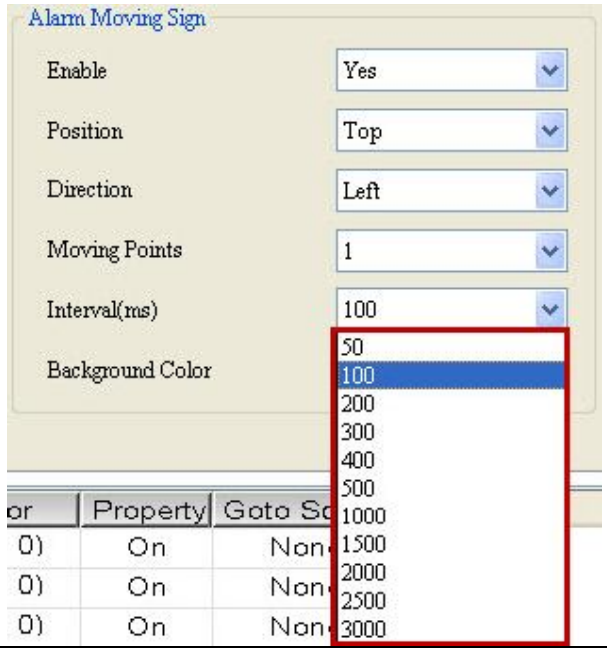
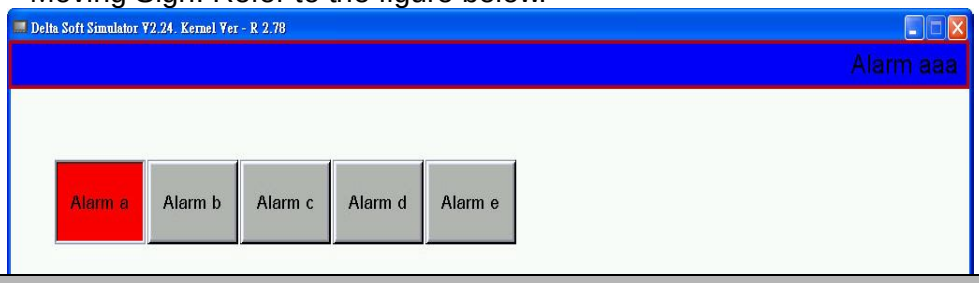
<table>
<tr><td></td><td> 
</td></tr>
<tr><td>Position</td><td>➢ Top and Bottom are available to the Position. If Top is selected, the message of the triggered alarm will be displayed at the top of the HMI screen. If Bottom is selected, the message of the alarm will be displayed at the bottom of the HMI screen.


<table>
<tr><td>Top</td><td> 
</td></tr>
</table></td></tr>
</table>

## Alarm Setup Properties

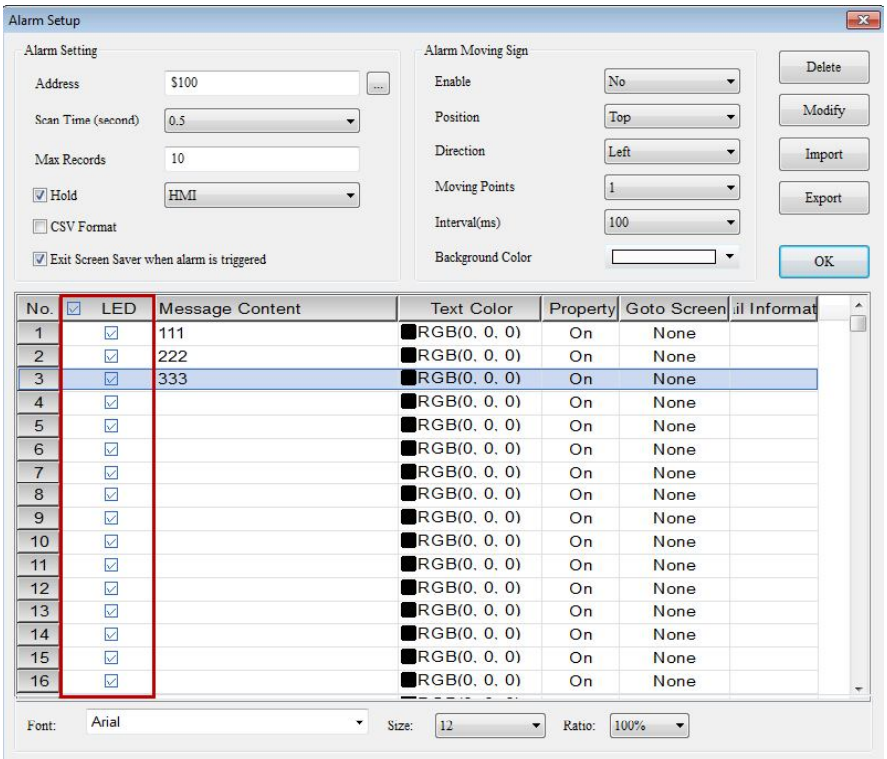
Table 16-1-4 Alarm Setup Properties

| | | |
|---|---|---|
| | **Bottom** |  |
| Direction | ➢ The moving direction is Left, Right, Up or Down.<br>  | |
| | **Left** |  |
| | **Right** |  |
| | **Up** | |
| | **Down** |  |
| Moving Points | ➢ The higher the moving points, the more the distance to which the text moves. The setting range is 1~50 with Pixel as the unit. | |

| Alarm Setup Properties<br>Table 16-1-4 Alarm Setup Properties | |
|---|---|
| Interval (ms) | ➢ The Interval defines the time (ms) between two message movements of the Alarm Moving Sign. The moving distance is set up based on the setting of the Moving Points.<br>  |
| Background Color | ➢ This option provides the Background Color for the display of the Alarm Moving Sign. Refer to the figure below.<br>  |
| ➢ **Show Alarm Message Content** | |
| LED | ➢ This function determines if LED will glitter when the alarm is triggered.<br>➢ In default setting, LED glitters when the alarm is triggered. Users can cancel this function. |

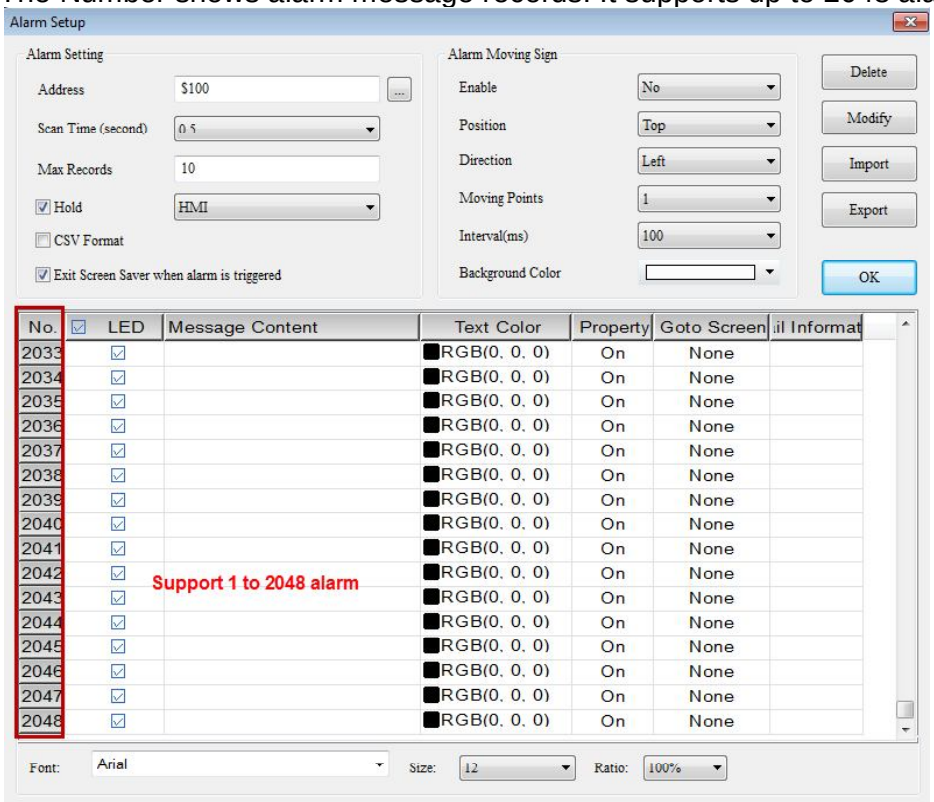
## Alarm Setup Properties

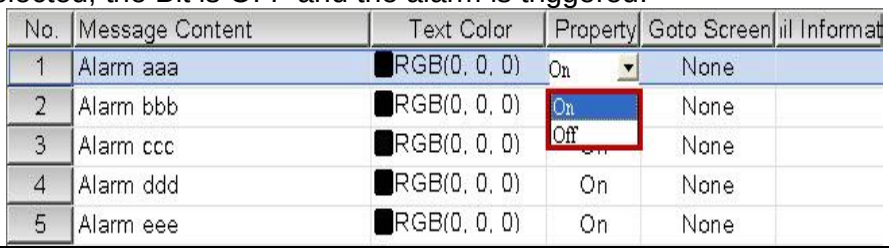
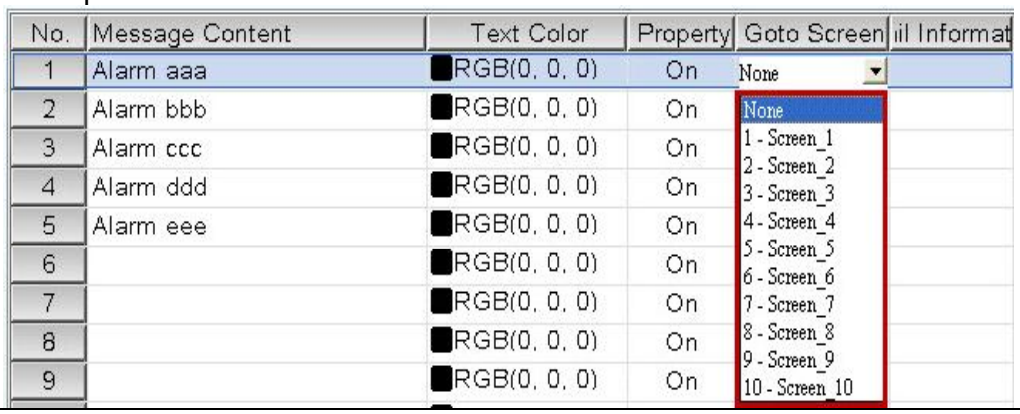
Table 16-1-4 Alarm Setup Properties




Number

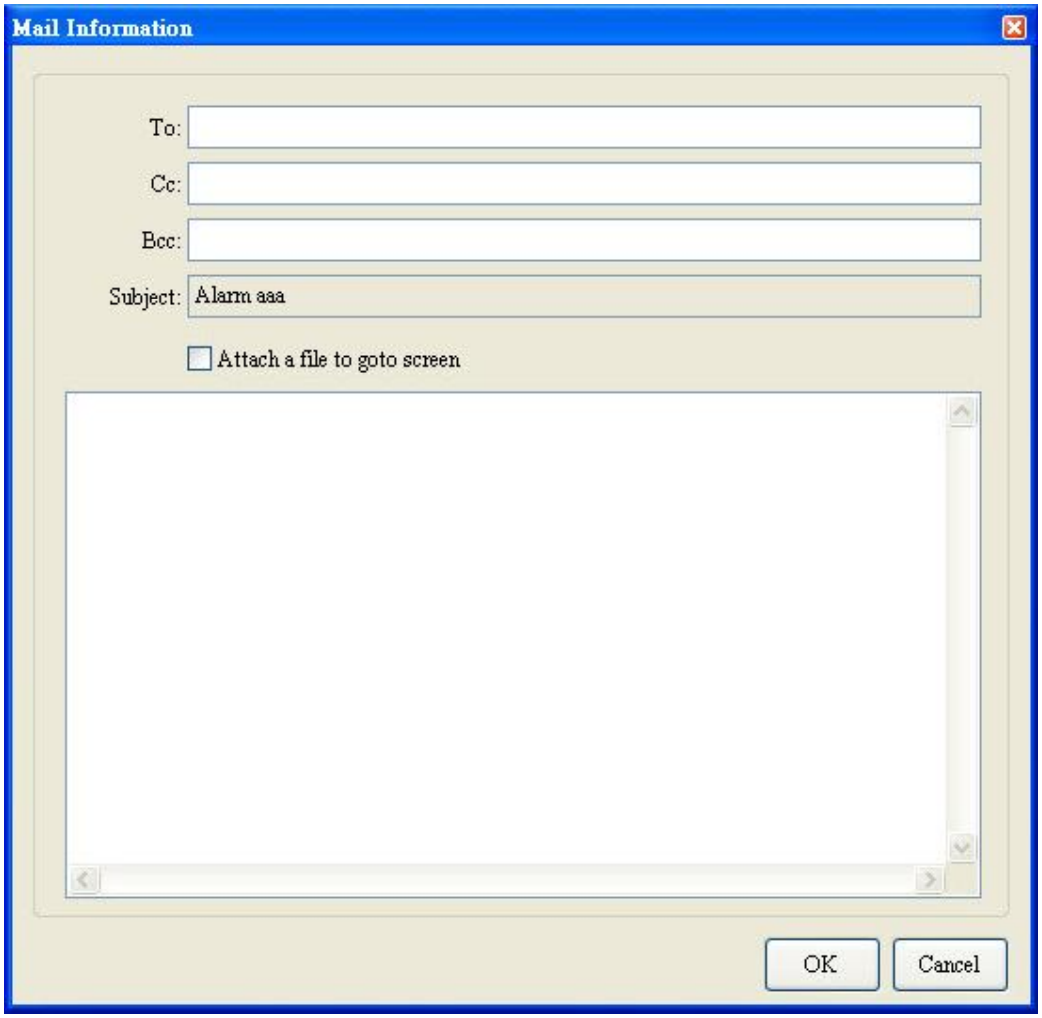
➢ The Number shows alarm message records. It supports up to 2048 alarms.

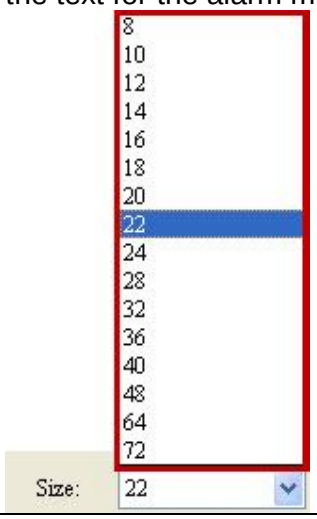
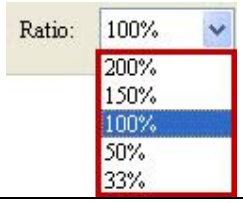
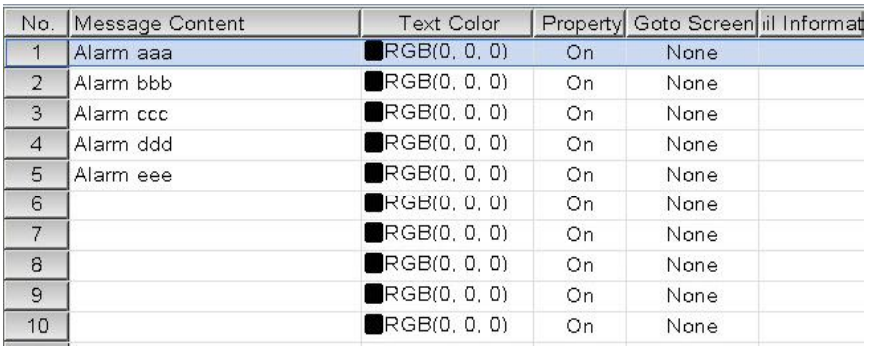


| **Alarm Setup Properties**<br>Table 16-1-4 Alarm Setup Properties | |
|---|---|
| Message Content | ➢ The user can define the alarm message content to be displayed in the Message Content column.<br>➢ The user may modify the message content directly in the column or click the Modify button. |
| Text Color | ➢ The Text Color column defines the display color of the alarm message. It is black by default. |
| Property | ➢ ON and OFF are available for the Property.<br>➢ When ON is selected, the Bit is On and the alarm is triggered. When OFF is selected, the Bit is OFF and the alarm is triggered.<br>  <br> |
| Go to Screen | ➢ This column defines whether any specified screen will be displayed upon trigger of the alarm. If other screens are created, the user can show the screen as desired by selecting the corresponding screen number from the dropdown menu.<br>  <br> |

**Alarm Setup Properties**

Table 16-1-4 Alarm Setup Properties

<table>
<tr><td rowspan="4">Mail Information</td><td colspan="2">➢ The Mail Information function can send an email to relevant personnel when an alarm is triggered. It must be used in conjunction with the [Options] → [Set Communication Parameter] → [Ethernet] → [SMTP] function.<br>➢ When enabling the SMTP function, the user can enter mail messages in this mail information column.<br> 
</td></tr>
<tr><td>To:</td><td>➢ Complete this field with the mail address of the recipient to which a notice will be sent upon trigger of the alarm. Multiple recipients are acceptable, and ";" must be used as a separator between the recipients. The format is same as an ordinary email.</td></tr>
<tr><td>Cc:</td><td>➢ Complete this field with the mail address of the person to which a copy of the notice will be sent upon trigger of the alarm. When this field is completed, the recipient of the mail can look at the mail information in this field.</td></tr>
<tr><td>Bcc:</td><td>➢ The recipient in this field is invisible. When the mail is sent, both the recipients of the mail and copy cannot see the</td></tr>
</table>

| **Alarm Setup Properties**<br>Table 16-1-4 Alarm Setup Properties | | |
|---|---|---|
| | | recipient in this field. |
| | **Subject:** | ➢ The user cannot change the subject of the mail information because it is generated according to the alarm message contents edited. If change of the subject is needed, the user must be change the message content first. |
| | **Attach a File to the Go to Screen** | ➢ If this option is checked, that current alarm screen will be sent to the recipient as an attachment. The attachment is created in .bmp format. |
| | **Content** | ➢ The user can enter the mail content as desired. |
| ➢ **Alarm Message Text Properties** | | |
| Font | ➢ This defines the font of the alarm message to be displayed. The user can set the font as desired.<br> | |
| Size | ➢ This defines the size of the text for the alarm message to be displayed.<br>  | |
| Zooming | ➢ This defines the size of the window for the alarm message to be displayed. A scale of 100% is set by default.<br>  | |
| | **100%** |  |

## Alarm Setup Properties

Table 16-1-4 Alarm Setup Properties

**150%**

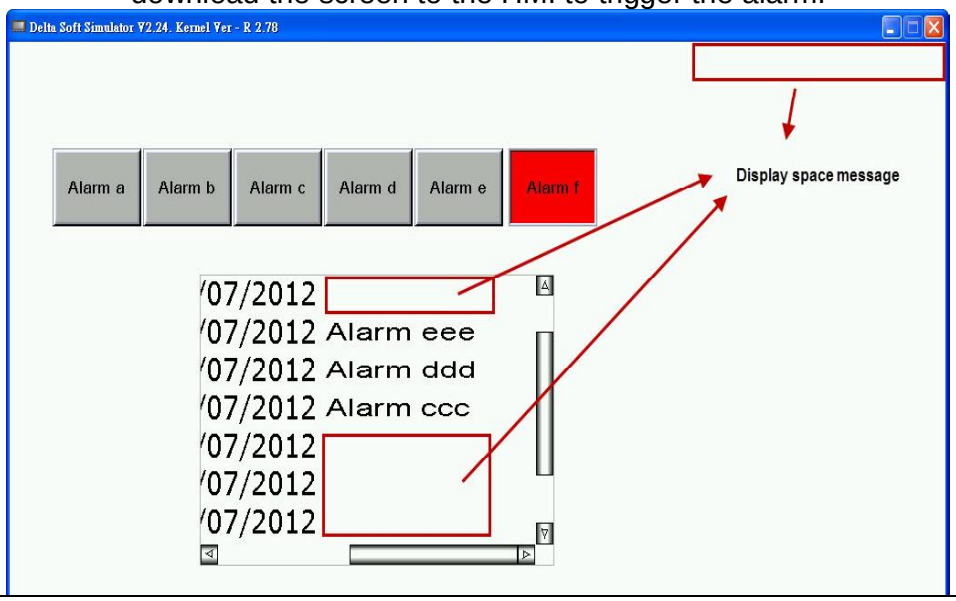
| No. | Message Content | Text Color | roper | oto Scre | Inform |
|---|---|---|---|---|---|
| 1 | Alarm aaa | RGB(0, 0, | On | None | |
| 2 | Alarm bbb | RGB(0, 0, | On | None | |
| 3 | Alarm ccc | RGB(0, 0, | On | None | |
| 4 | Alarm ddd | RGB(0, 0, | On | None | |
| 5 | Alarm eee | RGB(0, 0, | On | None | |
| 6 | | RGB(0, 0, | On | None | |
| 7 | | RGB(0, 0, | On | None | |
| 8 | | RGB(0, 0, | On | None | |
| 9 | | RGB(0, 0, | On | None | |
| 10 | | RGB(0, 0, | On | None | |

**Delete**

- After the alarm message content is created, the user can select a message to be deleted and click the Delete button to delete the selected message.

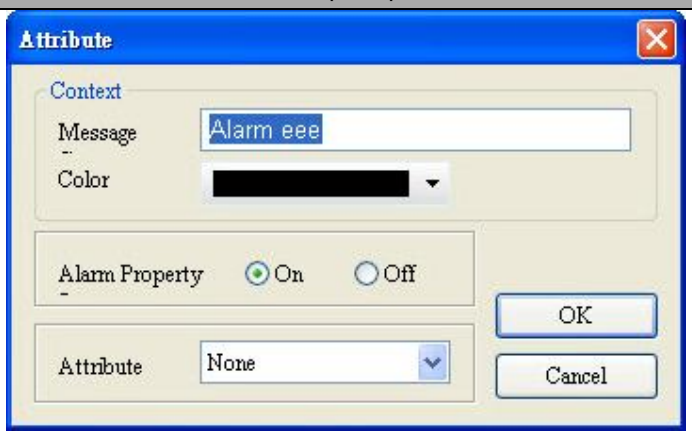
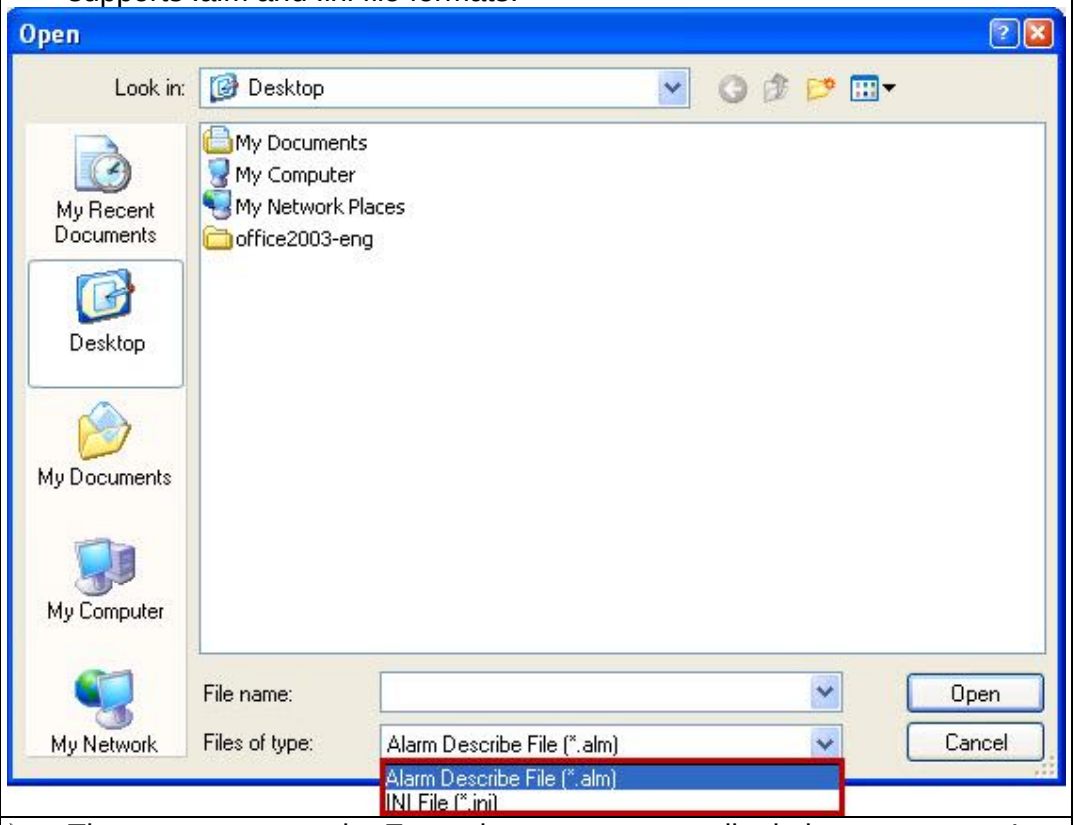
**NOTE:**

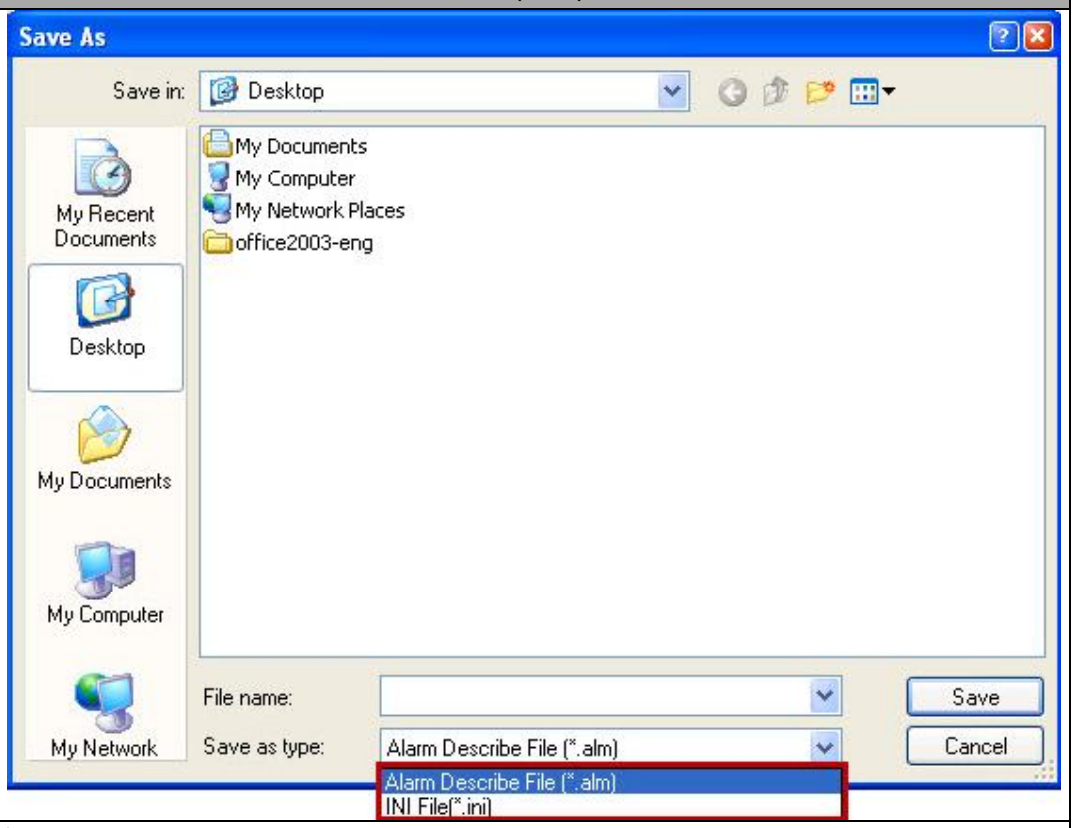
The user can enter a message in a blank field of the Message Content and move the cursor to the next field for entering an additional message. If the user deletes the first message using the Delete or Backspace key on the keyboard instead of the Delete button on the screen, the blank alarm will be displayed at the specified position when the user leaves the alarm setup screen and download the screen to the HMI to trigger the alarm.




**Modify**

- Press the Modify button to change the message content, text color and Goto screen.

| **Alarm Setup Properties**<br>Table 16-1-4 Alarm Setup Properties | |
|---|---|
| |  <br>➢ The user can also change the message, text color and Goto screen directly in the corresponding field. |
| Import | ➢ The user can press the Import button to import alarm information. It supports .alm and .ini file formats.<br>  |
| Export | ➢ The user can press the Export button to export edited alarm message. It supports .alm and .ini file formats. |

| **Alarm Setup Properties**<br>Table 16-1-4 Alarm Setup Properties | |
|---|---|
| |  |
| OK | ➢ Press the OK button to leave the Alarm Setup window. This button functions same as pressing the X mark at the upper right corner of the window. Where any change is made, pressing OK or the X mark will save the change and leave the window. |

## 16-2 History Alarm Table

| | |
|---|---|
| | History Alarm Table |

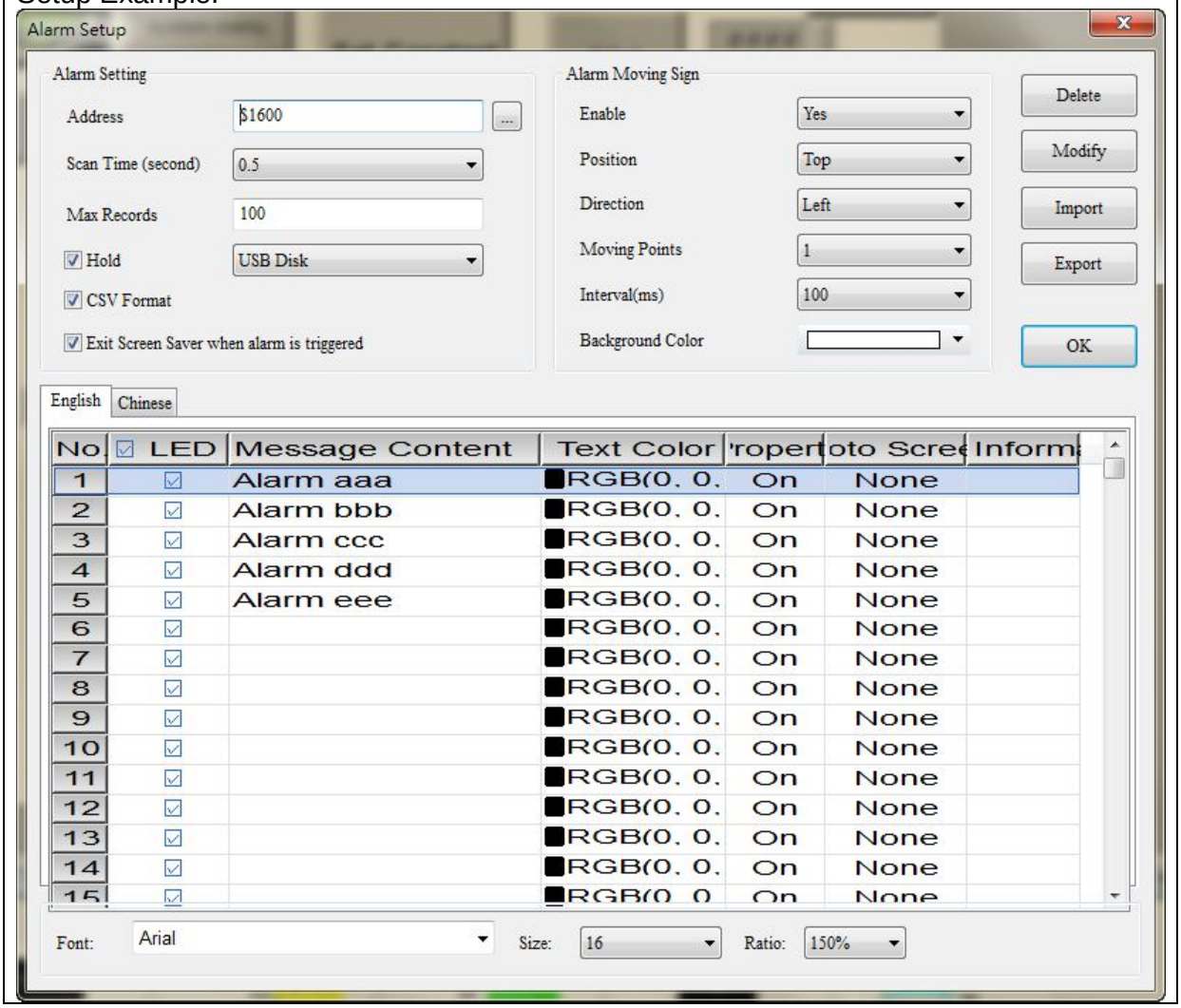
The History Alarm Table element is used to display the alarm information when an alarm is triggered. It also provides options for the user to display the release of the alarm. A corresponding state will be displayed for alarm ON and OFF.

Refer to the History Alarm Table example in Table 16-2-1.

**History Alarm Table Example**

Table 16-2-1 History Alarm Table Example

This example is described with reference to the alarm parameters in Table 16-1-3 Alarm Setup Example.

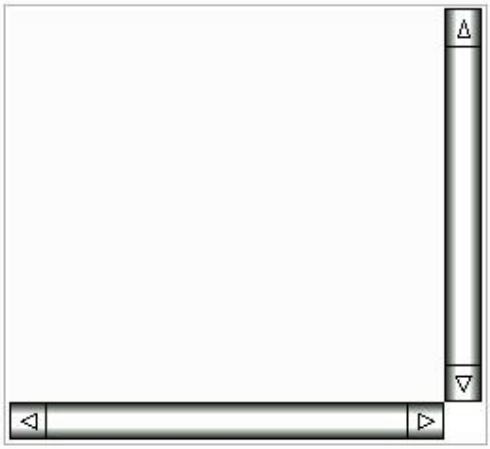


**History Alarm Table Example**

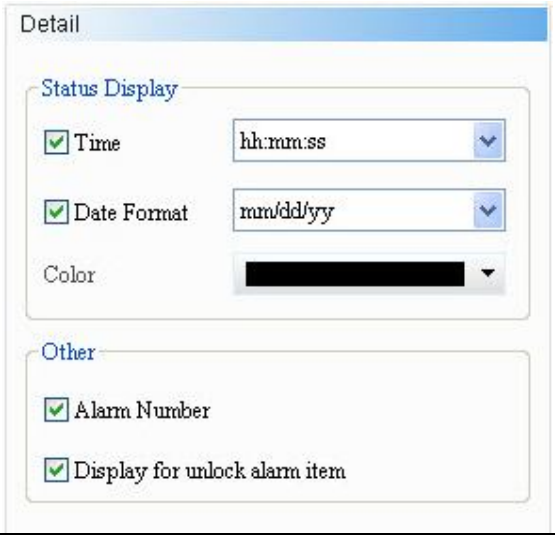
Table 16-2-1 History Alarm Table Example

**Add History Alarm Table Element**

- Step 1: Create the History Alarm Table element.

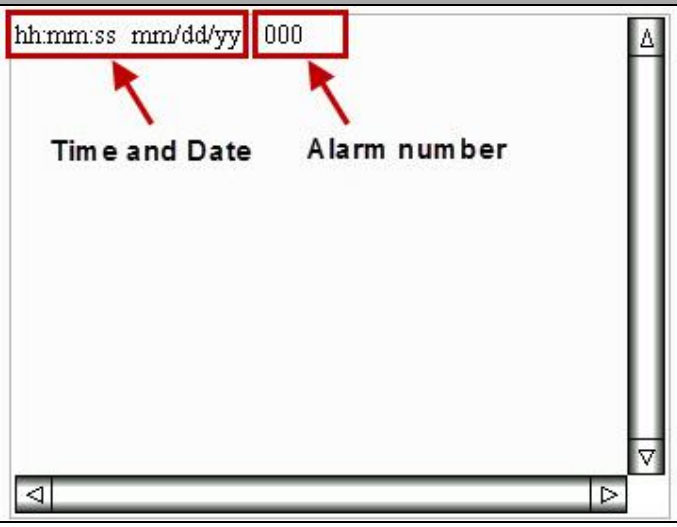


- Step 2: Check [Time Format] , [Date Format] , [Alarm Number] and [Show Alarm Release Item] . These options are used to show the time and date of the alarm, its number and whether to show alarm release.
  - Show Alarm Release Item: O stands for trigger of the alarm; X stands for release of the alarm.



**History Alarm Table Example**

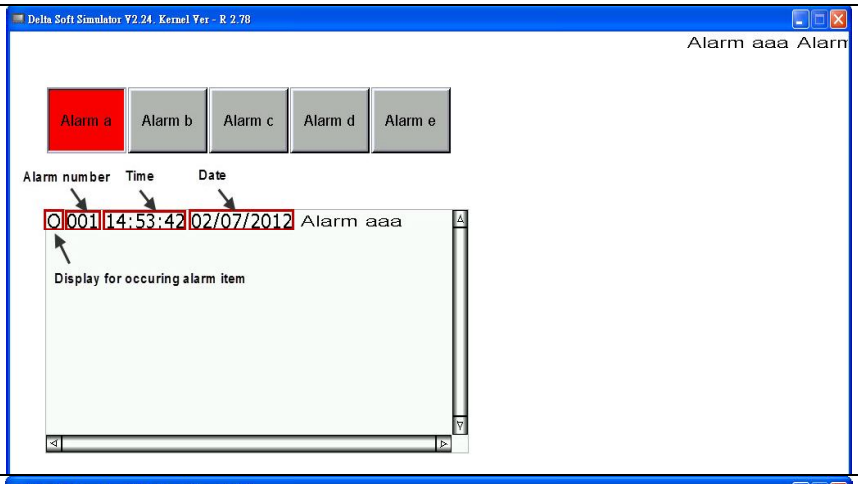
Table 16-2-1 History Alarm Table Example



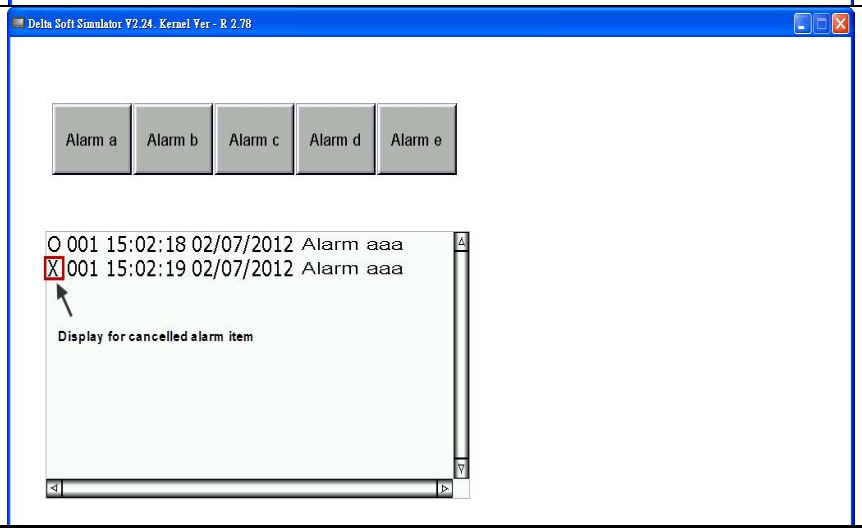

**Execution Results**

- After creation of the History Alarm Table element, perform the compilation and download the element to HIMI, when Alarm 1 is triggered, the History Alarm Table element will show the time and date of the alarm, its number, trigger and release states.

**Alarm ON**




**Alarm OFF**



Double click the History Alarm Table icon and the following property setting screen appears.

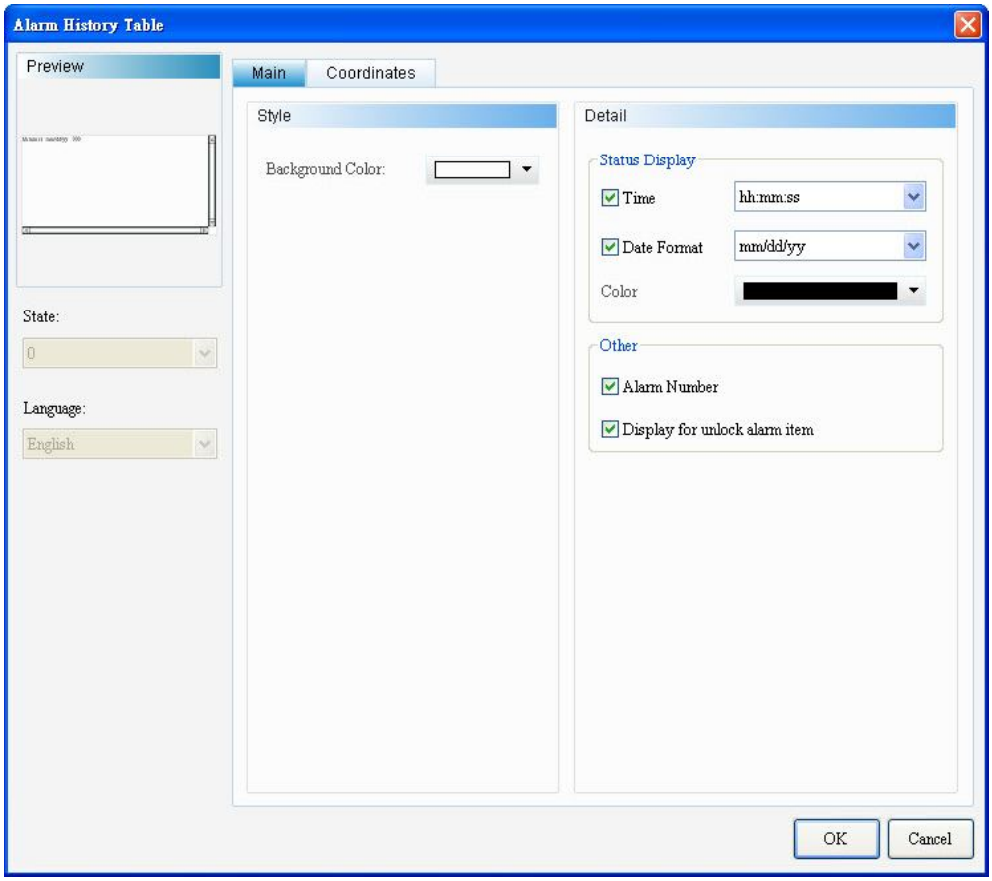



Fig. 16-2-1 History Alarm Table property setting screen

| History Alarm Table | |
|---|---|
| **Function Page** | **Content Description** |
| Preview | The State and Language are not available to the History Alarm Table. |
| General | Sets the Background Color, time format, date format, display color, alarm number, show alarm release item. |
| Position | Sets the X-Y coordinates, width and height of the element. |

Table 16-2-2 History Alarm Table function page

◆ General

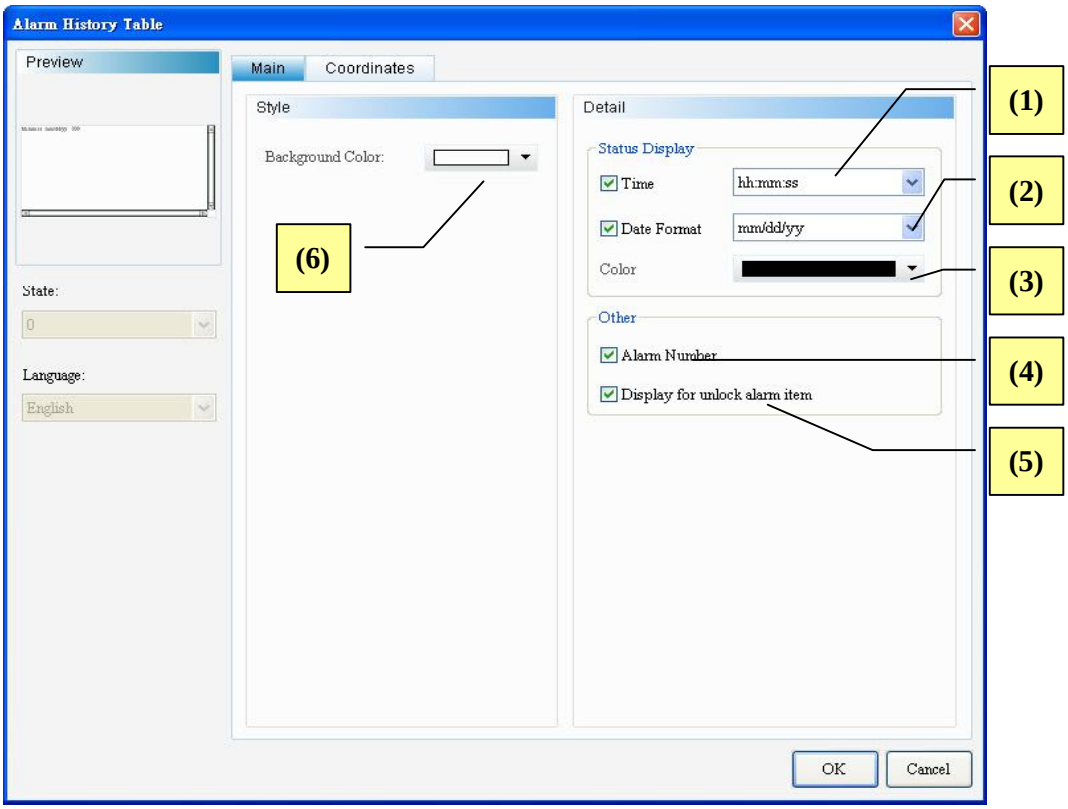
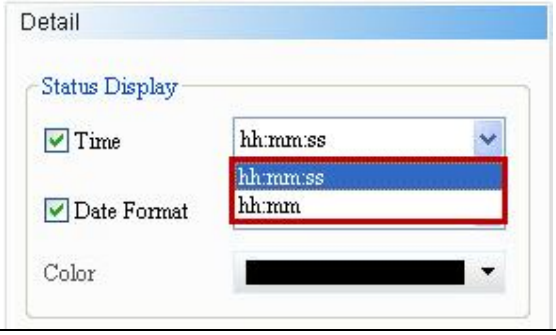
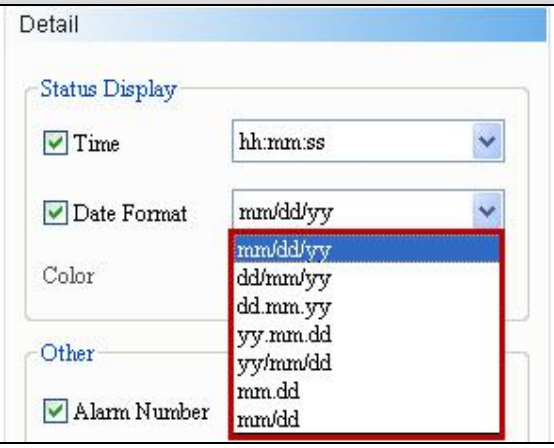
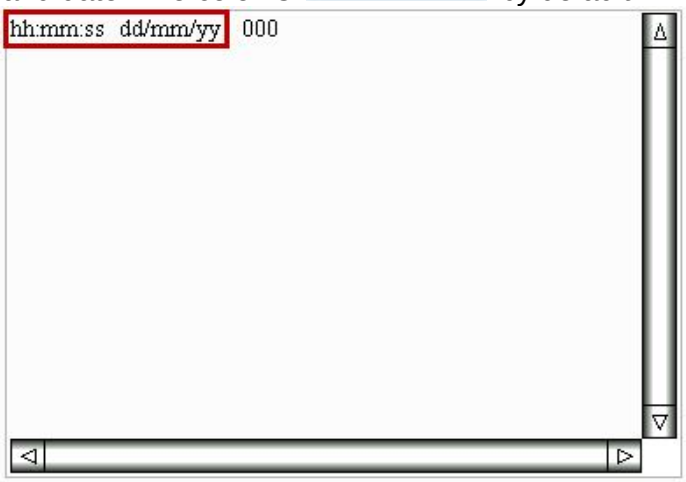
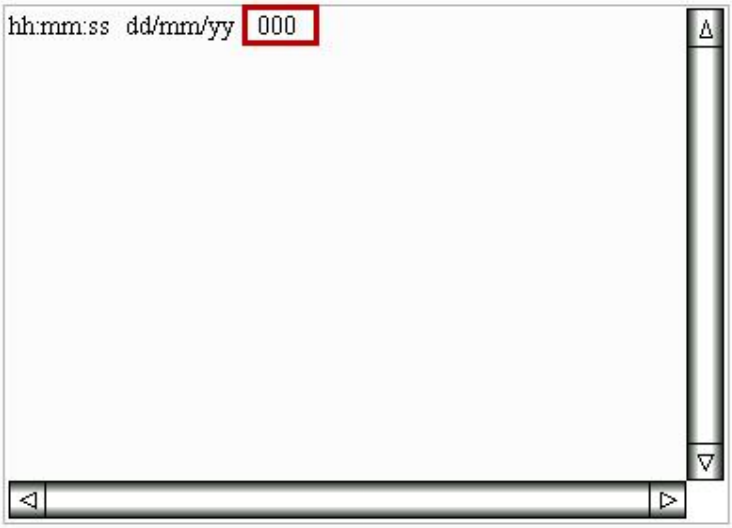
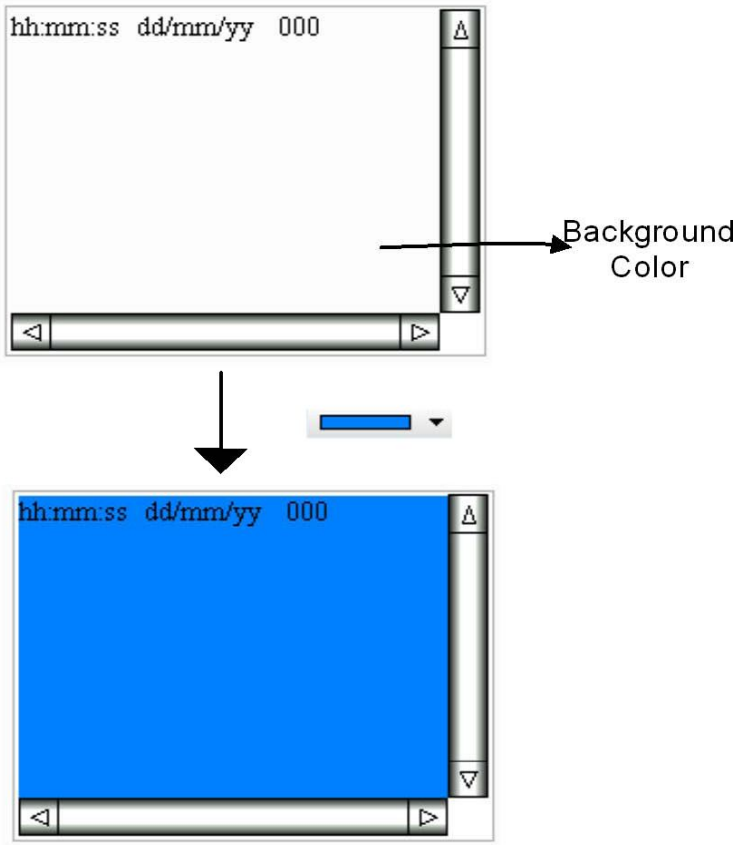



Fig. 16-2-2 History Alarm Table General property page

| No. | Item | Function |
|---|---|---|
| **(1)** | Time Format | ➢ The following two time formats are supported:   |
| **(2)** | Date Format | ➢ The following seven date formats are supported: |

| No. | Item | Function |
|---|---|---|
| | |  |
| **(3)** | Display Color | ➢ The Display Color option is used to change the display color of the time and date. The color is by default.<br>  |
| **(4)** | Alarm Number | ➢ When the Alarm Number is check, the corresponding number will be display when an alarm is triggered.<br>  |
| **(5)** | Show Alarm Release Item | ➢ When this option is checked, the History Alarm Table will show the alarm trigger and release state and information.<br>➢ When this option is unchecked, the History Alarm Table will only |

| No. | Item | Function |
|---|---|---|
| | | show the alarm trigger state and information.<br> <br> |
| **(6)** | Background Color | ➢ The user can set the Background Color for the element.<br>  |

◆ Location

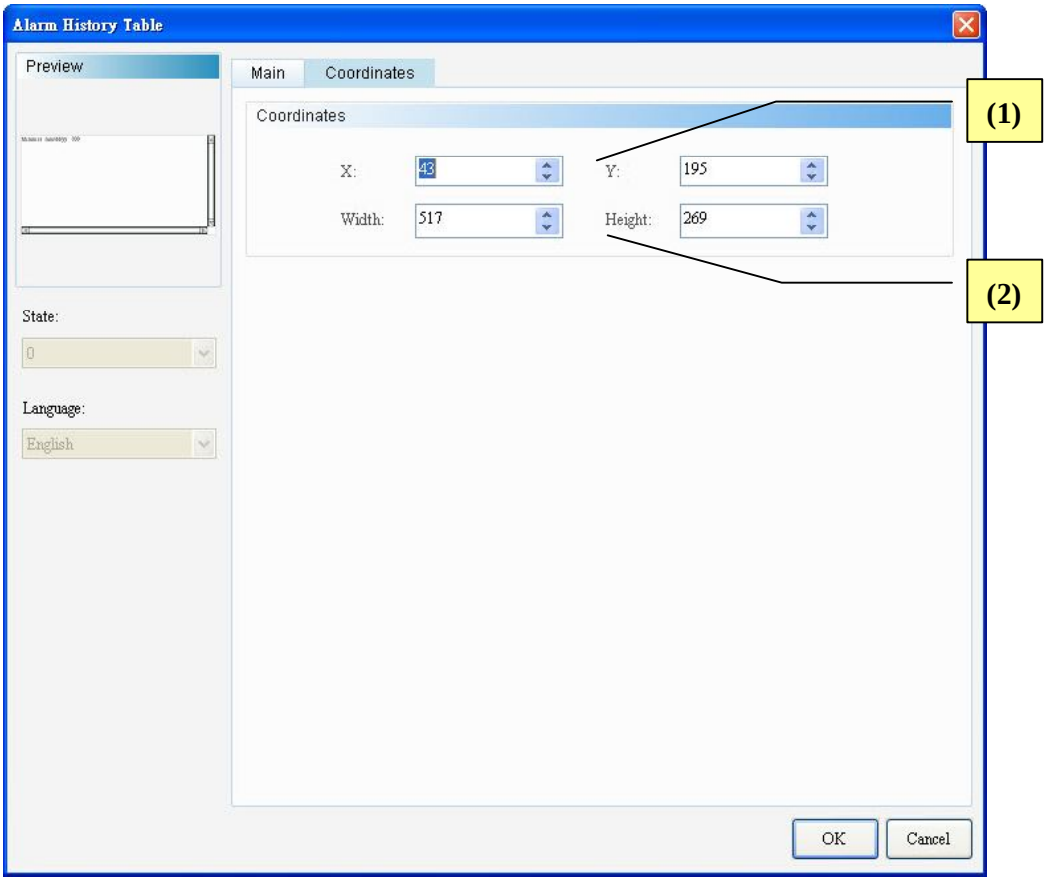



Fig. 16-2-3 History Alarm Table Position property page

| No. | Item | Function |
|---|---|---|
| **(1)** | X value, Y value | ➢ The X and Y coordinate at the upper left corner of the element. |
| **(2)** | Width, Height | ➢ The width and height of the element. |

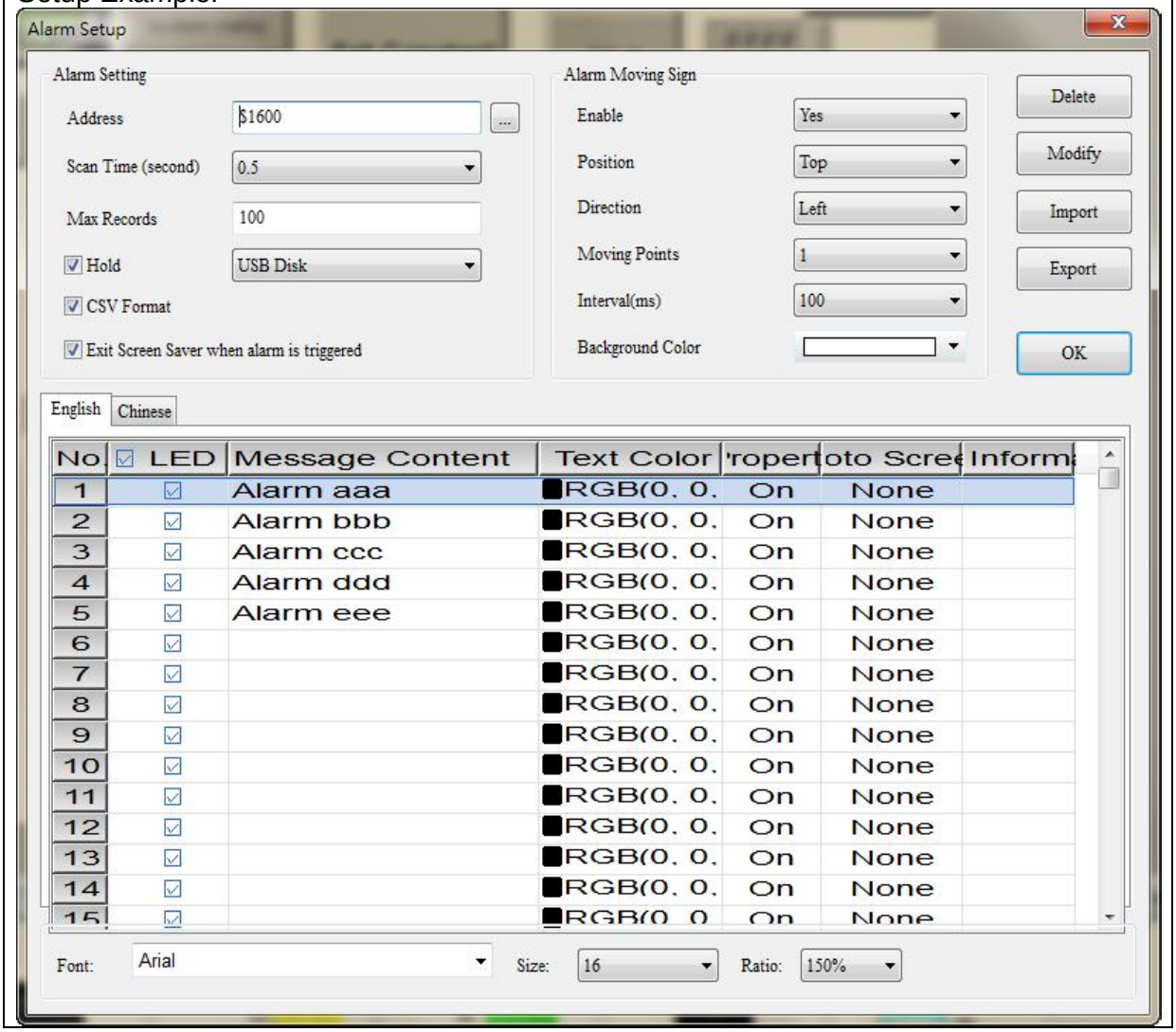
## 16-3 Active Alarm List

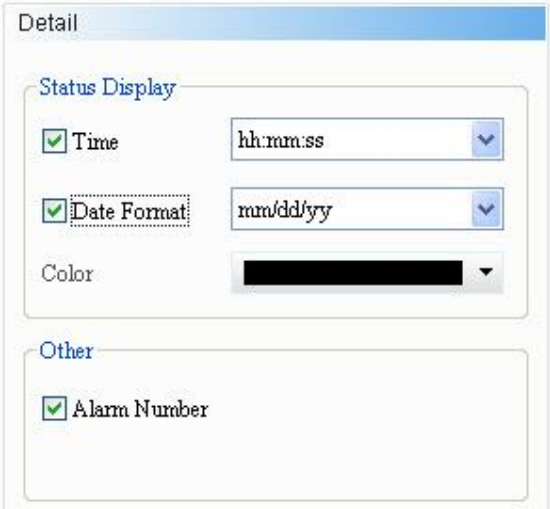
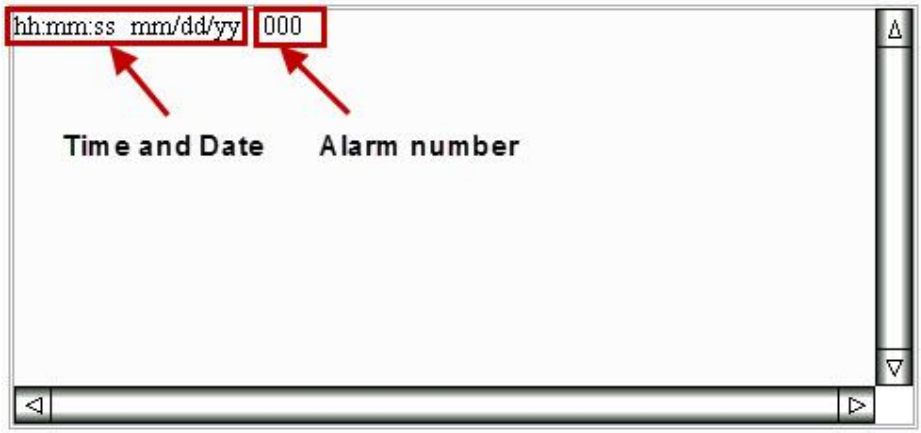
| | |
|---|---|
| | Active Alarm List |

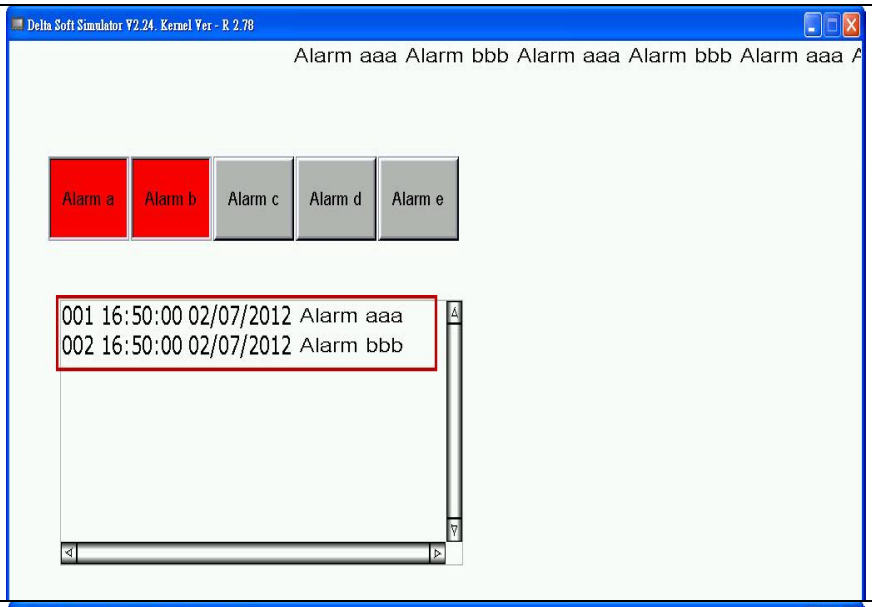
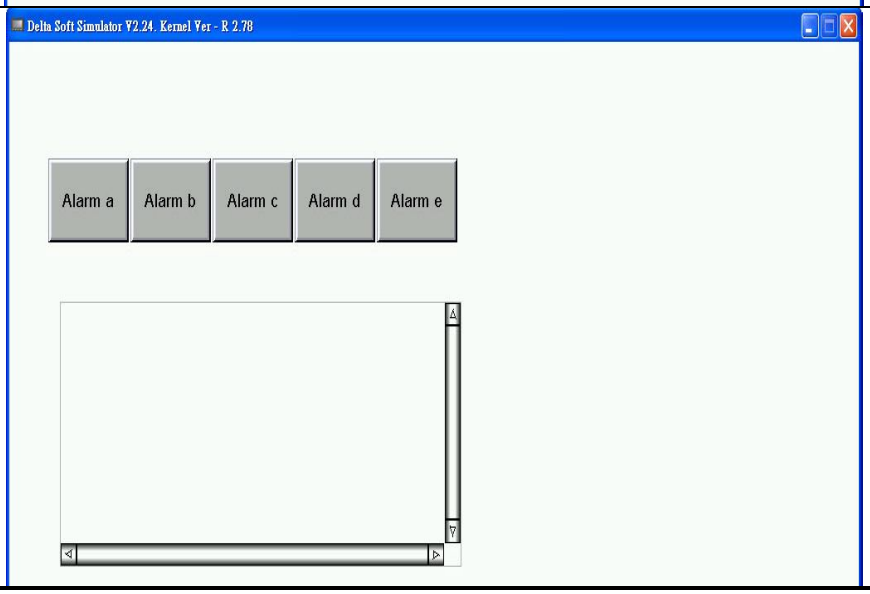
The Active Alarm List element is used to display the information of the alarm that occurs currently.

Refer to the Active Alarm List example in Table 16-3-1.

| Active Alarm List Example<br>Table 16-3-1 Active Alarm List Example |
|---|
| This example is described with reference to the alarm parameters in Table 16-1-3 Alarm Setup Example. |



| Active Alarm List Example<br>Table 16-3-1 Active Alarm List Example | |
|---|---|
| | |
| Add Active Alarm List Element | ➢ Step 1: Create the Active Alarm List element.<br> <br>➢ Step 2: Check [Time Format] and [Date Format] . These options are used to display the time and date of the alarm. The Alarm Number is checked by default.<br>  <br>  |

| Active Alarm List Example<br>Table 16-3-1 Active Alarm List Example | | |
|---|---|---|
| Execution Results | ➢ After creation of the Active Alarm List element, perform the compilation and download the element to HMI. When Alarm 1 and Alarm 2 are triggered, the Active Alarm List shows the time, date and numbering of the alarms that occur currently. No items will be displayed on the Active Alarm List when the alarms are released. | |
| | **Alarm ON** |  |
| | **Alarm OFF** |  |

Double click the Active Alarm List icon and the following property setting screen appears.

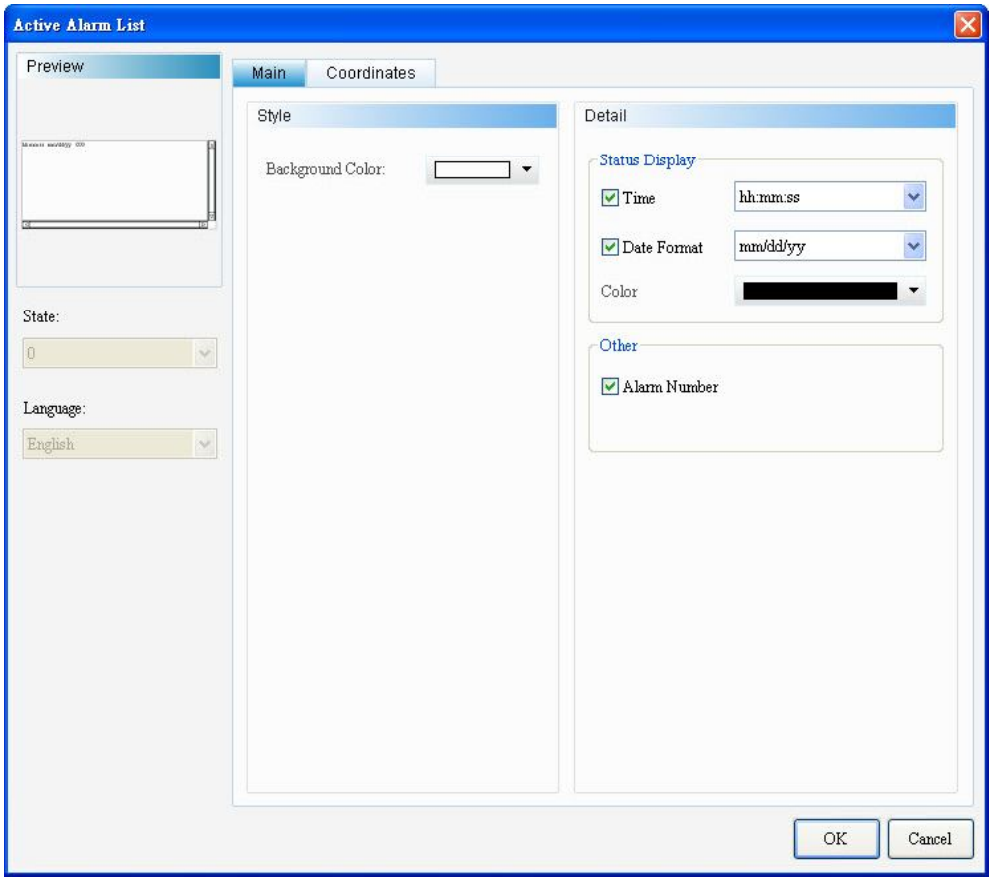



Fig. 16-3-1 Active Alarm List property setting screen

| Active Alarm List | |
|---|---|
| **Function Page** | **Content Description** |
| Preview | The State and Language are not available to the Active Alarm List. |
| General | Sets the Background Color, time format, date format, display color, alarm number. |
| Position | Sets the X-Y coordinates, width and height of the element. |

Table 16-3-2 Active Alarm List function page

◆ General

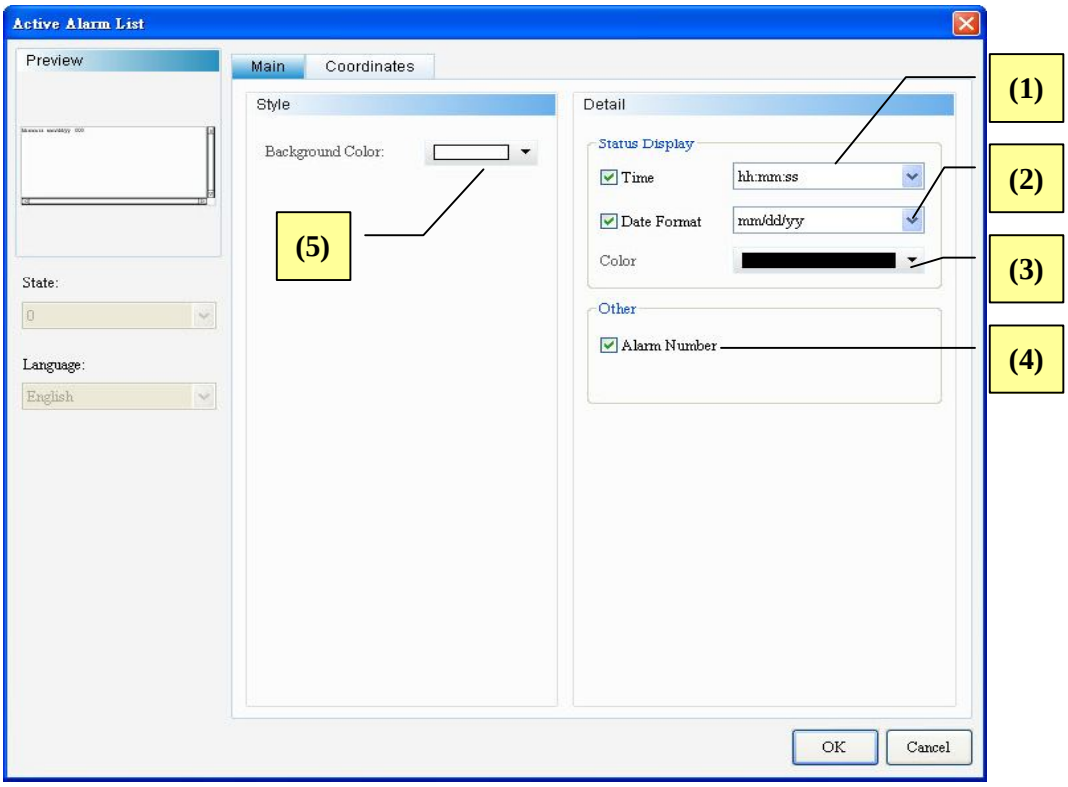
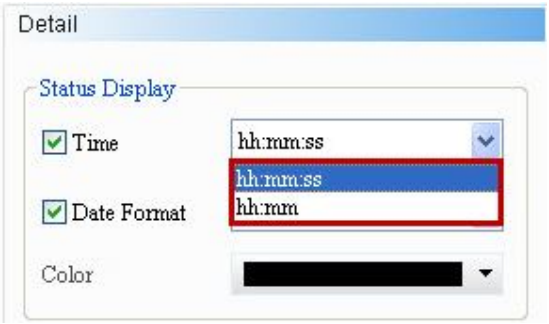
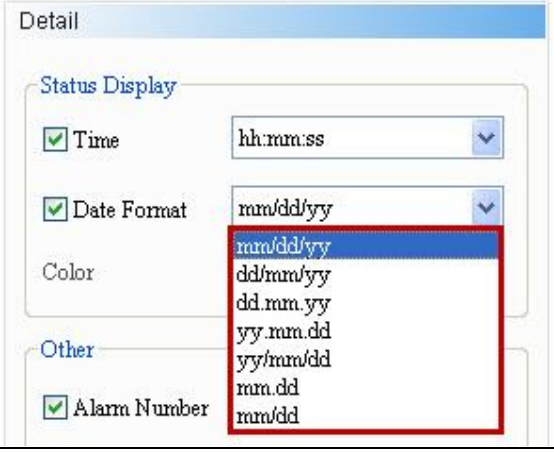
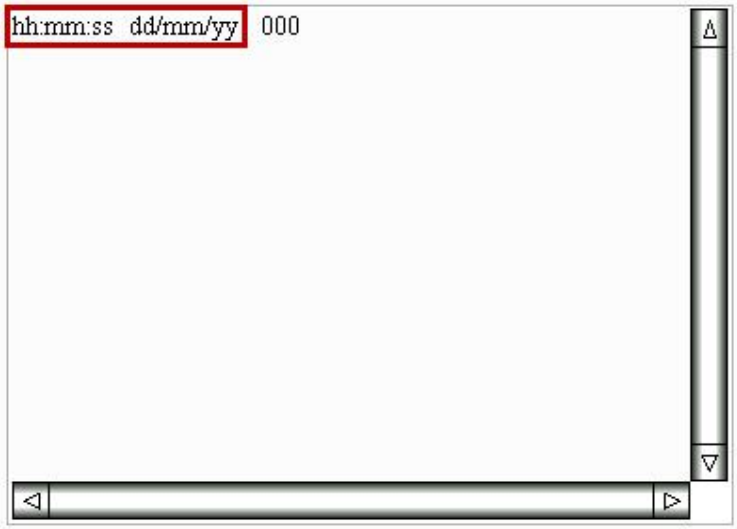
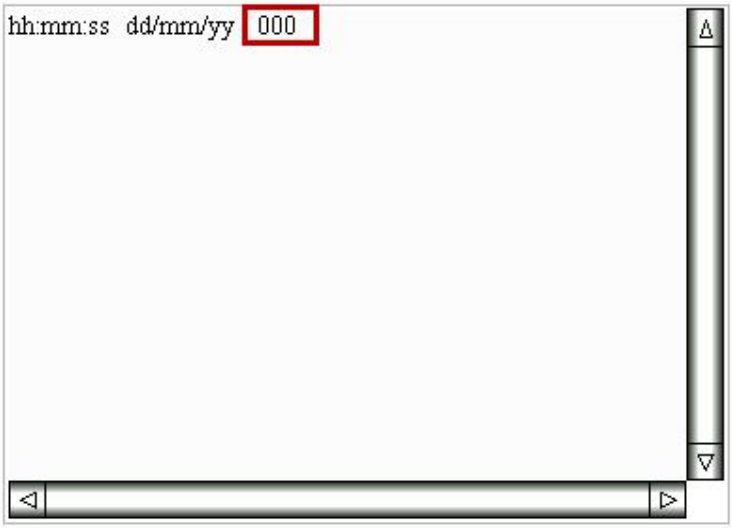
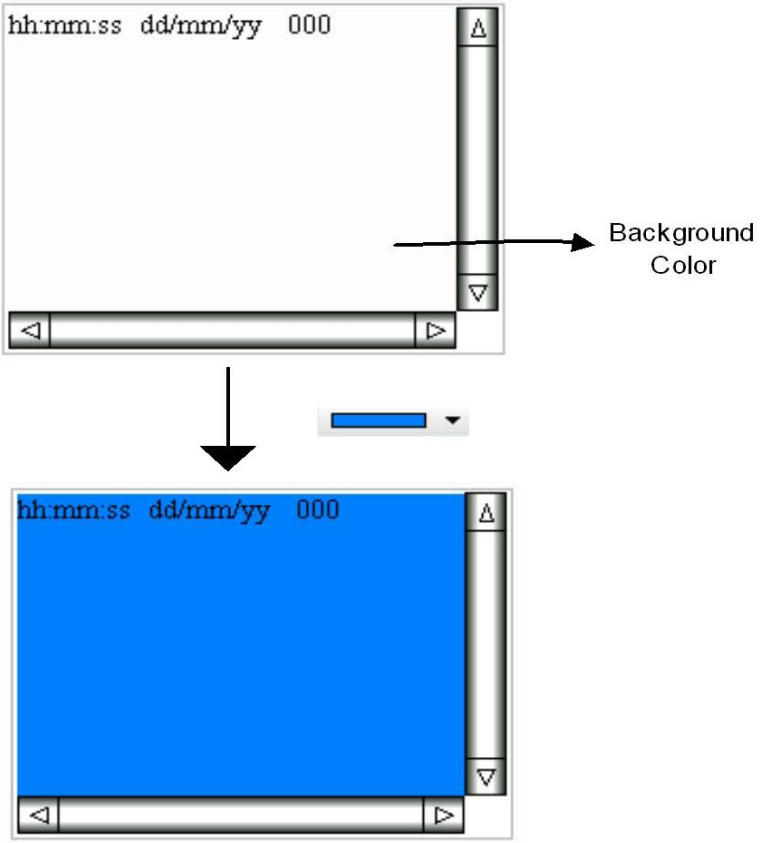



Fig. 16-3-2 Active Alarm List General property page

| No. | Item | Function |
|---|---|---|
| **(1)** | Time Format | ➢ The following two time formats are supported:<br>  <br> |
| **(2)** | Date Format | ➢ The following seven date formats are supported: |

| No. | Item | Function |
|---|---|---|
| | |  |
| **(3)** | Display Color | ➢ The Display Color option is used to change the display color of the time and date. The color is by default.<br>  |
| **(4)** | Alarm Number | ➢ Check this option to show the number of the alarm with it is triggered. |

| No. | Item | Function |
|---|---|---|
| | |  |
| **(5)** | Background Color | ➢ The user can set the Background Color for the element.<br>  |

◆ Location

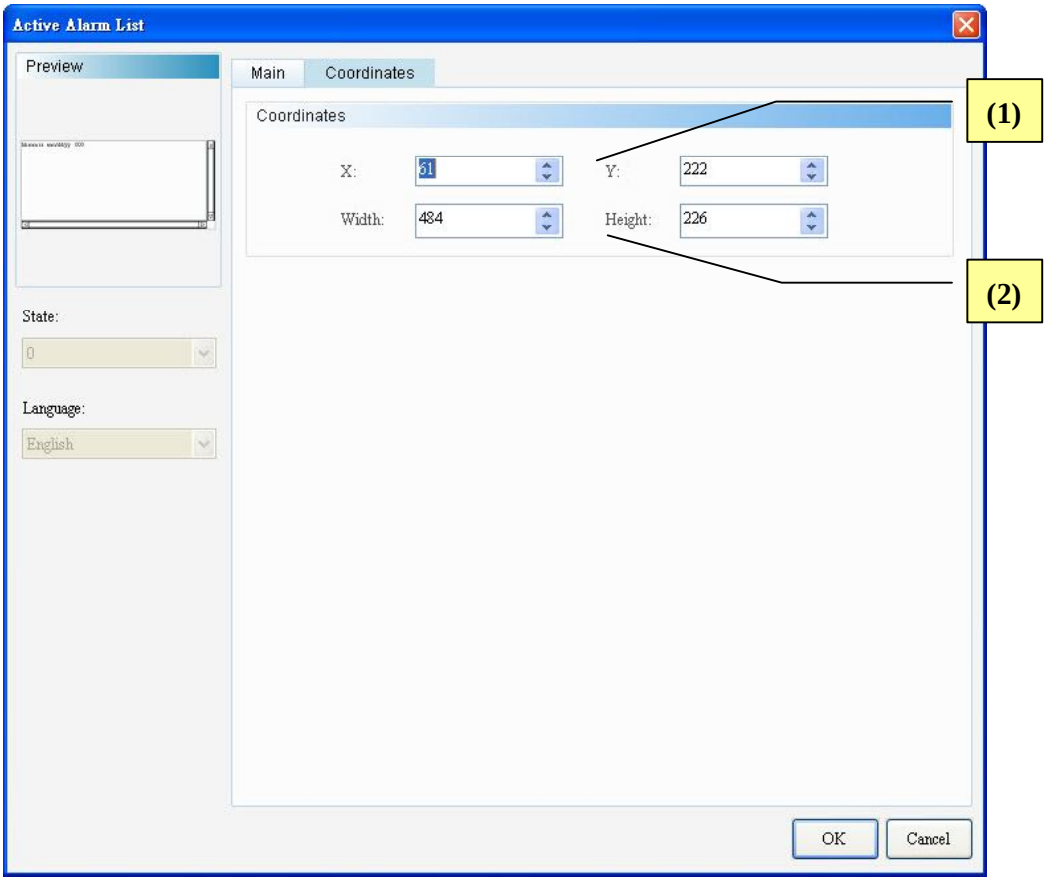



Fig. 16-3-3 Active Alarm List Position property page

| No. | Item | Function |
|---|---|---|
| **(1)** | X Value, Y Value | ➢ The X and Y coordinates at the upper left corner of the element. |
| **(2)** | Width, Height | ➢ The width and height of the element. |

## 16-4 Alarm Frequency Table

| | |
|---|---|
| | Alarm Frequency Table |

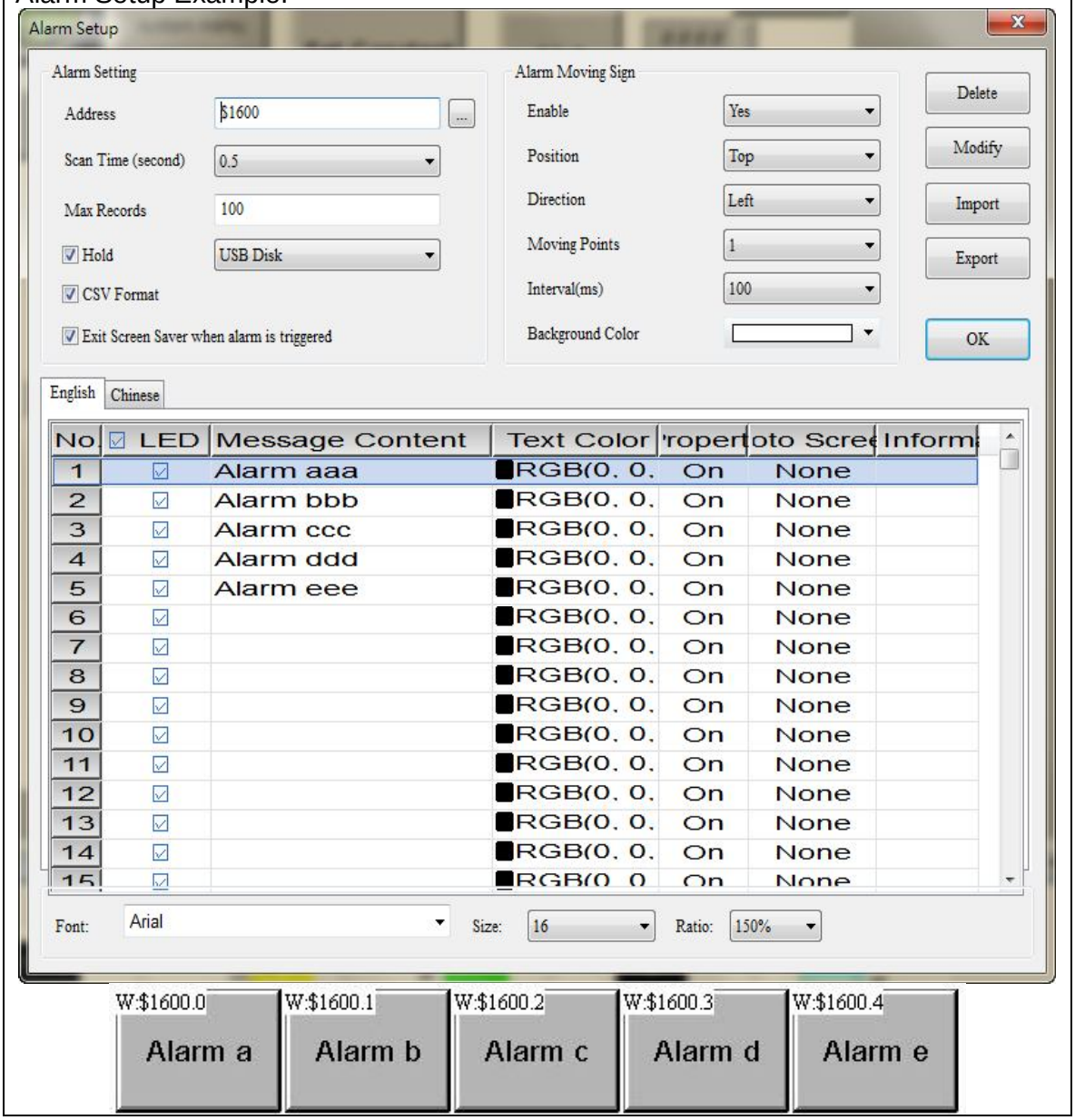
The Alarm Frequency Table element is sued to record and display the occurrence times of each alarm.

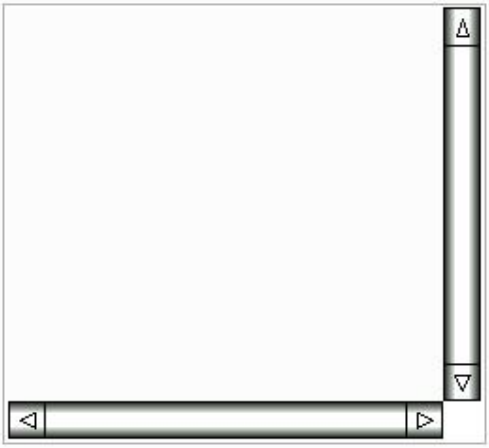
Refer to the Alarm Frequency Table example in Table 16-4-1.

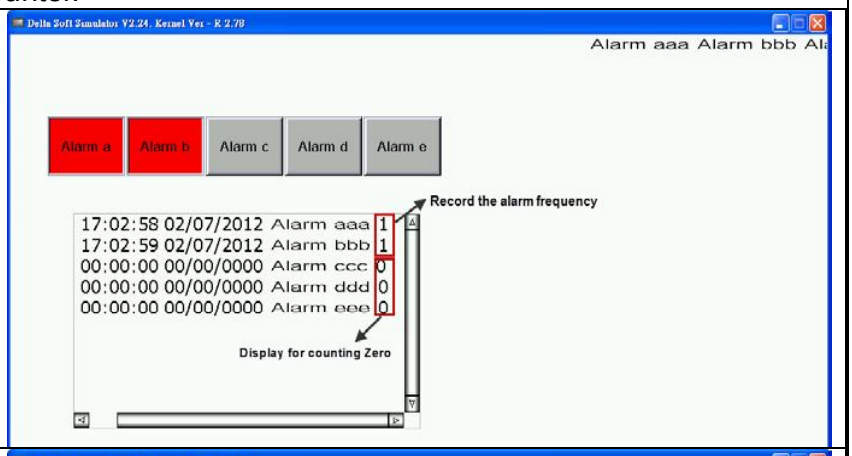
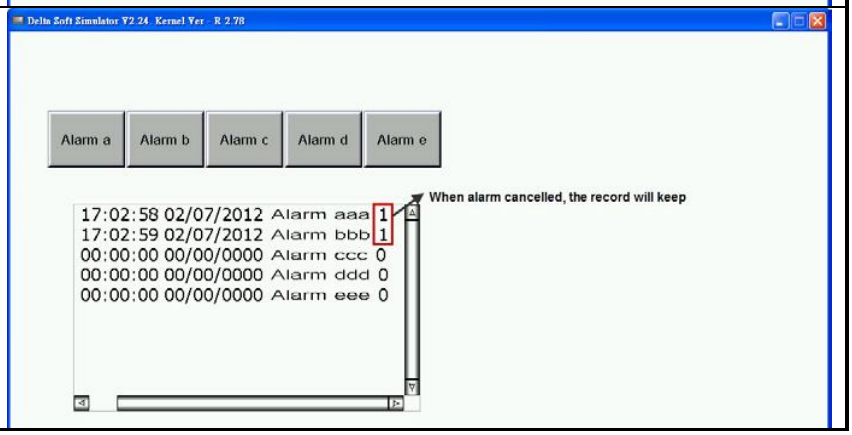
**History Frequency List Example**

Table 16-4-1 Alarm Frequency Table Example

This example is described with reference to the alarm parameters in Table 16-1-3 Alarm Setup Example.



| **History Frequency List Example**<br>Table 16-4-1 Alarm Frequency Table Example | |
|---|---|
| Add Alarm Frequency Table Element | ➢ Step 1: Create the Alarm Frequency Table element.<br>  <br>➢ Step 2: Check [Time Format] , [Date Format] , [Alarm Number] and [Show 0 for No Alarm] to show the time, date and numbering of the alarm. When [Show 0 for No Alarm] is checked, 0 is displayed on the Alarm Frequency Table when there is no alarm triggered. Otherwise, no message is displayed when the occurrence time of the alarm is zero.<br> |

| History Frequency List Example<br>Table 16-4-1 Alarm Frequency Table Example | | |
|---|---|---|
| Execution Results | ➢ After creation of the Alarm Frequency Table, perform the compilation and download the element to HMI. When Alarm 1 and Alarm 2 are triggered once, the time, date, numbering and occurrence times of the alarm will be recorded on the Alarm Frequency Table. When the alarm is released, the record on the Alarm Frequency Table will not be cleared unless the alarm counter Bit of the general control flag in the control area is used to trigger the alarm ON to clear the record in the counter. | |
| | **Alarm ON** |  |
| | **Alarm OFF** |  |

Double click the Alarm Frequency Table icon and the following property setting screen appears.

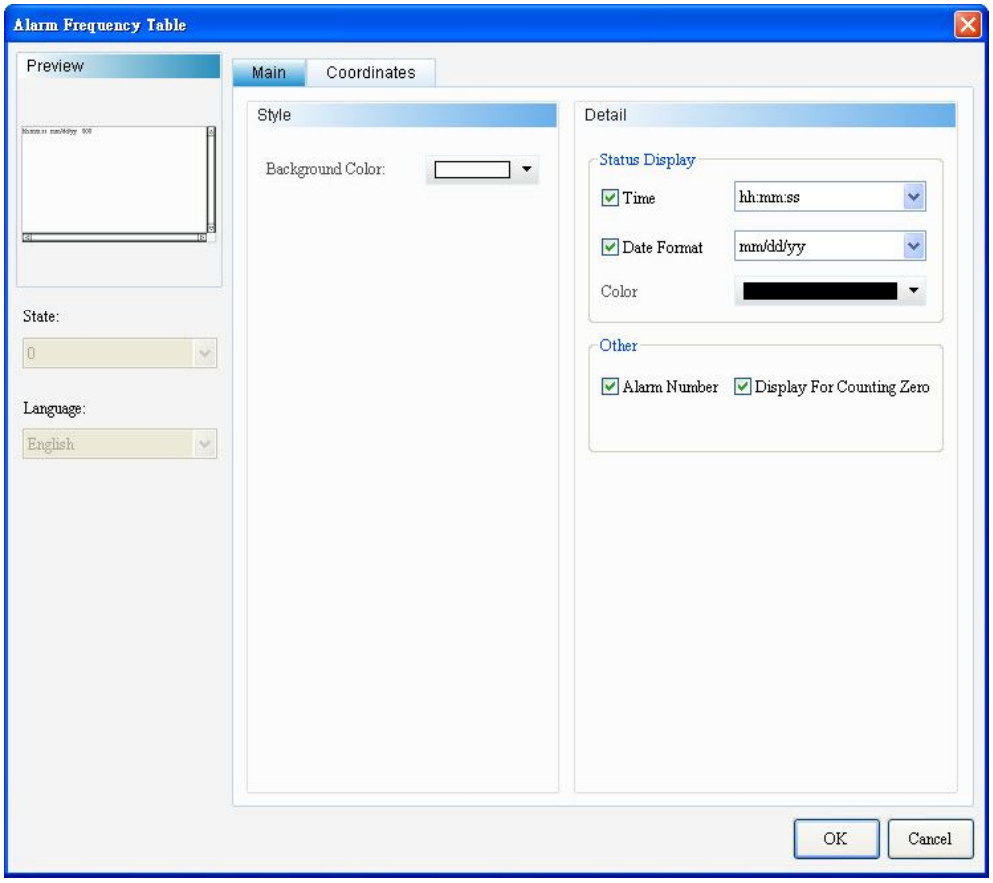



Fig. 16-4-1 Alarm Frequency Table property setting screen

| Alarm Frequency Table | |
|---|---|
| **Function Page** | **Content Description** |
| Preview | The State and Language are not available to the Alarm Frequency Table. |
| General | Sets the Background Color, time format, date format, display color, alarm number, show 0 for no alarm. |
| Position | Sets the X-Y coordinates, width and height of the element. |

Table 16-4-2 Alarm Frequency Table function page

◆ General

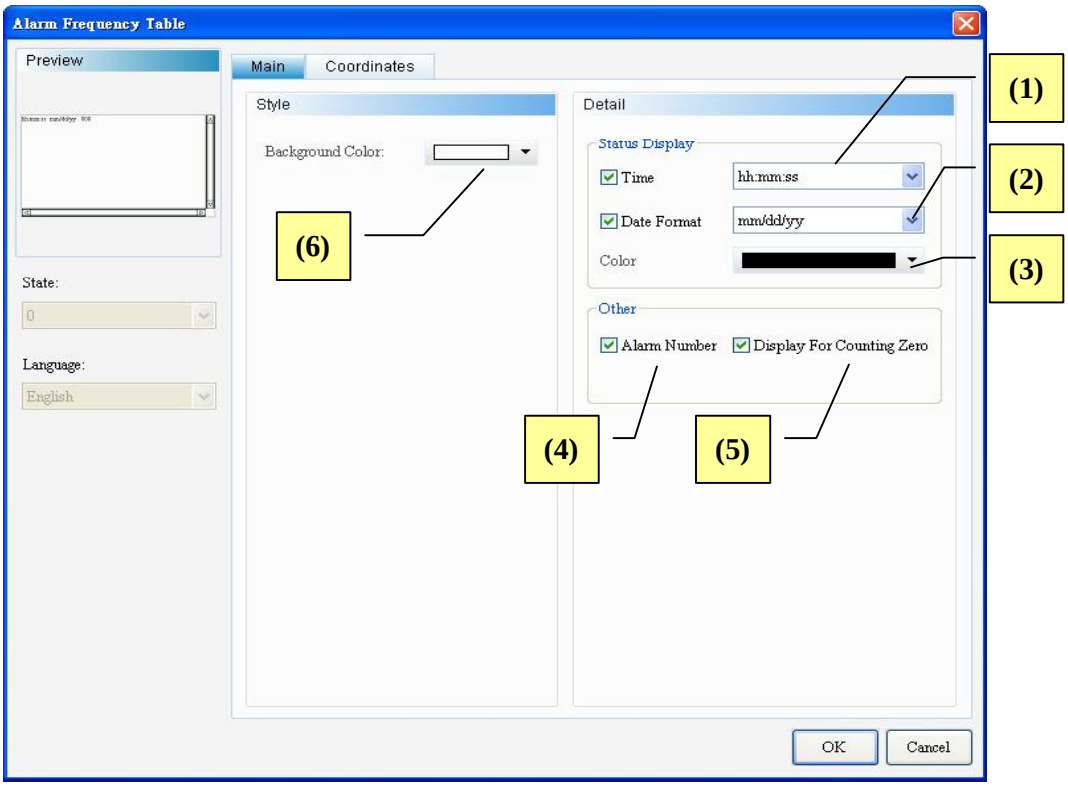
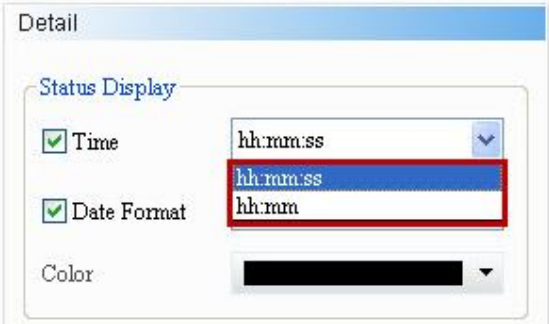
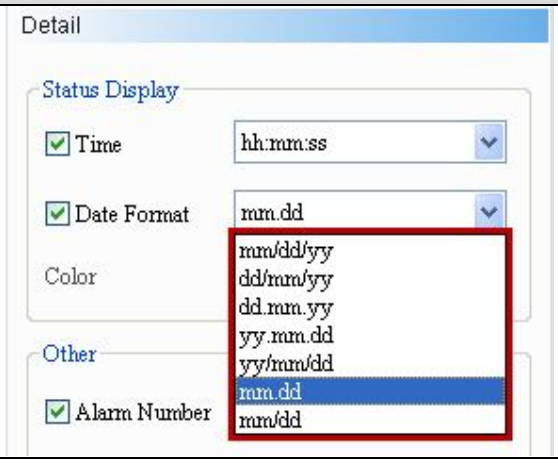
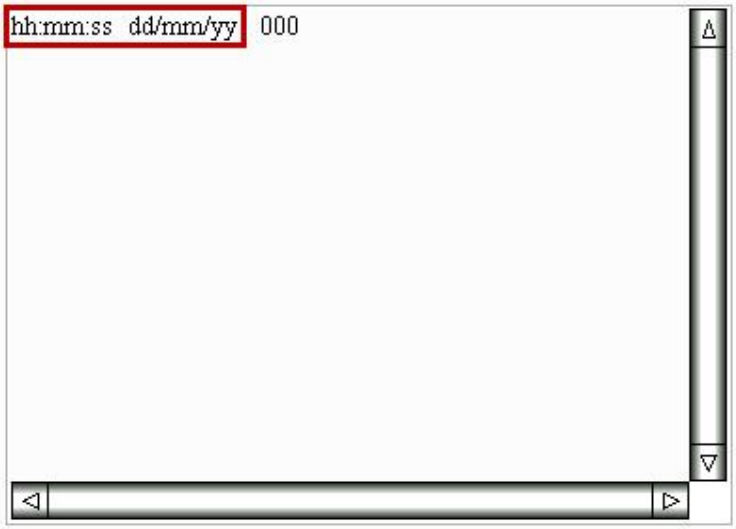
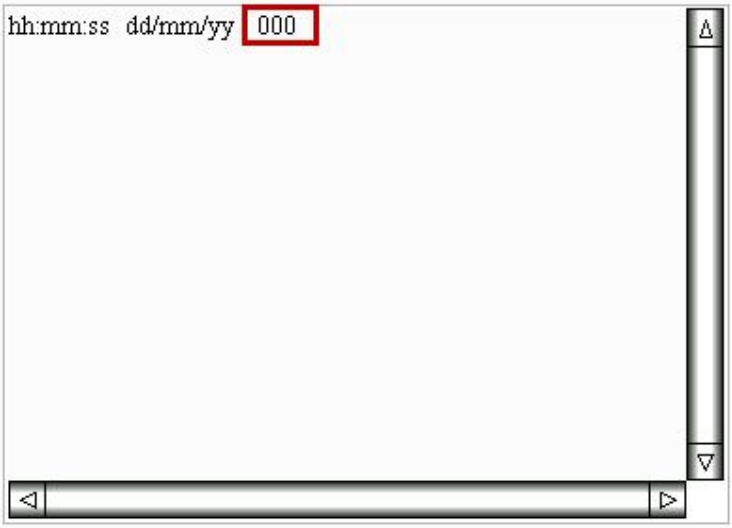
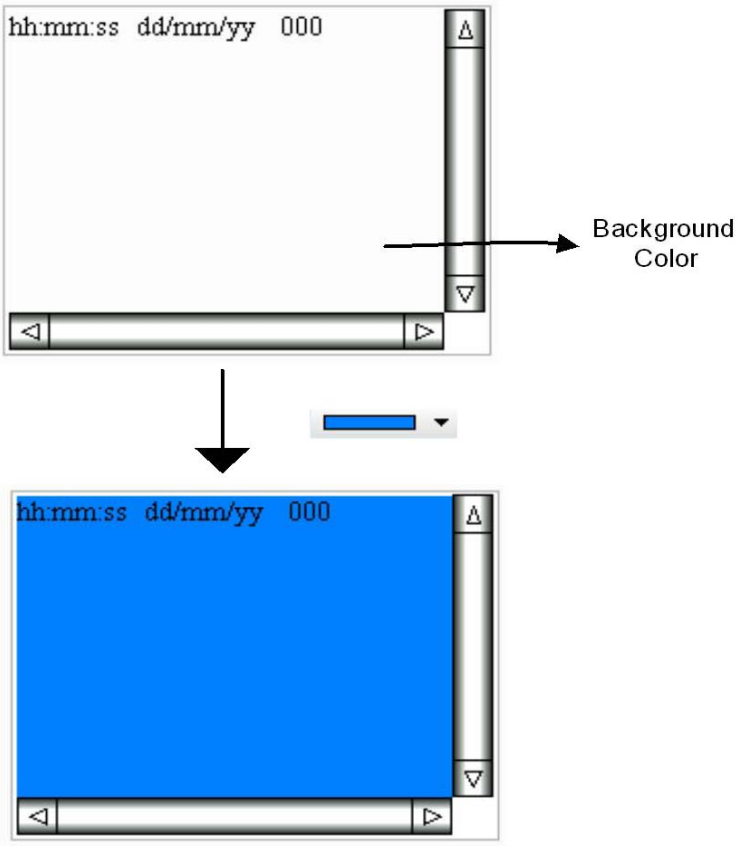



Fig. 16-4-2 Alarm Frequency Table General property page

| No. | Item | Function |
|---|---|---|
| **(1)** | Time Format | ➢ The following two time formats are supported:   |
| **(2)** | Date Format | ➢ The following seven date formats are supported: |

| No. | Item | Function |
|---|---|---|
| | |  |
| **(3)** | Display Color | ➢ The Display Color option is used to change the display color of the time and date. The color is by default.<br>  |
| **(4)** | Alarm Number | ➢ When the Alarm Number is check, the corresponding number will be display when an alarm is triggered. |

<table>
<tr><th>No.</th><th>Item</th><th>Function</th></tr>
<tr><td></td><td></td><td> 
</td></tr>
<tr><td>(5)</td><td>Show 0 for No Alarm</td><td>➢ Check this option to show 0 on the Alarm Frequency Table when no alarm is triggered. Otherwise, no message is displayed when the occurrence time of the alarm is zero.
<table>
<tr><td>Checked</td><td>
</td></tr>
<tr><td>Unchecked</td><td>
</td></tr>
</table></td></tr>
<tr><td>(6)</td><td>Background Color</td><td>➢ The user can set the Background Color for the element.</td></tr>
</table>

| No. | Item | Function |
|---|---|---|
| | |  |

◆ Location

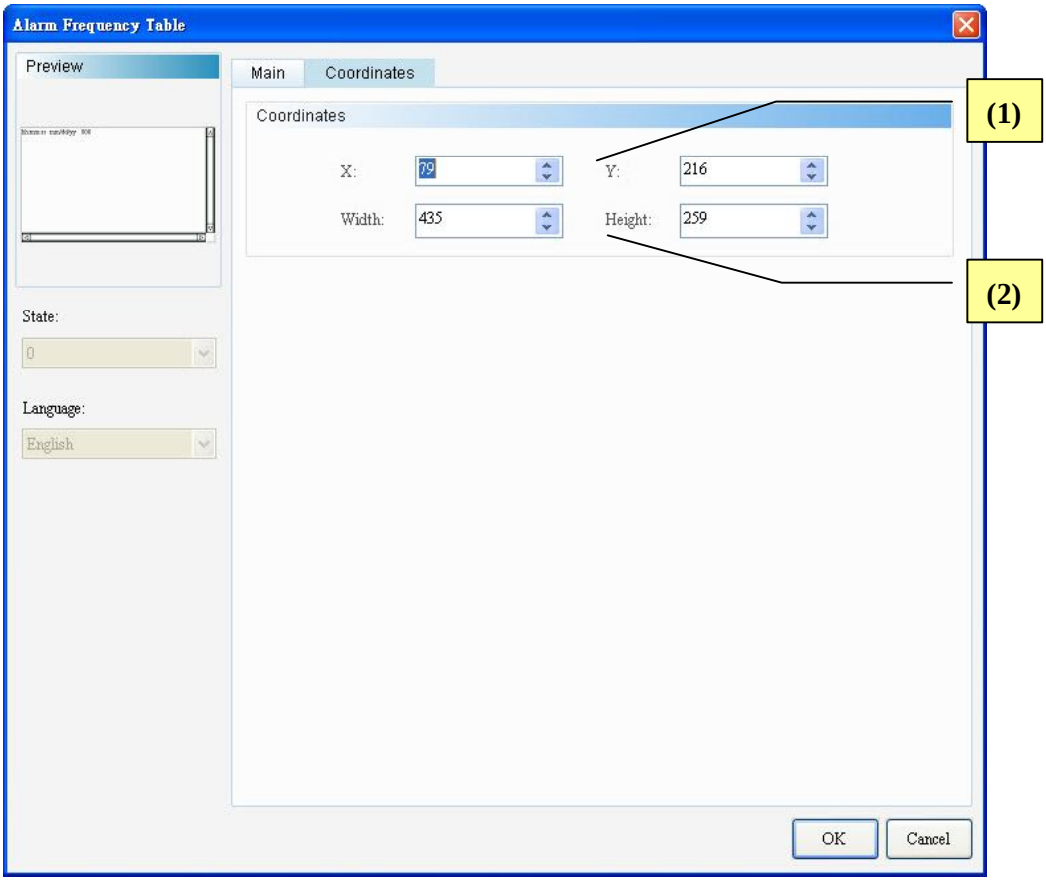



Fig. 16-4-3 Alarm Frequency Table Position property page

| No. | Item | Function |
|---|---|---|
| **(1)** | X value, Y value | ➢ The X and Y coordinate at the upper left corner of the element. |
| **(2)** | Width, Height | ➢ The width and height of the element. |

## 16-5 Alarm Moving Sign

| | |
|---|---|
| | Alarm Moving Sign |

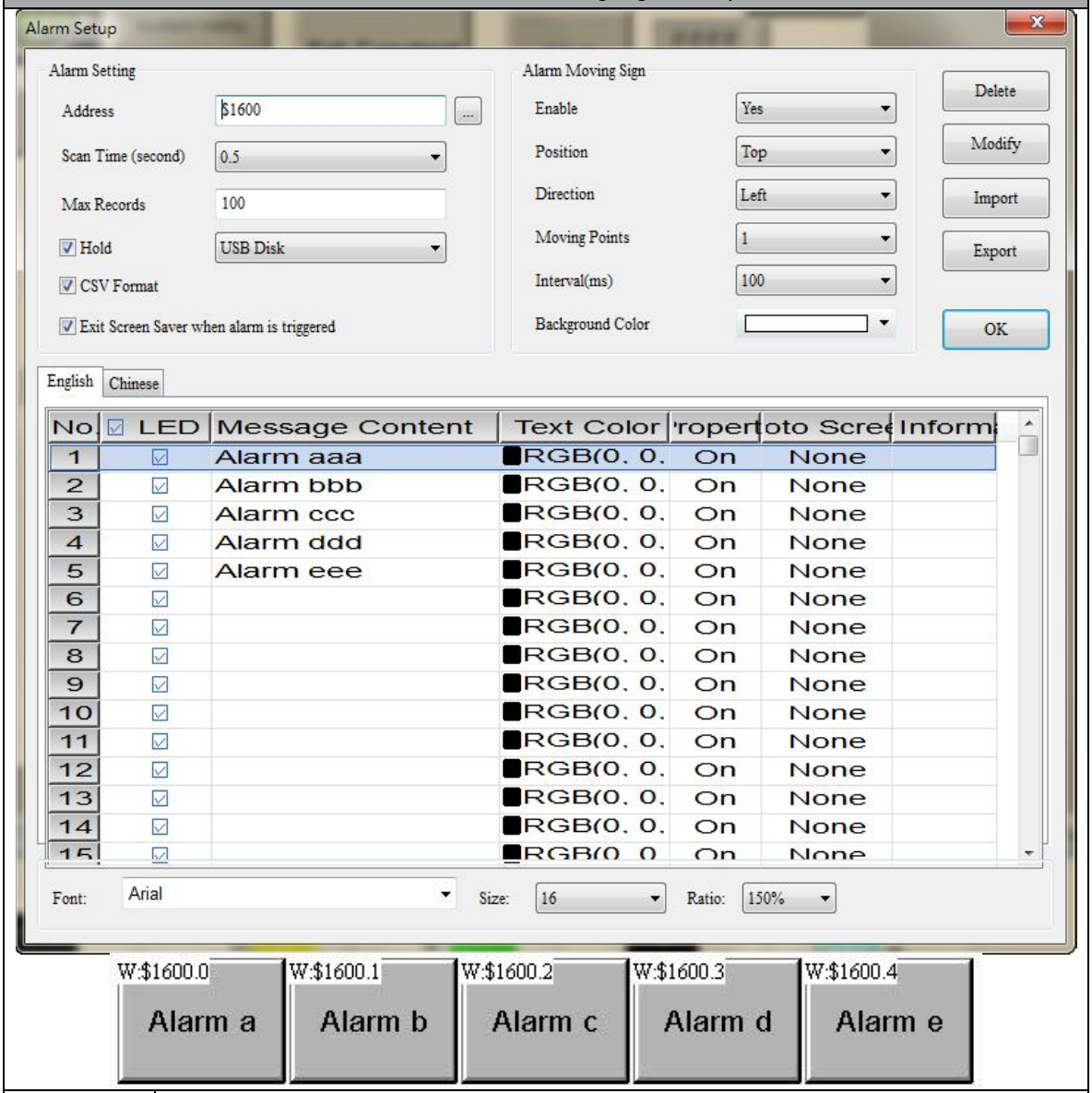
The Alarm Moving Sign element is used to record and display the numbering, time and date of the alarm. The user can define the preferred interval and moving points for the display. The parameter settings of this element are same as the [Options] → [Alarm Setup] Alarm Moving Sign. The user can use this element and the Alarm Moving Sign in the Alarm Setup simultaneously, but the Alarm Moving Sign element will generate a message in the form of a moving sign on the HMI screen regardless of the page it is used for. The settings of both elements are independent and no cross-reference exists in between.

Refer to the Alarm Moving Sign example in Table 16-5-1.

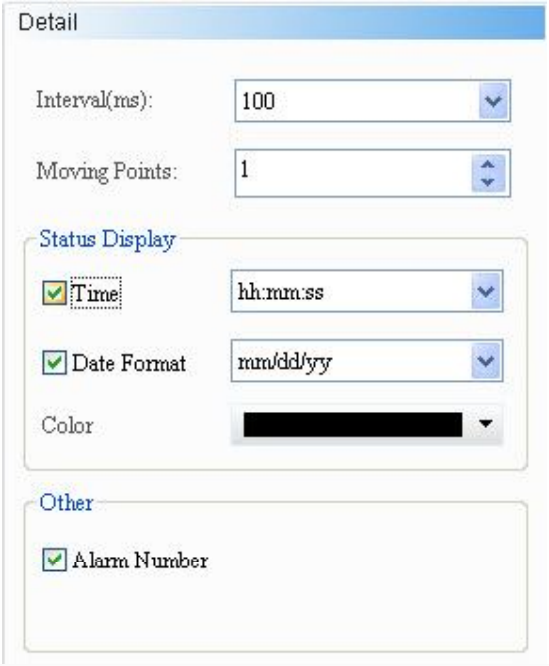
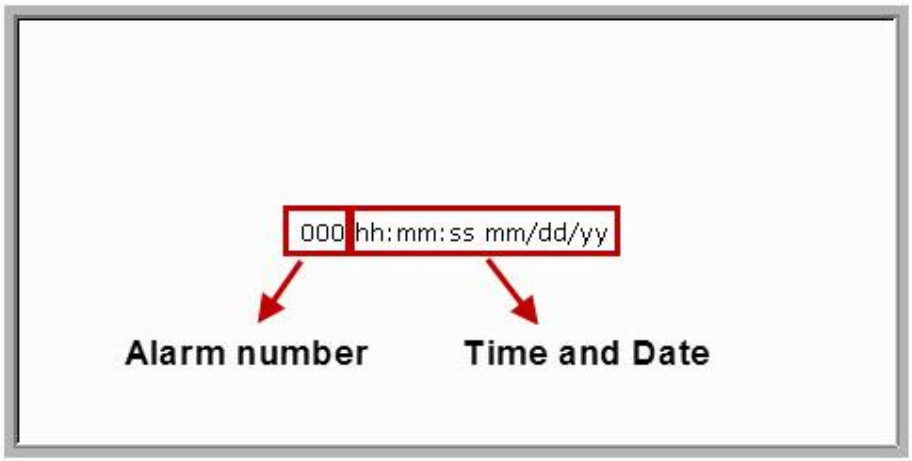
| Alarm Moving Sign Example<br>Table 16-5-1 Alarm Moving Sign Example |
|---|
| This example is described with reference to the alarm parameters in Table 16-1-3 Alarm Setup Example. |

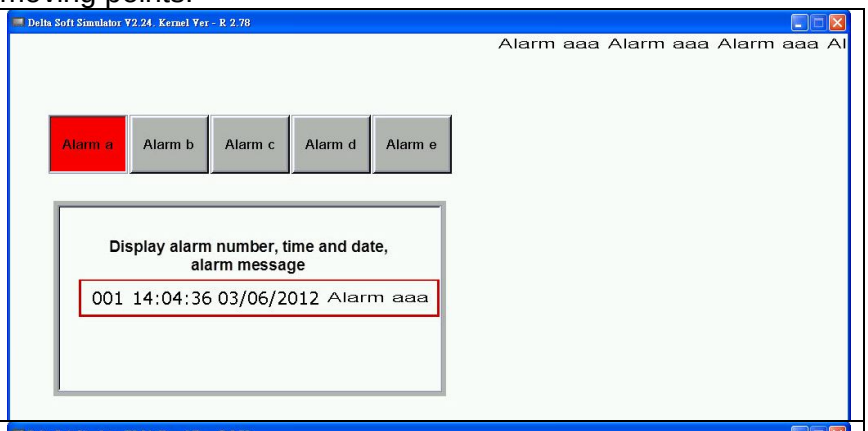
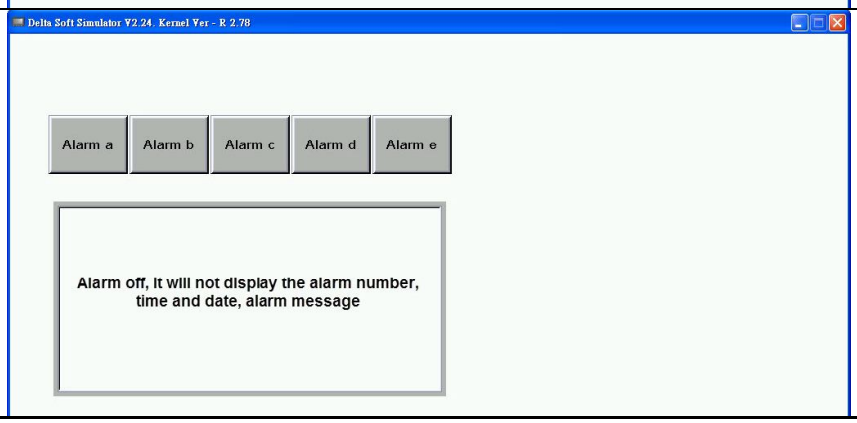
## Alarm Moving Sign Example

Table 16-5-1 Alarm Moving Sign Example




| | |
|---|---|
| Add Alarm Moving Sign Element | ➢ Step 1: Create the Alarm Moving Sign element.<br> <br>➢ Step 2: Check [Time Format] , [Date Format] and [Alarm number] , and set [Time Interval] and [Moving Points] . This element is used to display the numbering, time and date of the alarm. The user can |

| Alarm Moving Sign Example<br>Table 16-5-1 Alarm Moving Sign Example | |
|---|---|
| | define the preferred interval and moving points for the display.<br>  <br><br>  <br> |

| Alarm Moving Sign Example<br>Table 16-5-1 Alarm Moving Sign Example | | |
|---|---|---|
| Execution results | ➢ After creation of the Alarm Moving Sign element, perform the compilation and download the element to HMI. When Alarm 1 is triggered, the Alarm Moving Sign element will display the time, date and number of the alarm triggered according to the preset interval and moving points. | |
| | **Alarm ON** |  |
| | **Alarm OFF** |  |

Double click the Alarm Moving Sign icon and the following property setting screen appears.

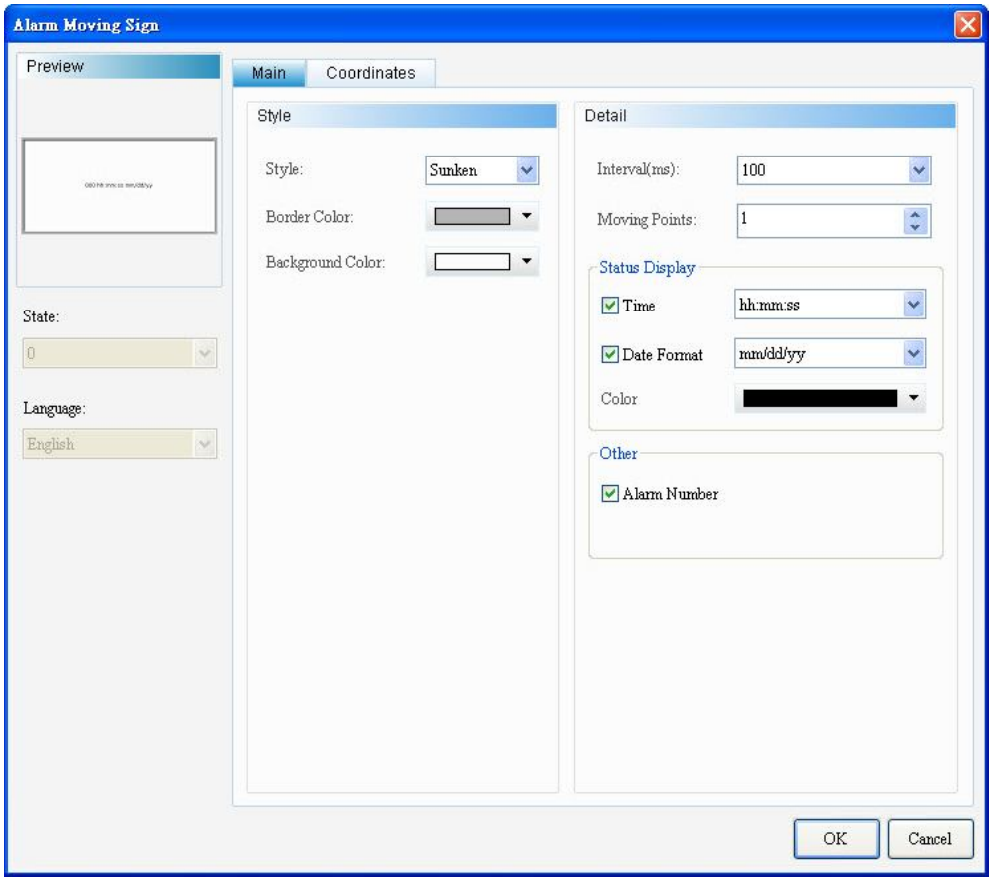



Fig. 16-5-1 Alarm Moving Sign property setting screen

| Alarm Moving Sign | |
|---|---|
| **Function Page** | **Content Description** |
| Preview | The State and Language are not available to the Alarm Moving Sign. |
| General | Sets the style, border color, Background Color, interval time (ms), moving points, time format, date format, display color, alarm number. |
| Position | Sets the X-Y coordinates, width and height of the element |

Table 16-5-2 Alarm Moving Sign function page

◆ General

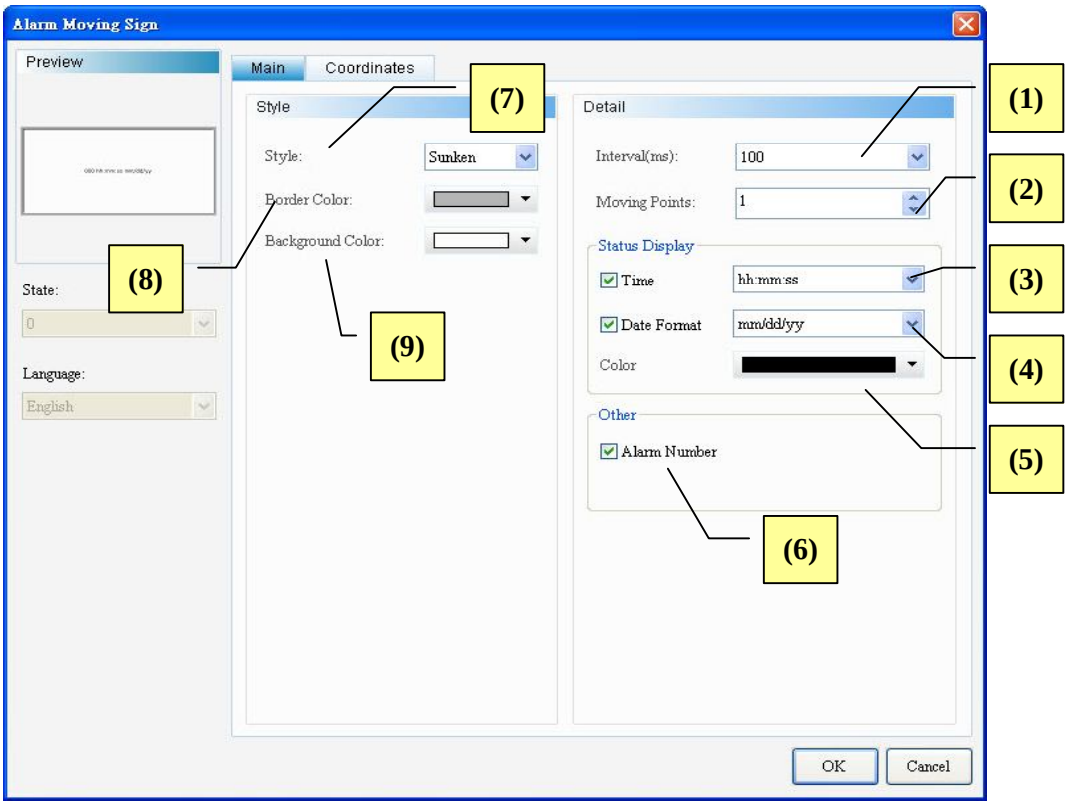
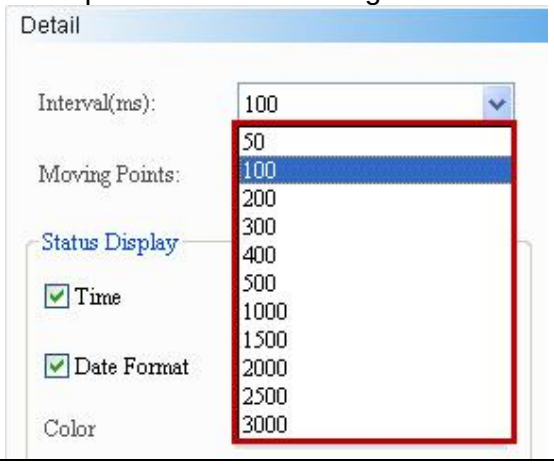
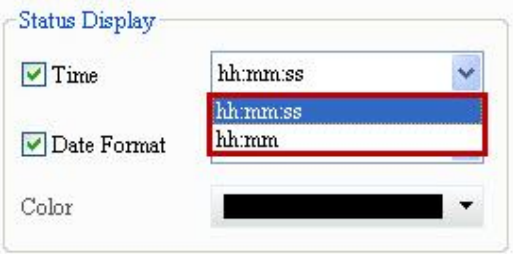
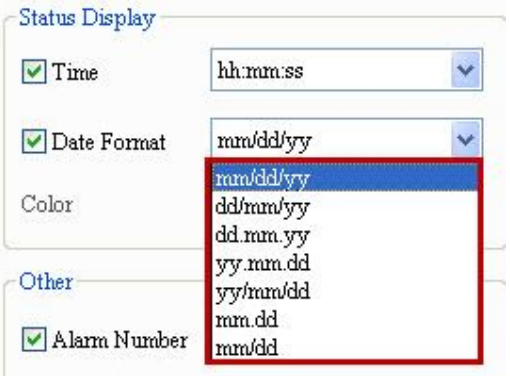
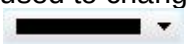
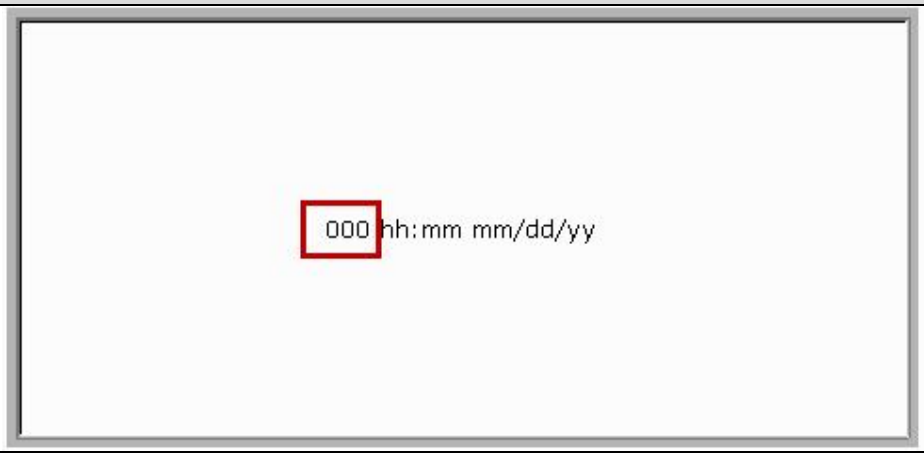
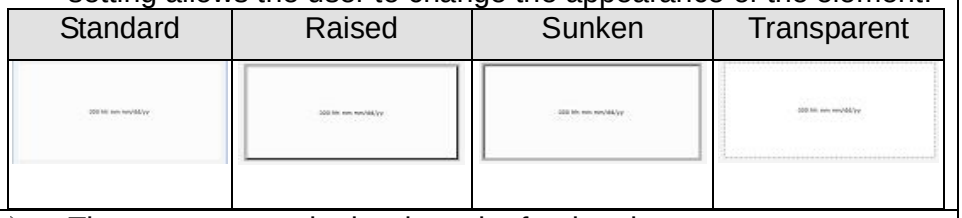
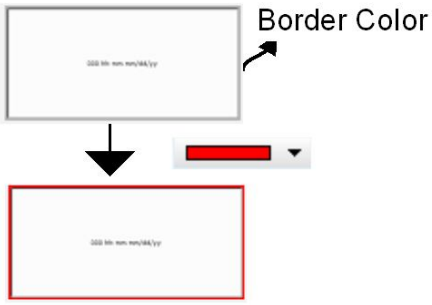
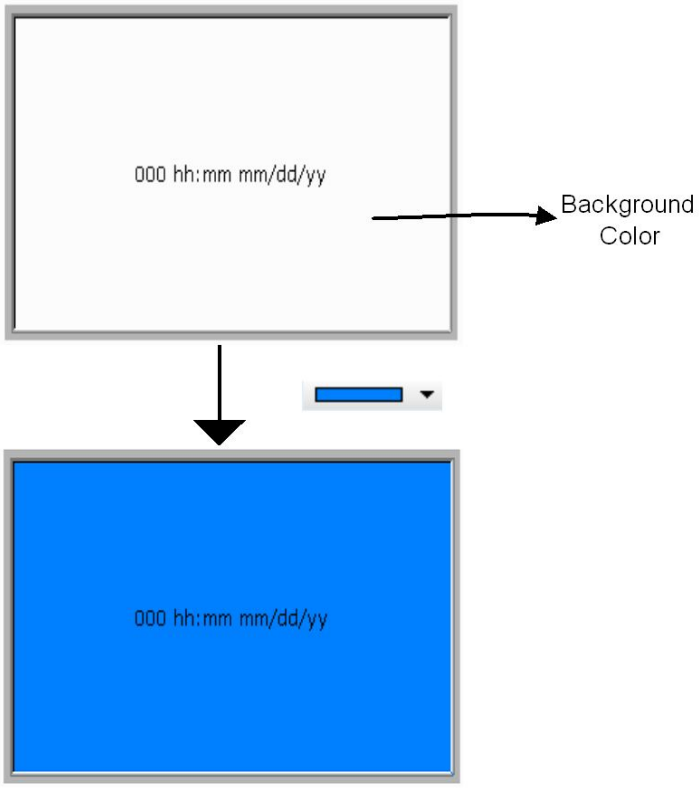



Fig. 16-5-2 Alarm Moving Sign General property page

| No. | Item | Function |
|---|---|---|
| (1) | Interval Time (ms) | ➢ The Interval defines the time (ms) between two message movements of the Alarm Moving Sign. The moving distance is set up based on the setting of the Moving Points. The moving distance is set up based on the setting of the Moving Points.   |
| (2) | Moving Points | ➢ The higher the moving points, the more the distance to which the text moves. The setting range is 1~50 with Pixel as the unit. |

| No. | Item | Function |
|---|---|---|
| **(3)** | Time Format | ➢ The following two time formats are supported:   |
| **(4)** | Date Format | ➢ The following seven date formats are supported:   |
| **(5)** | Display Color | ➢ The Display Color option is used to change the display color of the time and date. The color is  by default. |
| **(6)** | Alarm Number | ➢ When the Alarm Number is check, the corresponding number will be display when an alarm is triggered. |

| No. | Item | Function |
|---|---|---|
| | |  |
| **(7)** | Style | ➢ The style is Standard, Raised, Sunken or Transparent. This setting allows the user to change the appearance of the element.<br>  <br>Standard / Raised / Sunken / Transparent |
| **(8)** | Border Color | ➢ The user can set the border color for the element.<br>➢ When Transparent is selected as the style, the setting of the border color is disabled.<br>  |
| **(9)** | Background Color | ➢ The user can set the Background Color for the element. |

| No. | Item | Function |
|---|---|---|
| | |  |

◆ Location

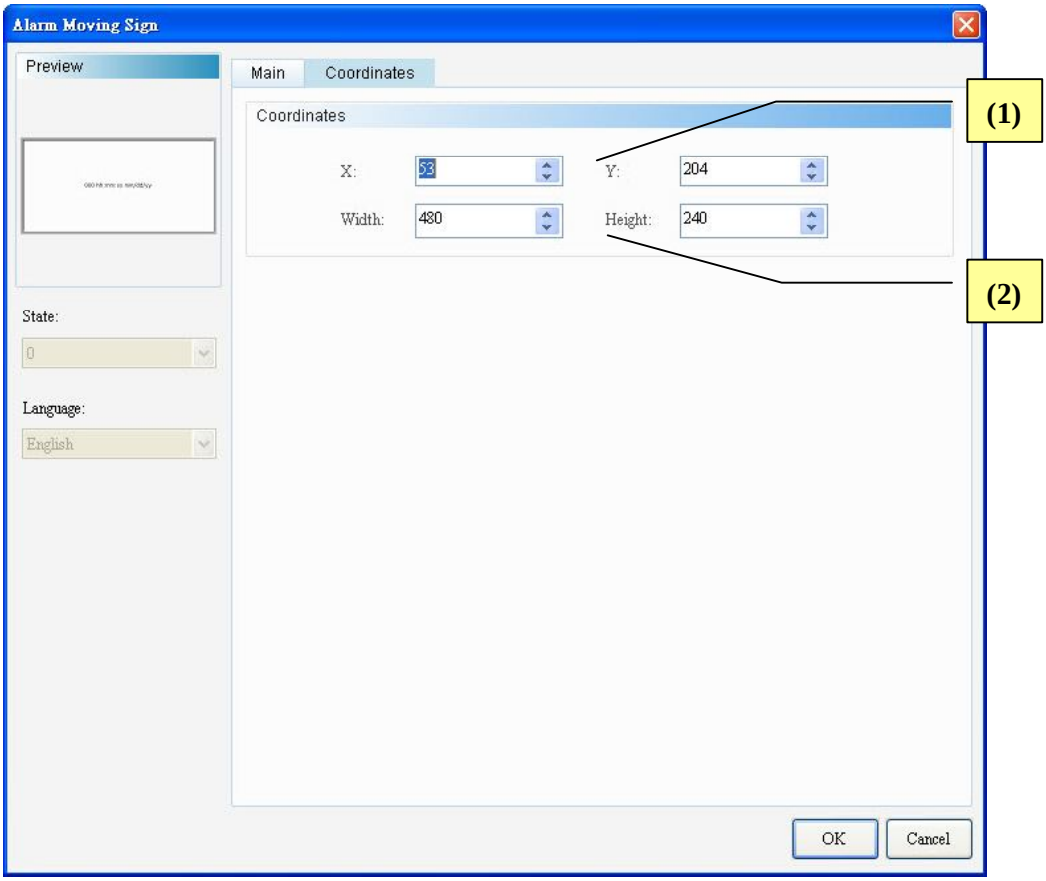



Fig. 16-5-3 Alarm Moving Sign Position property page

| No. | Item | Function |
|---|---|---|
| **(1)** | X Value, Y Value | ➢ The X and Y coordinate at the left corner of the element. |
| **(2)** | Width, Height | ➢ The width and height of the element. |