Chapter 7 Event Log

“Event log” is used to define the content of an event and the conditions triggering it. In EB8000, this triggered event, also called “alarm”, and its processing procedure can be saved to designated places such as HMI memory storage or external memory device. The saved file is with a name in a format as EL yyyymmdd.evt. In this name, yyyymmdd records the time that this file is built, and will be set automatically by the system. Take file name EL_20100524.evt as an example, this shows that this created file records the event occurred on 24th of May, 2010.

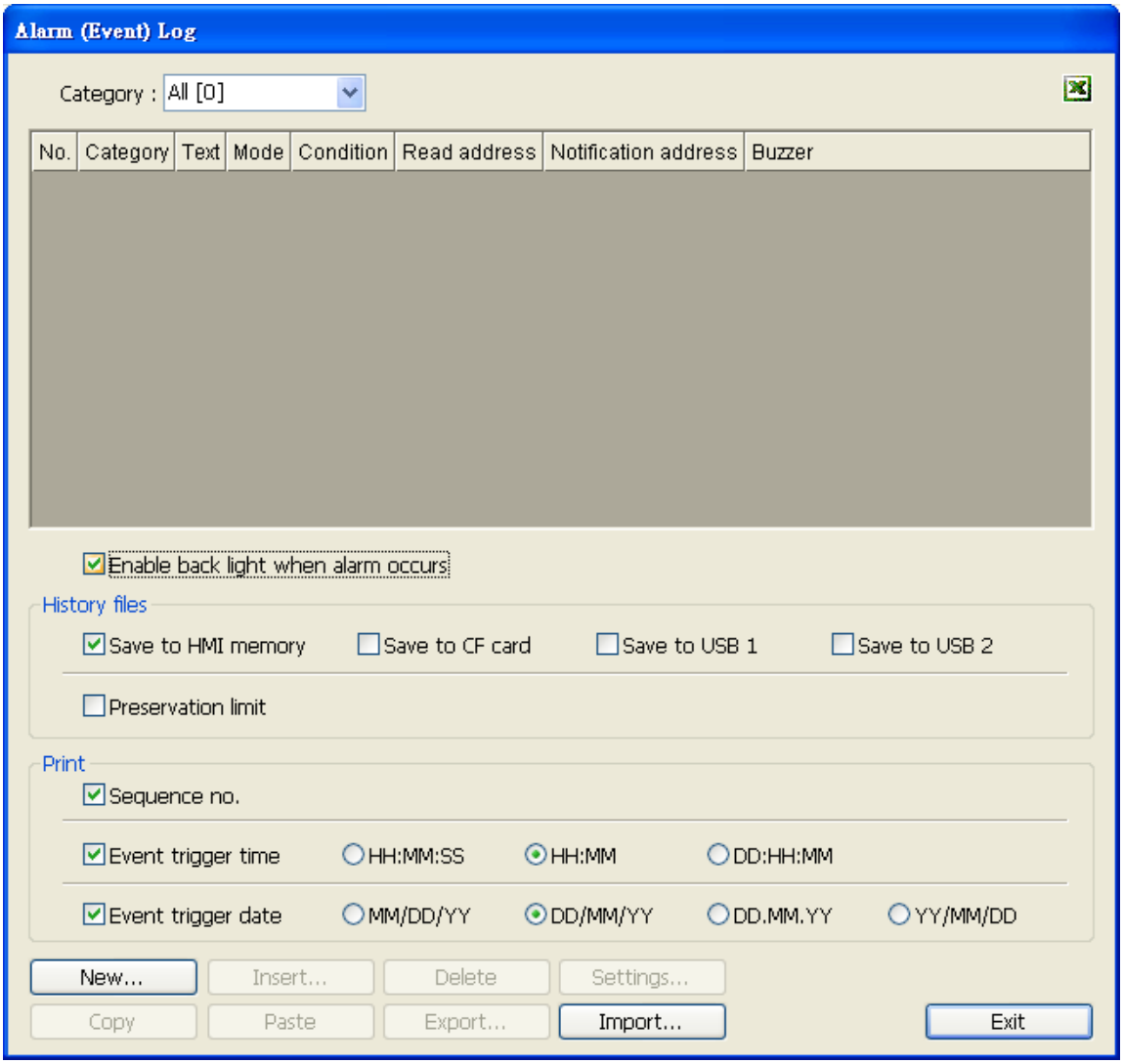
EB8000 also provides the following system address tags to manage the event log:

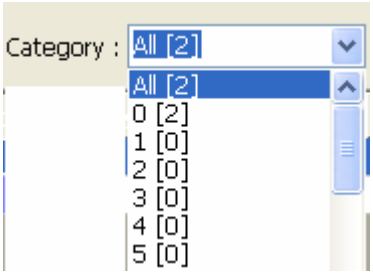
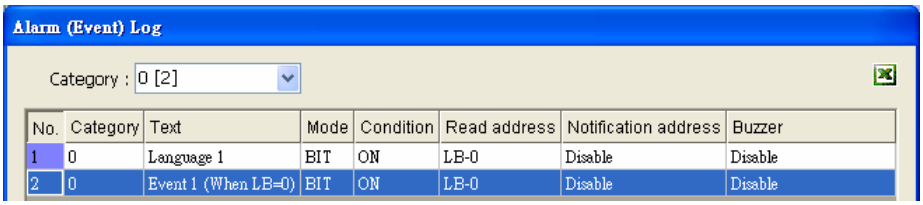
[LB-9021] reset current event log (set ON)
[LB-9022] delete the earliest event log file (set ON)
[LB-9023] delete all event log files (set ON)
[LB-9024] refresh event log information (set ON)
[LW-9060] no. of event log files
[LW-9061] size of event log files

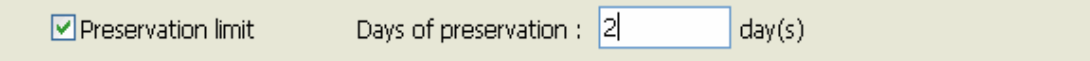
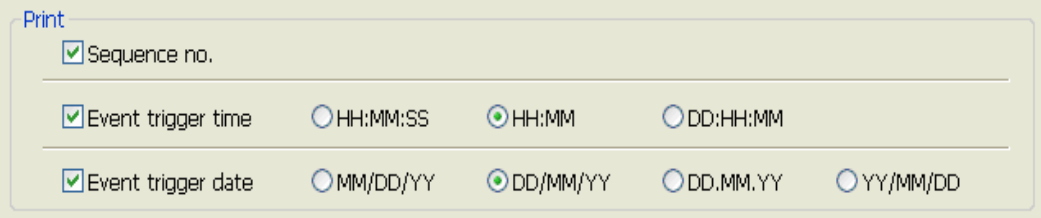
7.1 Event Log Management

With objects like [Alarm Bar], [Alarm Display] and [Event Display], users are able to clearly understand the life cycle of the whole event from happening, waiting for processing, until the alarm stops. Before using these objects, the content of an event has to be defined first.

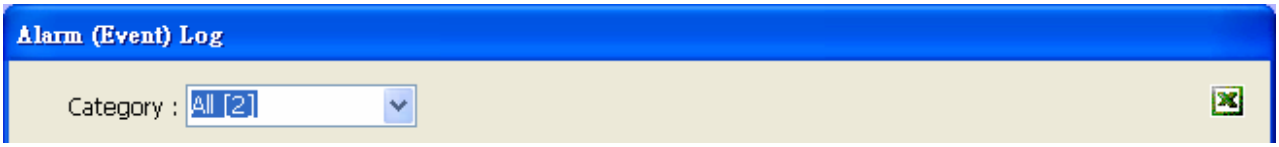
Click the **[Alarm (Event Log)]** icon, and the dialog appears as below:



Setting	Description
Category	EB8000 classifies events. All events are divided into categories 0~255. [Alarm Bar], [Alarm Display], and [Event Display] can be used to restrain which category to display. [Category] is for selecting which category of the events to be displayed.  The [2] of 0[2] in this illustration demonstrates there are two defined events in category 0. 
History files	Determine the storage device of an event log. However, when users simulate the project in PC, the files will be saved under the same event log subdirectory as EasyBuilder8000.exe. **[Save to HMI memory]** Save the event log data in MT8000 memory. **[Save to SD card]** Save the event log data in SD card. **[Save to USB 1]** Save the event log data in USB disk 1. Numbering rule of USB disk is: the disk inserted to the USB interface in the first place is numbered 1, next is numbered 2 and the last is numbered 3. It is not related to the interface position. **[Save to USB 2]** Save the event log data in USB disk 2. **[Preservation limit]** After choosing the device to save the Event log, users can see the

	[Preservation limit] selection. This setting determines how many days the data to be preserved. For example, the preservation time is set two days, which means HMI memory will keep the data of yesterday and the day before yesterday. Data that is not built in this period will be deleted automatically to prevent the storage space from running out. 
Print	To enable this setting, users have to finish the settings of printer in **[system parameter settings].** 

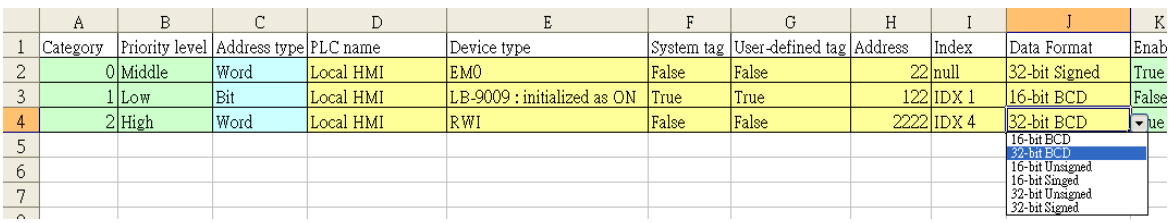
7.1.1 Excel Editing



There is an Excel icon in the top-right corner of the **[Alarm (Event Log) dialog]** for users to edit an Event log through Excel. An editing procedure includes: Edit in Excel, Import from Excel to Event Log and Export to Excel.

A. Edit in Excel

EB8000 provides a standardized sample of Excel in C:\EB8000\EventLogExample.xls for users to edit alarm (event) log. The sample includes some dropdown lists for an easier usage



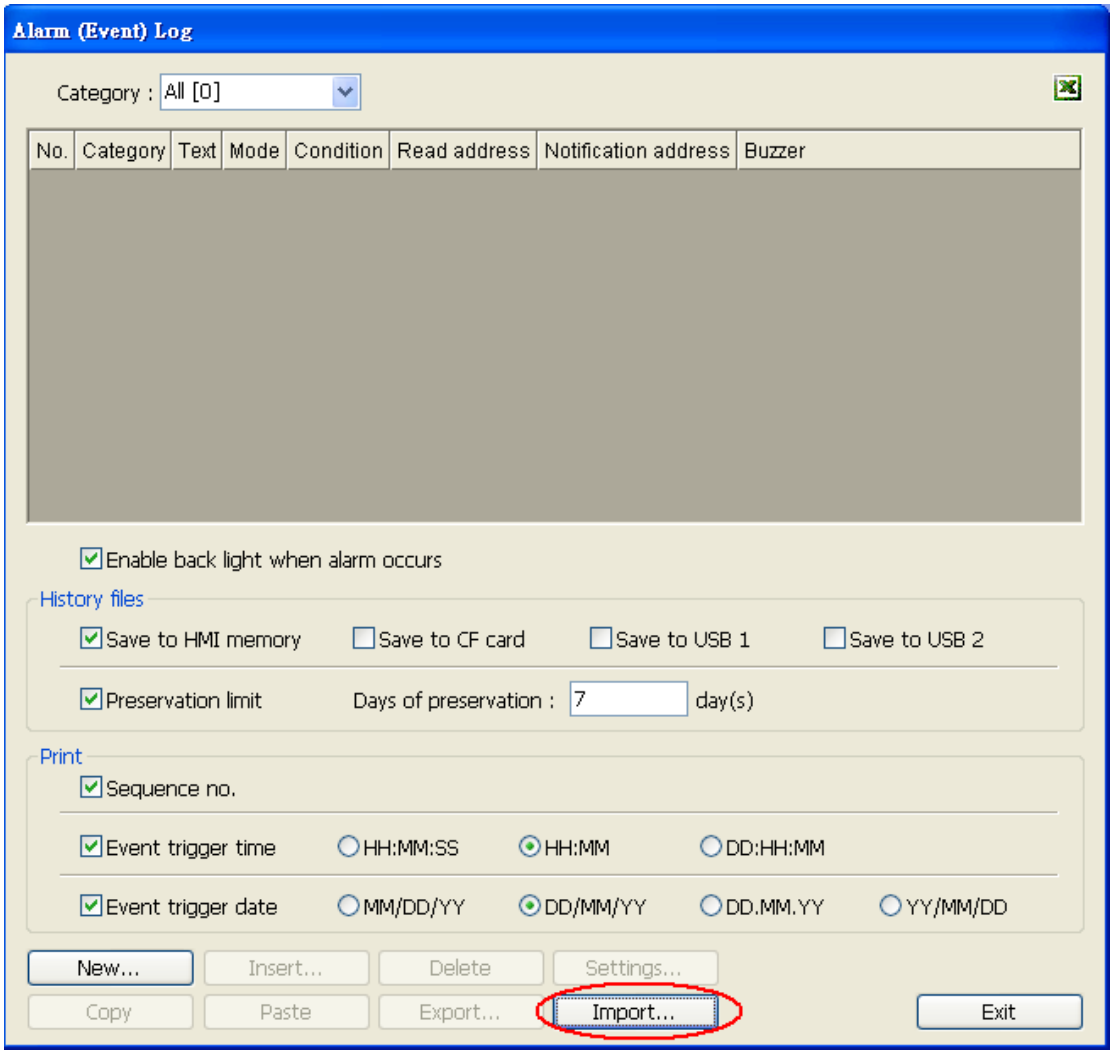
	A	B	C	D	E	F	G	H	I	J	K
1	Category	Priority level	Address type	PLC name	Device type	System tag	User-defined tag	Address	Index	Data Format	Enab
2	0	Middle	Word	Local HMI	EM0	False	False	22	null	32-bit Signed	True
3	1	Low	Bit	Local HMI	LB-9009 : initialized as ON	True	True	122	IDX 1	16-bit BCD	False
4	2	High	Word	Local HMI	RWI	False	False	2222	IDX 4	32-bit BCD	ue
5										16-bit BCD	
6										32-bit BCD	
7										16-bit Unsigned	
										16-bit Singed	
										32-bit Unsigned	
										32-bit Signed	

Caution:

1. **[System tag]** and **[User-defined tag]** can not be set true simultaneously. If both of them are set true, the system will view System tag to be true and User-defined tag to be false. If Device type is set as User-defined tag, please set System tag to be false.
2. The format of Color is R: G: B. the values of R, G, and B should be integer from 0 to 255.
3. Click Excel icon to open EventLogExample.xls

B. Import from Excel to Event log

Click **[Import excel button]** to import Excel file to Event log.

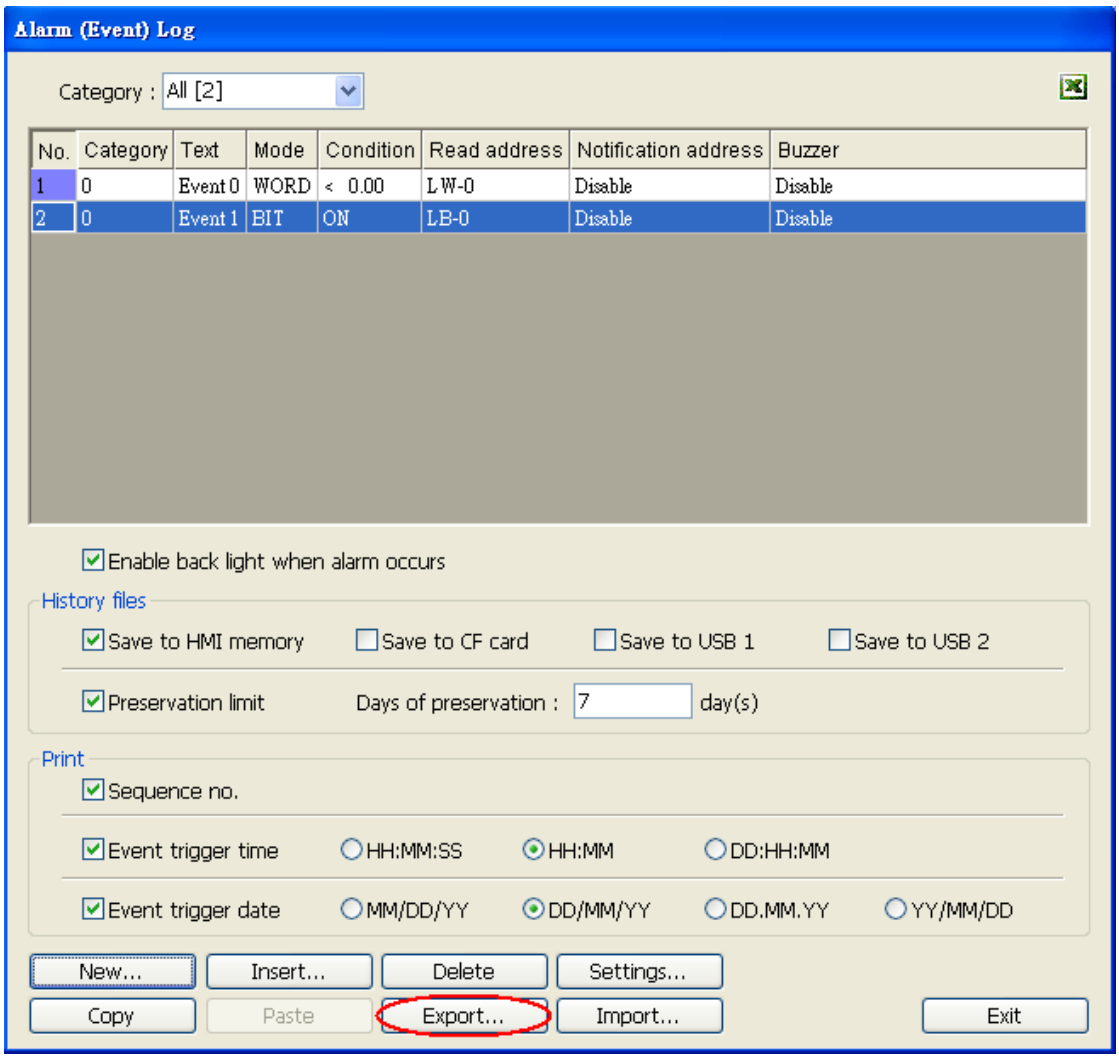


Caution:

1. When user-defined tag is set true in Excel, the system will compare this device type with the user-defined tag in system. If no suitable tag can be found, the system will set the user defined tag in event log to be false.
2. Before importing library (label library and sound library), please make sure library names exist in the system, otherwise the system will simply use the file name of the imported excel file.

C. Export to Excel

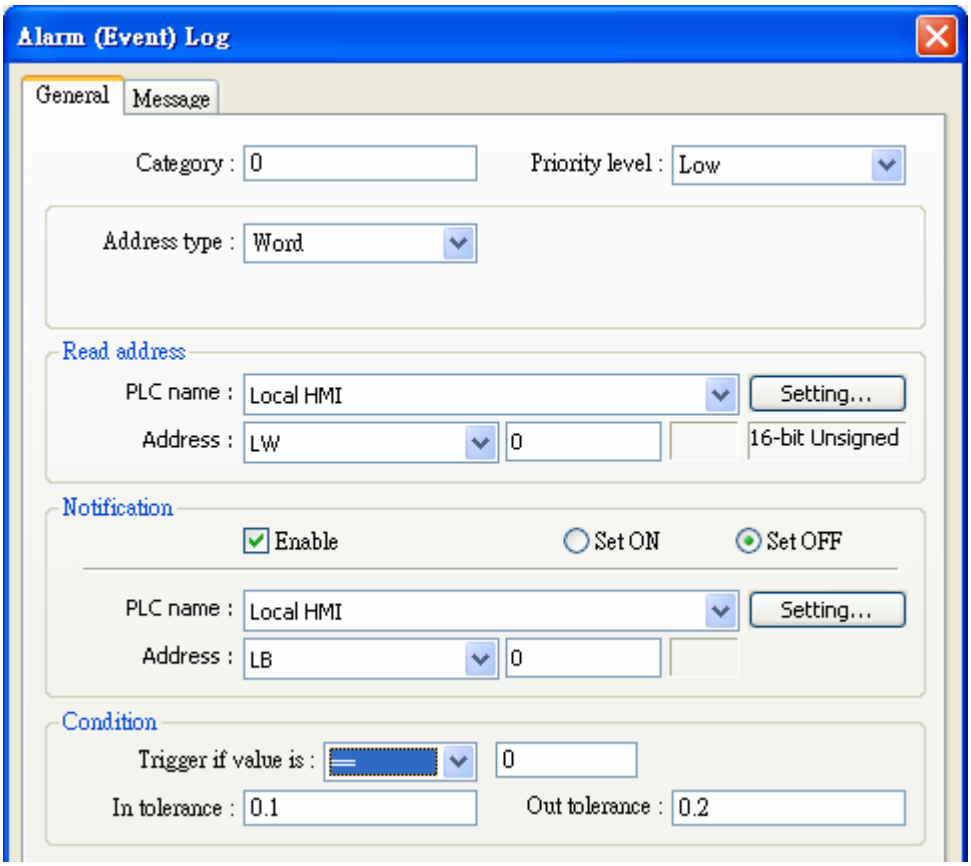
Click **[Export excel button]** to export data in Event log to excel.


Alarm (Event) Log
Category : All [2]
No. Category Text Mode Condition Read address Notification address Buzzer
1 0 Event 0 WORD < 0.00 LW-0 Disable Disable
2 0 Event 1 BIT ON LB-0 Disable Disable
Enable back light when alarm occurs
History files
Save to HMI memory
Save to CF card
Save to USB 1
Save to USB 2
Preservation limit
Days of preservation : 7 day(s)
Print
Sequence no.
Event trigger time
HH:MM:SS
HH:MM
DD:HH:MM
Event trigger date
MM/DD/YY
DD/MM/YY
DD.MM.YY
YY/MM/DD
New...
Insert...
Delete
Settings...
Copy
Paste
Export...
Import...
Exit

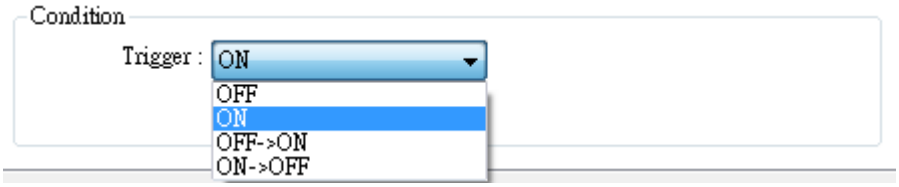
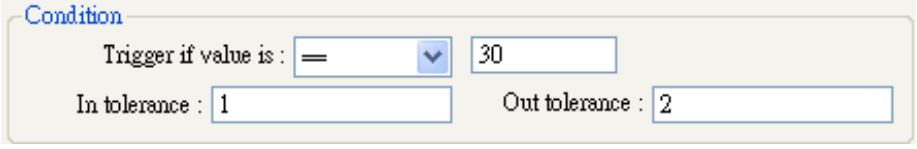
7.2 Create a New Event Log

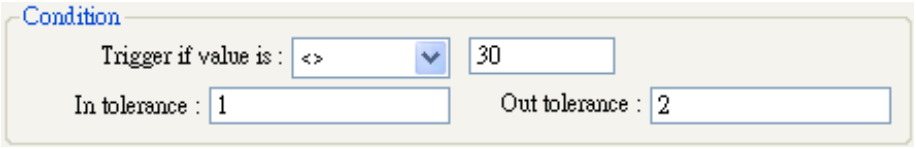
Click **[New…]**; **[Event Log]** dialog appears with two tabs.

[General] tab:

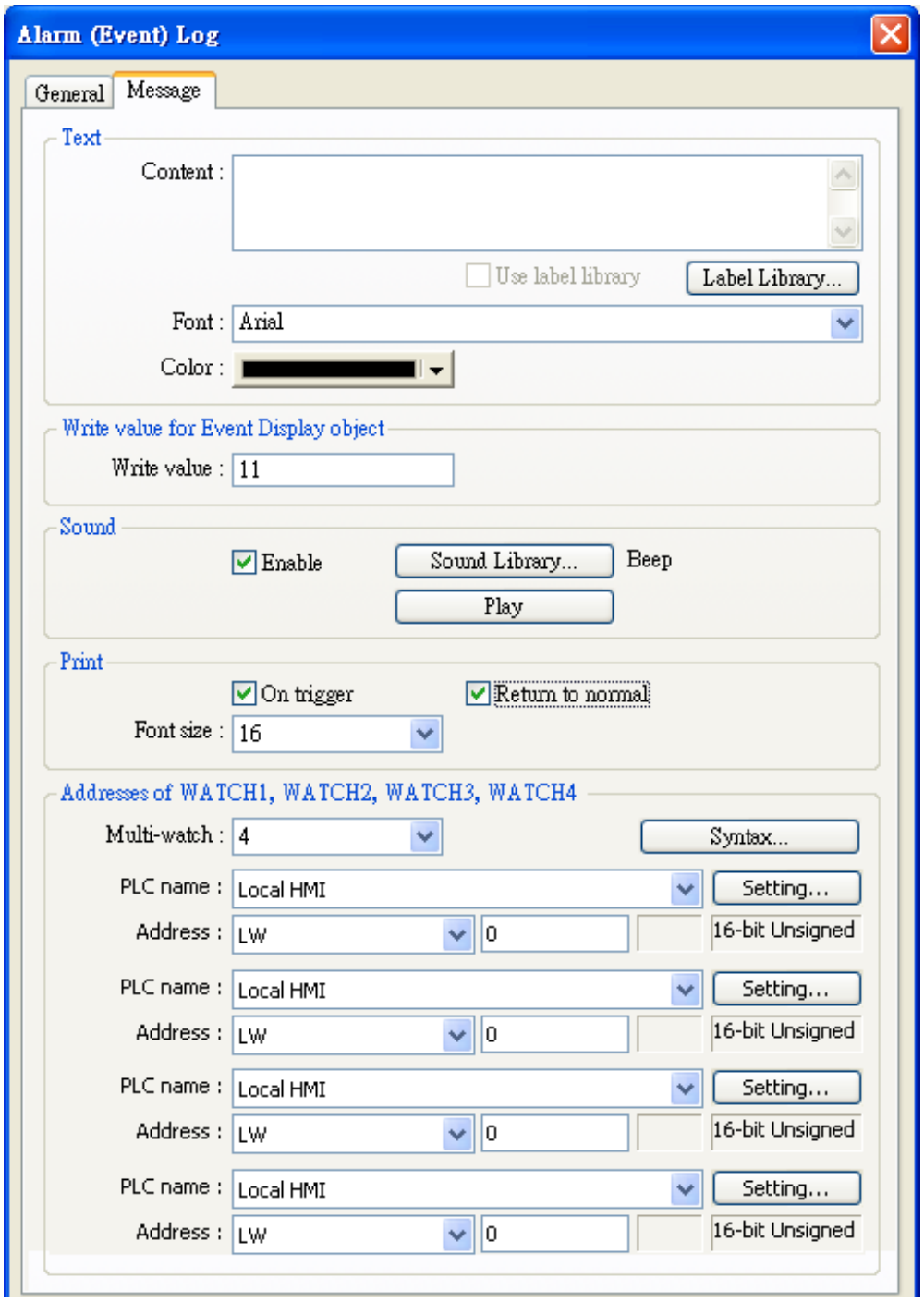


Setting	Description
Category	The category of an event.
Priority level	The priority of an event: Users can define **[Low]**, **[Middle]**, **[High]**, or **[Emergency]** according to the importance of the event. When the number of event log equals to the max number available in the system, the less important events (lower priority) will be deleted and new events will be added in. (the default is 1000, please refer to “General” in “Chapter 5 System Parameters” to set this number)
Address type	The type of address—**[Bit]** or **[Word]** mode.
Read address	By reading the address set here, system obtains a value and will use it to check if an event reaches the condition to be triggered. Please refer to

	"Chapter 9 Object General Properties" for more information.
Notification	When an event is triggered, the specific message is sent out from Notification address. Select **[Set ON]** to send ON message to this address or select **[Set OFF]** to send OFF message to this address. Please refer to "Chapter 9 Object General Properties" for detail.
Condition	The trigger condition of an event. When **[Address type]** of an event is **[Bit],** then **[ON]** or **[OFF]** in **[Trigger]** can be selected. The illustration below shows if Trigger **[ON]** is selected, and the status of [Read address] changes from OFF to ON, an event will be triggered and generate an event log record (or an alarm).  When the **[Address type]** of an event is **[Word]**, several selections are available as follows:  Under the condition, system will read values from [Read address] and compare them with the trigger conditions to decide if an event is to be triggered. If the trigger condition is set as **[==]** or **[<>]**, **[In tolerance]** and **[Out tolerance]** need be set while **[In tolerance]** is used as trigger condition and **[Out tolerance]** is used as system's normal condition. **Example 1:**  The illustration above indicates that if the value of [Read address] is greater or equal to 29(=30-1), or less or equal to 31(=30+1), the event

	will be triggered. 29 <= [Read address] value <=31 After the event is triggered, only when the value of [Read address] is greater than 32(=30+2) or less than 28(=30-2) will the system return to normal condition. [Read address] value < 28 or [Read address] value >32 **Example 2:**  Take another example above, it indicates that the event is triggered when the value of [Read address] is less than 29(=30-1) or greater than 31(=30+1). [Read address] value <29 or [Read address] value >31 When the event is triggered, system returns to normal condition only when the value of [Read address] is greater or equal to 28(=30-2), or less or equal to 32(=30+2). 28 <= [Read address] value <= 32

[Message] tab: Please see the illustration below



Setting	Description
Text	**[Content]** The text content of event log shown in [Alarm Bar], [Alarm Display] and [Event Display]. Please refer to “Chapter 9 Object General Properties” for more information. The data of LW address of the triggered event can be included in the content.

	Format: %#d %: initial sign # : LW's address d : end sign For example, if the content is set as "High Temperature = %20d", when an event is triggered, the value of LW20 will be displayed. If the value of LW20 is 13 when an event is triggered, the content displayed in [Event Display] object will be "High Temperature = 13". Except for LW, when an event is triggered, data in certain device type can also be shown in the content. This device type should be the same as that of the [read address] of event log. **Format: $#d** $: initial sign # : PLC's address d : end sign For example, if Device type in Read address is MW, when content is set as "High Temperature = $15d" and the value in MW15 is 42 while the event is triggered, the displayed content in [Event Display] will be "High Temperature = 42". **[Font], [Color]** Users can set Font and Color for each event. The font and color of an [alarm display] or [event display] object comes from this setting. As illustration below, these two events use different colors and font styles. 
Write value for Event Display object	When an event item in an [event display] object is touched, the value is written to the assigned address. Please refer to "Chapter 13 Objects" for information about [event display] object.
Sound	The warning alarm used when an event is triggered can be selected.

	Click **[Sound Library]** to choose warning sound, and click **[Play]** to check the sound.
Address of Watch	User can use the [Syntax] to embed PLC data in the content of an event log. About the syntax usage, please refer to below dialog.