

Chapter 7 Event Log

“Event log” is used to identify the content of an event and the conditions triggering this event. In addition, the triggered event (sometimes it is called alarm) and the processing procedure of the event can be saved to the designate location through the EB8000 as eventlogyyyymmdd.evt format where yyyymmdd indicates the creating time and is set by the system. For example, a file name of event, logeventlog20061127.evt, means the file is created on Nov. 27, 2006.

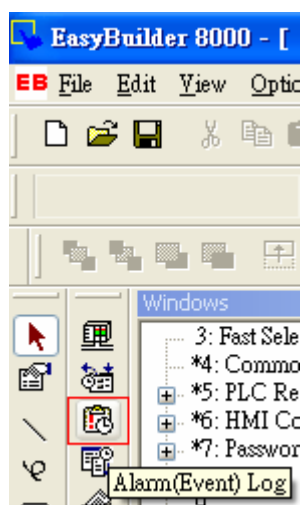
EB8000 provides system tag for manage the event log data.

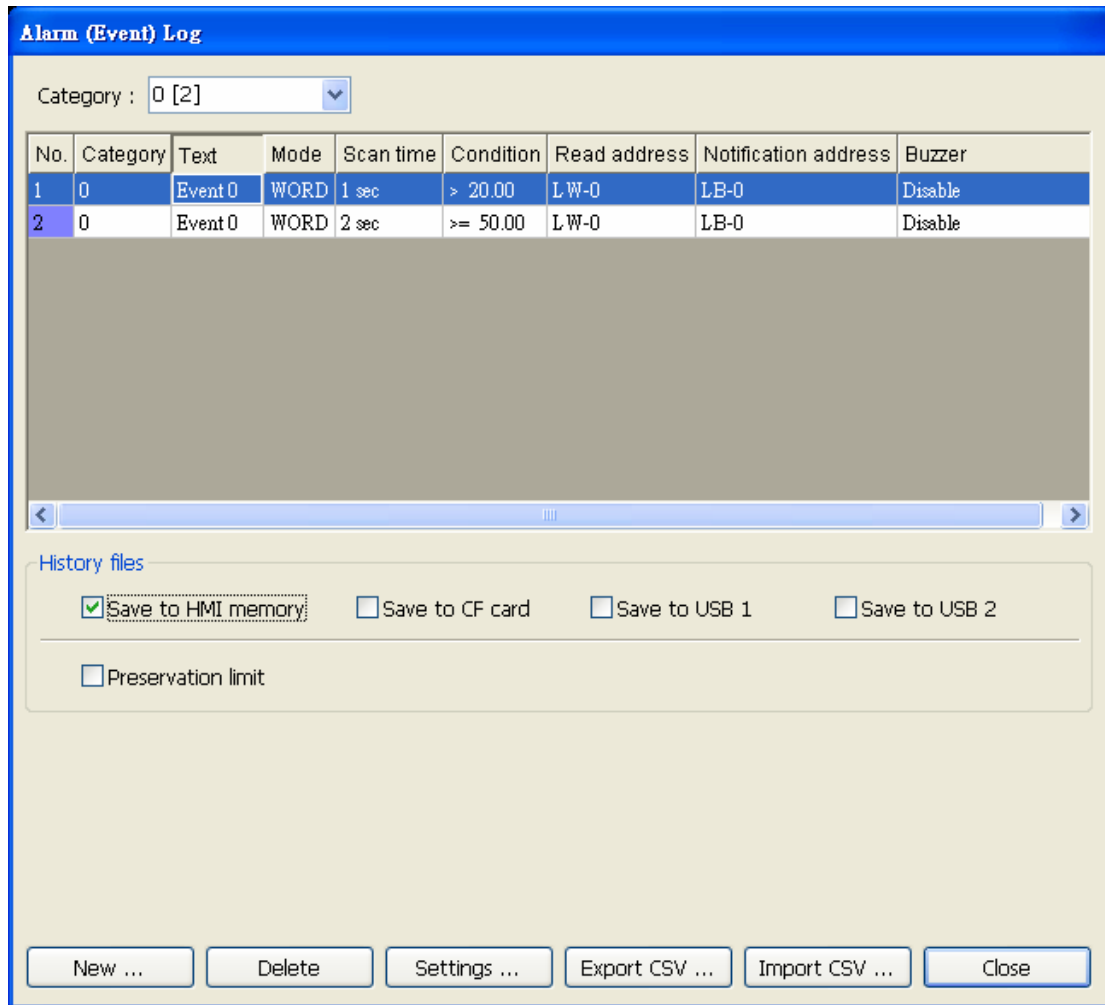
- [LB 9021] reset current event log (set ON)
- [LB 9022] delete the oldest event log file (set ON)
- [LB 9023] delete all event log files (set ON)
- [LB 9024] refresh event log information (set ON)
- [LW 9060] no. of event log files
- [LW 9061] size of event log files

1. Creating a new data log

Accompanied with alarm bar, alarm display and event display, users are able to clearly understand the life cycle of whole event from happening, waiting, processing to alarm disappearing. Before using these objects, the content of an event has to be identified first.

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

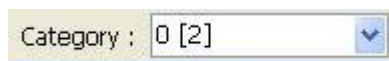




[Category]

The EB8000 provides category function and divides an event into 0~255 classifications. Alarm Bar, Alarm Display and Event Display can limit the displayed classifications.

[Catalog] selection determines the event catalog of current event. New added event type is determined by this function.



The [2] of 0[2] in the above illustration demonstrates two existing identified events in the classification 0.

[History files]

History files determine the save location of an event log. However, when users simulate on PC, files will be saved on the event log subdirectory, the same the subdirectory of EasyBuilder8000.exe.

[Save to HMI memory]

Record the event log to MT8000.

[Save to CF card]

Save the event log to CF card.

[Save to USB disk 1]

Save the event log to USB disk 1. The USB disk numbering rule 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. There's no relation with the interface location.

[Save to USB disk 2]

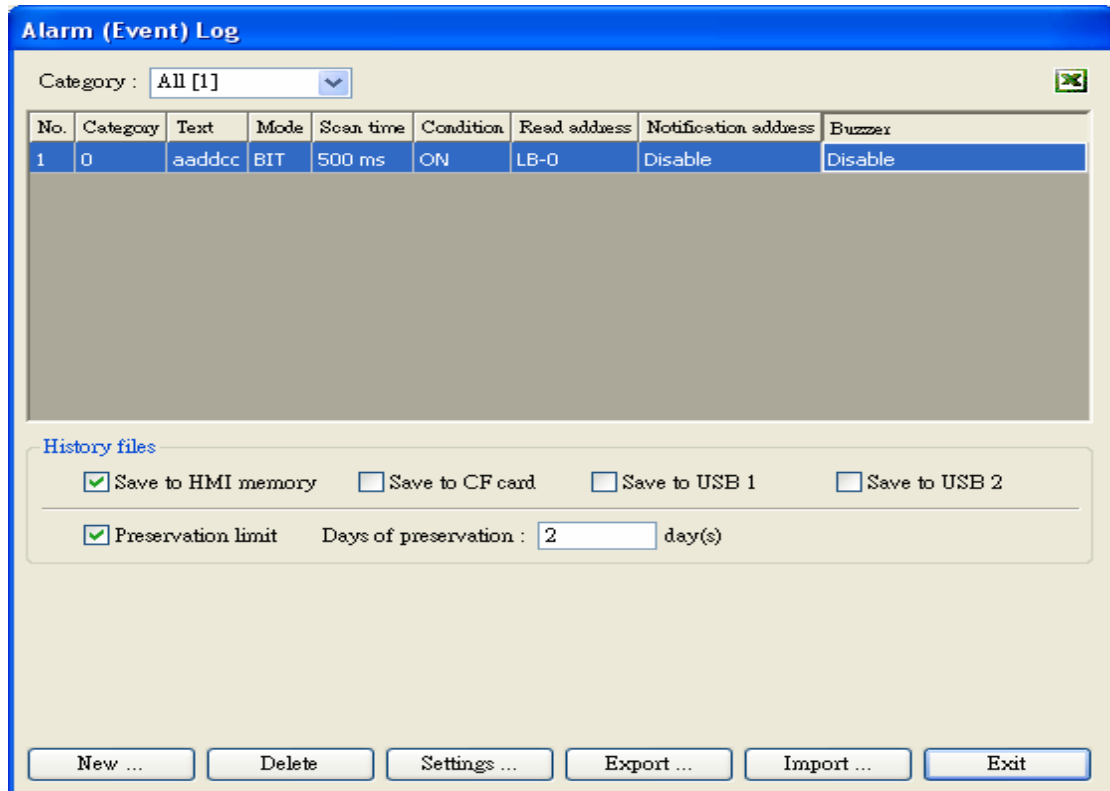
Save the event log to USB disk 2.

[Preservation limit]

After choosing History files, you can see the "Preservation limit". This is setting the data preserve time. As below picture, the preservation time is two days, that means HMI memory will keep yesterday and the day before yesterday's data.

For example,

Today is 7/1, the HMI will keep 6/30, 6/29 data in the memory and 6/28 will be canceled from memory.



[Print]

User has to define Printer on system parameter/model, and message will print out when alarm occurs in order but not full screen.

[New ...]

Create a new event.

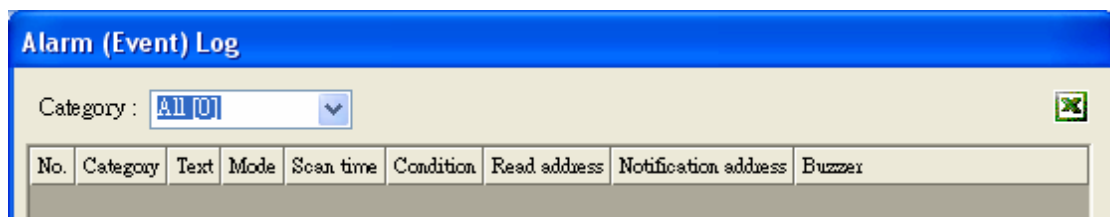
[Delete]

Delete a specific event.

[Settings ...]

Modify the definition of a specific event.

Excel Edit



On the right-up corner, an Excel icon is for edit Alarm (Event) Log. A completely edit includes: Excel Edit, Import from Excel, Export to Excel, please refer following information.

(1) Excel Edit

In C:\EB8000\EventLogExample.xls is for user to edit alarm (event) log, this example is a standard file, user can select content by list.

| | 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 | EMO | 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 | True |
| 5 | | | | | | | | | | 16-bit BCD | |
| 6 | | | | | | | | | | 32-bit BCD | |
| 7 | | | | | | | | | | 16-bit Unsigned | |
| | | | | | | | | | | 16-bit Signed | |
| | | | | | | | | | | 32-bit Unsigned | |
| | | | | | | | | | | 32-bit Signed | |

Caution:


- System tag and User-defined tag can not set true simultaneously, if both are set true, the system will set System tag to be true and User-defined tag to be false. If Device type is set User-defined tag, please set the System tag to be false.
- Color's format is R:G:B, and R,G,B are between 0~255 integer.
- Click Excel icon for open EventLogExample.xls



(2) Import to Event Log

Click import button for import excel file.

Alarm (Event) Log

Category : All [10] 

| No. | Category | Text | Mode | Scan time | Condition | Read address | Notification address | Buzzer |
|-----|----------|--------|------|-----------|------------|---------------------------------|----------------------|---------|
| 1 | 0 | test1 | WORD | 500 ms | <> 12.22 | EM0-22 | ?-33 | Enable |
| 2 | 1 | test2 | BIT | 500 ms | ON | LB-9009 : initialized as ON:122 | Disable | Enable |
| 3 | 2 | test3 | WORD | 500 ms | <> 337.89 | RWI-2222 | RBI:5555 | Disable |
| 4 | 3 | test4 | BIT | 500 ms | ON | RW_Bit:33333 | I:66666 | Disable |
| 5 | 4 | test5 | WORD | 500 ms | < 4444.67 | EM2-444444 | MW:777 | Enable |
| 6 | 5 | test6 | BIT | 500 ms | ON | RW_A_Bit:555555 | ?-8 | Enable |
| 7 | 6 | test7 | WORD | 500 ms | = 888.54 | RBI-66 | NONAME:99 | Enable |
| 8 | 7 | test8 | BIT | 500 ms | ON | LW-777 | Disable | Disable |
| 9 | 8 | test9 | WORD | 500 ms | <> 6788.98 | RW_A:8888 | DB11:3333 | Disable |
| 10 | 9 | test10 | WORD | 500 ms | >= 6778.79 | LW:9999 | DB90Bit:777777 | Enable |

History files

Save to HMI memory
 Save to CF card
 Save to USB 1
 Save to USB 2


Caution:

- When user-defined tag is true in the Excel, if device type can not match with user-defined tag, system will set false in user-defined tag.
- Before importing library (label library and sound library), please make sure those library name has existed in the system, otherwise the system will not use those library.

(3) Export to Excel

Click Export excel button to export data to excel file.

Alarm (Event) Log

Category : All [10] 



| No. | Category | Text | Mode | Scan time | Condition | Read address | Notification address | Buzzer |
|-----|----------|--------|------|-----------|------------|---------------------------------|----------------------|---------|
| 1 | 0 | test1 | WORD | 500 ms | <> 12.22 | EM0-22 | ?-33 | Enable |
| 2 | 1 | test2 | BIT | 500 ms | ON | LB-9009 : initialized as ON:122 | Disable | Enable |
| 3 | 2 | test3 | WORD | 500 ms | <> 337.89 | RWI-2222 | RBI:5555 | Disable |
| 4 | 3 | test4 | BIT | 500 ms | ON | RW_Bit:33333 | I:66666 | Disable |
| 5 | 4 | test5 | WORD | 500 ms | < 4444.67 | EM2-444444 | MW:777 | Enable |
| 6 | 5 | test6 | BIT | 500 ms | ON | RW_A_Bit:555555 | ?-8 | Enable |
| 7 | 6 | test7 | WORD | 500 ms | = 888.54 | RBI-66 | NONAME:99 | Enable |
| 8 | 7 | test8 | BIT | 500 ms | ON | LW-777 | Disable | Disable |
| 9 | 8 | test9 | WORD | 500 ms | <> 6788.98 | RW_A:8888 | DB11:3333 | Disable |
| 10 | 9 | test10 | WORD | 500 ms | >= 6778.79 | LW:9999 | DB90Bit:77777 | Enable |

History files

Save to HMI memory Save to CF card Save to USB 1 Save to USB 2

2. Create a new Event log

After clicking [New...], [Event Log] dialog appears with two tabs and [General] tab shows as below:

The screenshot shows the 'Alarm (Event) Log' dialog box with the 'General' tab selected. The dialog is divided into several sections:

- General:** Category: 0, Priority level: High.
- Address type:** Word, Scan time: 500 ms, Delay time when power on: 10 second(s).
- Read address:** PLC name: Local HMI, Device type: LW, Address: 30, System tag: , Index register: , 16-bit Unsigned.
- Notification:** Enable, Set ON, Set OFF, PLC name: Local HMI, Device type: LB, Address: 50, System tag: , Index register: .
- Condition:** Trigger if value is: = 30, In tolerance: 1, Out tolerance: 2.

Buttons at the bottom: 確定 (OK), 取消 (Cancel), 説明 (Help).

[Category]

The category of the event.

[Priority level]

The level of the event: According to the degree of importance, users can choose "Low", "Middle", "High", or "Emergency". When the number of event log is more than max number available in the system (the default is 1000, please refer to [General] of System Parameters to add extra records), less important events (lower level) will be deleted and new events will be added in.

[Address type]

The type of address—Bit or Word mode.

[Scan time]

The time interval of an event examination. By scan time, system checks if the event is satisfied with the triggered conditions.

[Delay time when power on]

The delay time of an event examination. System delays this time after rebooting so that it's able to check if the event is satisfied with the triggered condition and avoids the unnecessary event log record.

[Read address]

By reading the read address, system obtains the figure to check if an event is satisfied with the triggered condition. Please refer to Parts/General Settings for further details.

[Notification]

When an event is triggered, the specific message is sent out from Notification address. Select [Set ON] to send ON message out from the address. While select [Set OFF], Off message is sent out. Please refer to Parts/General Settings for further information.

[Condition]

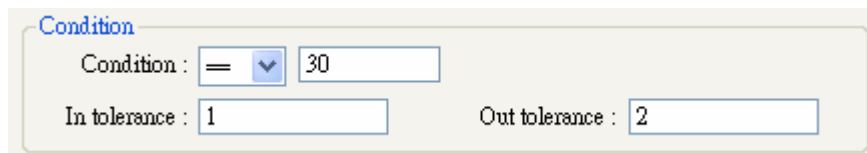
Trigger conditions of an event. When the condition of [Address type] of an event is “Bit”, “ON” or “OFF” of Trigger can be selected. The illustration below shows if Trigger [On] is selected, that is, the status of [Read address] changes from OFF to ON, an event will be triggered and generate an event log record (or an alarm).



When the condition of [Address type] of an event is “Word”, several selections are available as follows:



At this time, system will read values from [Read address] and then compare them with the trigger conditions to decide if the event is triggered. Especially if the trigger condition is "==" or "<>", [In tolerance] and [Out tolerance] can be set where [In tolerance] is used for trigger condition and [Out tolerance] is used for system's normal condition.



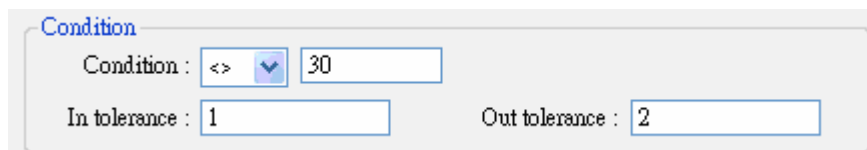
Condition

Condition : = 30

In tolerance : 1 Out tolerance : 2

From the example above, it indicates that if the value of [Read address] is bigger or equal to $29(=30-1)$ or smaller or equal to $31(=30+1)$, the event will be triggered.
 $29 \leq [\text{Read address}] \text{value} \leq 31$

After the event is triggered, only when the value of [Read address] is bigger than $32(=30+2)$ or smaller than $28(=30-2)$ will the system return to the normal condition.
[Read address] value < 28 or [Read address] value > 32



Condition

Condition : <> 30

In tolerance : 1 Out tolerance : 2

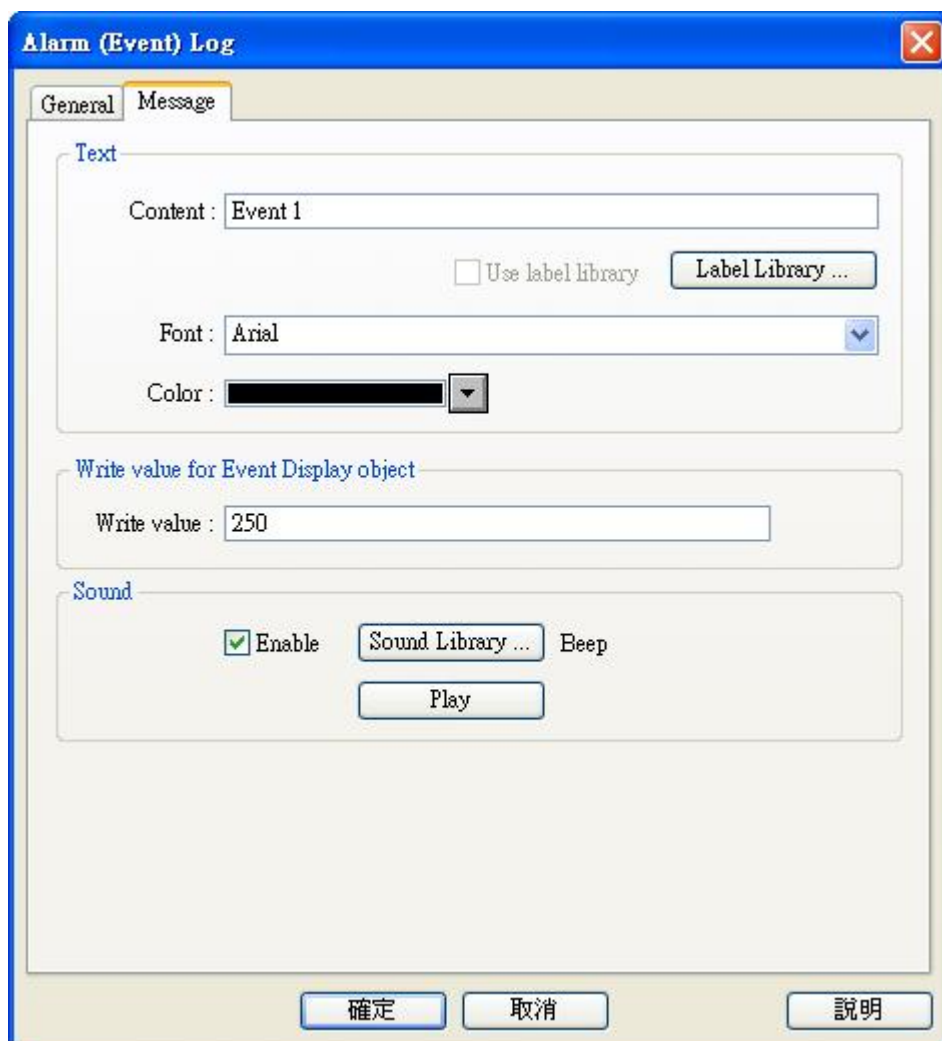
From the example above, it shows that system is under normal condition only when the value of [Read address] is less than $29(=30-1)$ or greater than $31(=30+1)$.

[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 bigger or equal to $28(=30-2)$ and smaller than $32(=30+2)$.

$28 \leq [\text{Read address}] \text{value} \leq 32$

Please refer to the picture below for the settings of [Message] tab.



Text

[Content]

The text context showed on [alarm bar], [alarm display] and [event display]. Please refer to “Parts/General settings” for more information.

To display LW address which includes in the event log are triggered, use can use %#d.

% means initial sign

means LW’s address

d means end sign

For example, when content has “High Temperature = %20d”, when event has triggered, if LW20=13, the event display object will show “High Temperature=13”.

When read address is PLC’s register, for example MW address. To display MW address, use can use \$#d.

\$ means initial sign
means MW's address
D means end sign

For example, when content as “High Temperature = \$15d”, and MW 15 = 42. the event display object will show “High Temperature=42”.

[Font][Color]

Font and color can be set for each event log, the alarm display and event log object's font and color setting comes from here. As below illustration, these two events use different color and font style.



[Write value for event display]

When event display of the event is touched, the write value is sent out to the assigned address. Please refer to event display of parts chapter.


[Sound]

The warning alarm can be selected when an event is triggered.

Click “Sound Library” to choose warning sound, and click “Play” to check the sound.

After the completion of each setting, a new event definition can be added as below:

Alarm (Event) Log

Category : All [3] 

| No. | Category | Text | Mode | Scan time | Condition | Read address | Notification address | Buzzer |
|-----|----------|---------|------|-----------|-----------|--------------|----------------------|---------|
| 1 | 0 | Event 0 | WORD | 500 ms | < 0.00 | LW-0 | Disable | Disable |
| 2 | 0 | Event 1 | WORD | 500 ms | == 0.00 | LW-100 | Disable | Enable |
| 3 | 0 | Event 1 | BIT | 500 ms | ON | LB-50 | Disable | Enable |

History files

Save to HMI memory
 Save to CF card
 Save to USB 1
 Save to USB 2