

# Demo Project for Auto. Backlight

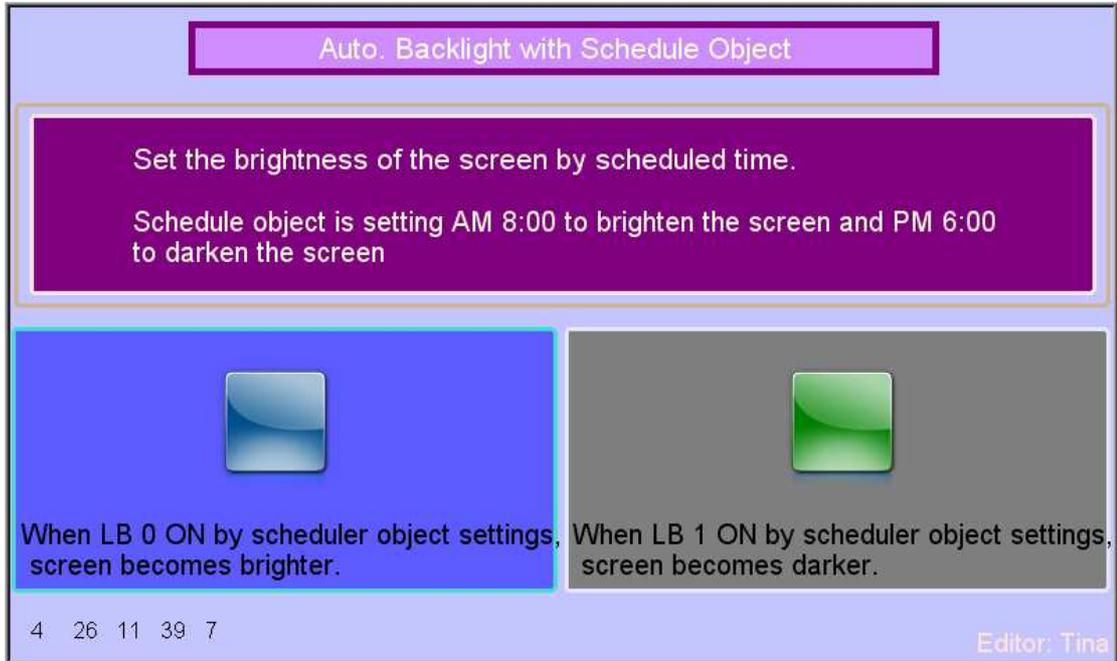
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# 1. Overview and Operation

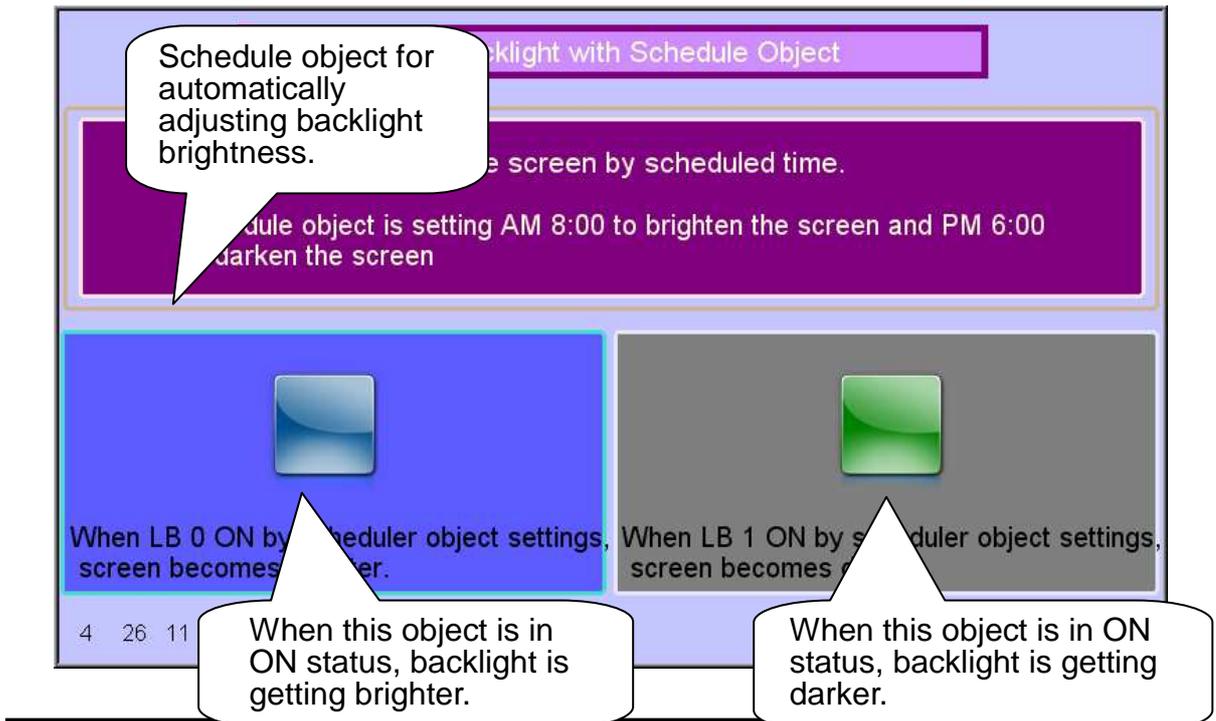
## [Overview]

Use Schedule function together with Macro to switch ON/OFF the backlight automatically at a specified time.



## [Operation]

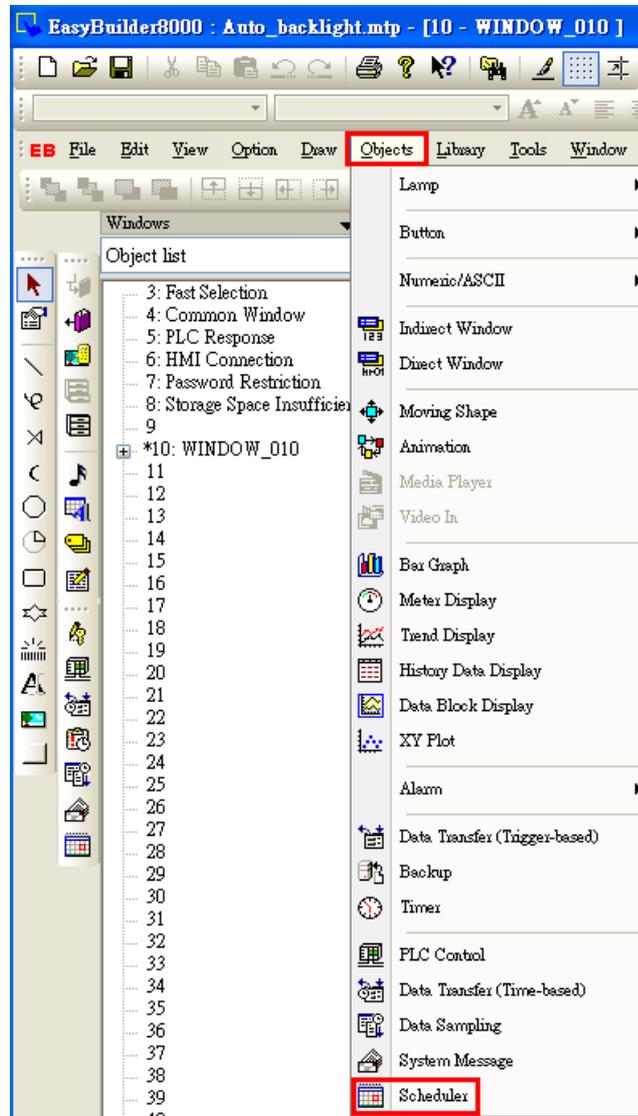
Use Scheduler object to automatically adjust the brightness of the backlight. Set the trigger time and Scheduler bit address to trigger this function at a specified time.



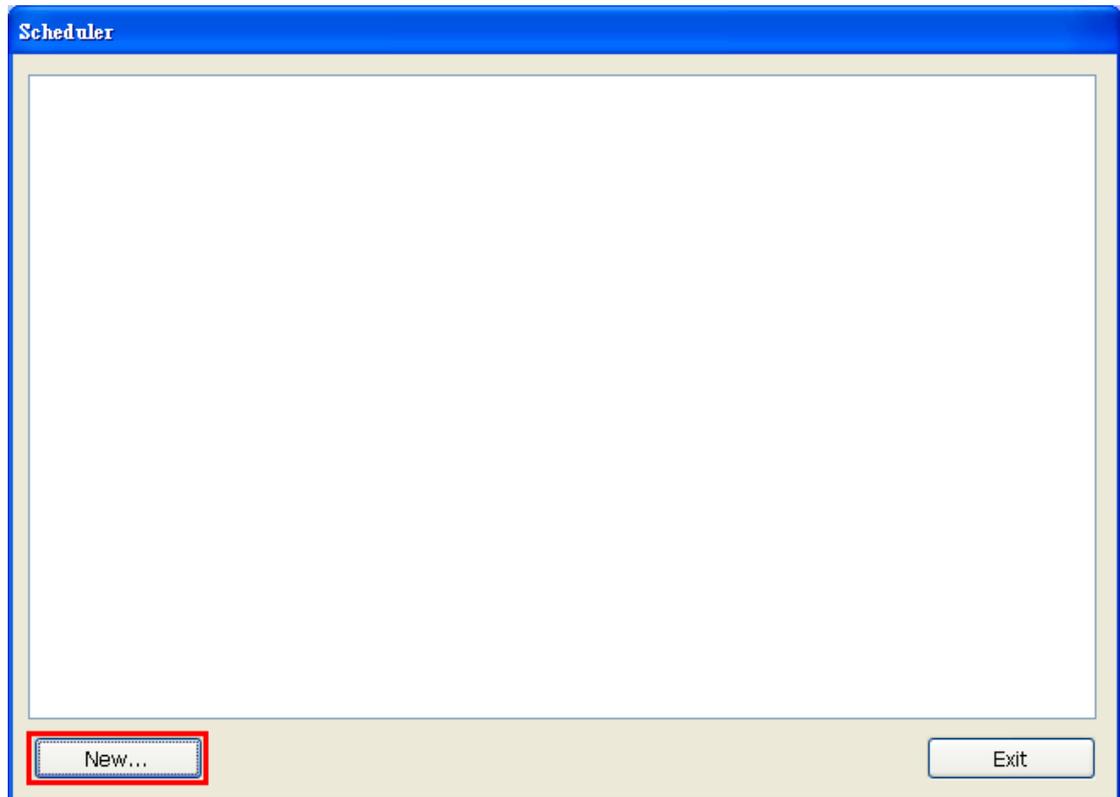
## 2. Setting Up the Screen

### 2-1 Setting of the Scheduler.

Go to Objects/Scheduler.

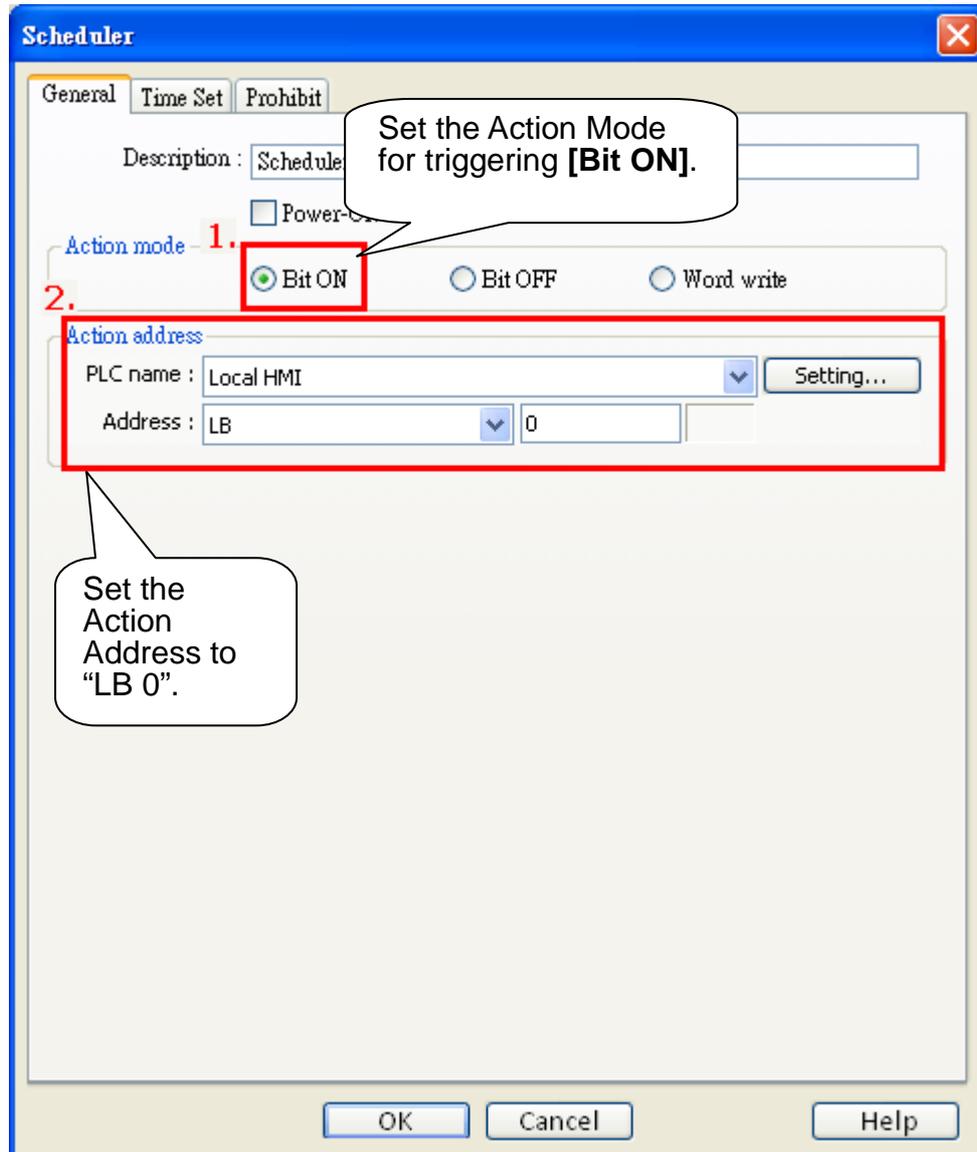


The Scheduler appears as below.

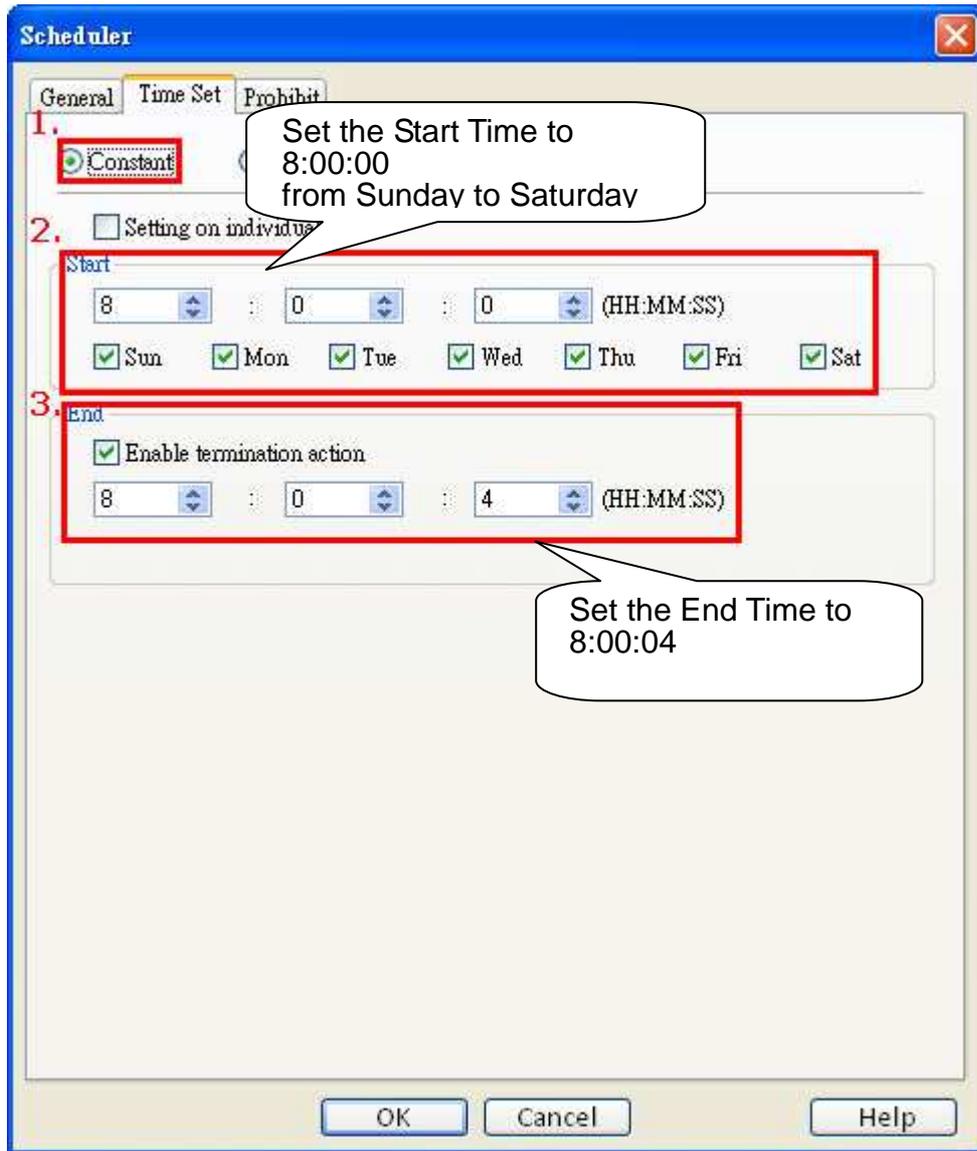


Click **[New]** to create a new schedule.

- In the **[General]** page, set the **[Action Mode]** and **[Action Address]**.

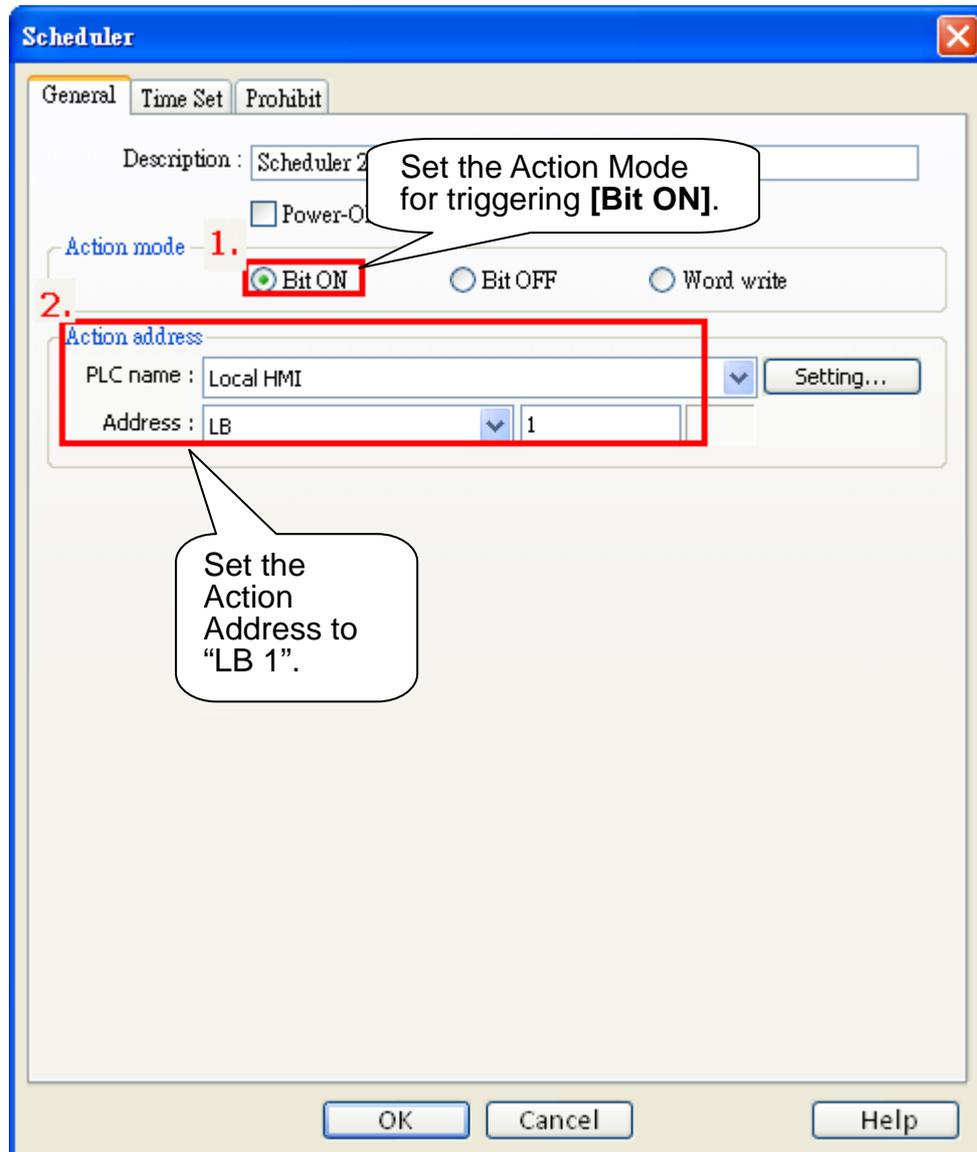


- For [Time Set], select [Constant] and set the time of [Start] & [End].

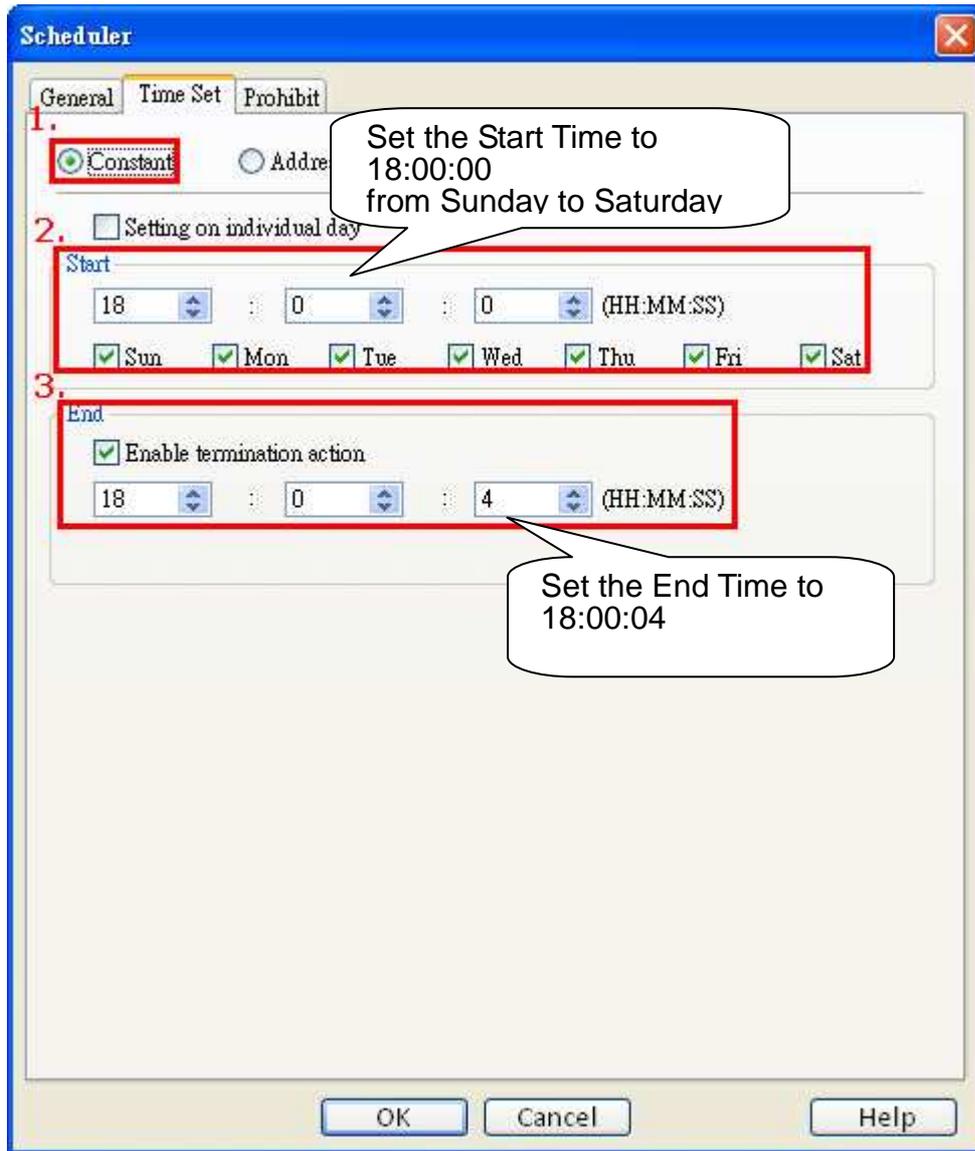


Set another Scheduler as below

- In the **[General]** page, set the **[Action Mode]** and **[Action Address]**.

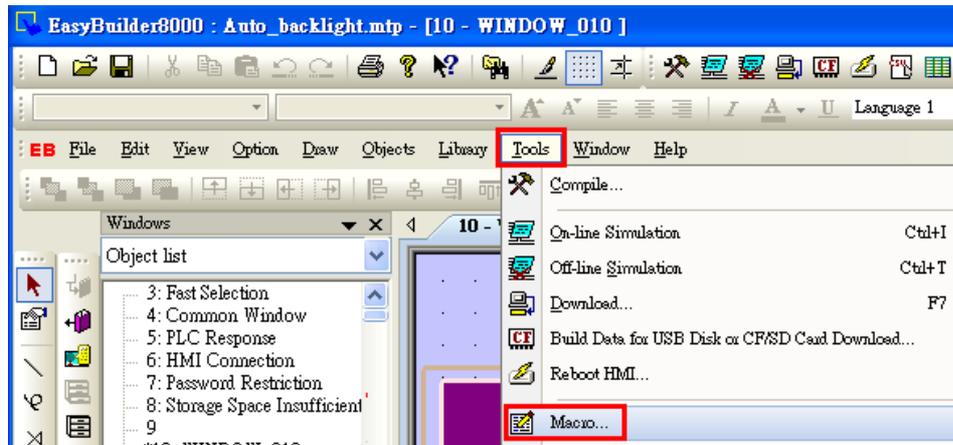


- For [Time Set], select [Constant] and set the time of [Start] & [End].

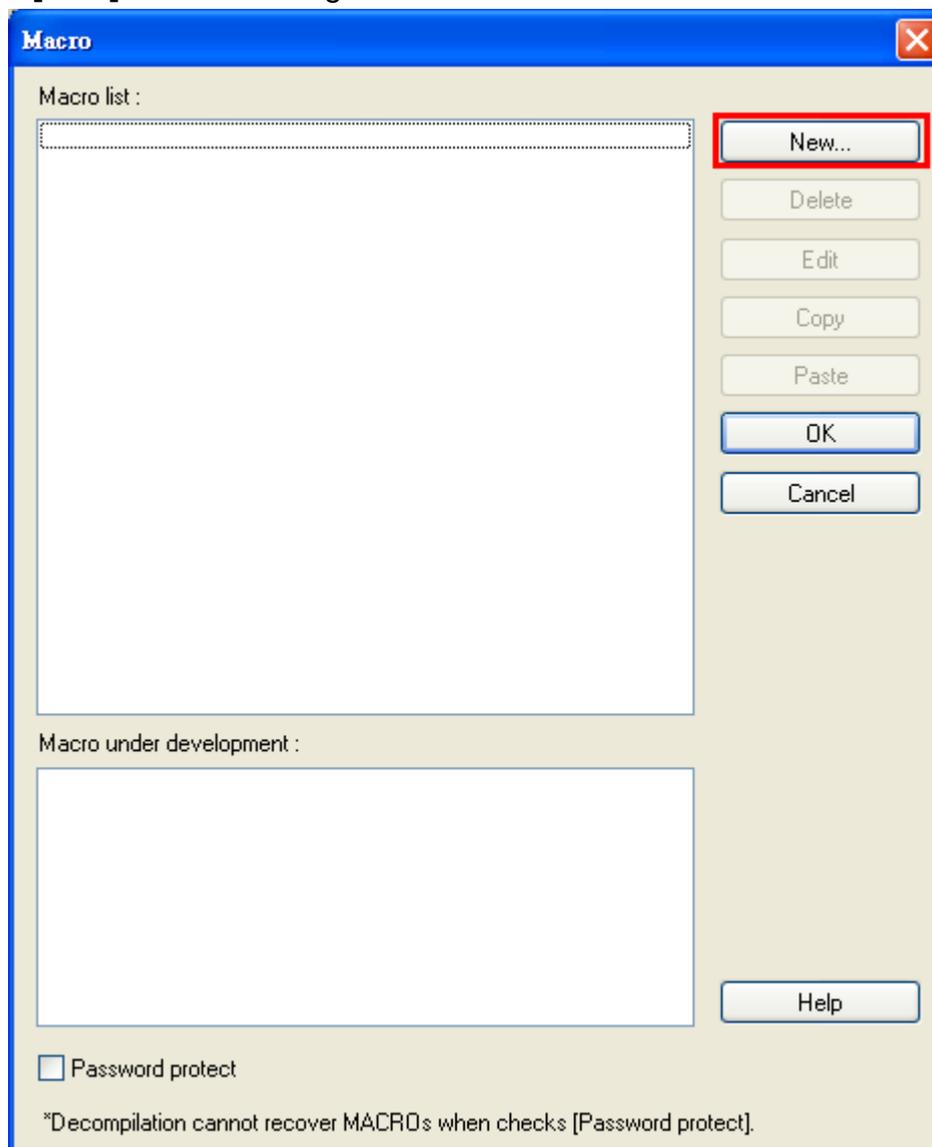


## 2-2 Setting of the Macro

Go to Tools / Macro.



Click [New] to enter editing screen.



Use LB9040 to turn the backlight up/down in Macro.

- In the Macro editing screen, write a Macro for backlight up.

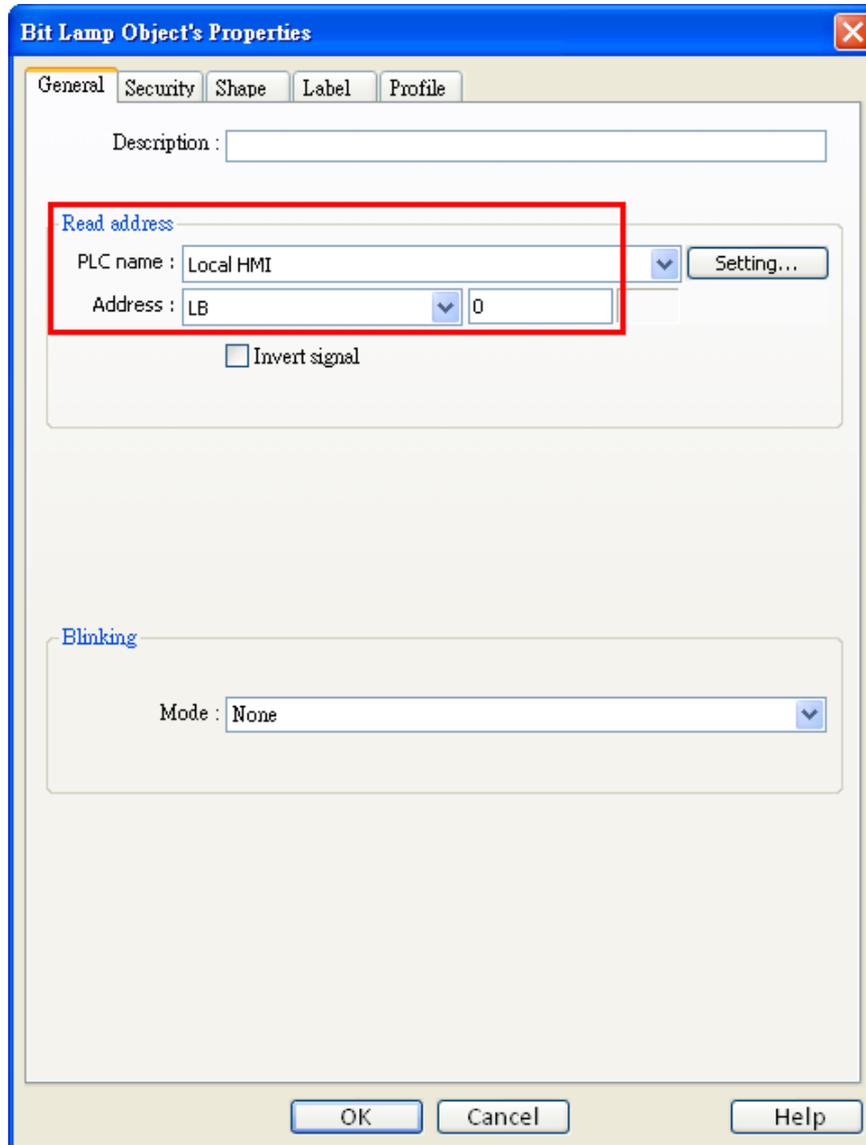
```
macro_command main()
bool a=1
short i
for i=0 to 30 step 1
SetData(a,"Local HMI", LB, 9040, 1)
next
end macro_command
```

- Create another Macro for backlight down.

```
macro_command main()
bool a=1
short i
for i=0 to 30 step 1
SetData(a,"Local HMI", LB, 9041, 1)
next
end macro_command
```

### 2-3 Setting of the Bit Lamp and Set Bit objects

- Create two Bit Lamp objects set to LB0 and LB1 for displaying the Scheduler object status. When LB0/LB1 is ON, the backlight is activated.



**Bit Lamp Object's Properties** [X]

General Security Shape Label Profile

Description : \_\_\_\_\_

**Read address**

PLC name : Local HMI [v] [Setting...]

Address : LB [v] 1

Invert signal

**Blinking**

Mode : None [v]

[OK] [Cancel] [Help]

- Create two Set Bit objects set to LB0 and LB1, and select **[Set OFF when window opens]** in **[Attribute]**.

**Set Bit Object's Properties**

General Security Shape Label Profile

1. Description :

Write address

PLC name : Local HMI

Address : LB 0

2. Attribute

Set style : Set OFF when window opens

Macro

Execute macro

OK Cancel Help

**Set Bit Object's Properties**

General Security Shape Label Profile

1. Description : \_\_\_\_\_

Write address

PLC name : Local HMI [v] [Setting...]

Address : LB [v] 1

2. Attribute

Set style : Set OFF when window opens [v]

Macro

Execute macro

OK Cancel Help

### 3. Addresses

The addresses used in this demo project are listed below. Please change these addresses base on actual usage.

Addresses		Object ID	Detail
Window 10			
Bit	LB-0	BL_0	Will be triggered by Scheduler 1
	LB-1	BL_1	Will be triggered by Scheduler 2
	LB-0	SB_0	Set OFF when window opens
	LB-1	SB_1	Set OFF when window opens
	LW-9017	ND_1	HMI time – second
	LW-9018	ND_2	HMI time – minute
	LW-9019	ND_3	HMI time – hour
	LW-9020	ND_4	HMI time – day
	LW-9021	ND_5	HMI time – month