

# Chapter 3

## Device Monitoring Screen

## Chapter 3 Device Monitoring Screen (Screen for checking the status of each Device)

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# 3.1

## Device Monitoring Screen

The Lamp Display and Message Display indicating the status of the device is explained in this chapter.



# What is Device Monitoring Screen?

## • Why is it used?

In the Device Screen, the screen where the ON/OFF status for each device or the I/O status for temperature/ pressure can be displayed using the lamp or message is created.

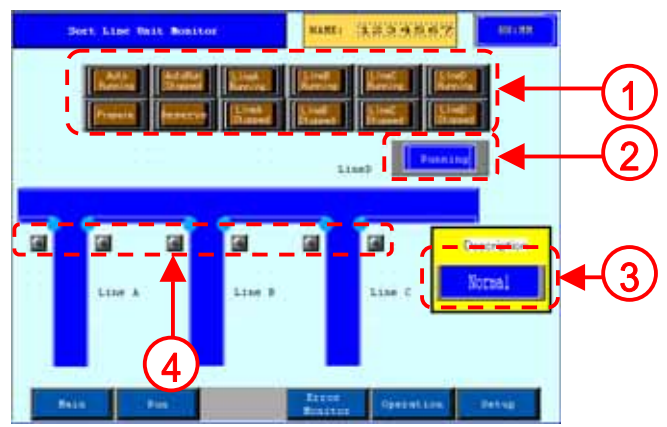
## • Device Screen

-----  
The Operation Status of each lamp is set in the lamp label .

-----  
The operation status of Line D is set in the label of the 4 State lamp and displayed.

-----  
The conditions of Line are displayed using the message display

-----  
The power and speed data for each line is displayed using the meter or bar graph.



# 3.2

## Lamp Display

The lamp for displaying the status of the device will be explained in this chapter.



解説

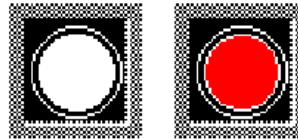
## Methods for Lamp Display

- The lamp monitors the ON/OFF status of the bit address of PLC and switches the display.

### (1) Lamp Display

Bit address is monitored and the display of the respective pictures (Labels) at the time of ON/OFF is switched.

Examples of Lamp Display



<b>Bit Address</b>	OFF	ON
--------------------	-----	----

The labels of ON/OFF can be in different characters.

Example) Normal / Abnormal

Stopping / Running Etc.

### (2) 4 State Lamp Display

Two Bit addresses are monitored and with the combinations of ON/OFF of respective Bits, the display of pictures(Labels) of 4 status is switched

4 State lamps display example



<b>Bit address 1</b>	OFF	OFF	ON	ON
<b>Bit address 2</b>	OFF	ON	OFF	ON

The labels of ON/OFF can be in different characters.

Example) Stop / Low speed / Medium speed / High speed

Level 1/Level 2/Level 3/Level 4 ,etc.



**Hint!**

Even more displays can be switched by using message display (P3-16) and L tag (P8-16).



## How to Display Lamp ?(Lamp Settings)

- Depending on the PLC Bit Address status, lamp displays ON/OFF.

### (1) Selection method of Lamp

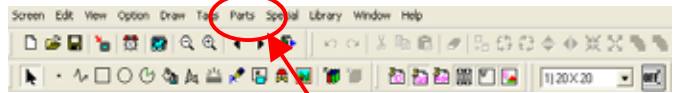
Select 'Lamp' from 'Parts' in the Menu bar.



Or, Click the icon of 'Lamp'



#### • Menu bar



#### • Parts tool bar

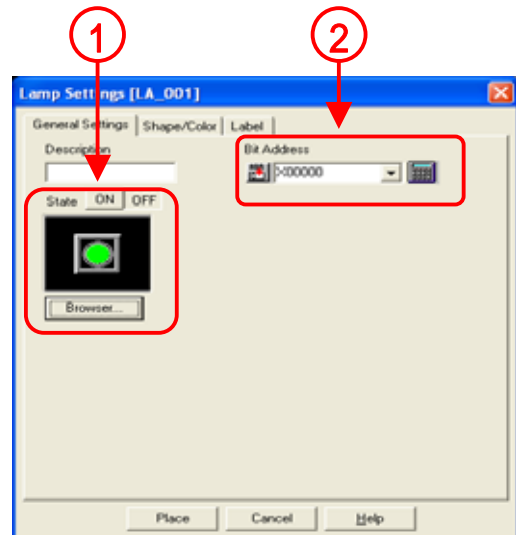


### (2) General settings

**State:** If ON/OFF is clicked, the picture of lamp is changed to ON/OFF status.

**Browser:** The lamp picture can be selected if clicked.

Set the Bit Address to be monitored.



**(3) Shape/ Color Settings**

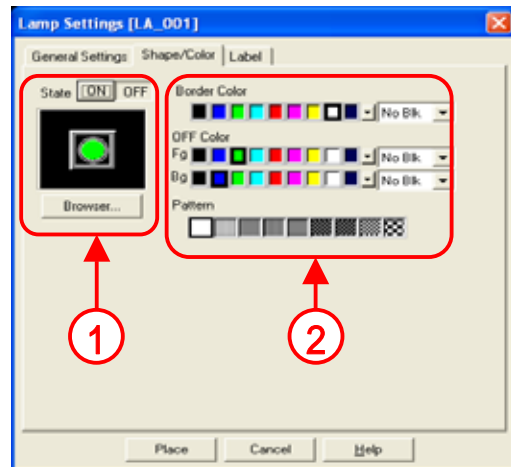
For the settings of color, depending on the picture selected in the browser there are pictures that can. Can not be changed.

The first screen shot shows the dialog box where the color can not be changed and the screen shot below shows the dialog box where the color can be changed .

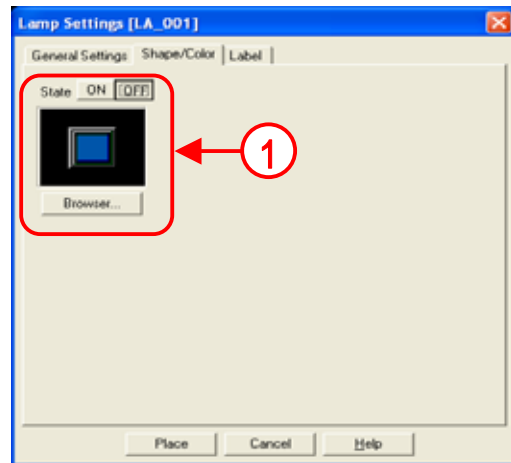
**State:** If ON/OFF is clicked the picture of the lamp is changed to ON/OFF status.

**Browser:** The lamp picture can be selected if clicked.

• When colors can be changed



• When colors can not be changed

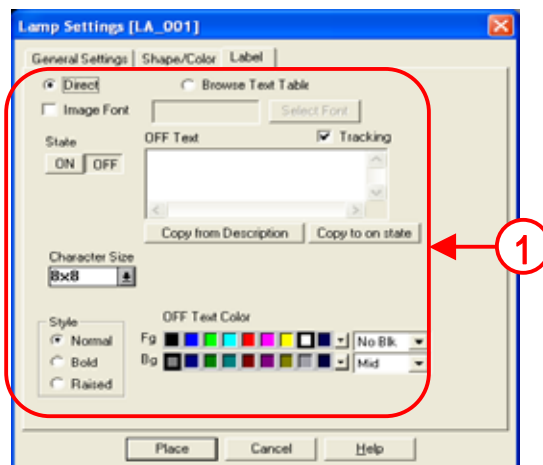


The color for the picture of the lamp is set.

**(4) Label Settings**

The characters displayed on lamp are set. ON/OFF for 'State' is selected and the characters to be displayed are set for ON/OFF each

For details refer P1-9







## How to Place the Lamp

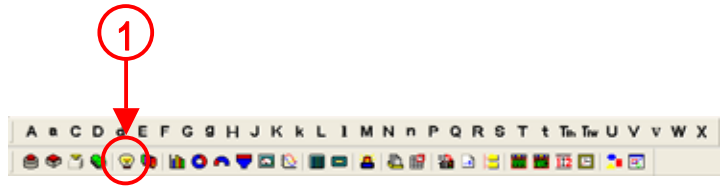
The method of creating the lamp displaying the operation status of each line is explained in this section.

[ Setup Flow ]

1. Open the base screen 'B 3'.
2. Set/ Place Lamp.

### (1) How to select the Lamp

Click the 'Lamp' icon from the Parts tool bar.



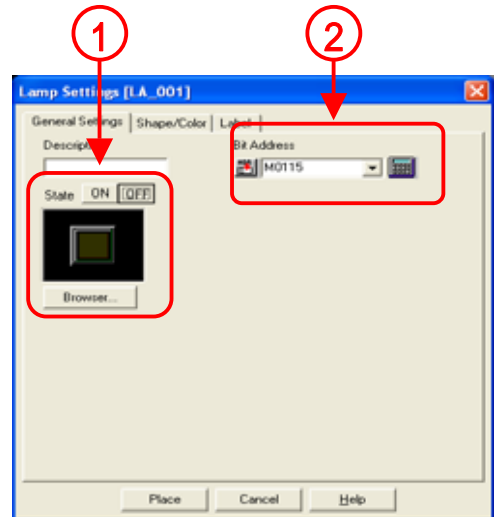
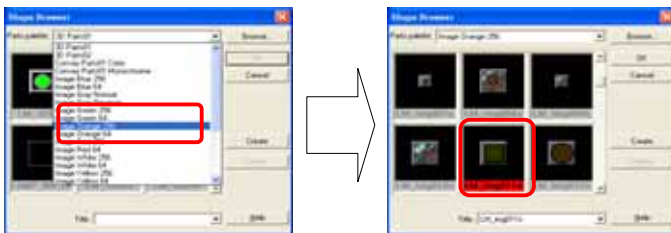
### (2) Information settings

Select the picture of the lamp to be placed

Click 'Browser'.

Select 'Image\_Orange\_256' from 'Parts Palette'.

Select 'LM\_img011o' and click 'OK'.



Set 'M115' in 'Bit Address'.

**(3) Label Settings**

1. Set 'State' to 'Off'
2. Select 'Direct' and check 'Image Font'.
3. Click 'Select Font' and perform the following settings.

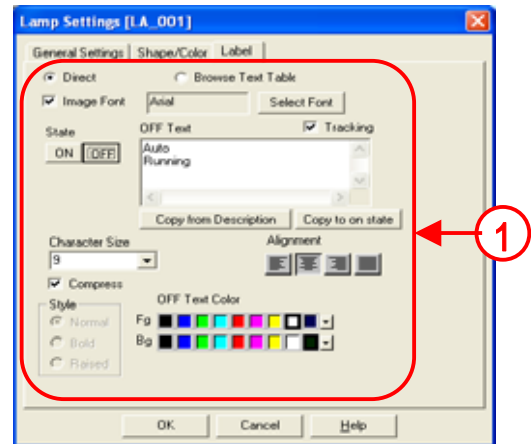
- Font Name: MS Gothic
- Style : Regular
- Size: 9



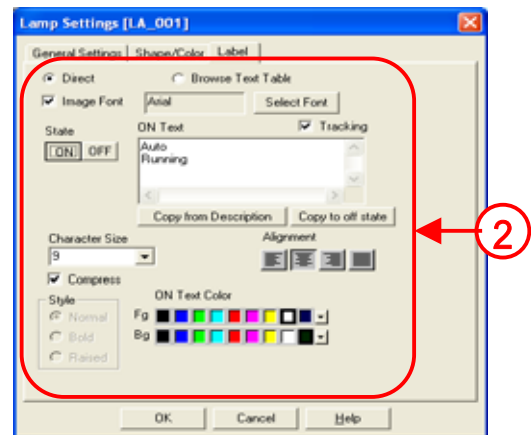
4. Click 'OK'.
5. Enter 'Auto Running' in 'Label (OFF)'
6. Set 'Alignment' to [Left Alignment Icon].
7. Click 'Copy to ON state'.

Click 'Copy to ON state' and if the 'State' is switched to 'On' the label of State : Off' are copied to 'State: On'.

• State: When it is Off



• State: When it is On



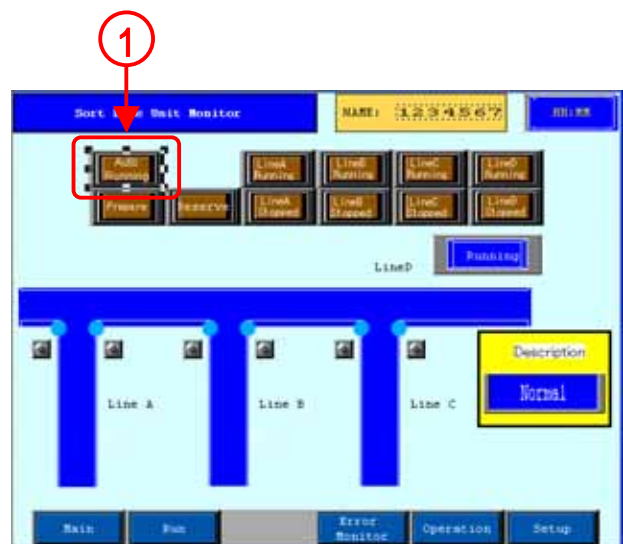
**(4) How to Place the Lamp**

Click 'Place' and the Lamp is placed.

On the right side of the lamp placed for 'Auto Running', Lamp is to be placed. The following settings are to be performed.

- Bit address: M116
- Label: Auto Running Stopping

Perform the other settings like the settings of 'Auto Running' Lamp.





## How to Display Lamp?(4 State Lamp Settings)

- Lamp Display of the 4 Bit addresses status is possible by referring to the status of 2 Bit addresses of PLC.

### (1) How to select 4 State Lamp

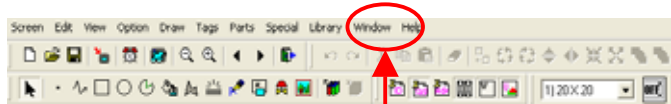
Select 'Lamp' from 'Parts' of Menu bar.



Or, click the 'Lamp' icon.



#### • Menu bar



#### • Parts Tool bar

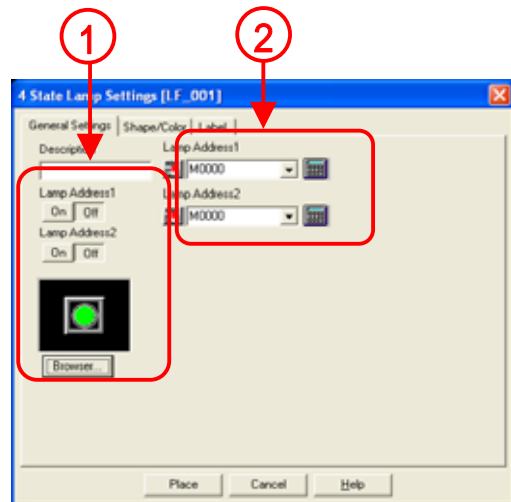


### (2) General Settings

**Lamp Address 1, Lamp Address 2:** If ON/OFF is clicked, lamp picture changes to that status.

**Browser:** The lamp picture can be selected if clicked.

The Bit Address to be monitored is set.

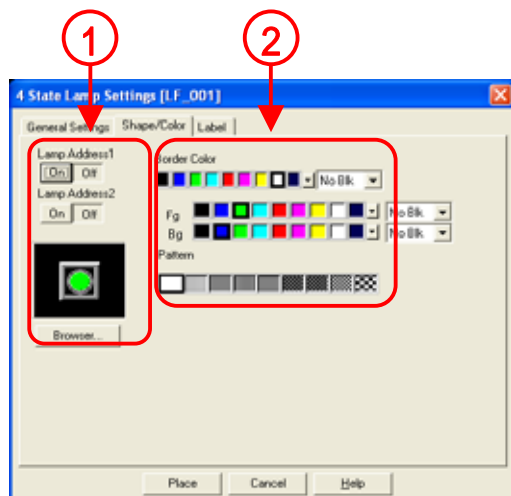


### (3) Shape/ color settings

**Lamp Address 1, Lamp Address 2 :** If ON/OFF is clicked, lamp picture changes to that status.

**Browser:** The lamp picture can be selected if clicked.

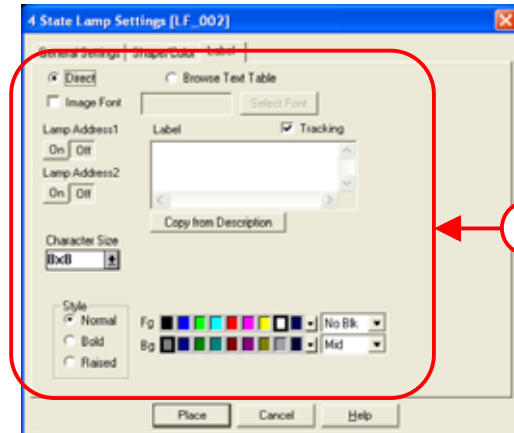
Color of the lamp picture is set.



**(4) Label Settings**

The characters displayed on the lamp are set.  
Select ON/OFF for 'Lamp Address 1' 'Lamp  
Address 2' and set the characters to be displayed.

For details refer P1-9





## How to place the 4 State Lamp

How to display the 4 State Lamp.

[ Setup Flow ]

1. Open the base screen 'B 3' .
2. Set/ Place the 4 State Lamp.

### (1) How to select 4 State Lamp

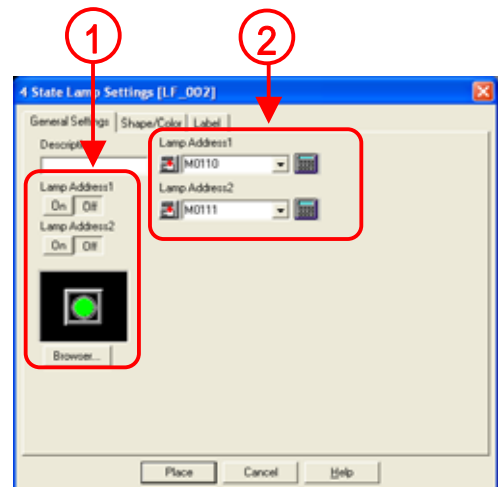
Click the icon of '4 State Lamp' from the Parts tool bar.



### (2) General settings

Click 'Browser', and select the desired picture.

Set 'M110 ' in 'Lamp address 1' and 'M111' in 'Lamp Address 2'.

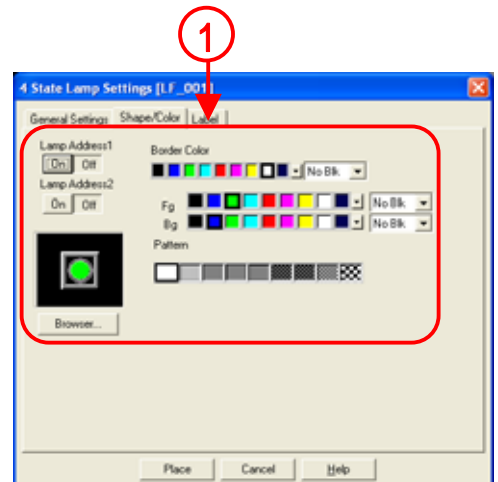


### (3) Shape/ Color Settings

Switch ON/OFF of 'Lamp Address 1' and 'Lamp Address 2',  
And set the desired color for each status of lamp.

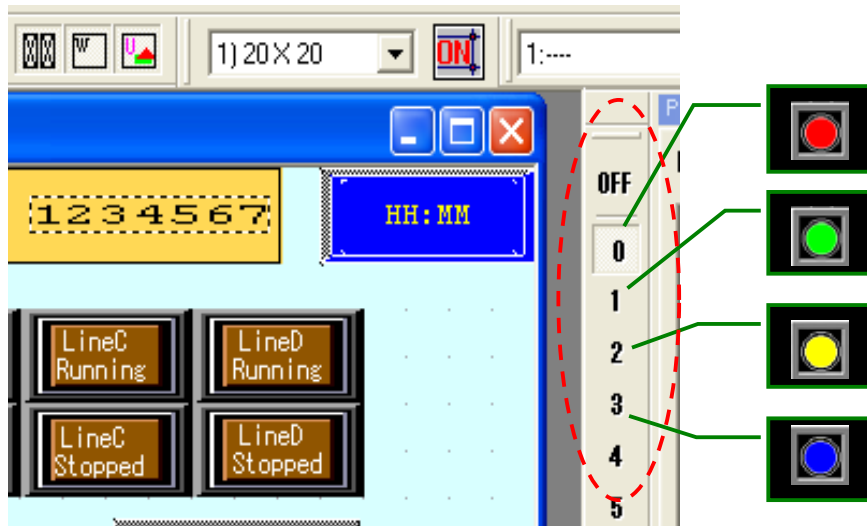
After finishing the settings , click 'Place' and place it on the screen.

Does not function on Sample screen.



 **Hint!**

How to check the operation of the 4 state lamp on the screen editor?



If the numbers of the 'Parts State Switch Tool Bar' are clicked, it is possible to check the display of the 4 State Lamp.

# 3.3

## Message Display

The method of switching the display of the short messages will be explained here.



# Methods for Message Display

- The display of the set message is switched by monitoring the status of the specified Bit Address and Word Address

## Message Display

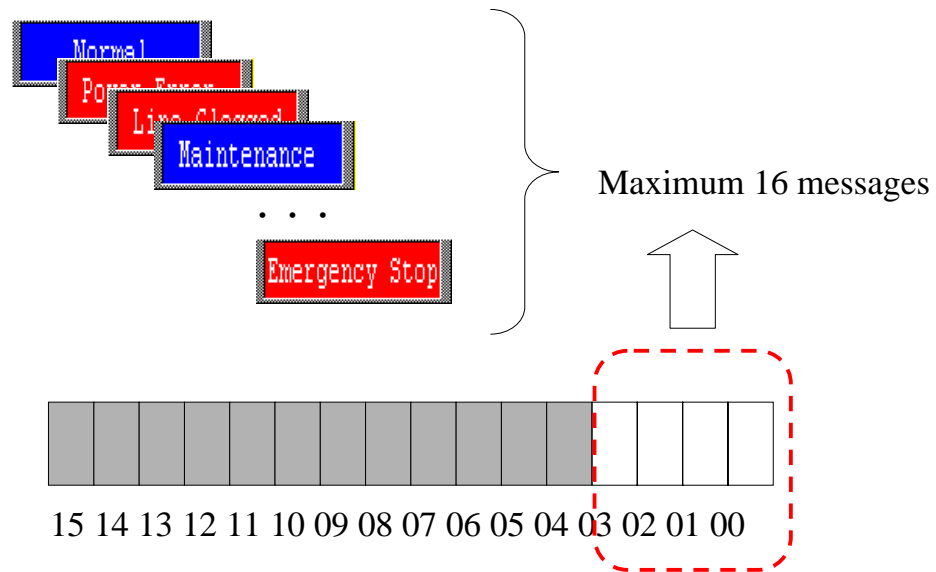
The created message is switched as per the change in data.  
There are two modes of operation, namely Bit and Word.

When Operation mode is Bit, one Bit Address is monitored and like lamp, the two messages of ON/OFF are alternately displayed.

When the Operation Mode is Word, 16 messages at maximum can be switched and displayed.

When the Operation Mode is Word

In 1 Word Address, the ON/OFF status of the lower 4 bits is monitored.



The Bit count used in 1 Word Address

Messages	Used bit count
2	1
4	2
8	3
16	4

**★ Hint!**

Switching up to 2 types and 4 types, is possible even with Lamp or 4 State Lamp. (Refer P3-5) and, in case of more than 17 types status are to be displayed, L tag (Indirect) is used.(P8-18)



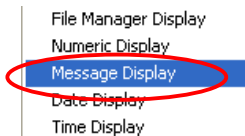


## How to Display Message? (Message Display Settings)

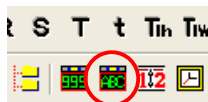
- Maximum 16 types of messages can be displayed alternately by referring to the change in the data of specified Bit/ Word Address.

### (1) How to Select Display Message?

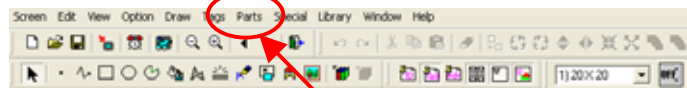
Select 'Message Display' from the 'Parts' on the Menu bar .



Or click the icon of 'Message Display'



#### • Menu Bar



#### • Parts Tool Bar



### (2) General Settings

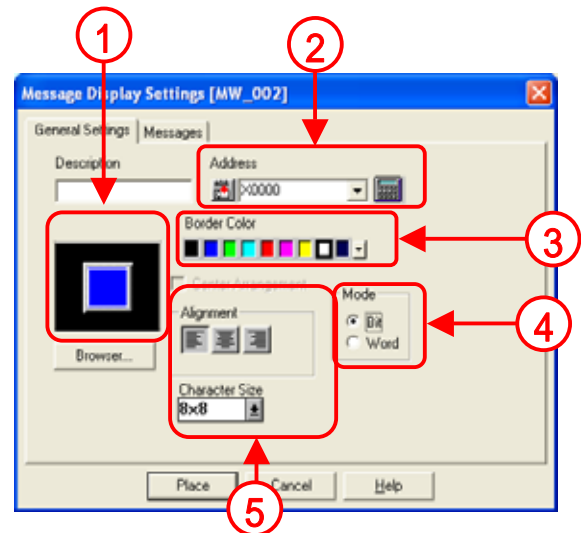
The picture of the currently message display is displayed

If 'Browser' is clicked, the picture of the message display can be selected.

The address for changing the message is set. When the 'Mode' is 'Bit', Bit Address is set and when it is 'Word', Word Address is set.

The color of the border of the Message Display is set.

When there are two messages, set as "Bit", if 3-16, set as "Word"



**Alignment:** The alignment of the message can be selected from 'Left/Center/Right'

**Font Size:** Set the font size of the message.

### (3) Message Settings

**Direct:** the characters to be displayed are directly input.

**Browse Text Table:** The character string registered in the Text Table is selected and displayed (It is used when the language of the Display Screen is to be switched between Japanese and English)

**Displayed Character Count:** The character count of the displayed message is set.

The maximum count are 40 single byte characters .

**Message Registration:** Message is registered here.

**Message Settings:** The ON/OFF button of the specified Bit is selected and the respective message is registered.

**Comment Copy:** The Text set in the 'Comment' of 'Information' is copied to 'Selected Message'.

**Copy to all :** The text registered in the current 'Selected Message' is all copied to the 'Selected Message'

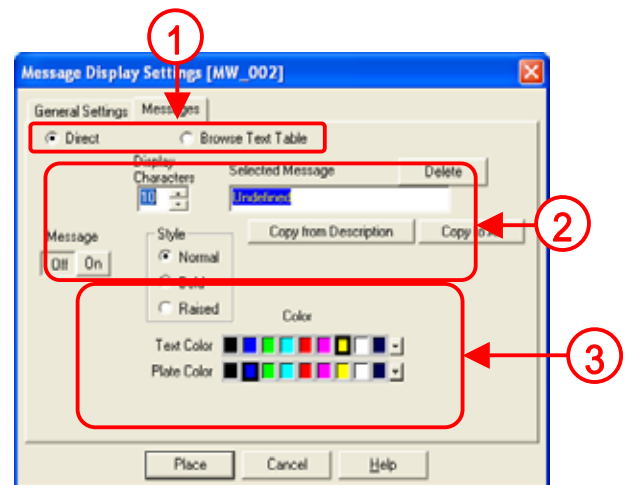
For each message the 'Text Style', 'Text Color' and 'Plate Color' is set.

**No. Of Messages:** The number of messages to be switched and displayed is set. The message count can be selected from '2', '4', '8', '16'.

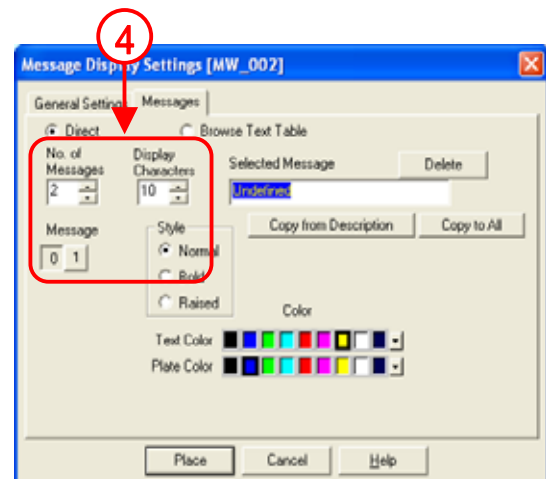
**Display Characters:** The character count for the displayed text is set. Maximum character count is single byte 40 characters.

**Message :** The button only shows the number set in the 'message count'. The number is selected and the respective messages are registered.

'Operation Mode:Bit'



'Operation Mode: Word'





## How to place the Message Display

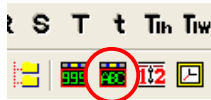
How to display the message display that displays the operation status of line.

[ Setup Flow ]

1. Open the base screen 'B 3'.
2. Set/ Place the Message Display.

### (1) How to select the Message Display

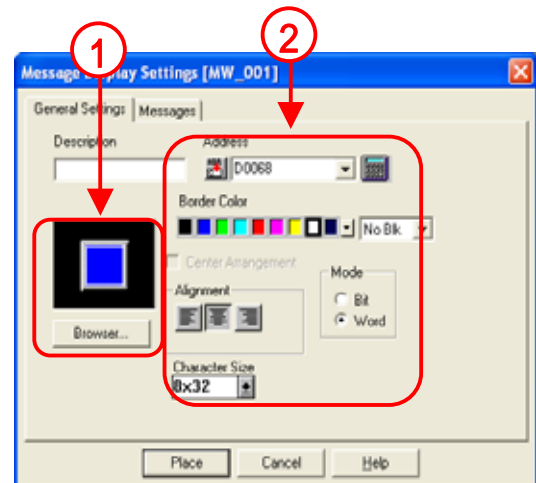
Click the 'Message Display' icon from Parts Tool Bar.



### (2) General Settings

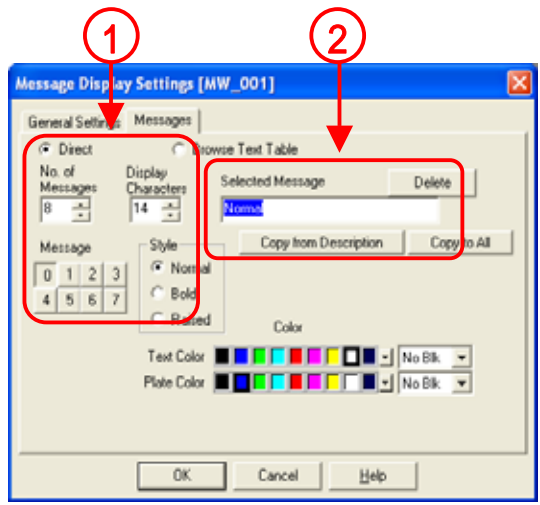
Click the 'Browser' and select the desired picture.

Set the 'Mode' as 'Word' and 'Address' as 'D68'.  
Set the desired 'Border Color' 'Alignment' and 'Character Size'.



**(3) How to set the message**

Select 'Direct' and set the 'No. of Messages' as '8' and 'Display Characters' as '14'.  
Select '0' for 'Message Settings'.



Enter 'Normal' in 'Selected Message'.  
And set the desired Character style and color.

Change the 'Message Settings' sequentially from 1 to 4 and register the following messages respectively..

- 'Message Settings: 1' is 'Power Error'
- 'Message Settings: 2' is 'Line clogged'
- 'Message Settings: 3' is 'Maintenance'
- 'Message Settings: 4' is 'Emergency Stop'

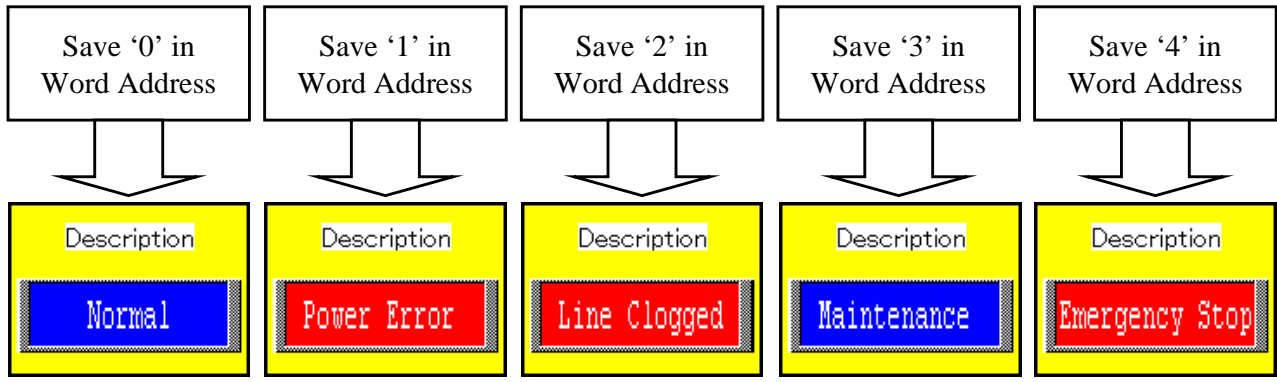
**(4) How to place the Message Display**

Click 'Place', and place the 'Message Display' on the screen.



**(5) How to operate the Message Display**

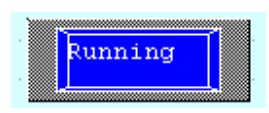
The actual working is as follows.



Like 4 State Lamp, the display can be checked by 'Parts State Switchover Tool Bar'. (Refer P3-13)

**★ Hint!**

Modifications in the Label Alignment for Lamp or Message Display - 'Alignment' -



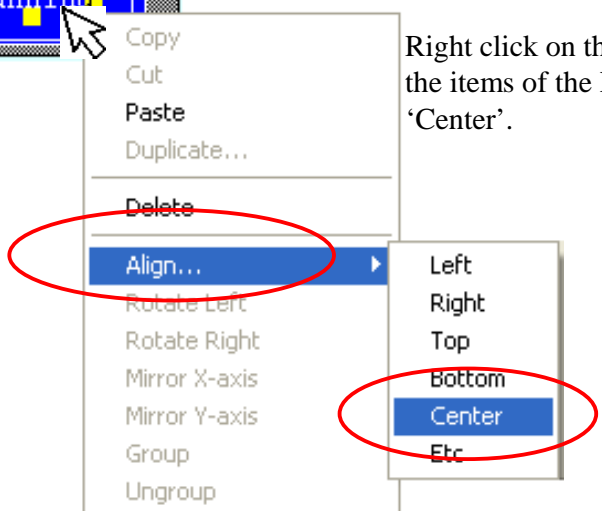
For e.g. if the label of the part has shifted, as shown on the right ...



Specify by clicking the entire part.  
(The handle is displayed in the surrounding area)



Then click on the shifted label as shown and select only the label part



Right click on the label, go to 'Alignment' option in the items of the Pull down menu and lastly click 'Center'.



The label is placed in the center of the frame.

Alignments other than Center are also possible.

It can also be used in parts like Switch or Numeric Display.

If 'Align' 'Others' is used, multiple objects are selected in the specified range and they can be arranged on X and Y axis. (For the range specification refer P1-13)

Example)

