

# Chapter 5

Device Operation/  
Guidance Screen

Chapter 5 Device Operation/Guidance Screen (The screen where the device is run/ stopped)

5.1 Device Operation/ Guidance Screen

What is Device Operation/ Guidance Screen? . . . . . 5-3

5.2 Running Operation

Method for Bit Operation (Bit Switch Settings) . . . . . 5-5

How to place the Bit Switch . . . . . 5-7

5.3 Window Display Guide Line

Method for window display (Window Registration) . . . . . 5-11

Method for window display (U Tag Settings) . . . . . 5-13

How to place U tag . . . . . 5-22

5.4 Word Switch Guideline

Method for Word Operation (Word Switch Settings ) . . . . . 5-21

How to place Word switch . . . . . 5-23

# 5.1

## Device Operation/ Guidance Screen

The meaning of Device  
Operation/Guidance Screen will be  
explained in this section.



## What is Device Operation/ Guidance Screen?

### • Why is it used?

Guidance for explaining the operations of Device Switch Operation is displayed in Device Operation/ Guidance Screen.

There are two kinds of Switches, namely switching between ON/OFF of the Bit Address of PLC and switching to data writing for Word Address.

For the display of guidance, Window is used.

### • Precautions

The touching area of the Touch Panel is a '20x20 Dots' square area unit. This is called as Touch Panel Grid. The count of Touch Panel Grid in GP2500 (Display Dot Count: 640 x 480) is  $32 \times 24 = 768$ . If 1 Touch Panel Grid is shared by two switches, the switch might behave in an abnormal way and there might be malfunctioning.

For details refer P1-3

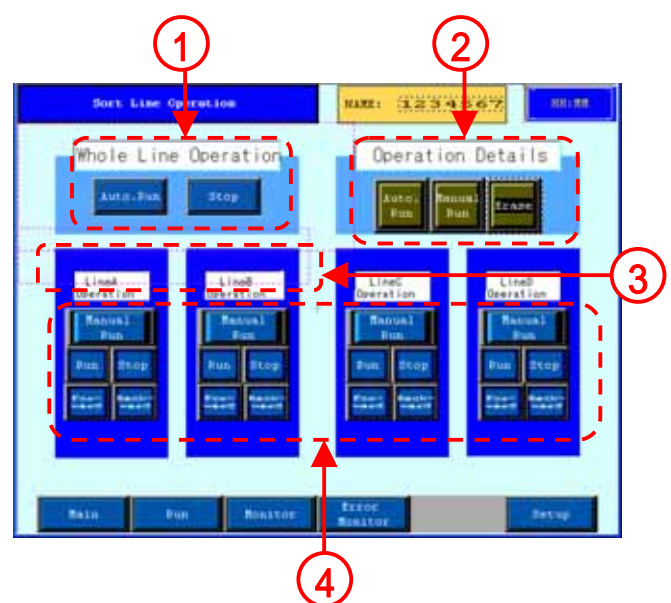
### • Device Operation/Guidance Screen

-----  
It is the 'Auto run' and 'Stop' switch that operates the running and stopping for the entire line  
-----

It is a switch that displays the explanation for Line Operation.  
-----

The guidance is displayed in this part.  
-----

It is the switch for 'Manual Operation' etc. that operates the running and stopping for each operation.  
-----



# 5.2

## Running Operation

The Bit switch that operates the Running/ Stopping of the Device will be explained in this section.

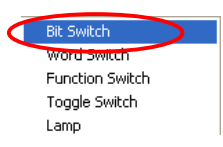


# Method for Bit operation (Bit Switch Settings)

• The Bit Address of PLC is operated by the Switch.

## (1) How to select the Bit Switch?

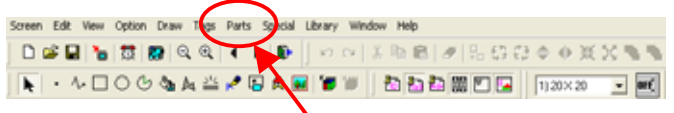
Select 'Bit Switch' from 'Parts' in Menu Bar.



Or, click the 'Bit Switch' icon.



• Menu Bar

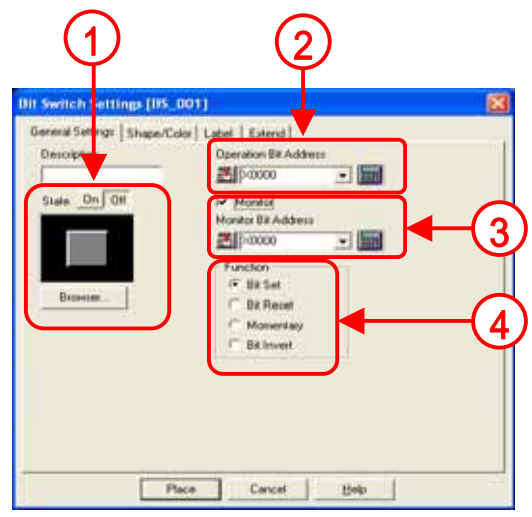
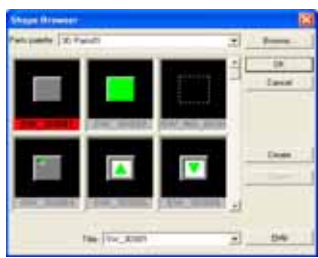


• Parts Tool Bar



## (2) General Settings

The picture of the currently selected Switch is displayed. If 'Browser' is clicked, the the picture of the Switch can be selected.



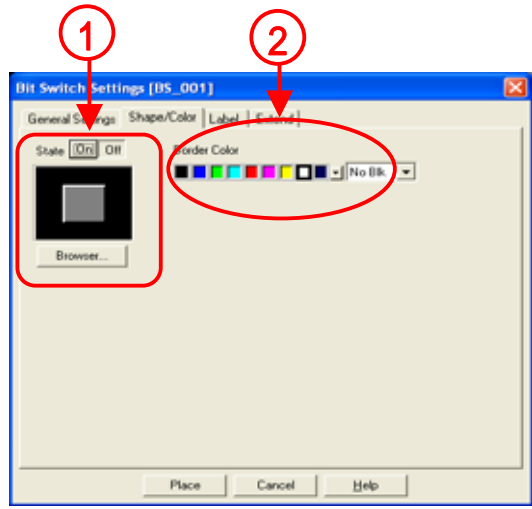
Set the actually operating Bit Address by touching the Switch.

The picture of the Switch will change according to the change in the ON/OFF status of the Bit set in 'Monitor Bit Address'.

- Bit Set:** The Operation Bit will be ON if this switch is touched.
- Bit Reset:** The Operation Bit will be OFF if this switch is touched.
- Momentary:** Operation Bit is switched ON while it is touched.
- Bit Invert:** For each touch, the Operation Bit will change between ON/OFF.

**(3) Shape/ Color Settings**

The picture of the currently selected Switch is displayed. If 'Browser' is clicked, the picture of the Switch can be selected. If 'Monitor' is checked, 'State' is displayed. If 'ON/OFF' is selected, the picture for that status is displayed and the color for the switch can be selected.

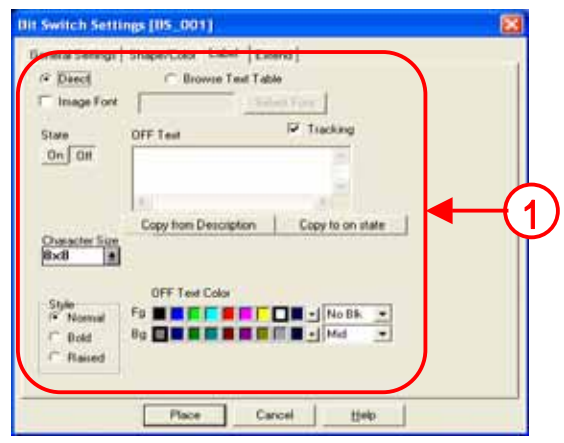


Set the color of the switch.

**(4) Label Settings**

The text displayed on the switch is set. When 'Monitor' is checked, select ON/OFF for 'State' and set the label for each.

For details refer P1-9

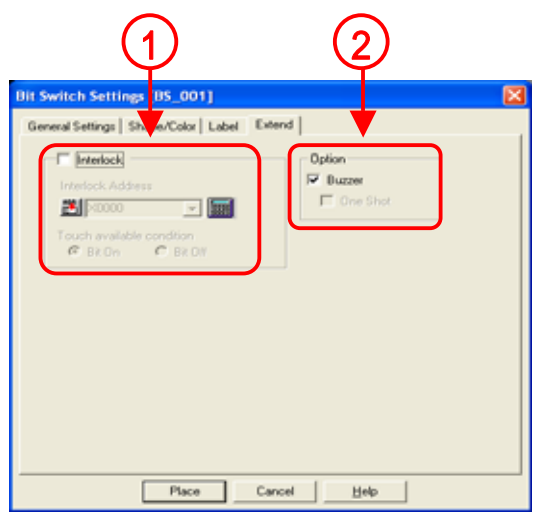


**(5) Extend Settings**

**Interlock:** When the Bit Address set in the Interlock Address is in the same status as 'Touch Available Condition', only then the Switch Operation can be enabled.

**'Touch Available Condition :Bit ON':** Only when the Interlock Address is ON, the switch operation is enabled.

**'Touch Available Condition : Bit OFF':** Only when the Interlock Address is OFF, the switch operation is enabled.



**Buzzer:** The buzzer sounds when it is checked and the Switch is touched.

**One Shot:** It can be set only when the Bit Operation is set as 'Momentary'. The buzzer sounds when it is checked and only at the instant that the Switch is touched.



## How to place the Bit Switch

How to display the switch that operates the entire line.

[Setup Flow]

1. Open the base screen 'B 5'.
2. Set/ Place the Bit Switch.

### (1) How to select the Bit Switch

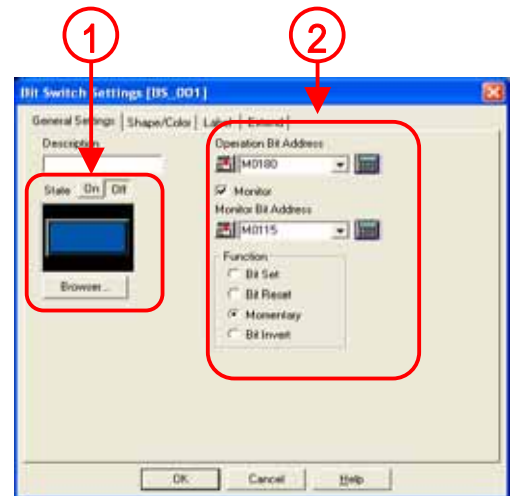
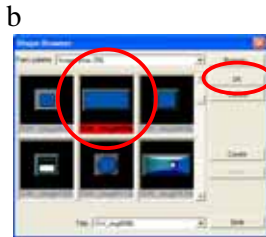
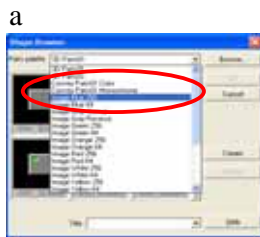
Click the 'Bit Switch' icon from Parts Tool bar.



### (2) How to set the information

Click 'Browser'.

- a. Select 'Image\_blue\_256' from the 'Tools Palette'.
- b. Select 'SW\_img008b' and click 'OK'.



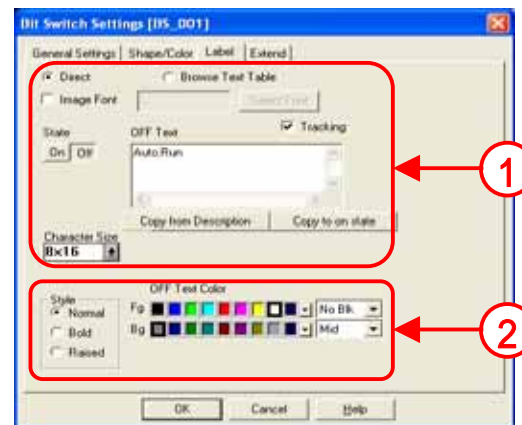
Check 'Change Status', set 'Operation Bit Address' to 'M180' and 'Monitor Bit Address' to 'M115' and set 'Bit Operation' to 'Momentary'.



**(3) How to us set the label**

Check 'Direct'. Set 'State' to 'Off' and enter 'Auto Running' in 'Label (Off)'. Next set 'Character Size' as '1 x 1(f)' and click 'Copy to On'.

Set Fg of 'Character Color (Off)' to White. Next, set 'State' to 'On' and set Fg of 'Character Color (On)' to Black.



**(4) How to set the extend settings**

Check that 'Interlock' is not checked and check 'Buzzer' and 'One shot'.

If 'Interlock' is checked, the switch might not respond.



**(5) How to place the Bit Switch**

Click 'Place' and place it on the screen.



## (6) How to check the Working

After Data transfer, if the Auto Run Switch is touched, the switch reverses the display and the entire line is operated.



### ★ Hint!

#### Operation Check for Run Status

After data transfer, if the display screen of GP is switched to B2 (Run Status Screen), the number of productions of all lines is added and it is understood that they are running.

And if the 'Manual Operation'-'Run' switch for each line placed under B5 is touched, each line can be individually operated.

(From guidance contents)

It is necessary to transfer the demo ladder program, in the attached CD-ROM, to PLC.

#### B2 Run Status Screen



# 5.3

## Window Display Guideline

The method for creating Window Display will be explained in this section.



## Method for Window Display (Window Registration)

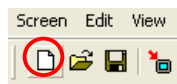
• It is necessary to register the part on the base screen to display window. There are two methods for Window Registration, namely Registration in 'Window Screen' and Registration in 'Base Screen'.

### • Window Screen Registration Method

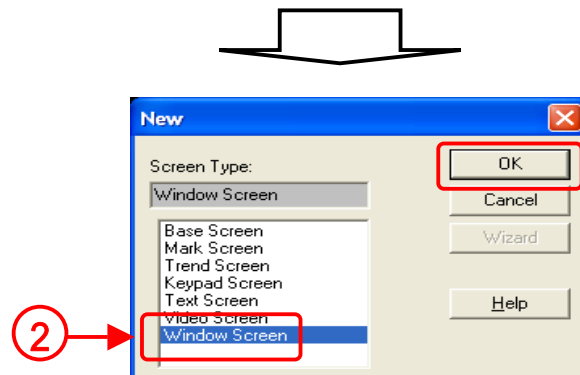
The Method for Window Registration in Window Screen is explained below.

#### (1) How to open the Window Screen

Click the 'New' icon .



Select the 'Window Screen' and click 'OK'.



#### (2) How to do window Registration

The part/tag/picture to be called in the Window screen is placed. After it is placed, enclose the area to be called with the white border of the Window area. If the Window Screen is saved, the range specified by the Window Area is registered as Window.

When you open the Window Screen, the Window area is already displayed. If the area is selected and dragged, the size can be changed.



**• Registration Method for Base Screen**

The method for Screen Registration in Base Window is explained below.

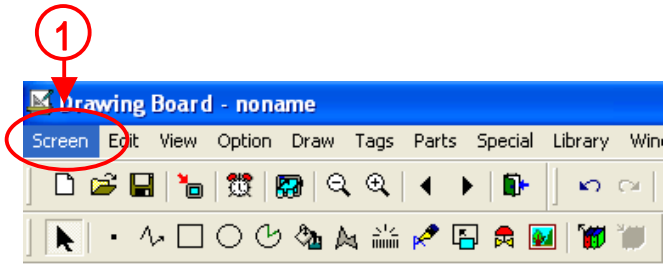
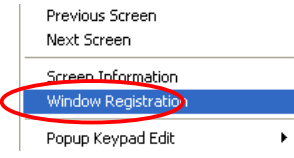
**(1) How to open the Base Screen to be registered.**

Create the screen to be registered as Window on the Base Screen.

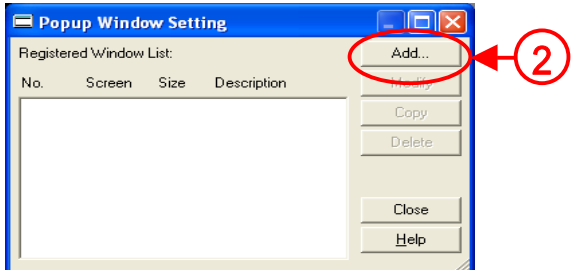


**(2) How to do Window Registration**

Select 'Window registration' from 'Screen' on Menu bar.



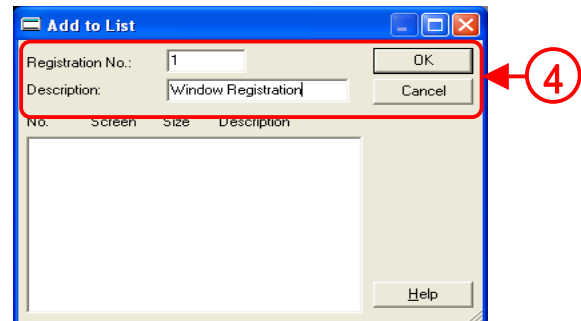
Click 'Add'.



The mouse cursor changes to '+'. Enclose the area to be registered as a Window in a white frame by clicking the start point and end point once each, as if drawing a square.



Enter the 'Registration Number' and 'Description' of the Window and when 'OK' is clicked, it is registered as Window.



## Note

- K tag, U tag, V tag, v tag, Trend Graph, Keypad Input Display, Logging Display, CSV Display, File Manager Display do not function in the window.

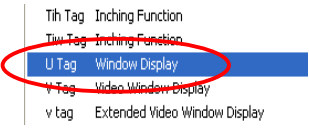


# Method for Window Display(U tag Settings)

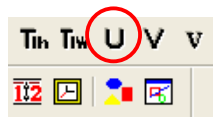
• U tag can display/operate by calling parts/tags/pictures placed on other Base Screen/Window Screen. When parts/tags placed on the Base Screen are called, it is necessary to do Window Registration for the parts/tags that are to be called.

## (1) U tag Selection Method

Select 'U tag' from the 'Tag' of Menu bar.



Or click the 'U Tag' icon.



### • Menu Bar



### • Parts Tool Bar

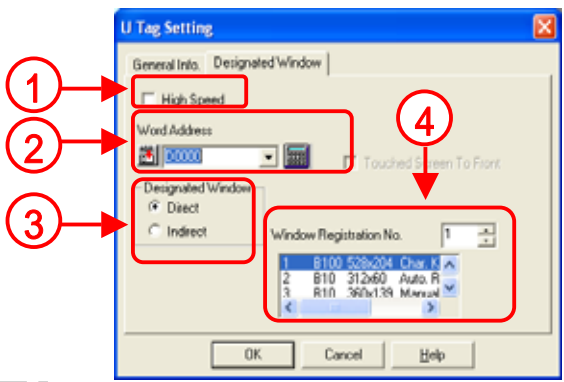


## (2) Designated Window (Direct) Settings

When the Designated Window is 'Direct' , there is 1 (fixed) window that can be displayed by 1 U tag. And the called position is also fixed.

If 'High Speed' is checked, the speed at which the window is called, increases. However the performance of the Base Screen as a whole reduces. And , 'Designated Window' becomes only Direct.

Only 2 U tags with 'High Speed' checked could be placed in the same screen.



The Address that controls the Window Display is set. If '1' is set in the Control Address, Window is displayed and if '0' is set window is deleted.

Designated Window is set.

The Registration Number of the Window to be called is set.

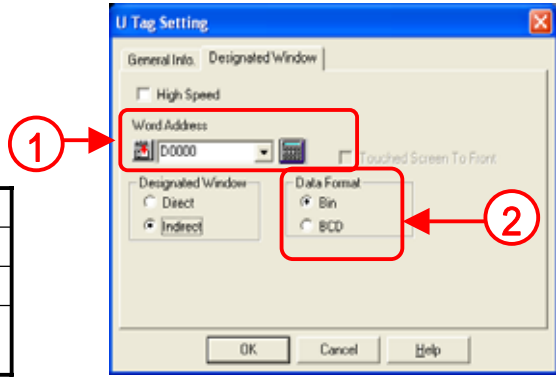
**(3) Designated Window (Indirect) settings**

When the designated window is set as ' Indirect', multiple windows can be switched and displayed by 1 U tag. And the display position can also be changed.

The Address that controls Window Display is set. 4 continuous words are used from the address where the word address is set and they are set as Window Show/ Hide, Registration Number of Window to be displayed and co-ordinate position of the Window to be displayed, respectively.

- Contents of Word Address in case of 'Indirect'

+ 0	Window Display Control Word
+ 1	Number of the Window Registration to be displayed.
+ 2	Value of the X co-ordinate of the Window Display Position
+ 3	Value of the Y co-ordinate of the Window Display Position



As for coordinates, the upper left of the Window to be called is taken as origin.

The format of the data to be saved in the Word Address is set.





## How to place U tag

How to operate the Window Display .

[Setup Flow]

1. Open the Base Screen 'B 10'.
2. Do Window Registration for Guidance on 'Auto Running'.
3. Open Base Screen 'B5'.
4. Set/ Place U tag.

### (1) How to Open the Base Screen

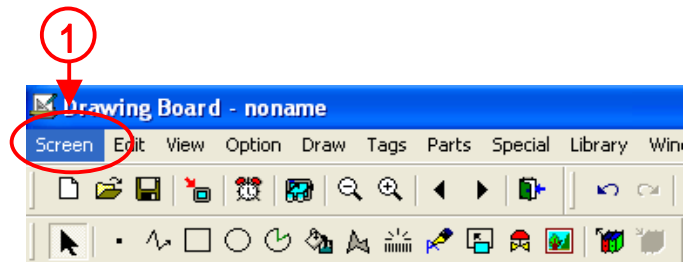
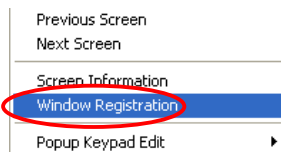
Open Base Screen 'B 10'

①

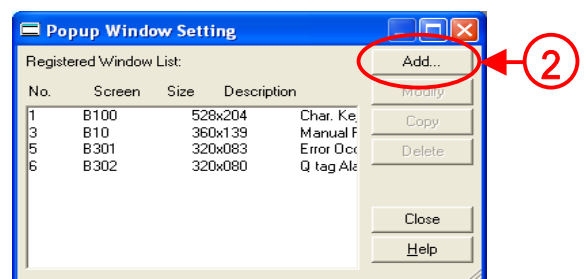


### (2) How to do Window Registration

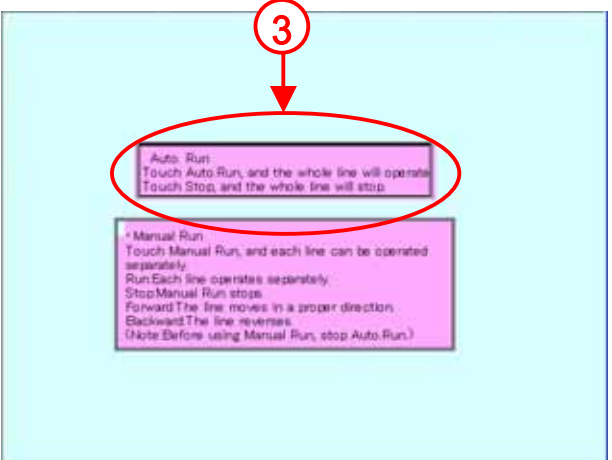
Select 'Window Registration' from 'Screen' on Menu Bar.



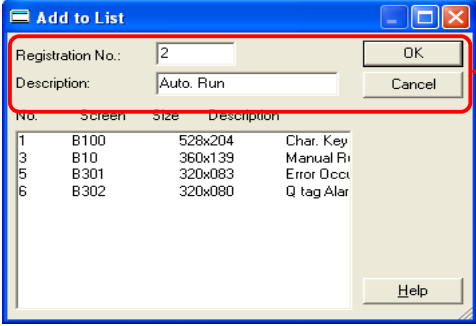
Click 'Add'.



Enclose the range for Window Registration in a square.



Enter '2' in 'Registration Number' and 'Auto Run' in 'Description' and Click 'OK'.



**(3) How to select U tag**

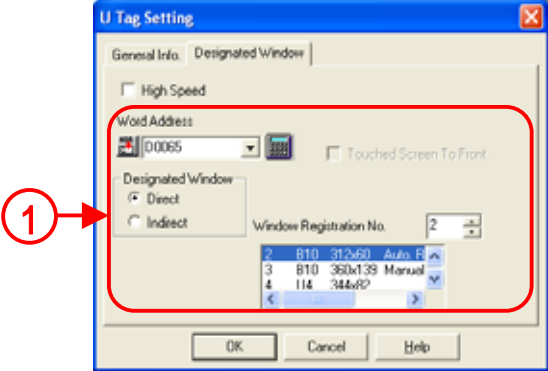
Open Base Screen 'B5'.

Click the 'U Tag' icon from the Tag Tool Bar.



**(4) How to set U tag**

Set the 'Designated Window' as 'Direct'. 'Window Address' as 'D65' and 'Window Registration Number' as '2'.

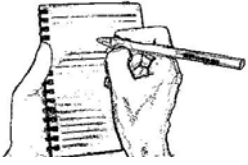


**(5) How to place U tag**

-----  
If 'OK' is clicked, a purple border is displayed on the screen. Place it at the position where the window is to be displayed.

**★ Hint!**

- Refer to P5 - 23 ~ for the method to set the switch for the display of Guidance.



Memo (Blank page. Please use for taking notes)

# 5.4

## Word Switch Guide Line

The Word Switch to Show/ Hide Guidance will be explained in this section.

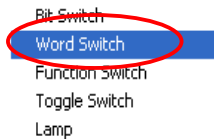


## Method for Word Operation(Word Switch Settings)

- Touch the Switch and save the data in Word Address of PLC.

### (1) Word Switch Selection Method

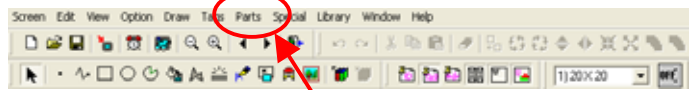
Select 'Word Switch ' From 'Parts' of the Menu Bar.



Or click the 'Word Switch' icon.



#### • Menu bar

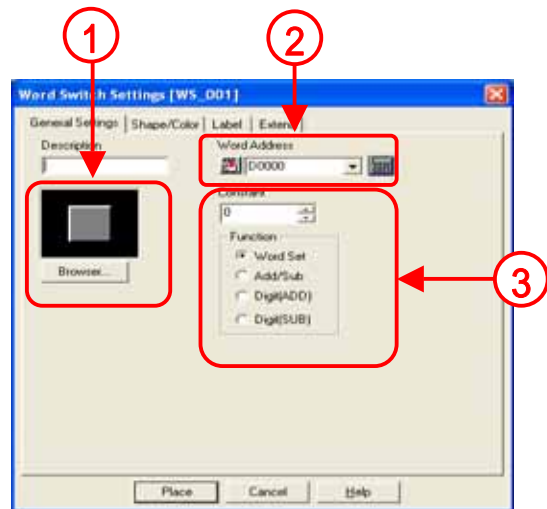
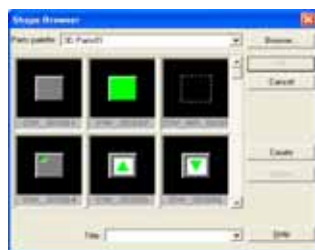


#### • Parts Tool Bar



### (2) General Settings

The picture of the currently selected Switch is displayed. If 'Browser' is clicked, the picture of the switch can be selected.



Touch the Switch and then set the Word Address to actually write the data.

**'Word Set':** The fixed value set in the 'Constant' is written.

**'Add/Sub':** Add the value set in the 'Constant' in the data saved in the Word Address. When it is to be subtracted, set the 'Constant' as '-(Minus)' .

**'Digit add/ Digit sub':** The data in the set digit position is Added/ Subtracted one by one at every touch.

Digit add/ digit sub sets the data format (Bin/BCD).

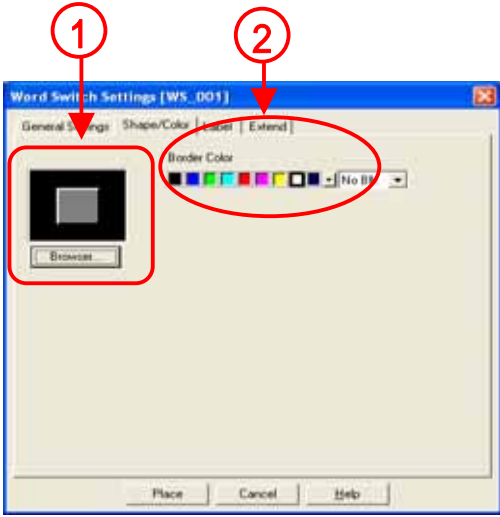
**(3) Shape/ Color Settings**

-----

The picture of the Switch currently selected is displayed.  
If Browser is clicked, the picture for the switch can be selected.

-----

Set the color of the Switch.

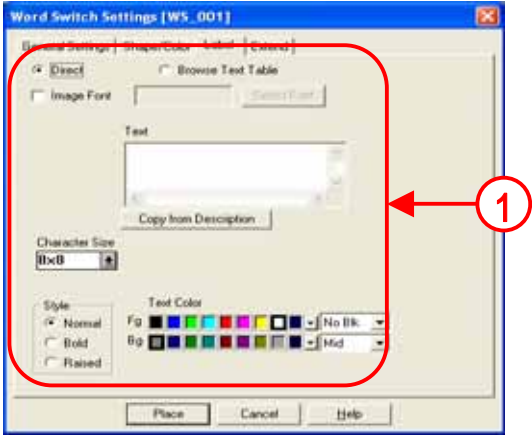


**(4) Label Settings**

-----

Set the text to be displayed on the Switch.

For details refer P1-9.



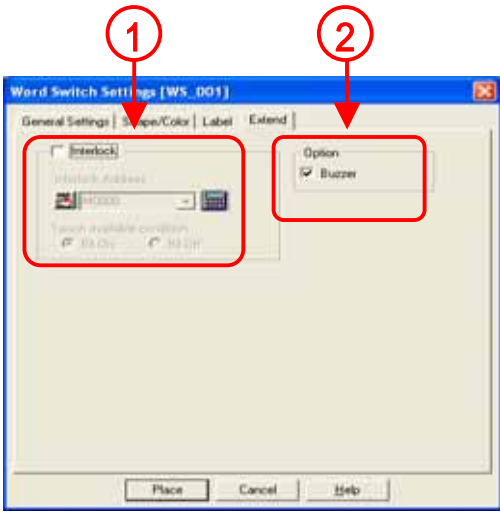
**(5) Extend Settings**

-----

**Interlock:** When the Bit Address set in the Interlock address is in 'Touch Available Condition' status, only then the Switch Operation can be enabled

**'Touch Available Condition: Bit ON':** Only when Interlock Address is ON, Switch Operation is enabled.

**'Touch Available Condition: Bit OFF':** Only when Interlock Address is OFF, Switch Operation is enabled.



-----

**Buzzer:** The buzzer sounds when it is checked and the Switch is touched.



## How to Place Word Switch

How to display the Switch that Shows/  
Deletes the window for Guidance.

[Setup Flow]

1. Open Base Screen 'B 5'.
2. Set/ Place Word switch.

### (1) How to select Word Switch

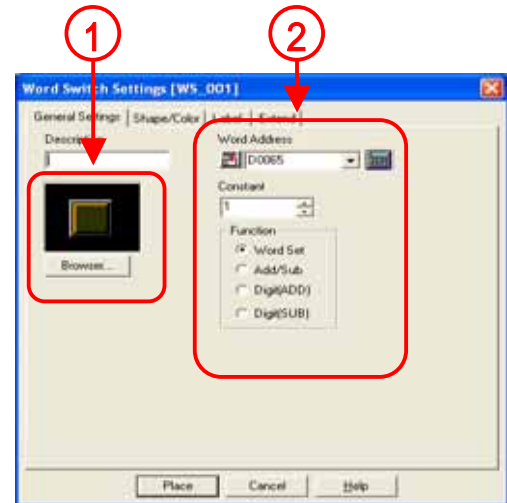
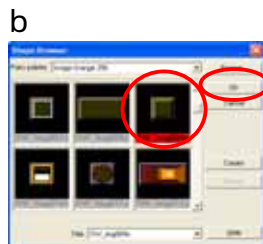
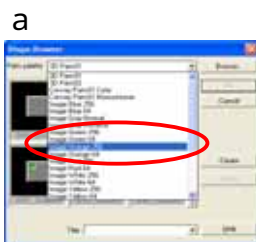
Click the 'Word Switch' icon from Parts  
Tool Bar.



### (2) General Settings

Click 'Browser' .

- a: Select 'Image\_orange\_256' from 'Parts Palette'.
- b: Select 'SW\_Img009o' and click 'OK'



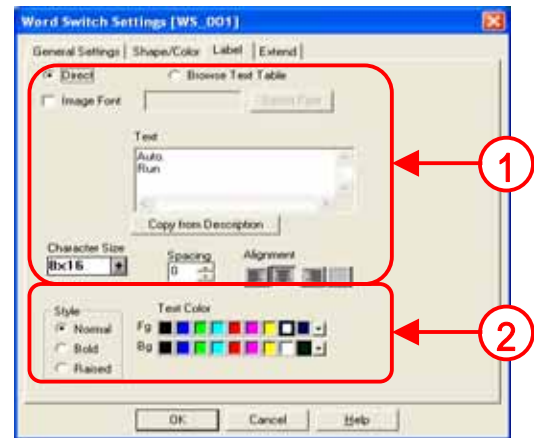
Set the 'Word Address' as 'D65' , 'Function' as 'Word Set' and 'Constant'  
as '1'.



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

Check 'Direct'.  
 Enter 'Auto Run' in 'Text'.  
 Next set '1 × 1(f)' in 'Character Size' and  
 'Center' in 'Alignment'.

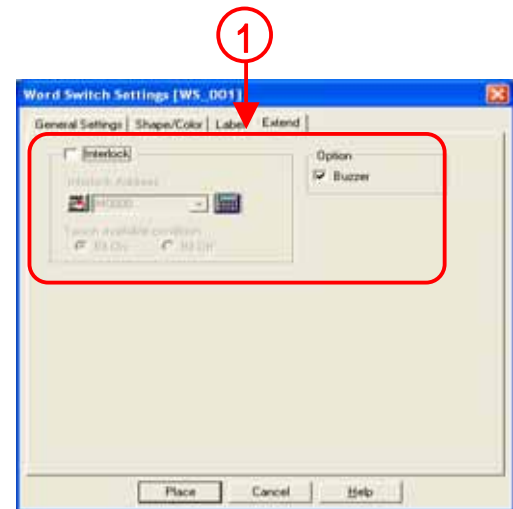
Set the Character 'Style' as 'Normal' and  
 the 'Text color' for Fg as White and Bg as  
 Transparent.



**(4) How to set extend settings**

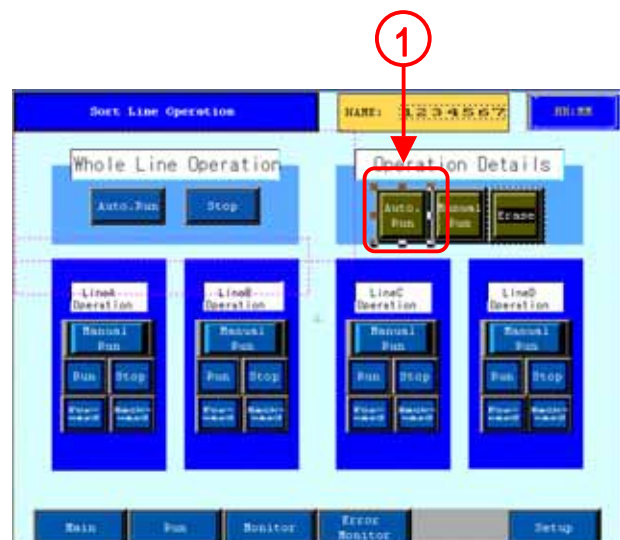
Confirm that 'Interlock' is not checked and check  
 'Buzzer'.

If 'Interlock' is checked, the Switch may not respond.



**(5) Let us place Word Switch**

Click 'Place' and place it on screen.



**(6) Let us also Set/ Place the other Word Switch**

Let us set the Address, Constant and label as follows and place them. Make the other settings like the Switch for Auto Run.

**‘Switch for Start Operation of Manual Run’ :**

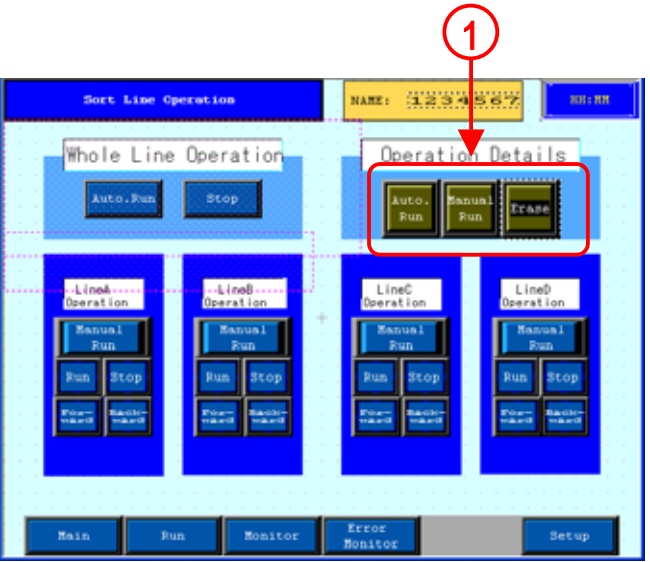
- ‘Word Address : D66’,
- ‘Word Operation: Data Set’,
- ‘Constant : 1’, ‘Label:Manual Run’

**‘Switch for Stop Operation of Auto Run’:**

- ‘Word Address: D65’,
- ‘Word Operation: Data Set’,
- ‘Constant: 0’, ‘Label: Delete’

**‘Switch for Stop Operation of Manual Run’:**

- ‘Word Address: D66’,
  - ‘Word Operation: Data Set’,
  - ‘Constant: 0’, ‘Label: None’,
- For the picture of Switch, select the transparent picture of ‘SW\_NO\_BORDER’ from ‘Browser’.



‘Switch for Stop Operation of Auto Run’ and ‘Switch for Guidance Deletion of Manual Run’ are placed one on top of other.

**(7)Let us Display Window**

After data transfer, if the Switch of ‘Auto Run’ is touched, ‘1’ is saved in D65 and the operation for ‘Auto Run’ is active. If ‘Erase’ is touched, ‘0’ is saved in D65 and operation is inactive.

