# OI Touchscreen

## Basic Tutorial



This Tutorial describes the basic procedures for programming a screen using WindO/I-NV2 software. It is intended for users who are trying IDEC OI Touchscreens for the first time and for those who wish to master the fundamentals of WindO/I-NV2 software.


IDEC Touchscreen Family

# 1 Operator Interface Features

## Features

### Design Tool Compatible With All IDEC OI Touchscreens

- Users can easily create screens and setup operations by using the design tool, WindO/I-NV2 software.

### Supports Multiple Languages

- The Operator Interface supports multiple languages, such as Japanese, Chinese (simplified and traditional Chinese characters), Korean, and European languages.
- Up to 16 types of display languages can be switched to during operation.


### Bright, Legible Display

- Brignt LCD
- Wide view angle

### Connects to Peripheral Equipment *1

- RS232C/RS-485/RS-422
- Ethernet port
- CF card slot

### Conforms to International Standards

- Conforming to UL/c-UL standards, EN standards, and EU directives.

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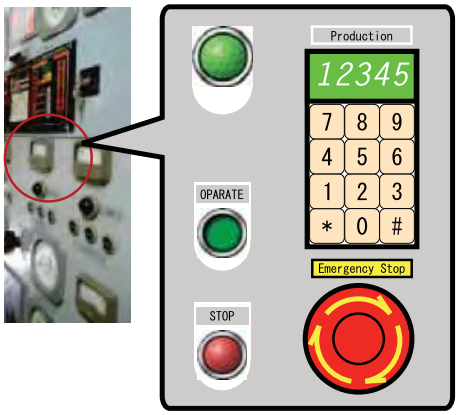
*1: The type of interface available for the OI varies depending on the model.
(Refer to "Operator Interface Models" on page 44)

## Operator Interface Advantages

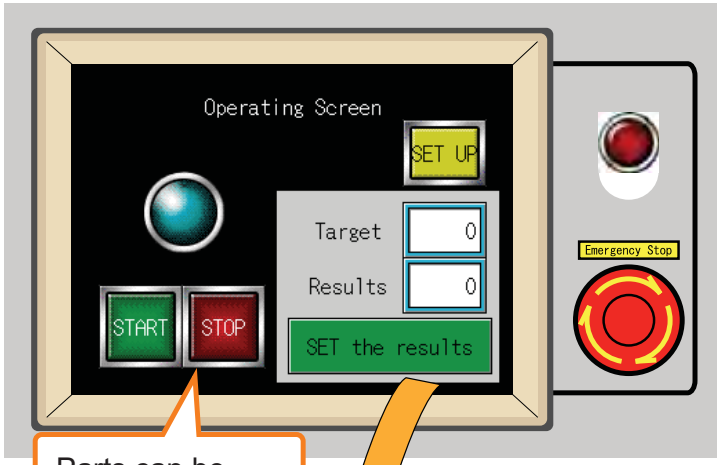
**Conventional Control Panel**

- Large size
- Complicated wiring
- Many components
- Adding and modifing components is difficult




**Operator Interface**

- Small size
- Cable wiring is reduced
- Applicable to multiple items (Easy to add and modify components)
- Multifunction, flexibility in expansion

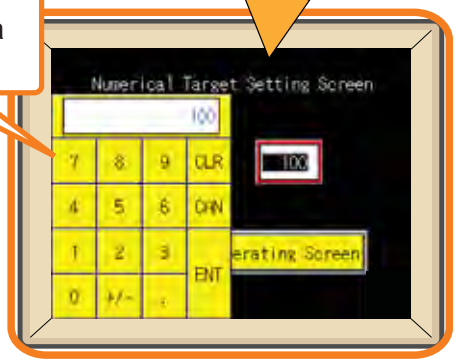



Operate screens by touching directly with a finger.

Parts can be placed anywhere.

Easily switch between displayed screens.

Enter data with a numeric keypad.



# 2 WindO/I-NV2 Overview

## Preparations

Before creating a screen for the OITouchscreen using WindO/I-NV2 software, you will need the following:

| | |
|---|---|
| **(1) WindO/I-NV2 Software**<br>Part Number: HG9Y-ZSS2W |  |
| **(2) PC*1**<br>To use a PC that does not have a COM port, use a commercially available USB-RS232C converter.<br>Part Number: FC4A-USB |  |
| **(3) Programming Cable for the OI Touchscreen**<br>Part Number: HG9Z-XCM1A<br>or FC2A-KC4C |  |
| **(4) Operator Interface*2**<br>Example Part Number:<br>HG2F-SS22VCF |  |

*1: For PC system requirements, refer to page 44 (back cover).
*2: To supply power to the Operator Interface, a 24 V DC power supply is required.

If the OI Touchscreen will be configured to communicate with a host (ie. PLC), then you will also need the following:

| | |
|---|---|
| **(5) Programmable Controller (PLC)**<br>Example: MicroSmart |  |
| **(6) Communication Cable (between the MicroSmart & OI)**<br>Example: FC4A-KC2CA |  |

## Operation Flow

(1) Software installation

Refer to Chapter 2 on page 7

(2) Creating a screen on the PC

Refer to Chapter 3 on page 10

Software
WindO/I-NV2

PC

(3) Downloading the project to the OI

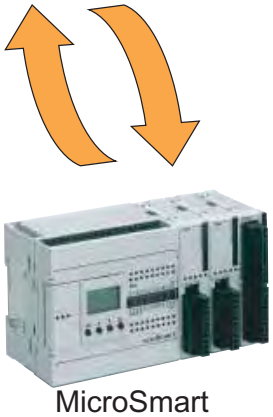
Refer to Chapter 4 on page 34

(4) Simulation (operation verification)

Refer to Chapter 5 on page 36

Cable

Operator Interface



MicroSmart

# 1 Software Installation

This section describes the procedure for installing WindO/I-NV2 software.

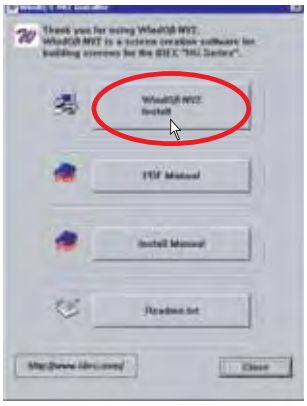
**1.** **Insert the WindO/I-NV2 CD-ROM into the CD-ROM drive of the PC.**

**2.** **The WindO/I-NV2 setup program will automatically start.**

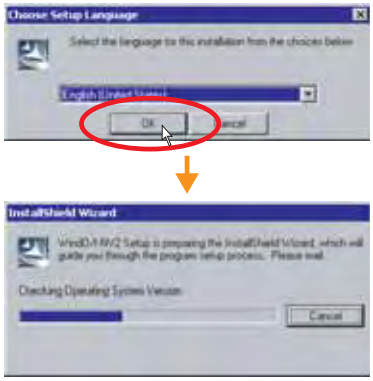
**If the setup program does not start:**


1. Double-click the My Computer icon on the desktop.
2. Double-click NV2lande.exe in the CD drive.

**3.** **Click the [WindO/I-NV2 Install] button.**

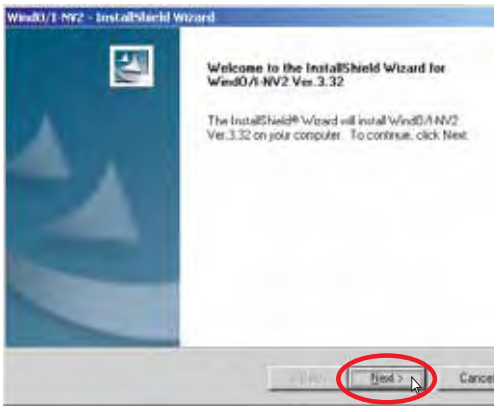


**4.** **Make sure that English is selected, and click [OK].**

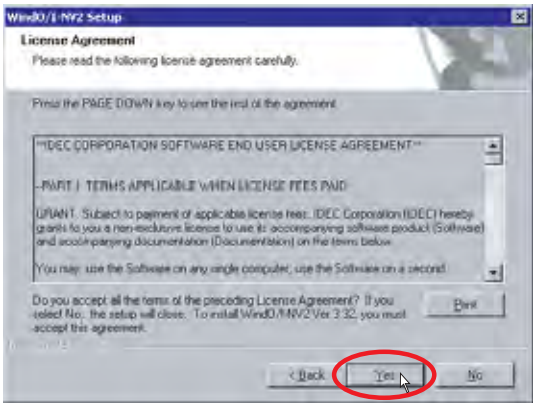


InstallShield Wizard will start.

**5.** **Click [Next].**

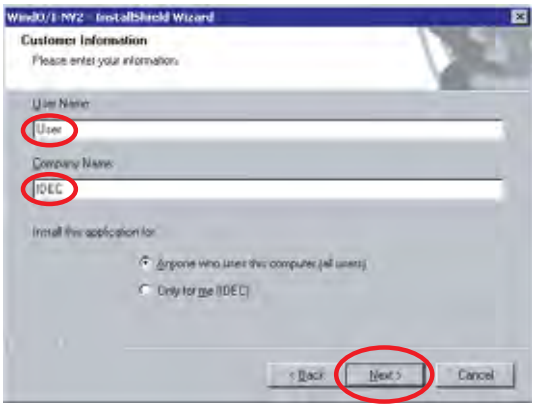


**6.** **Review the contents of the license agreement. If you accept the terms of the agreement, click [Yes].**

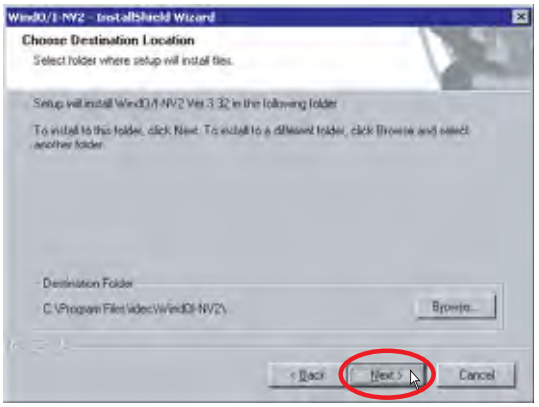



**7.** **Enter User Name and Company Name , and click [Next].**

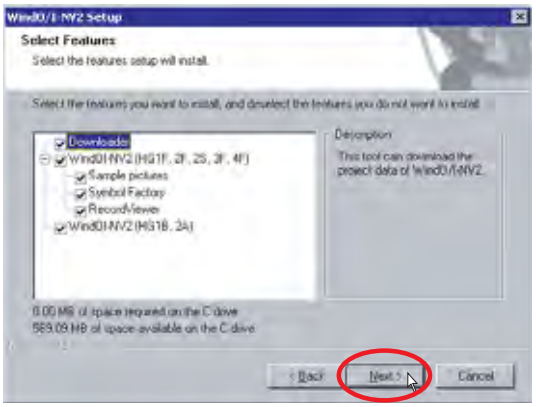
In this example, User and IDEC are entered in User Name and Company Name , respectively.



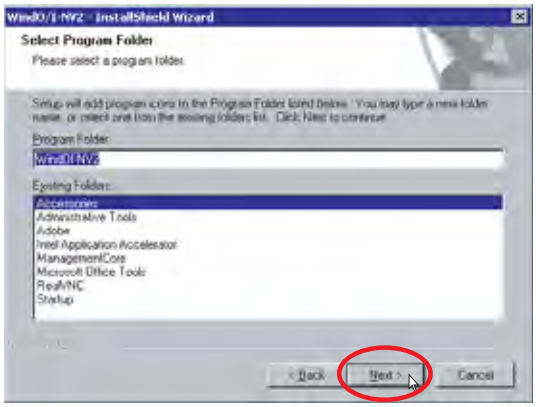

**8.** **Click [Next].**



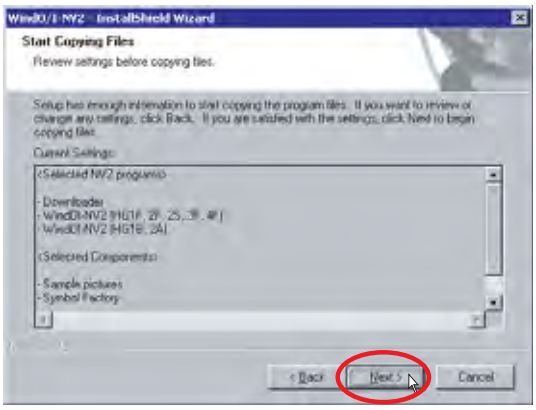

**9.** **Click [Next].**



**10.** **Click [Next].**

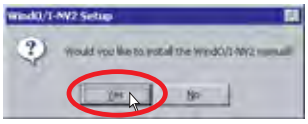



**11.** **Review the settings and click [Next].**

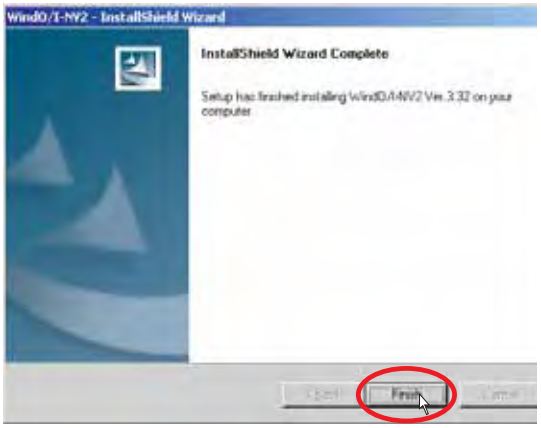



Installation will start.


**12.** **Click [Yes].**




**13.** **After installation is completed, click [Finish].**



# 1 Sample Program

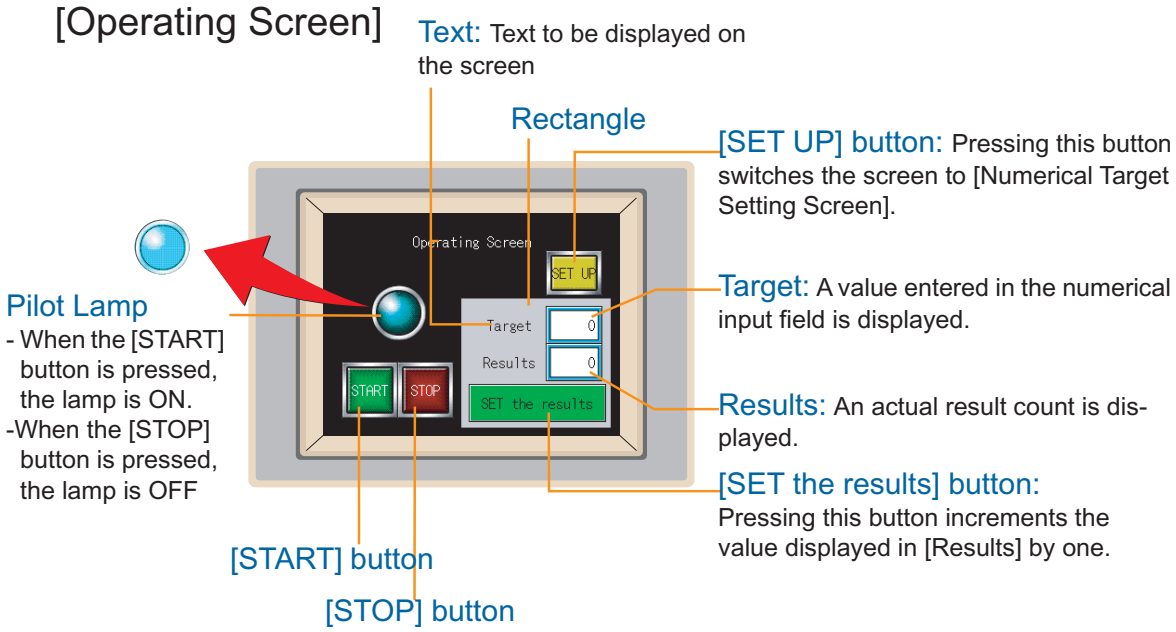
Using WindO/I-NV2 installed in Chapter 2, even beginners can easily create the following screen:

## Create a project to control & monitor a product ion line

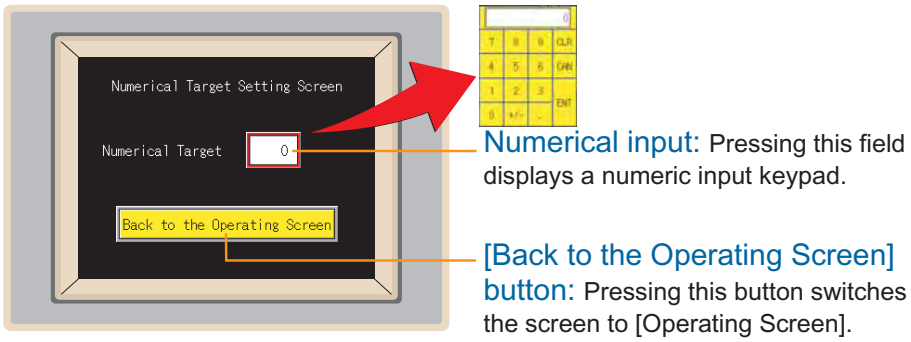
Using a production line as the application, create a screen that functions as follows:

**(1) Starting and stopping the production line using the [START] and [STOP] buttons**
**(2) Indicate operation status of the production line with a Pilot Lamp**
**(3) Entering a target production quantity in Numerical Target , and displaying the target quantity in Target**
**(4) Pressing the [SET the results] button increments the value displayed in Results by one.**

### [Operating Screen]



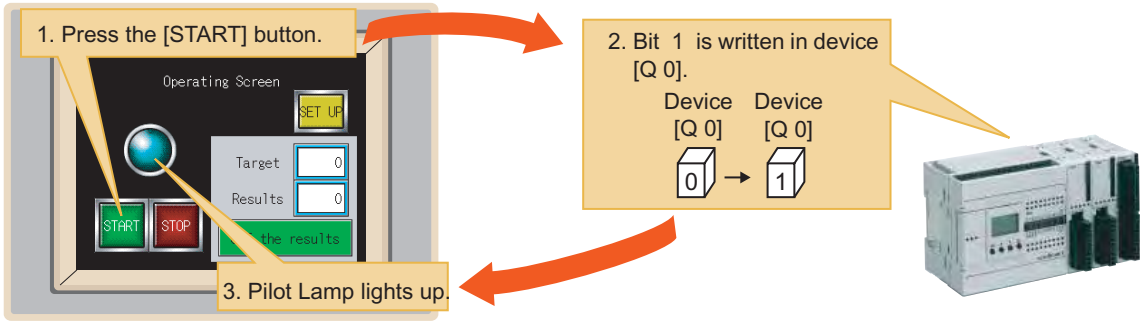

### [Numerical Target Setting Screen]



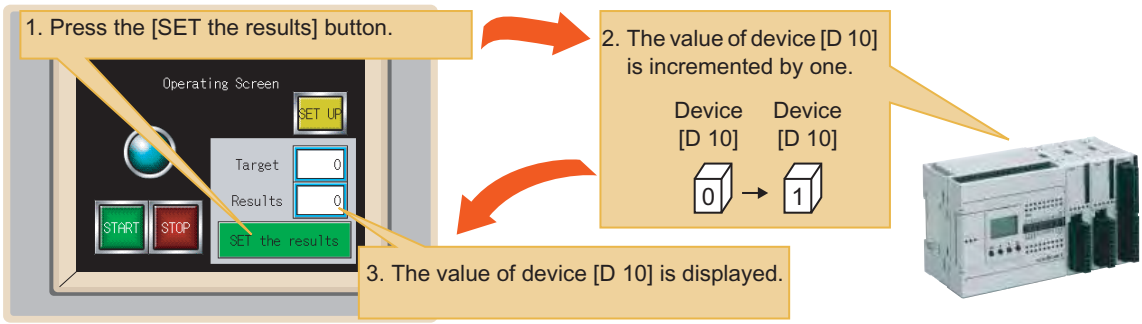
## Available Devices and Parts Operation

Each part will be operated with the following devices:

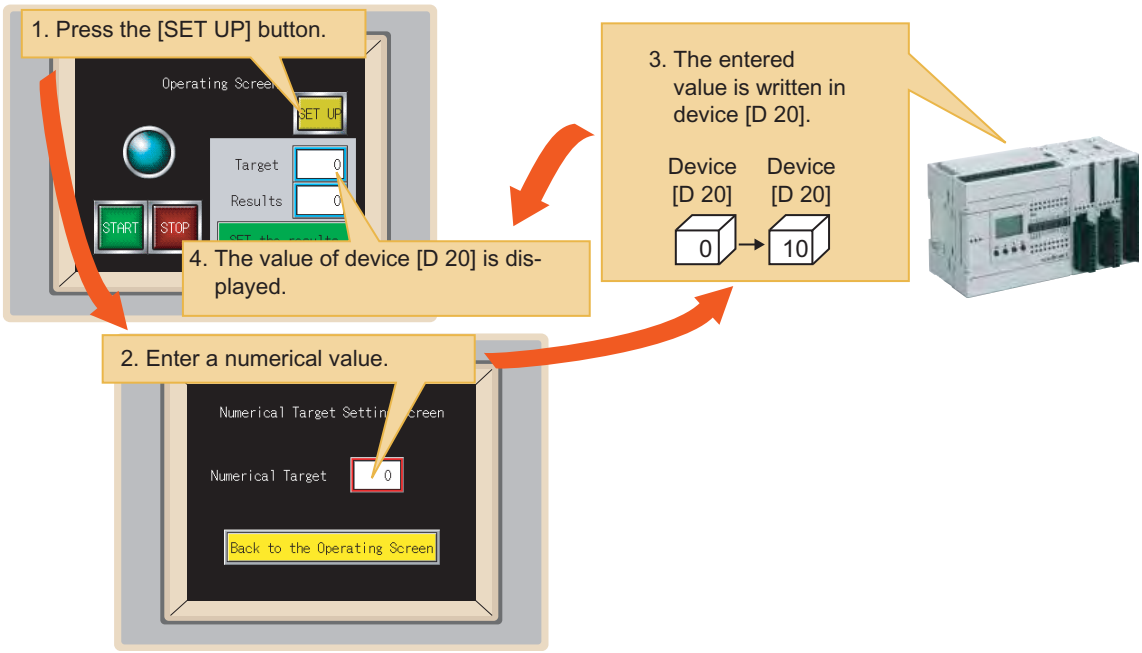
### [Q 0]: [START (or [STOP]) button and pilot lamp operation




### [D 10]: [INC the results] button and [Results] display




### [D 20]: Numerical input field and [Target] display



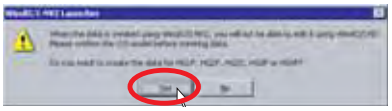
# 2 Launching WindO/I-NV2 & Creating a New Project

## Starting WindO/I-NV2

**1.** **Double-click the WindO/I-NV2 Launcher icon on the desktop.**

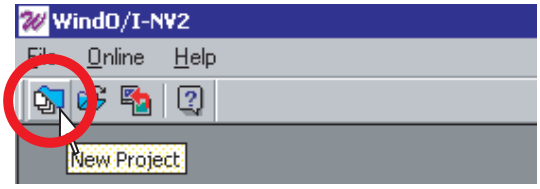

**2.** **Select HG1F/2F/2S/3F/4F .**


**3.** **Click [Yes]. WindO/I-NV2 will start.**



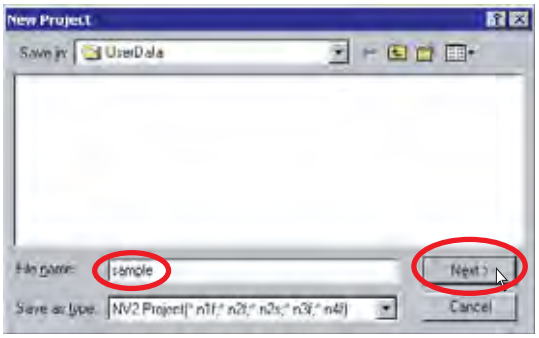
## Creating a New Project

**4.** **Click the**  **(New Project) icon.**



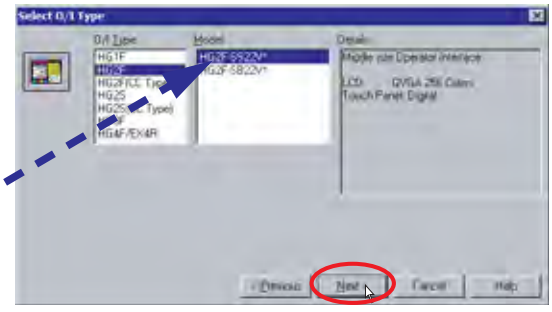

**5.** **Enter the file name of a project, and click [Next].**

Enter sample for File name .




**6.** **Select the type and model of the Operator Interface being used, and click [Next].**

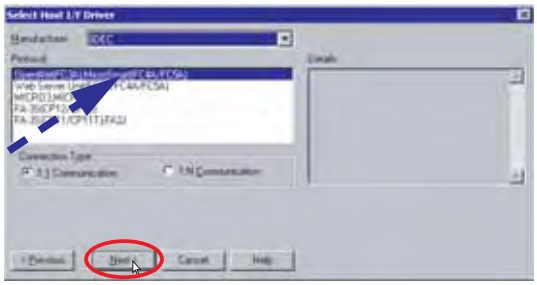
Select HG2F for O/I Type , and select HG2F-SS22V for Model .




HG2F-SS22VF

**7.** **Set the items in Select Host I/F Driver , and click [Next].**

Select IDEC for Manufacturer , and OpenNet (FC3A), MicroSmart (FC4A/FC5A) for Protocol .



MicroSmart

The Project Settings window will be displayed.

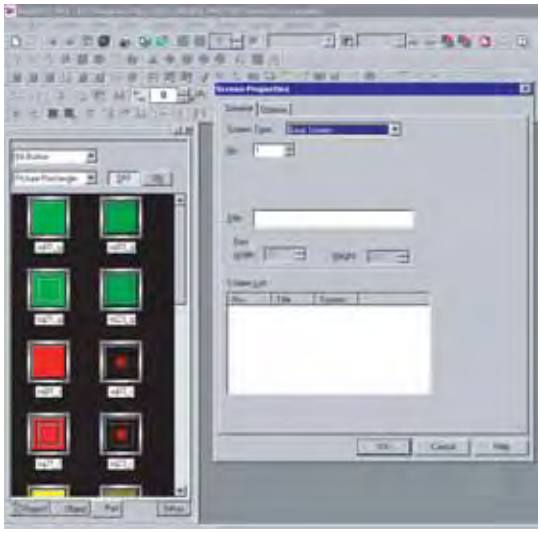
**8.** **Click [OK].**

The Project Settings window enables common settings for all screens of a project. However, you may keep the same settings as shown in this window.

If you wish to change the settings later, select [Set up] > [Project Settings] menu.

Creation of a new project is complete.

The Screen Properties window will be displayed, and you can proceed to create a screen.



# 3 Creating Screens

## [Operating Screen]

### Set Up

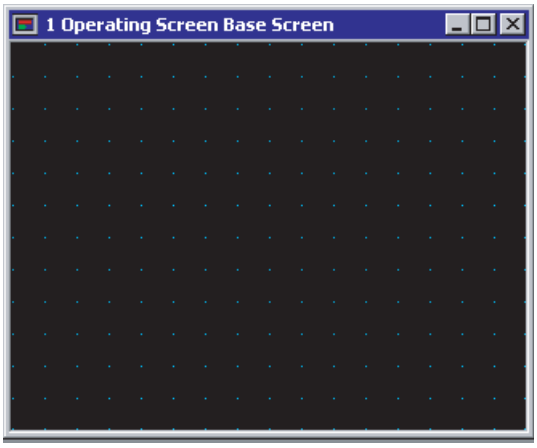
**1.** **Enter [Title].** (optional)

In this example, select Base Screen for [Screen Type], and enter 1 in [No.].

If you wish to change the above settings, double-click the screen to display the Screen Properties window.


**2.** **Click [OK].**

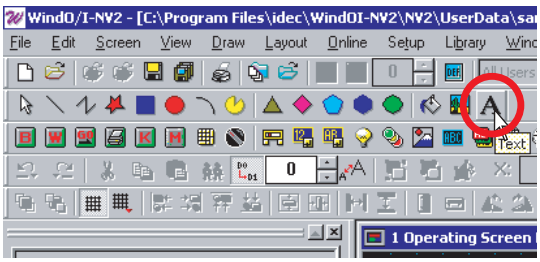
The [Operating Screen] setup is complete, and 1 Operating Screen Base Screen is displayed.



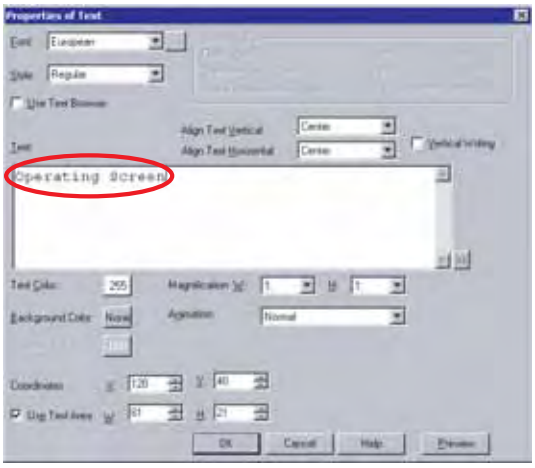

### Creating screen text

**1.** **Click the A (Text) icon, and then click on the screen where you want the text to be.**

The Properties of Text window is displayed.



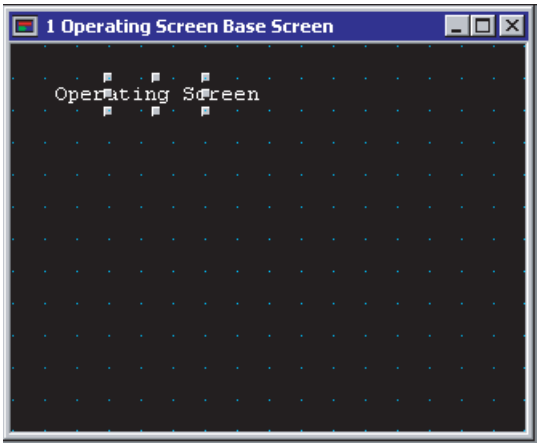
**2.** **Enter Operating Screen in the text box.**




**3.** **Click [OK].**

The text will be displayed on the screen.

To move the text, use the Drag & Drop function.

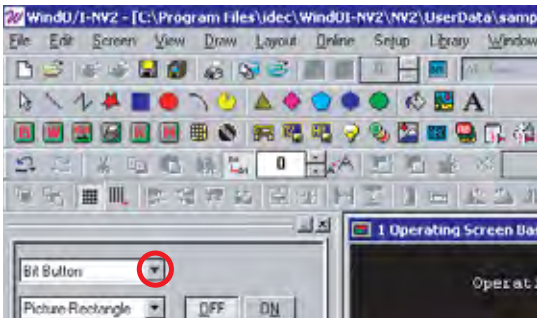



## [START] and [STOP] buttons

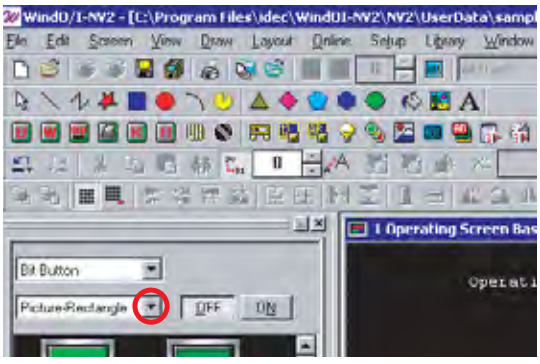
Create a [START] button and [STOP] button to turn a Pilot Lamp on/off.

**1.** **To create the [START] and [STOP] buttons, select Part tab on work-space.**

Click [ ▼ ] for the parts list and select Bit Button .

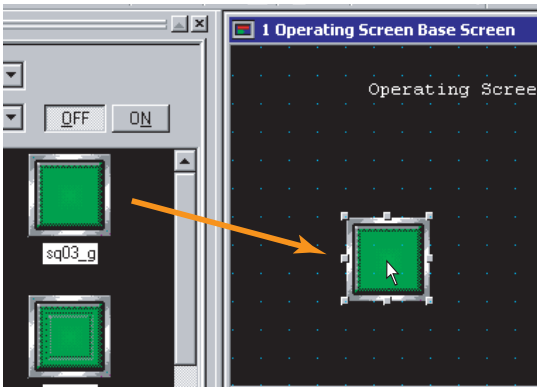



**2.** **Click [ ▼ ] for shape, and select Picture - Rectangle .**



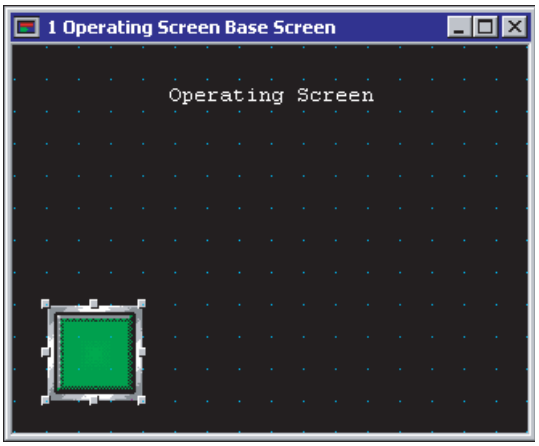
**3.** **Select the desired part, and place the part on 1 Operating Screen Base Screen using drag & drop operations.**

In this example, select Bit Button sq03_g .



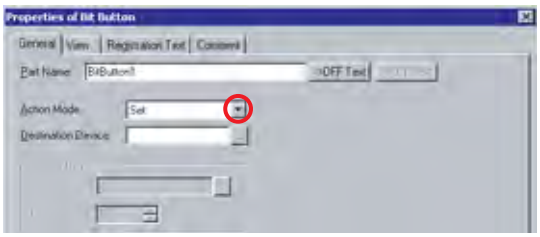

**4.** **Double-click the part placed on the screen.**

The Properties of Bit Button window is displayed.




**5.** **Click [ ▼ ] for Action Mode , and select Set .**

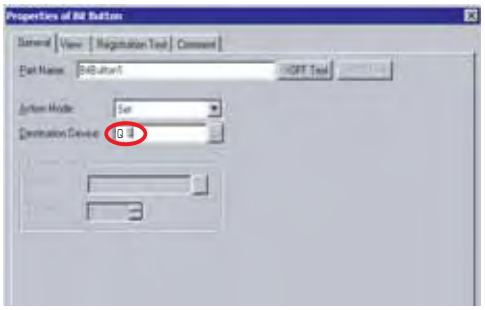
If Set is selected for Action Mode , 1 will be written in the specified device when this button is pressed.




**6.** **Enter Q 0 in [Destination Device].**

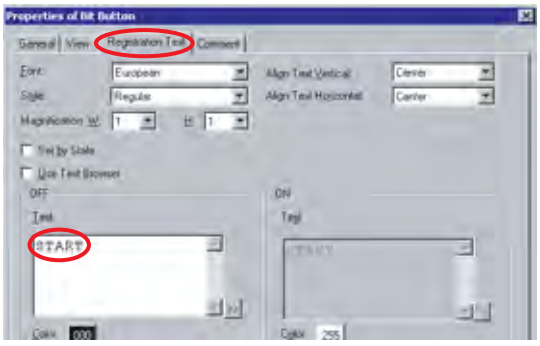
Insert a space between the letter Q and the number 0 .

In this example, 1 will be written in PLC device Q 0 .



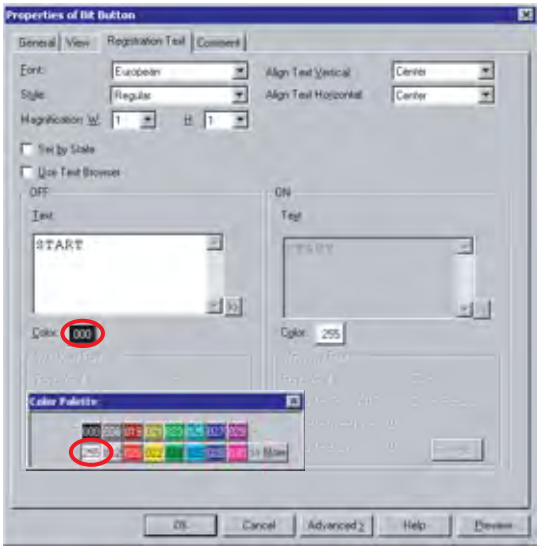

**7.** **Select the Registration Text tab, and enter the text that will appear on the button.**

In this example, enter START .



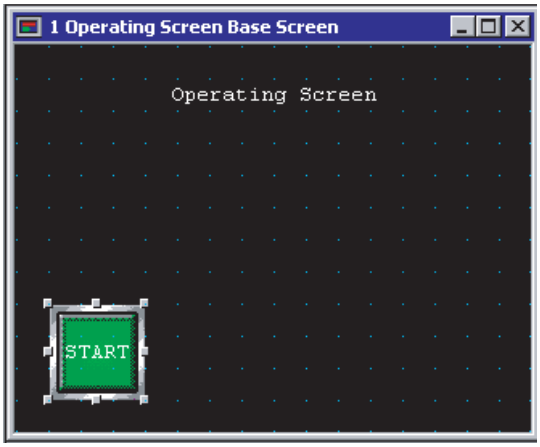
**8.** **Click the [Color] selection button to change the text color.**

In this example, select 255 (white).




**9.** **Click [OK].**

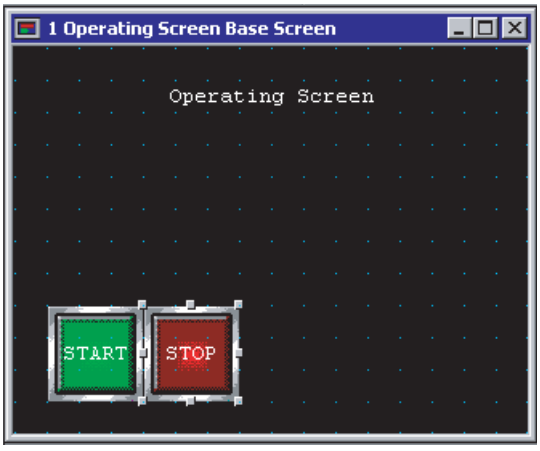
The [START] button will appear on the screen.




**10.** **Create a [STOP] button by following the previous steps 1 to 8 as shown below.**

- In Step 1, place Bit Button sq03_r on the screen.
- In Step 5, select Reset . (If Reset is selected for Action Mode , 0 will be written in a specified device when this button is pressed.)
- In Step 6, enter Q 0.
- In Step 7, enter STOP .

The [STOP] button will appear on the screen.

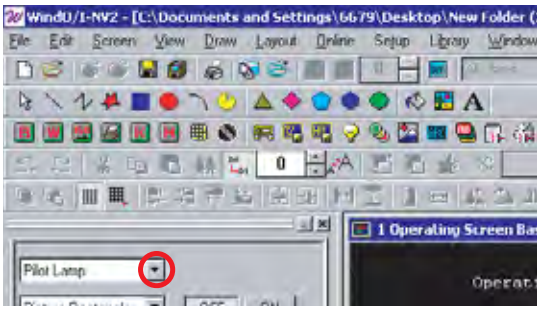


## Pilot Lamp

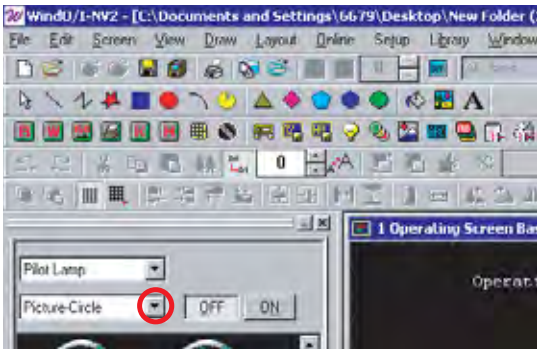
Create a pilot lamp that will turn on when the [START] button is pressed, and turn off when the [STOP] button is pressed.

**1.** **To create a pilot lamp, select Pilot Lamp .**

Click [ ▼ ] for the parts list, and select Pilot Lamp .



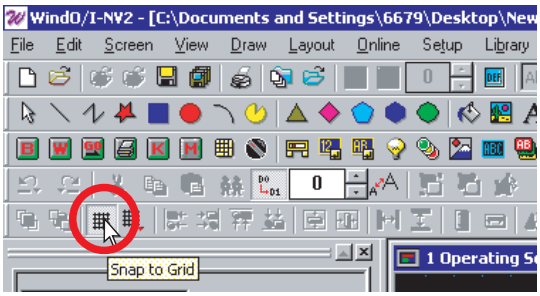

**2.** **Click [ ▼ ] for shape, and select Picture - Circle .**




**3.** **Click the (Snap to Grid) icon.**

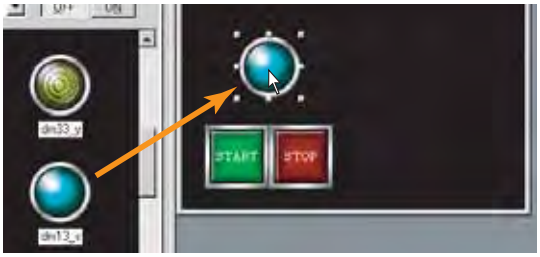
**The icon is reset (shown as ), and the Snap to Grid setting is disabled.**

Disabling Snap to Grid allows you to place the object/part anywhere on the screen.




**4.** **Select the desired part, and place the part on 1 Operating Screen Base Screen using drag & drop operations.**

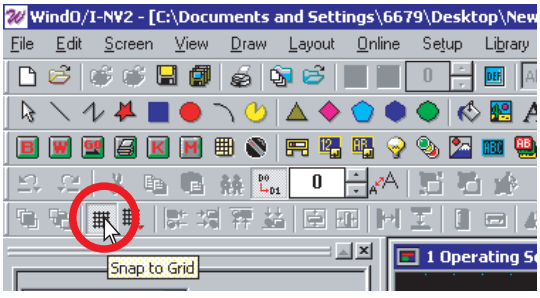
In this example, select Pilot Lamp dm13_s .




**5.** **Click the (Snap to Grid) icon.**

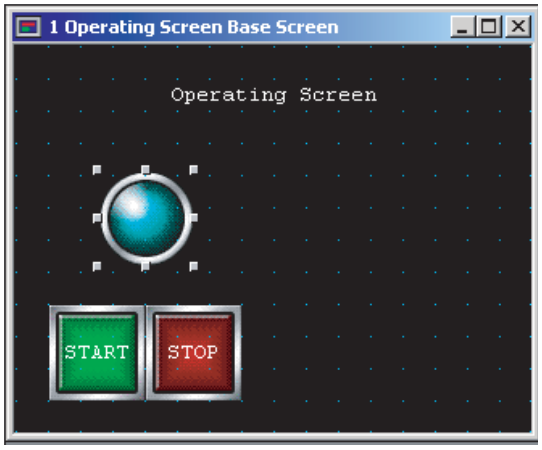
The Snap to Grid (shown as ), setting becomes active.

Enabling Snap to Grid allows you to set the push buttons on a grid so they function properly.



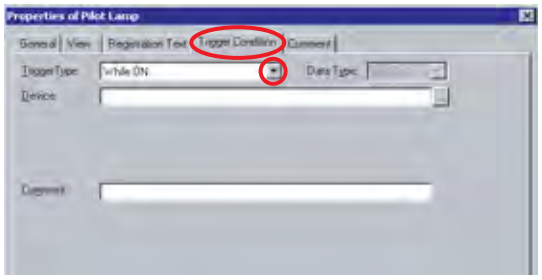
**6.** **Double-click the part placed on the screen.**

The Properties of Pilot Lamp window is displayed.




**7.** **Select the Trigger Condition tab, and click [ ▼ ] for [Trigger Type]. Select While ON .**

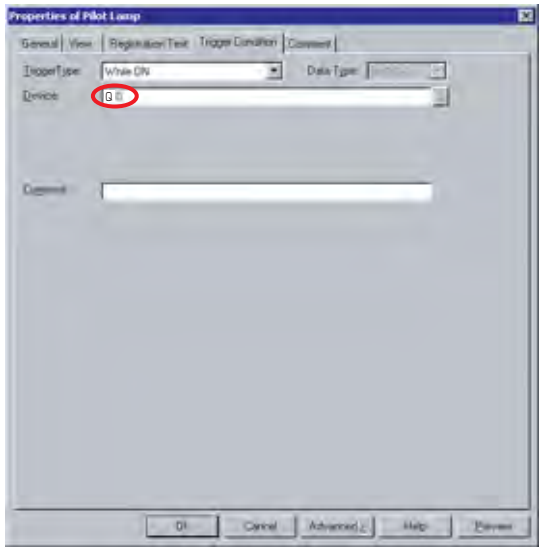
If While ON is selected for [Trigger Type], the lamp will remain lit when the specified device is ON.



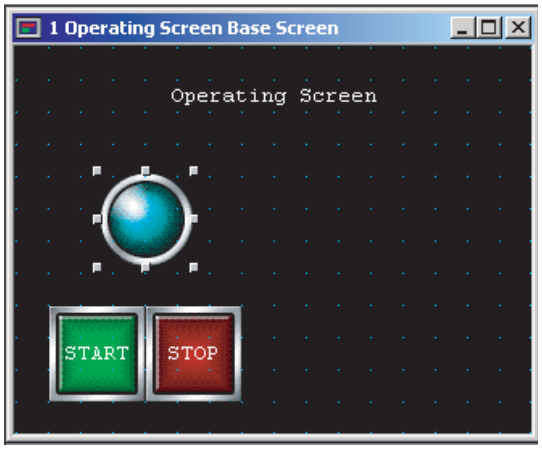

**8.** **Enter Q 0 in [Device].**

Insert a space between Q and 0 .

In this example, the lamp will be switched ON/OFF by the PLC device Q 0 .




**9.** **Click [OK].**

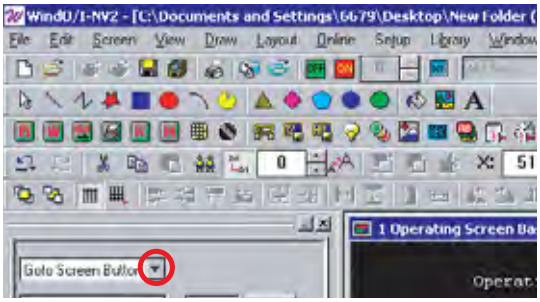


## [SET UP] button

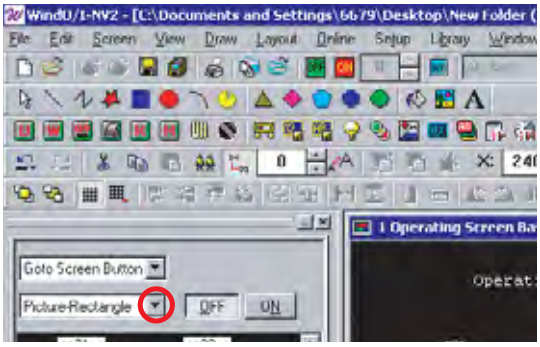
Create a [SET UP] button that will change from [Operating Screen] to [Numerical Target Setting Screen] when pressed.

**1.** **To create a [SET UP] button, select the Goto Screen Button .**

Click [ ▼ ] for the parts list, and select Goto Screen Button .

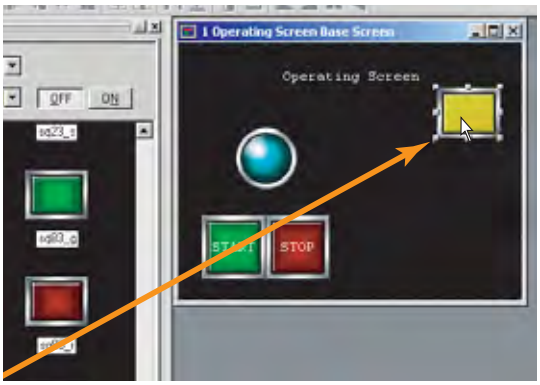



**2.** **Click [ ▼ ] for shape, and select Picture - Rectangle .**



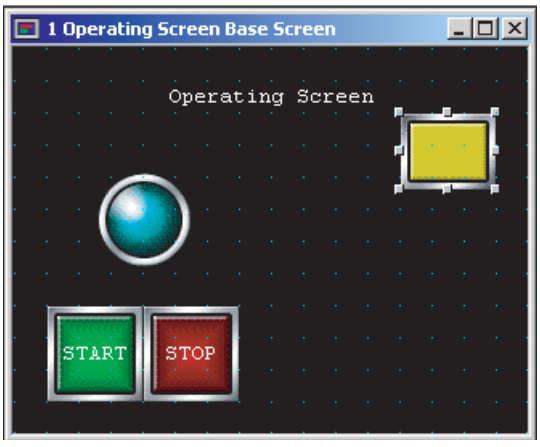

**3.** **Select the desired part, and place the part on 1 Operating Screen Base Screen using the drag & drop function.**

In this example, select the Goto Screen Button sq81_y .




**4.** **Double-click the part placed on the screen.**

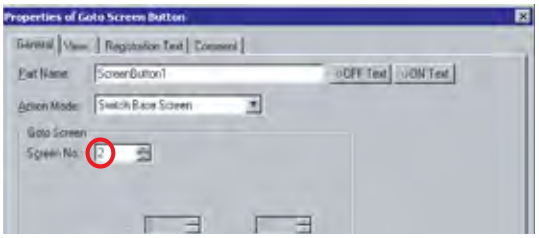
The Properties of Goto Screen Button window will be displayed.



**5.** **Click [ ▼ ] for Action Mode to select Switch Base Screen .**

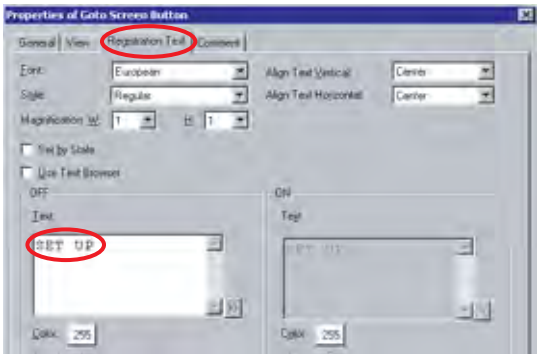

**6.** **In Goto Screen set Screen No. to 2 .**

The screen No. is set to 2 .



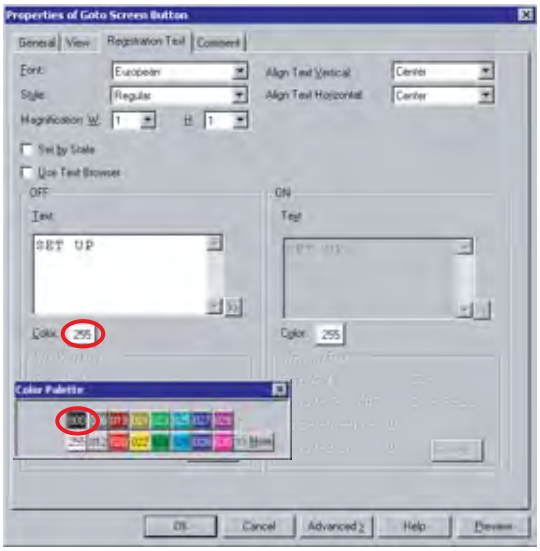

**7.** **Select the Registration Text tab, and specify the text to be shown on the button.**

In this example, enter SET UP in the text box.



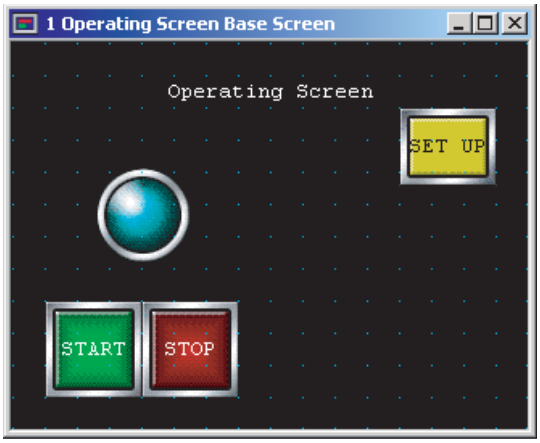

**8.** **Click the [Color] selection button to change the text color.**

In this example, select 000 (black).




**9.** **Click [OK].**

The [Set Up] button will appear on the screen.

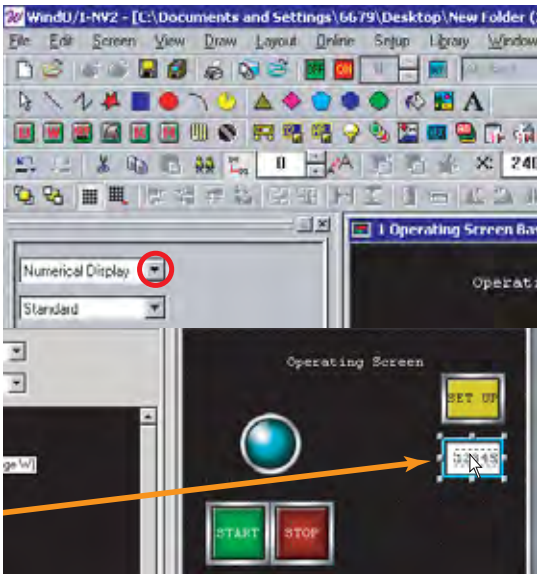


## [Target] & [Results] Displays

Create a [Target] display to show the value entered in the Numerical Target (numerical input field). Create a [Results] display that will increment the displayed value by one, every time the [SET the results] button is pressed.

**1.** **To create the [Target] display, select Numerical Display .**

Click [ ▼ ] for the parts list, and select Numerical Display .

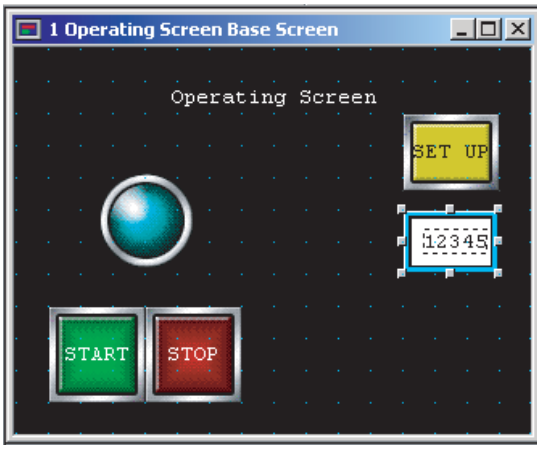


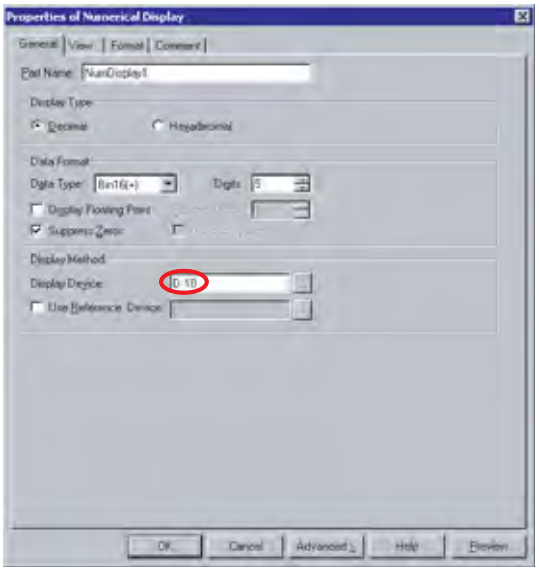

**2.** **Select the desired part, and place it on 1 Operating Screen Base Screen using the drag & drop function.**

In this example, select Numerical Display F0004 .

**3.** **Double-click the part placed on the screen.**

The Properties of Numerical Display window will be displayed.



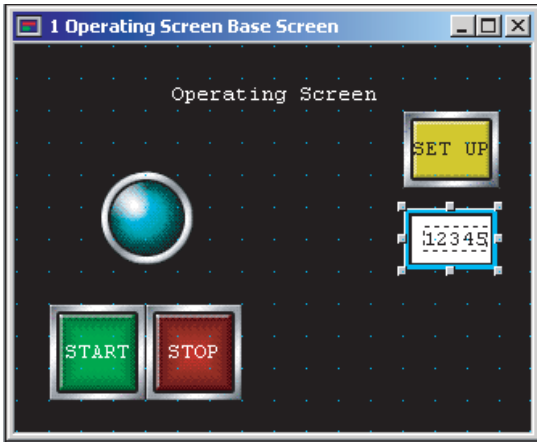




**4.** **Enter D 10 in [Display Device].**

Insert a space between D and 10 .

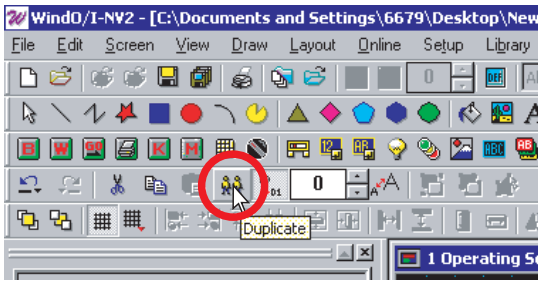
In this example, the value of the PLC device D 10 will be read and displayed in the [Target].

**5.** **Click [OK].**

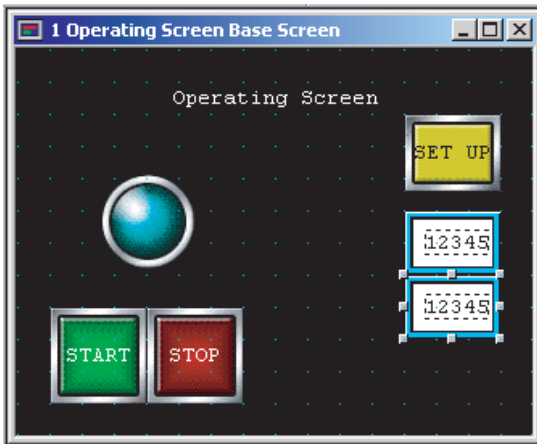



**6.** **Select the numerical display for the [Target], and click the (Duplicate) icon.**

The numerical display will be copied.



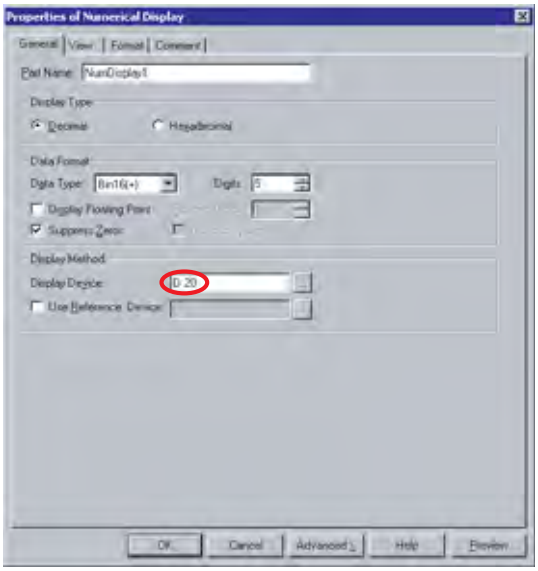

**7.** **Drag and drop the copied numerical display below the [Target] numerical display.**



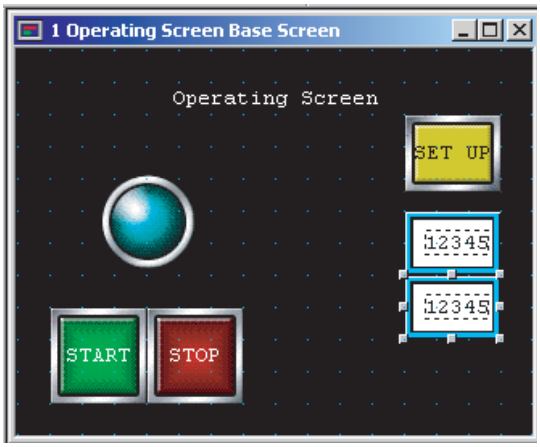

**8.** **Double-click the duplicated numerical display, and change the setting of the Display Device to D 20 .**

Insert a space between D and 20 .

In this example, the value of the PLC device D 20 will be read and displayed in [Results].

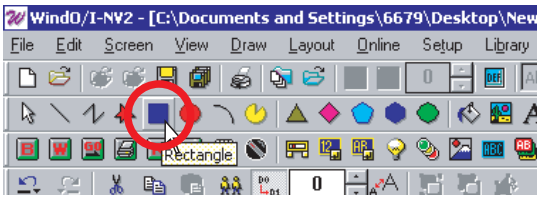


**9.** Click [OK].




## Objects

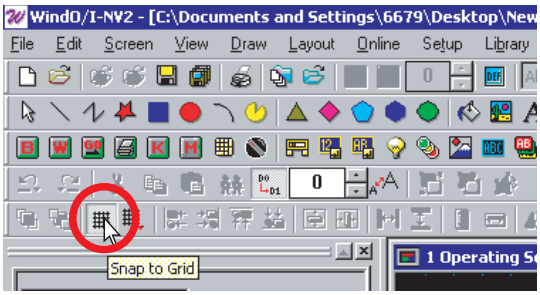
**1.** Click the  (Rectangle) icon.



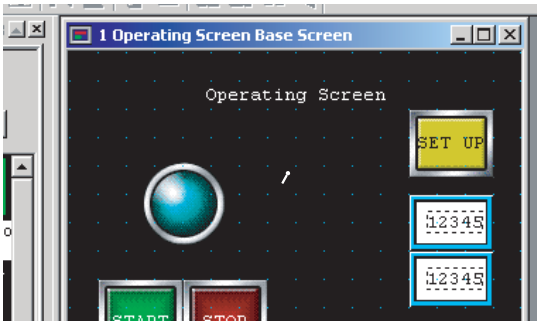

**2.** Click the  (Snap to Grid) icon.

The icon is reset (shown as  ), and the Snap to Grid setting is disabled.

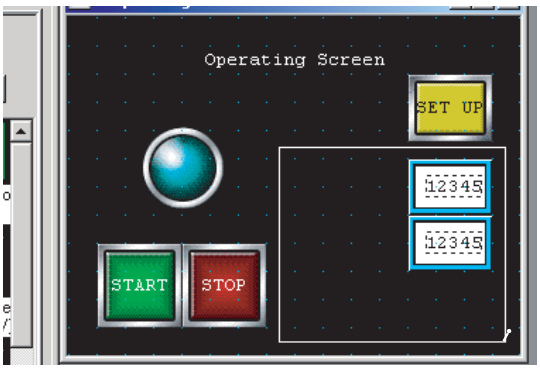
Disabling Snap to Grid allows you to place the object/part anywhere on the screen.




**3.** Click on the screen to start drawing a rectangle.

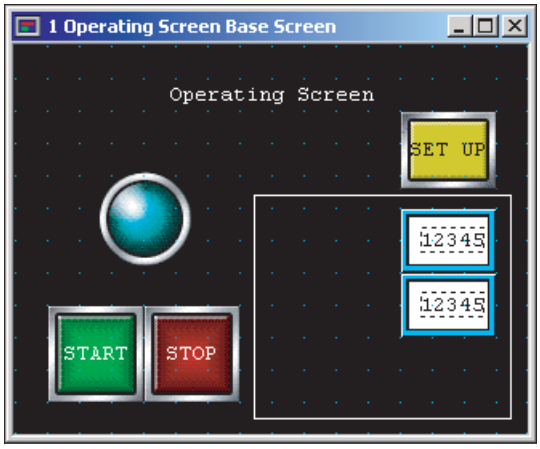



**4.** Use the click & drag function to resize the rectangle if necessary.



**5.** **Double-click the rectangle.**

The Properties of Rectangle window will be displayed.

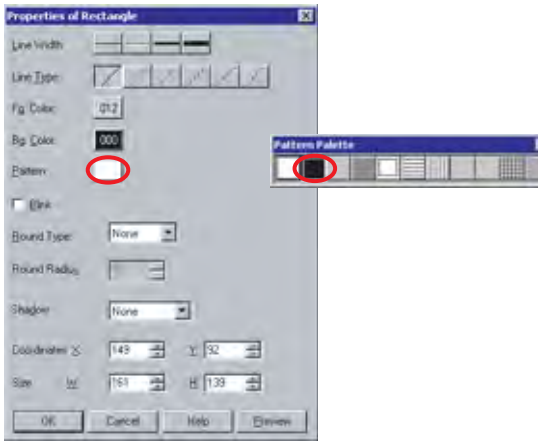



**6.** **Click the [Fg. Color] selection button to change the foreground color.**

In this example, select 012 (gray).

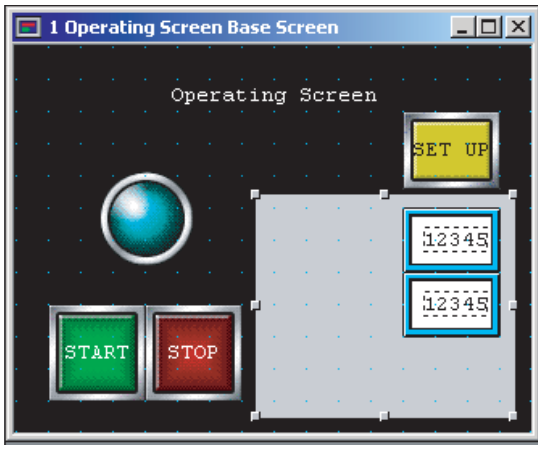

**7.** **Click the [Palette] selection button to change the Pattern Palette.**

In this example, select Fore 100% .




**8.** **Click [OK].**

The completed (rectangle) will appear on the screen.




**9.** **Place text ( Target and Results ) on the object, following the procedure for Creating text to be displayed on the screen on page 14.**

For the text color, select 000 (black).

## [SET the results] Button

Create a [SET the results] button that will increment the value displayed in [Results] by one, every time the button is pressed.

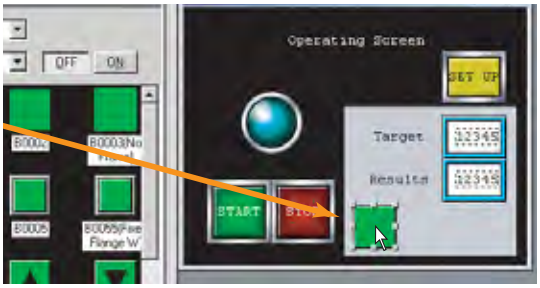
**1.** **To create the [SET the results] button, select Word Button .**

Click [ ▼ ] for the parts list, and select Word Button .

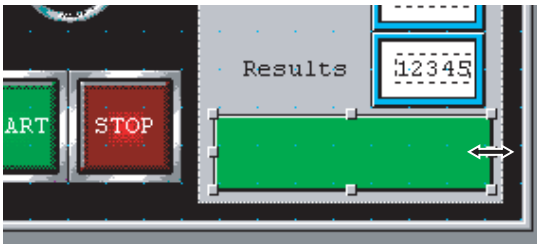
**2.** **Click [ ▼ ] for shape, and select Rectangle .**

**3.** **Select the desired part, and place it on 1 Operating Screen Base Screen using the drag & drop function.**

In this example, select Word Button B0001 .

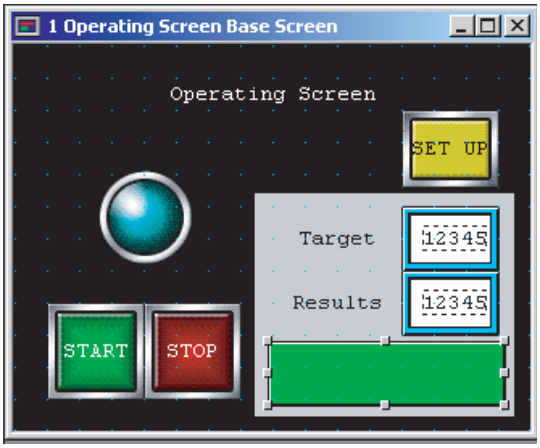



**4.** **Change the size of the part using the drag & drop function.**



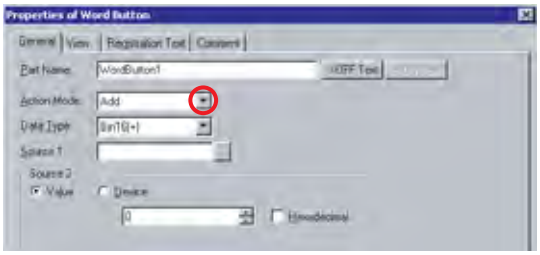

**5.** **Double-click the part placed on the screen.**

The Properties of Word Button window will be displayed.



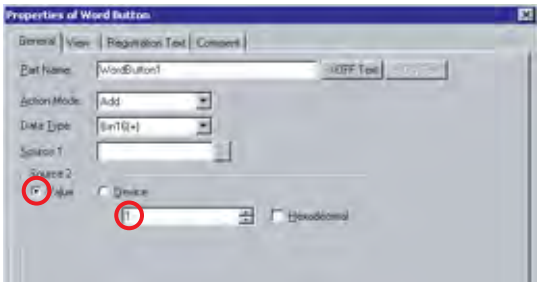
**6.** **Click [ ▼ ] for Action Mode , and select Add .**

In this example, select Add , so that the displayed value will increment.



**7.** **Enter 1 for Value in [Source 2].**

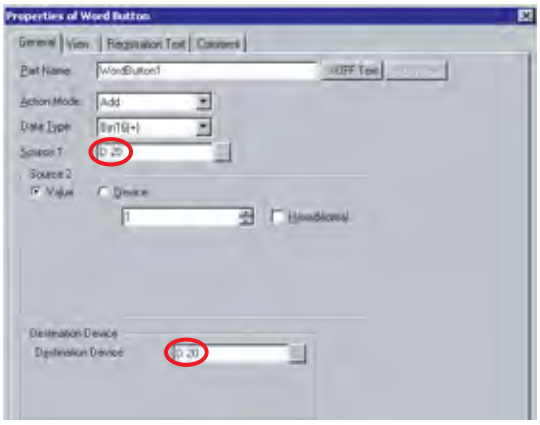
In this example, enter 1 for Value so that the displayed value will increment by one.



**8.** **Enter D 20 for both [Source 1] and [Destination Device].**

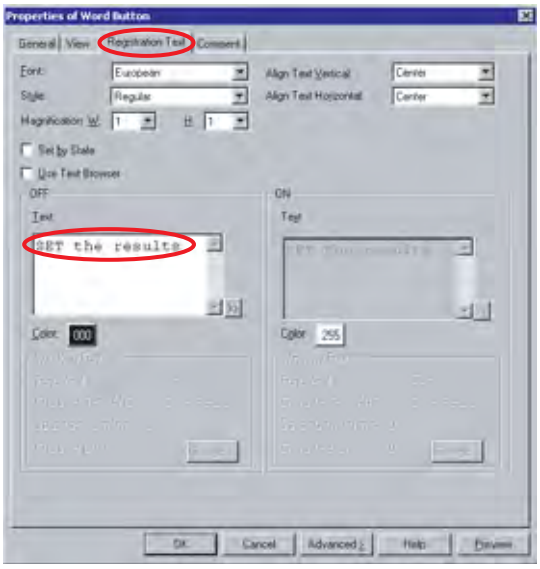
Insert a space between D and 20 .

In this example, the value of the PLC device D 20 , which is used for the [Results] display setting, will be read. The read value will be inceased by one, and written in D 20 .



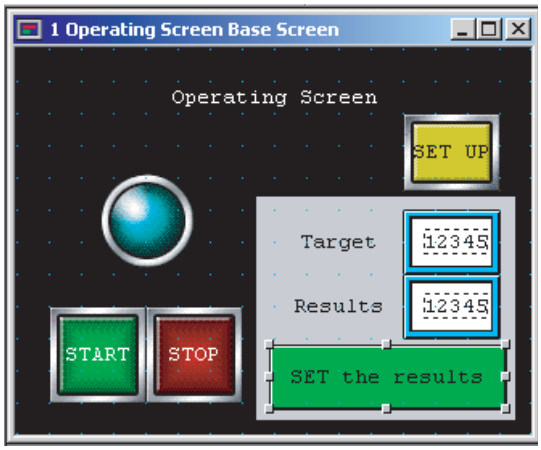
**9.** **Select the Registration Text tab, and specify the text to be shown on the button.**

In this example, enter SET the results in [OFF] - [Text] box.



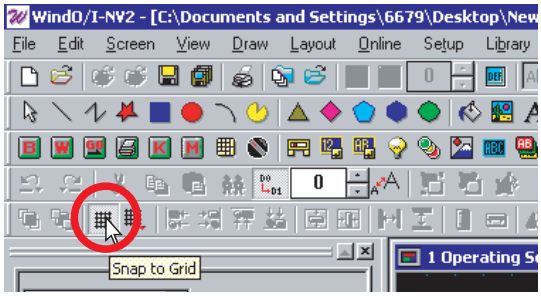
**10.** **Click [OK].**

The [SET the results] button will appear on the screen




**11.** **Click the**  **(Snap to Grid) icon.**

**The icon is set (shown as**  **),** and the Snap to Grid setting becomes active.



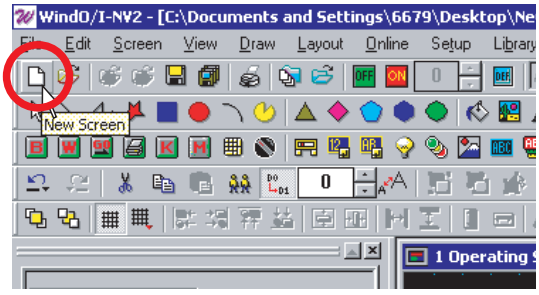

## [Numerical Target Setting Screen]

Create a [Numerical Target Setting Screen] to display a screen when the [SET UP] button is pressed.

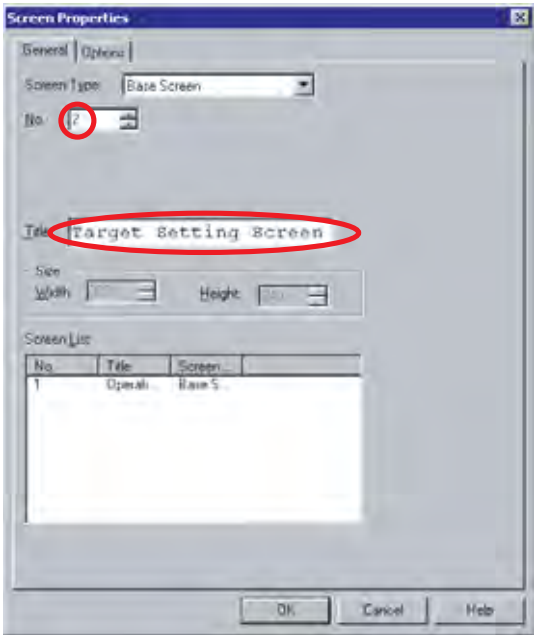
### Set Up

**1.** **Click the**  **(New Screen) icon.**

The Screen Properties window will be displayed.

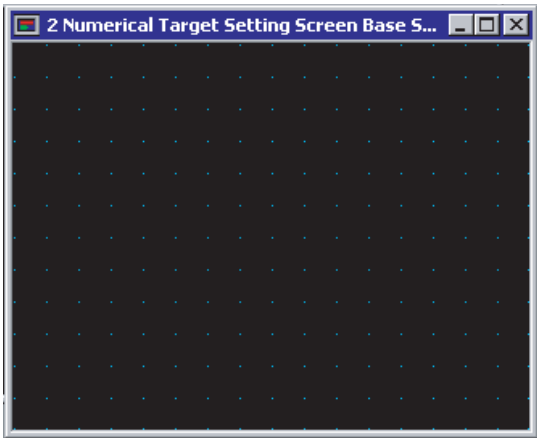


**2.** **Enter 2 in [No.], and enter Numerical Target Setting Screen in [Title].**




**3.** **Click [OK].**

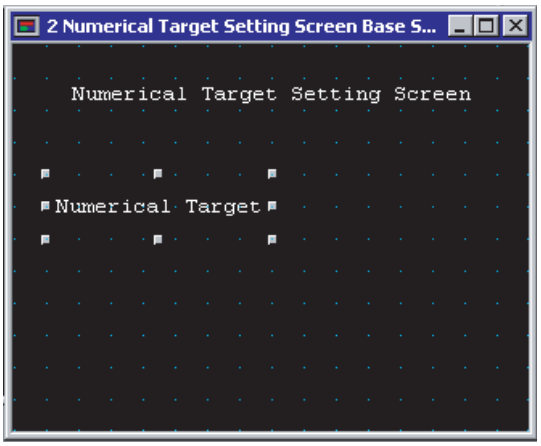
[Numerical Target Setting Screen] set up is complete, and 2 Numerical Target Setting Screen Base Screen will be displayed.




## Creating screen text

**1.** **Create text for ( Numerical Target Setting Screen , and Numerical Target ), according to the procedure for Creating screen text as described on page 14.**

For the text color, select 255 (white).

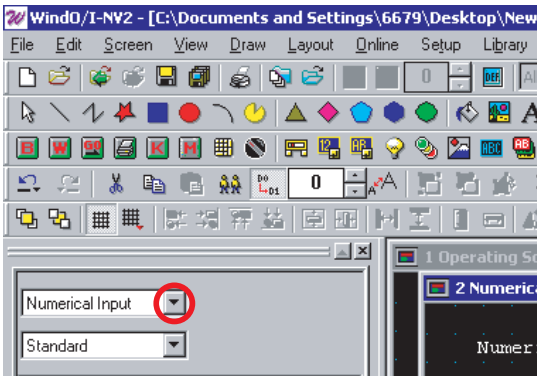


## Numerical Target input field

Create a numerical input field to enter and display a target value.

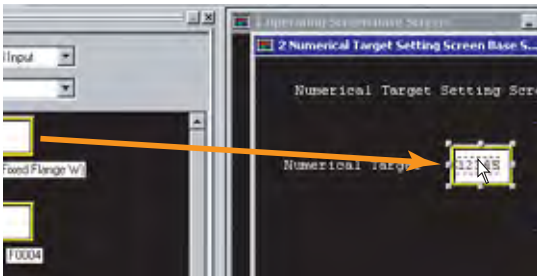
**1.** **To create the Numerical Target input, select Numerical Input .**

Click [ ▼ ] for the parts list, and select Numerical Input .



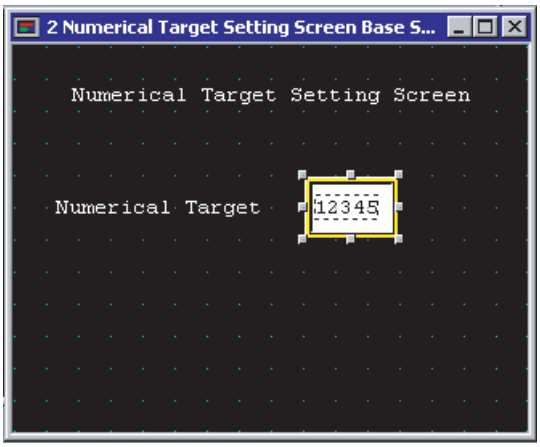

**2.** **Select the desired part, and place it on 2 Numerical Target Setting Screen Base Screen using the drag & drop function.**

In this example, select Numerical Input F0006 .




**3.** **Double-click the part placed on the screen.**

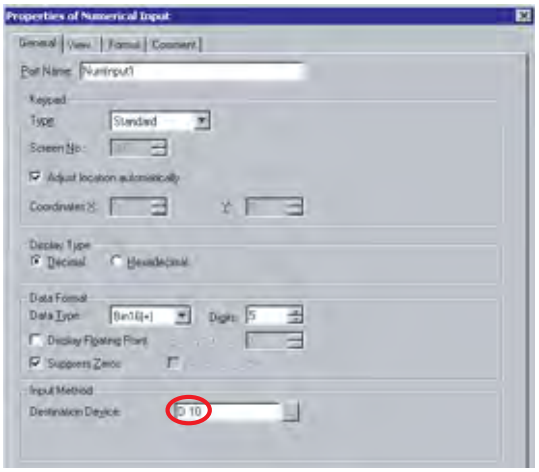
The Properties of Numerical Input window will be displayed.




**4.** **Enter D 10 in [Destination Device].**

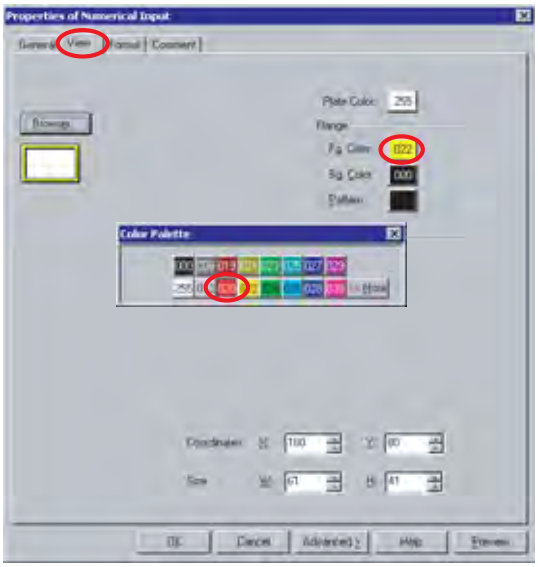
Insert a space between D and 10 .

In this example, the entered value will be written in PLC device D 10 .



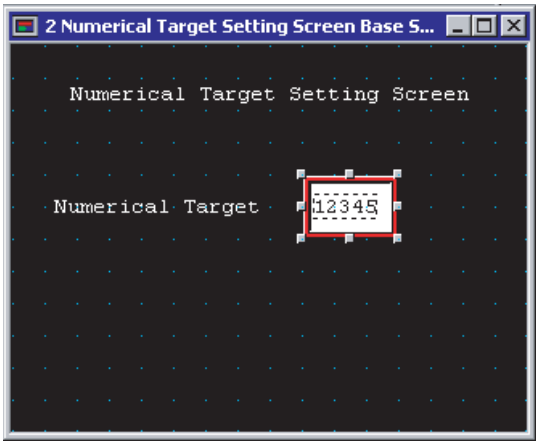
**5.** **Select the [View] tab, and click the [Fg. Color] selection button in [Flange] to change the foreground color.**

In this example, select 020 (red) for [Fg. Color].



**6.** **Click [OK].**

The numerical input field for the Numerical Target will be displayed on the screen.



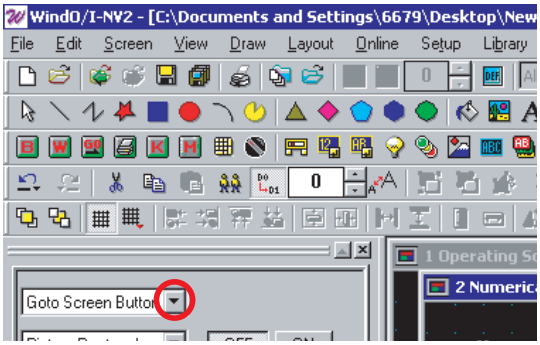

## [Back to the Operating Screen] button

Create a [Back to the Operating Screen] button that will switch from the [Numerical Target Setting Screen] to the [Operating Screen] when pressed.

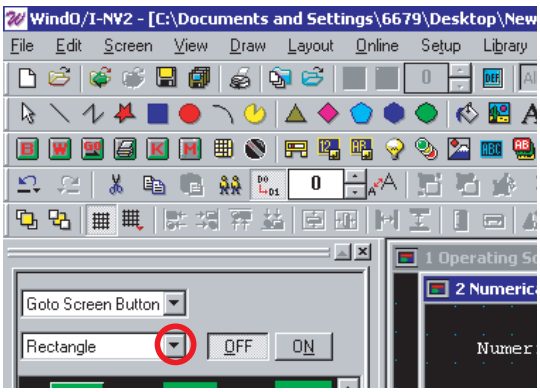
\

**1.** **To create the [Back to the Operating Screen] button, select Goto Screen Button .**

Click [ ▼ ] for the parts list, and select Goto Screen Button .

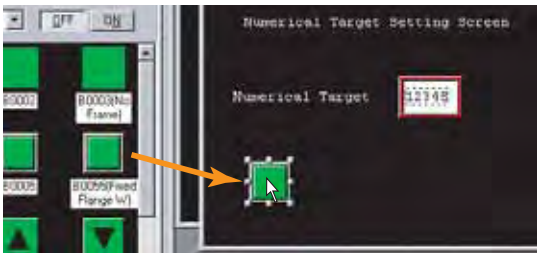


**2.** **Click [ ▼ ] for shape, and select Rectangle .**

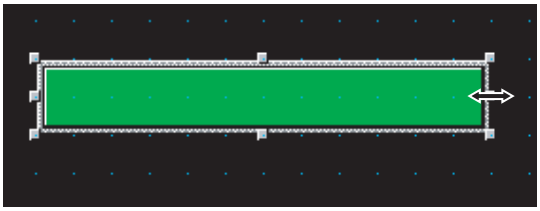



**3.** **Select the desired part, and place it on 2 Numerical Target Setting Screen Base Screen using the drag & drop function.**

In this example, select Goto Screen Button B0055 (Fixed Flange W) .

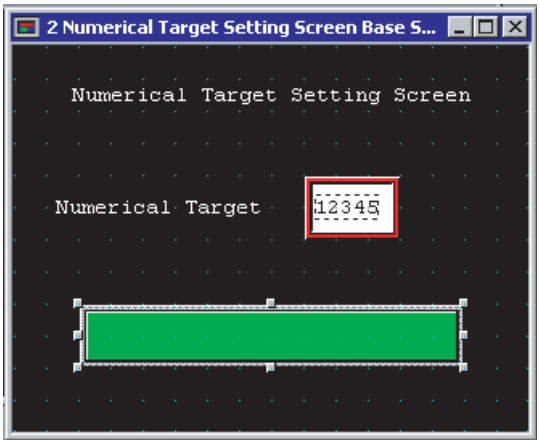



**4.** **Change the size of the part using the click & drag function.**



**5.** **Double-click the part placed on the screen.**

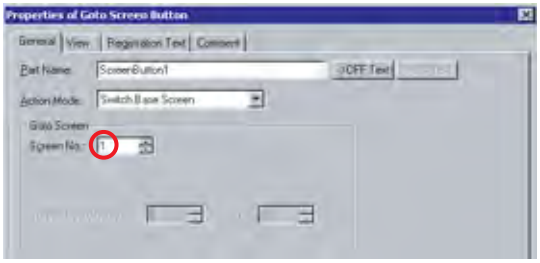
The Properties of Goto Screen Button window will be displayed.




**6.** **Click [ ▼ ] for Action Mode , and select Switch Base Screen .**

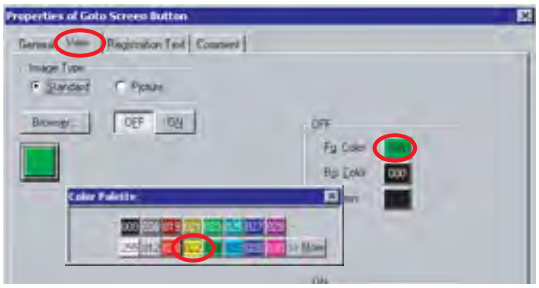
**7.** **In [Goto Screen] set [Screen No.] to 1 .**

In this example, set the screen No. to 1 because the [Opeating Screen] No. or the screen to be switched to, is 1 .



**8.** **Select the [View] tab, and click the [Fg. Color] selection button in [OFF] to change the foreground color.**

In this example, select 022 (yellow) for [OFF] - [Fg. Color].

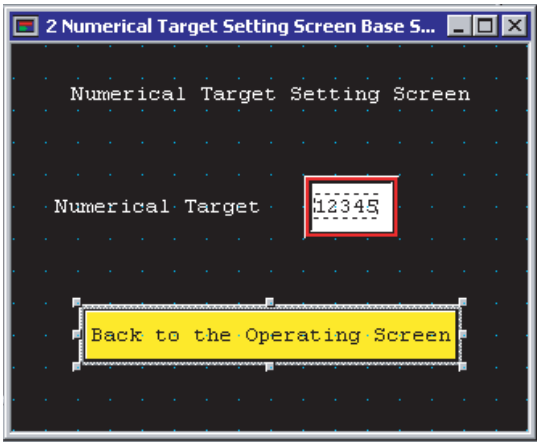



**9.** **Select the Registration Text tab and enter the text to be shown on the button.**

In this example, enter Back to the Operating Screen .

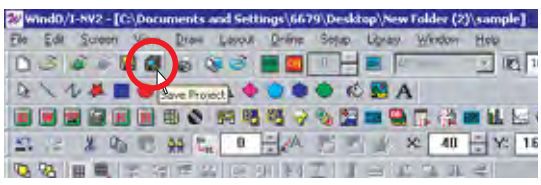

**10.** **Click [OK].**

[Back to the Operating Screen] button is will be displayed.




## Saving

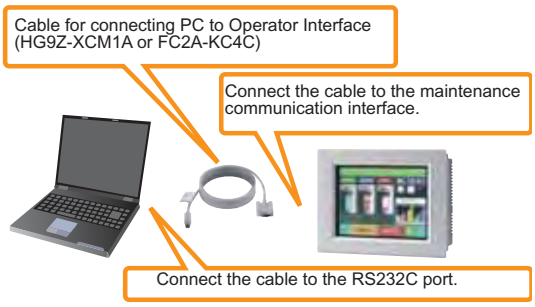
**Click the**  **(Save Project) icon.**



# 1 Downloading the Project

If you download the project data created in Chapter 3 to an Operator Interface, the project will be displayed and can be operated on the OI screen.

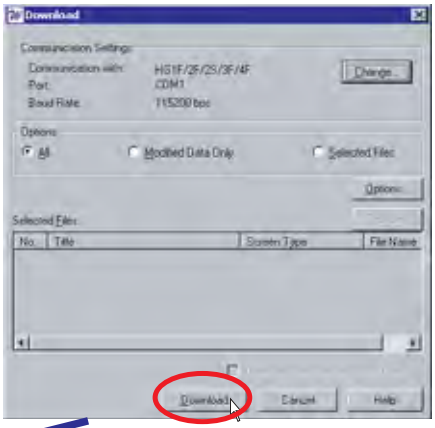
**1.** **Connect the Operator Interface to a PC with a cable.**

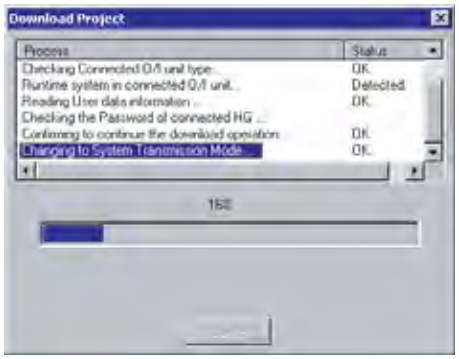



**2.** **Click the (Download Project) icon.**

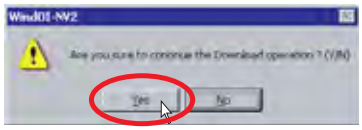

**3.** **Click [Download].**

The Operator Interface starts downloading the project.



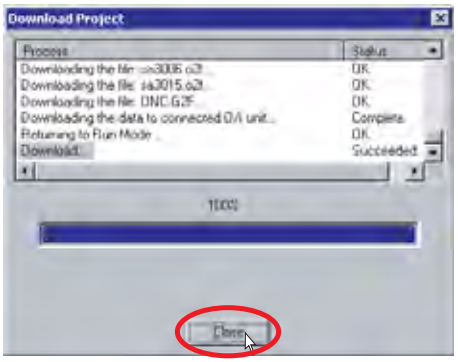




**4.** **After the download confirmation message appears, click [Yes].**



**5.** **After download is complete, click [OK].**


**6.** **Click [Close].**




## If download cannot be completed, check the following:

- Check the power supply to the Operator Interface.
- Check the cable connection between the Operator Interface and the PC.
- Check the COM port of the PC connected to the Operator Interface.

* If the COM port is being used by another application, then the port is not available for download.

## Host Communication Error

Once a project is downloaded to the Operator Interface, the Operator Interface may display a Host Communication Err message after approx. 10 seconds. This error is caused by improper connection between the Operator Interface and the PLC that the Operator Interface is to communicate with. Even if the Host Communication Err message is displayed, the Operator Interface can execute off-line operation checks using the simulation function. (Refer to Simulation Mode on page 36.)

# 1 Simulation Mode

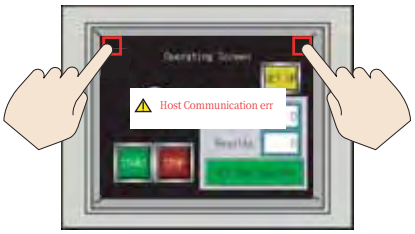
Running Simulation Mode will verify whether the downloaded project data is displayed correctly and if it will function properly on the Operator Interface.

## Starting Simulation Mode

The IDEC OI Touchscreens have a simulation mode that enables the Operator Interface to check the functionality of the project without being connected to a PLC.

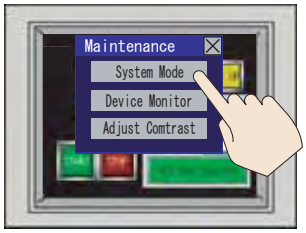
**1.** **Simultaneously press the top right and top left corners on the screen for 3 seconds.**

The Maintenance screen appears.



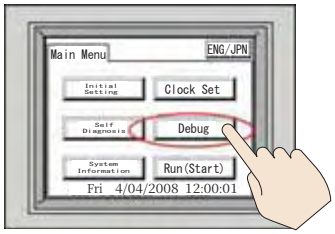

**2.** **Press the [System Mode] button.**

The Main Menu screen appears.

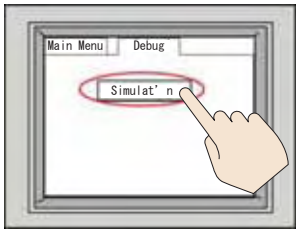



**3.** **Press the [Debug] button.**

The Debug screen appears.

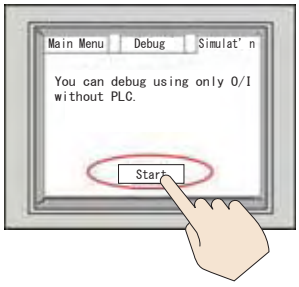



**4.** **Press the [Simulat n] button.**




**5.** **Press the [Start] button.**

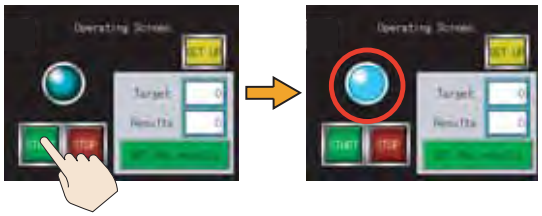
The project [Operating Screen] is displayed, and simulation is enabled. ( Simulation Mode will blink at the bottom left of the screen.)



## Simulating

**1. Press the [START] button.**

The pilot lamp turns on.



**2. Press the [STOP] button.**

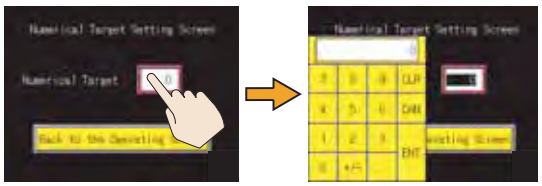
The pilot lamp turns off.

**3. Press the [SET UP] button.**

The [Numerical Target Setting Screen] appears.

**4. Press the Numerical input.**

The numeric keypad appears.



**5. Enter 100 , and press the [ENT] key.**

100 is set in [Numerical Target].

**6. Press the [Back to the Operating Screen] button.**

The [Operating Screen] appears, and 100 is displayed in [Target].

**7. Press the [SET the results] button.**

Every time this button is pressed, the value displayed in [Results] increments by one.

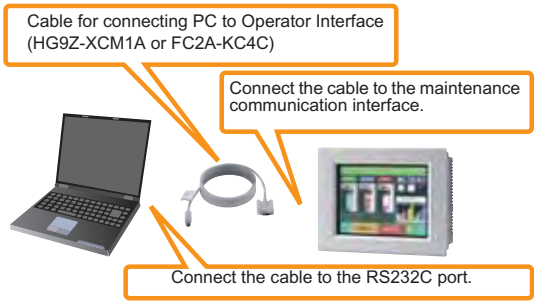
# 2 Debug Mode

If the Operator Interface does not operate normally when connected to a PLC, you can check and correct the settings, while monitoring operations with WindO/I-NV2.

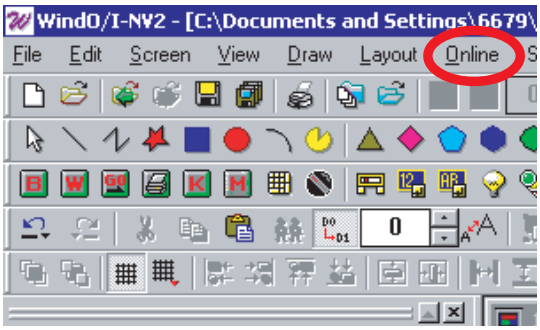
## Start Debug Mode

The process for detecting and correcting errors in project data is called Debug . WindO/I-NV2 software provides a debug function (debugger).

**1.** **Connect the Operator Interface to a PC with a cable.**



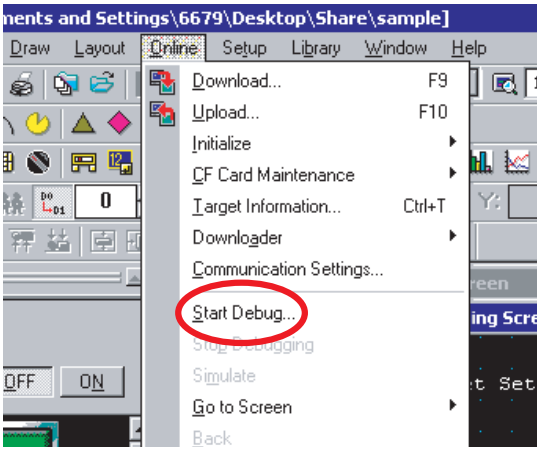

**2.** **Click the [Online] menu.**




**3.** **Click the [Start Debug] menu.**

The Operator Interface displays the screen monitor window and the debug tool bar, and starts debugging.

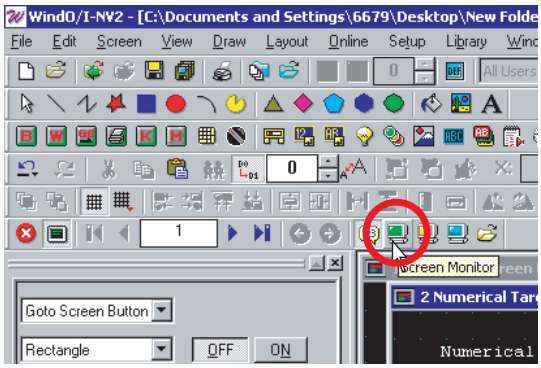
In this step, the monitor window displays information on the [Operating Screen].



## Verify Operation with the Screen Monitor

The screen monitor allows you to verify actual screen operation and automatically display all devices being used for the target screen. You can also view the data values or change the data value of each device used.

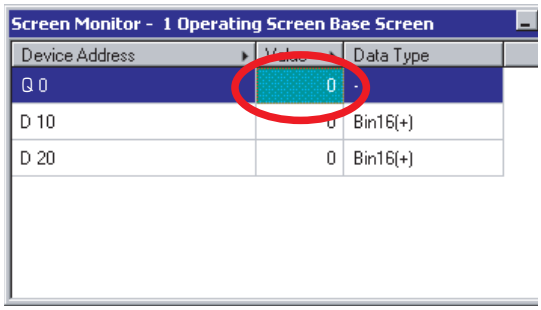
**If the screen monitor is not displayed, click the (Screen Monitor) icon.**




### Checking pilot lamp operation on [Operating Screen]

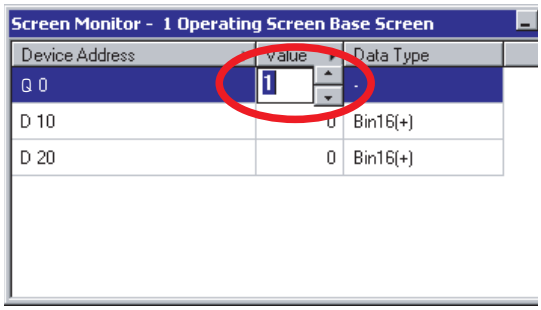
**1. Double-click Value for device address Q 0 .**

Up and down buttons are displayed.




**2. Click [ ▲ ] to set the value to 1 , and press [Enter].**

The pilot lamp on the Operator Interface will turn on.

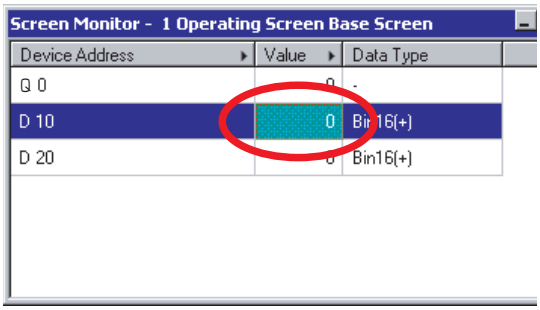



**If the pilot lamp does not turn on, check the device for the lamp.**
(Refer to "Pilot Lamp" on page 18.)

## Verifying [Target] and [Results] Values on [Operating Screen]

**1.** **Double-click the Value cell for device address D 10 .**

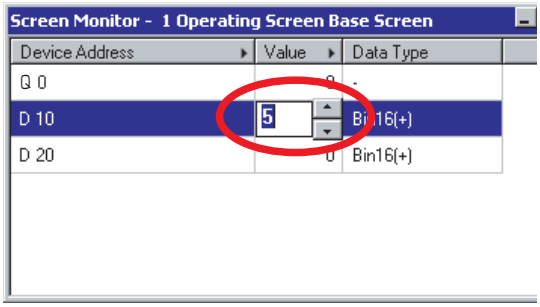
Up and down buttons are displayed.




**2.** **Click [ ▲ ] to set the value and press [Enter].**

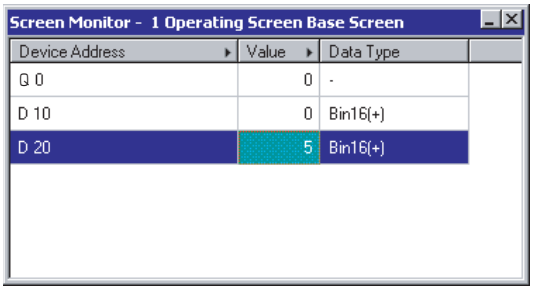
In this example, the value is set to 5 .

The value will be displayed in the [Target] numerical display on the Operator Interface.




**3.** **Repeat Steps 1 and 2 to check device address D 20 .**

The value will be displayed in the [Results] display on the Operator Interface.

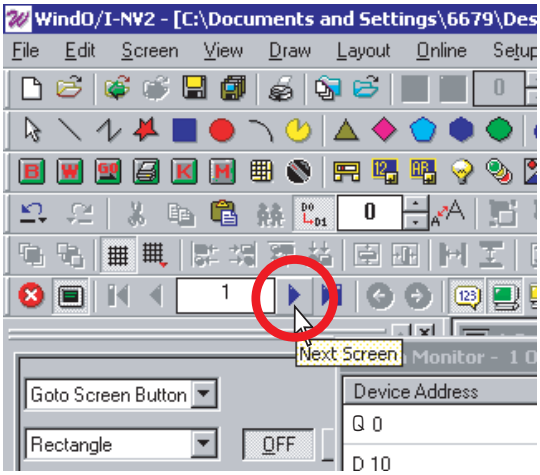



**If the value is not shown in each numerical display, check the device for the numerical display [Target] or [Results] .**
(Refer to "[Target] & [Results] Displays" on page 22.)

## Verifying [Numerical Target] on [Numerical Target Setting Screen]

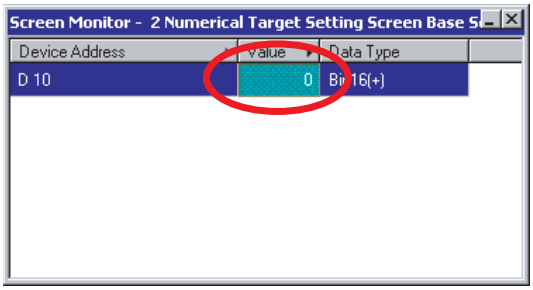
**1.** **Click  (Next Screen) button.**

[Screen Monitor - 2 Numerical Target Setting Screen Base Screen] appears. The [Numerical Target Setting Screen] is displayed on the Operator Interface.



**2.** **Double-click the Value cell for device address D 10 .**

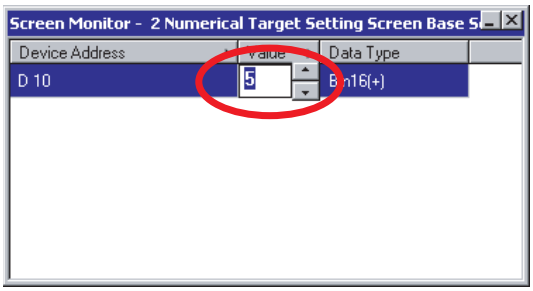
Up and down buttons are displayed.




**3.** **Click [ ▲ ] to set the value and press [Enter].**

In this example, the value is 5 .

The value will be displayed in the [Numerical Target] numerical input field on the Operator Interface.

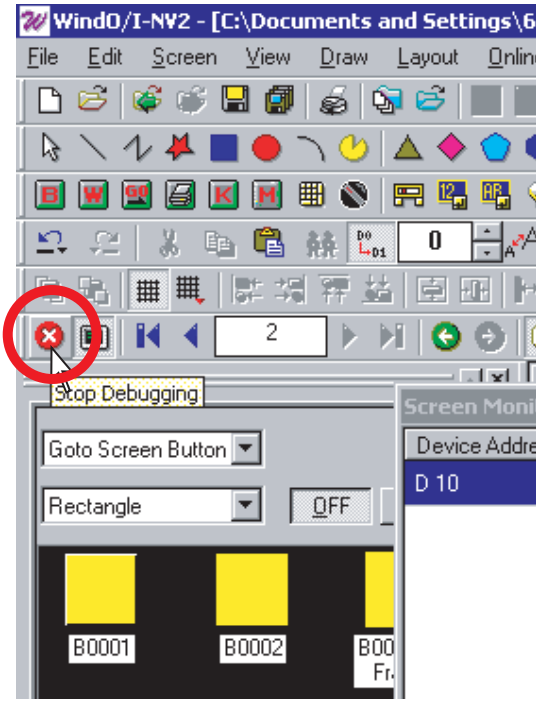



**If the value does not display in the numerical input field, check the devices for the [Numerical Target] numerical input field.**
(Refer to " Numerical Target input field" on page 30.)

## End Debugging Mode

Once debugging is complete, exit debug mode.

**Click the**  **(Stop Debugging) icon.**



# 1 Tools and Functions

## Shortcut Keys

Using keyboard shortcuts, you can execute frequently used operations.

### Edit

| | |
|---|---|
| Undo | Ctrl + Z |
| Redo | Ctrl + Y |
| Cut | Ctrl + X |
| Copy | Ctrl + C |
| Paste | Ctrl + V |
| Duplicate | Ctrl + D |

### Screen

| | |
|---|---|
| New Screen | Ctrl + N |
| Open Screen | Ctrl + O |
| Open Previous Screen | Ctrl + R |
| Open Next Screen | Ctrl + E |
| Save Screen | Ctrl + S |

### Others

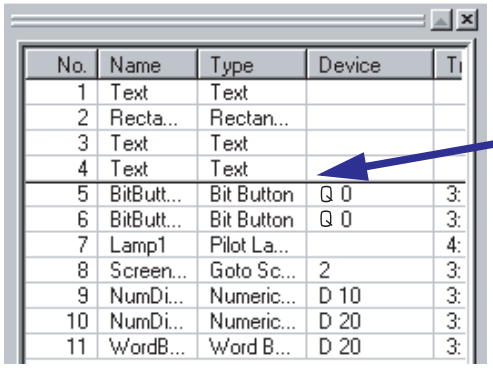
| | |
|---|---|
| Snap to Grid | F8 |
| Download | F9 |

## Object List

The Object List displays a list of parts and objects that have been placed on a screen. You can easily change the properties of the listed parts.

### Displaying an object list

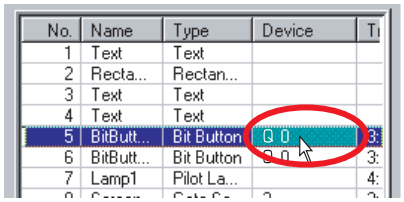
**Click the  (Object ) button at the bottom of the workspace.**



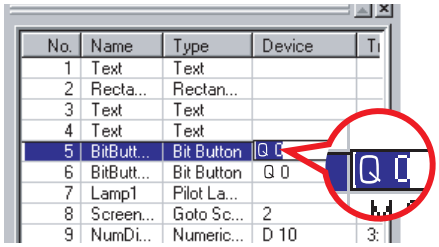
| No. | Name | Type | Device | Ti |
|---|---|---|---|---|
| 1 | Text | Text | | |
| 2 | Recta... | Rectan... | | |
| 3 | Text | Text | | |
| 4 | Text | Text | | |
| 5 | BitButt... | Bit Button | Q 0 | 3: |
| 6 | BitButt... | Bit Button | Q 0 | 3: |
| 7 | Lamp1 | Pilot La... | | 4: |
| 8 | Screen... | Goto Sc... | 2 | 3: |
| 9 | NumDi... | Numeric... | D 10 | 3: |
| 10 | NumDi... | Numeric... | D 20 | 3: |
| 11 | WordB... | Word B... | D 20 | 3: |

## Changing objects in the workspace

**Click the cell you want to change and press [F2] or [F3] on the keyboard.**



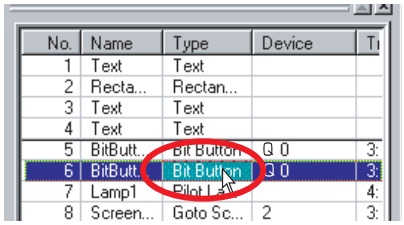

You can change a destination device through direct input on the keyboard.




## Changing properties

**Double-click the No., Name or Type cell.**

The Properties window appears.

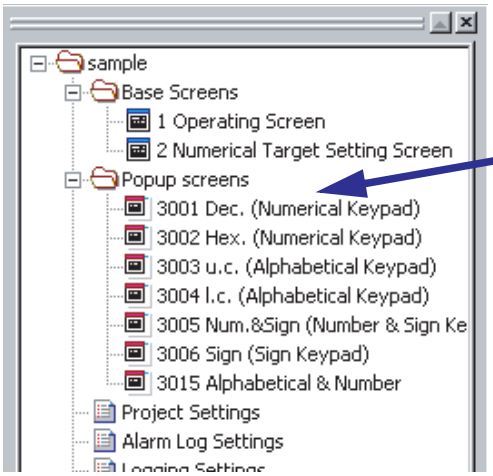



# Project List

The Project List enables overall project management. It displays a list of screens and related settings that have been saved for a particular project allowing you to easily change their properties.

## Displaying a project list

**Click the  (Project) button at the bottom of the workspace.**




## System Requirements

| | |
|---|---|
| **Compatible PC** | **PC-AT compatible model** |
| **Compatible OS** | **Windows 95 (OSR2 or later version)/98/Me/NT4.0/2000/XP/Vista (Incompatible with 64-bit version)** |
| **CPU** | **CPU that normally runs Windows (Pentium, 200 MHz or higher)** |
| **RAM** | **64MB minimum** |
| **Hard Disk** | **Empty area: 150MB minimum (including manual)** |
| **Graphic** | **SVGA (800 x 600) or higher resolution** |
| **User** | **User authorized as administrator (for use of Windows NT4.0/2000/XP/Vista)** |
| **Others** | **Mouse, CD-ROM drive, COM port** |

## Operator Interface Models

| Model | Large | | Medium | | Small | CC Pendant | |
|---|---|---|---|---|---|---|---|
| Type | HG4F | HG3F | HG2F (Color) | HG2F (Monochrome) | HG1F (Monochrome) | HG2S (Color) | HG2S (Monochrome) |
| Screen Size | 12.1 inches | 10.4 inches | 5.7 inches | 5.7 inches | 4.6 inches | 5.7 inches | 5.7 inches |
| Appearance |  |  |  |  |  |  |  |
| LCD | TFT | TFT | STN | STN | STN | STN | STN |
| Pixels | 800 × 600 | 640 × 480 | 320 × 240 | 320 × 240 | 300 × 100 | 320 × 240 | 320 × 240 |
| Display Color | 256 colors | 256 colors | 256 colors | Monochrome | Monochrome | 256 colors | Monochrome |
| User Memory Size | 6 MB | 6 MB | 2 MB | 2 MB | 1 MB | 2 MB | 2 MB |
| Memory Card (CF) | Yes | Yes | Yes | Yes | — | — | — |
| Ethernet Port | Yes | Yes | — | — | — | — | — |
| O/I Link | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| USB | — | — | Yes | Yes | — | — | — |
| RS232C | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| RS485/422 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| UL | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| CSA (c-UL) | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| CE | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Design Tool | WindO/I-NV2 | | | | | | |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