

Chapter 8

Animation Screen

Chapter 8 Animation Screen

8.1 Animation Screen

What is the Animation Screen	8-3
------------------------------	-----

8.2 Animation Display

How to display various animations	8-5
How to change pictures with Bit ON/OFF	8-6
[Practice] Let's display changes of a device	8-7
How to move and display an object(1)	8-10
[Practice] Let's show products moving	8-11
How to move and display an object (2)	8-15
[Practice] Let's move and display a box on a straight line	8-16

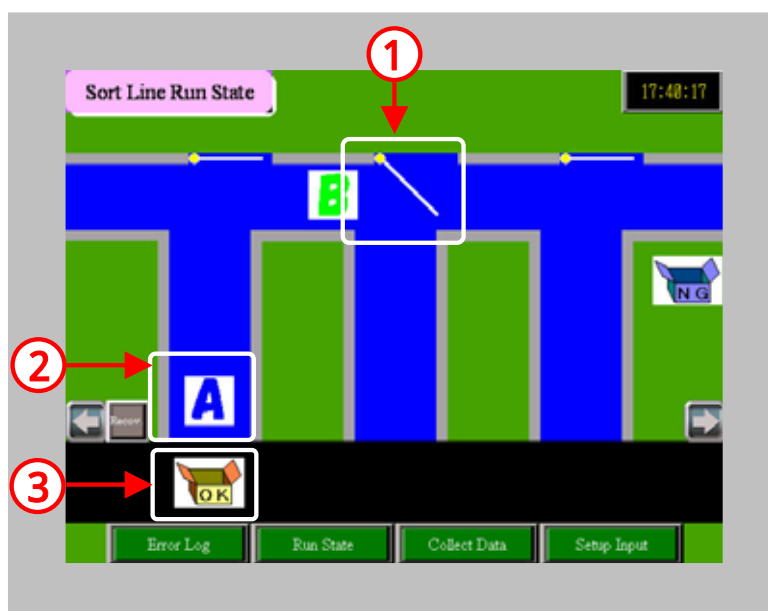
8.1

Animation Screen



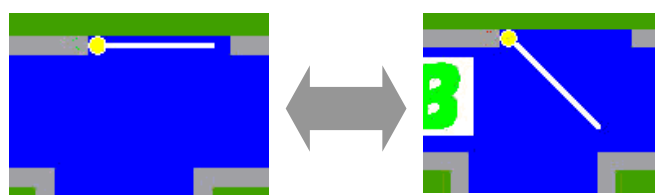
What is the Animation Screen

Switch pictures or display moving objects according to the bit (ON/OFF) condition of a device.

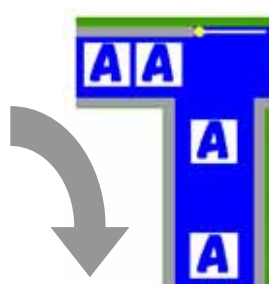


Display the open and close movements of pusher according to the bit address changes.

(->refer to P8 - 6 for details.)

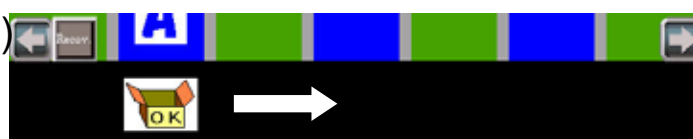


Display the object (mark) movement according to data changes. (->refer to P8-10 for details.)



Display movements of an object (picture or illustration) according to data changes.

(->refer to P8-15)



8.2

Animation Display



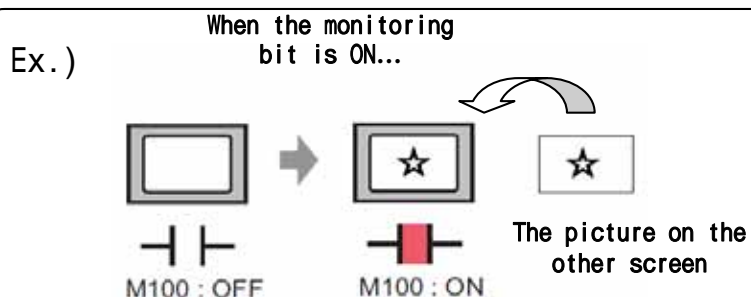
How to display various animations

Use a “Picture Display” to display movements of various objects on the screen.

Picture Display

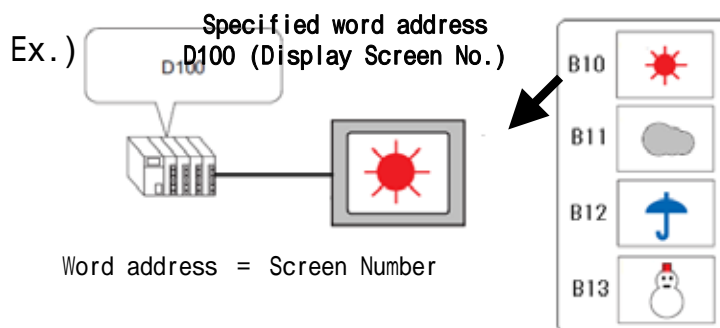
ON/OFF Display

Display/hide a picture on the screen according to the bit changes.



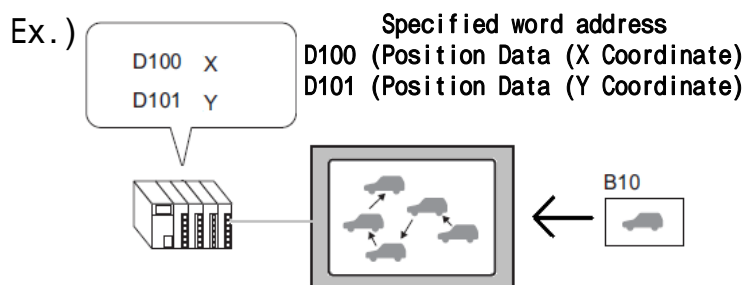
State Display

Change pictures according to word address movement.



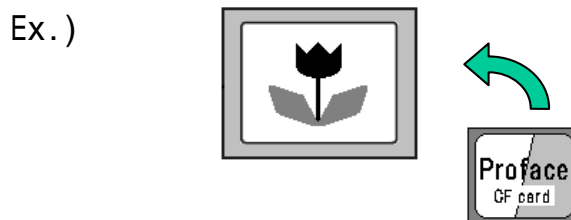
Moving Display

Move pictures according to word address changes.



CF Image Display

Display JPEG images stored in the CF card.



* Display settings will differ depending on the type of pictures called. (package, base screen, image, mark).

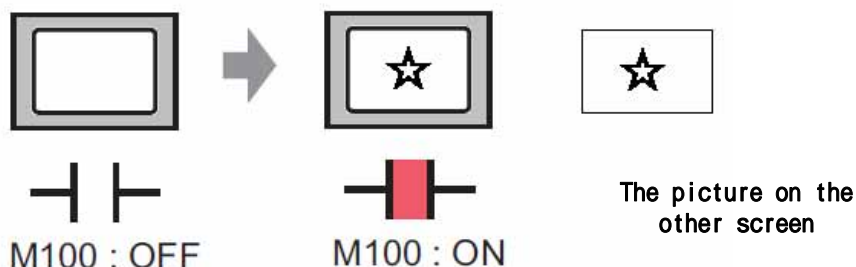
* In this chapter, the ON/OFF Display and Moving Display are used for practice.



How to change pictures with Bit ON/OFF

Use the “ON/OFF Display” feature of a Picture Display.

When the monitoring bit is turned ON,...



Position/Setting Procedure

Prepare a picture you want to display.

- Create the picture on a base screen.
- Register the picture in a package. (This allows a picture to be used in various types of GP units.)
- Register a picture in an image. (convert BMP or JPEG file.)
- Create the picture as a mark.



Place and set up the Picture Display.





Let's display device changes.

Display the Open-Close movement of the pusher on the production line.

[Setting Flow]

1. Open the base screen "8".
2. Select/place/configure a "Picture Display: ON/OFF Display (Package)".

Open the base screen "8".

[Practice Version]



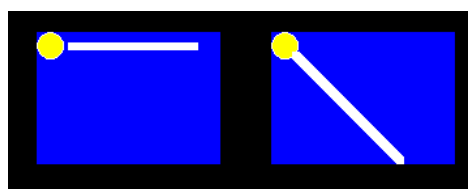
[Completed Version]



(1) Creating a picture to display.

Create the On and Off images to a desired base screen.

* For this practice screen, the base screen "101 Pusher" is already prepared.



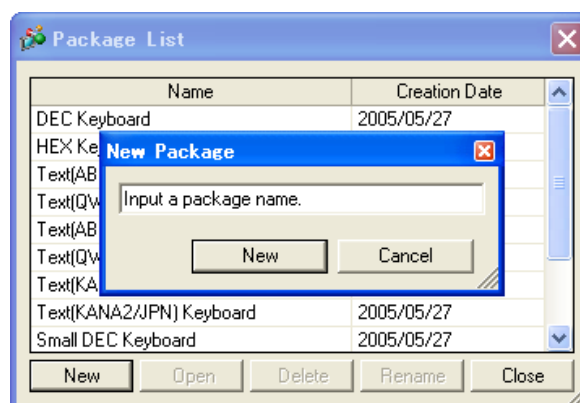
(2) Registering in a package.

Click the [Package] icon from the toolbar.



Click [New] to name a package as preferred.

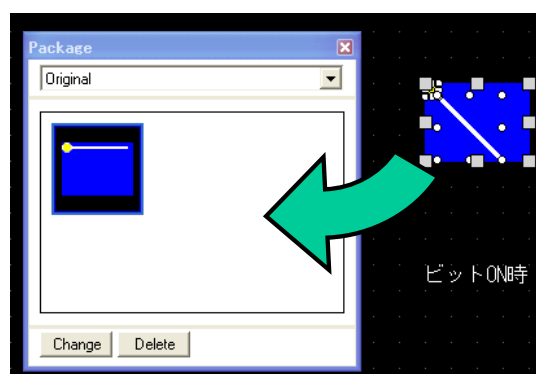
* Give the name "Original" to this practice data.



When the package window opens, select the pictures you created, drag and drop to register them.

Here, register each of the two pictures already prepared.

After registration, close the window.

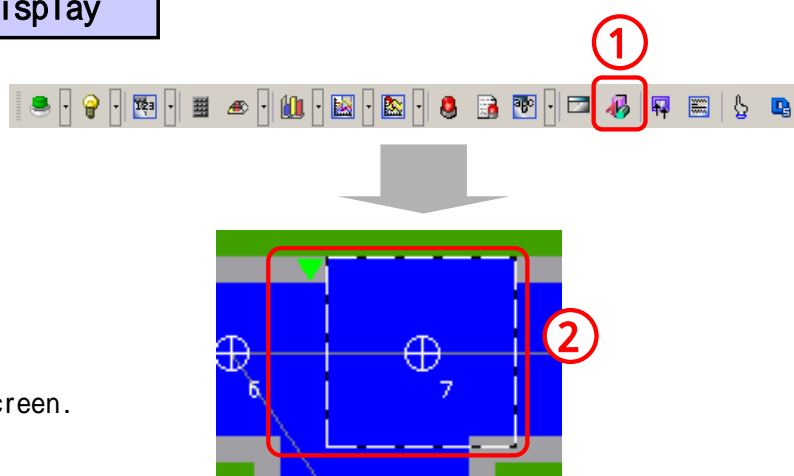


(3) Selecting/Placing a Picture Display

Click on the [Picture Display] icon from the toolbar.



Place the Picture Display on the screen.



(4) Basic Settings

Double click on the Picture Display.

Select [ON/OFF Display] from [Display Type] in the Basic settings.

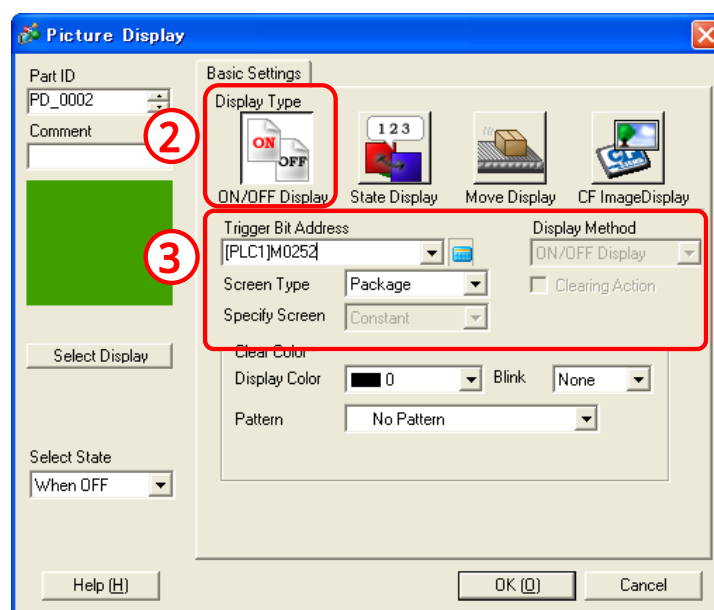
Trigger Bit Address:

Specify the bit address to trigger a display.

Screen Type :

Select the screen type to display.

Select [Trigger Bit Address] to "M252" and [Screen Type] to "Package".



(5) Selecting a picture to display.

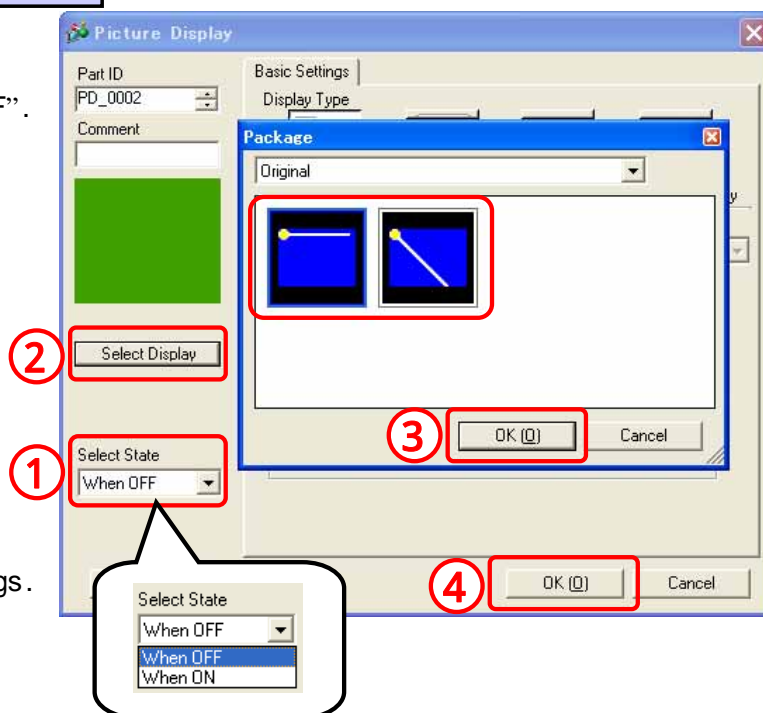
Select [Select State] to "When OFF".

Click [Select Display].

Select the [When OFF] pusher picture from the "Original" package and then click "OK".

* Also select the pusher picture for [When ON] in the [Select State].

Click [OK] to complete the settings.

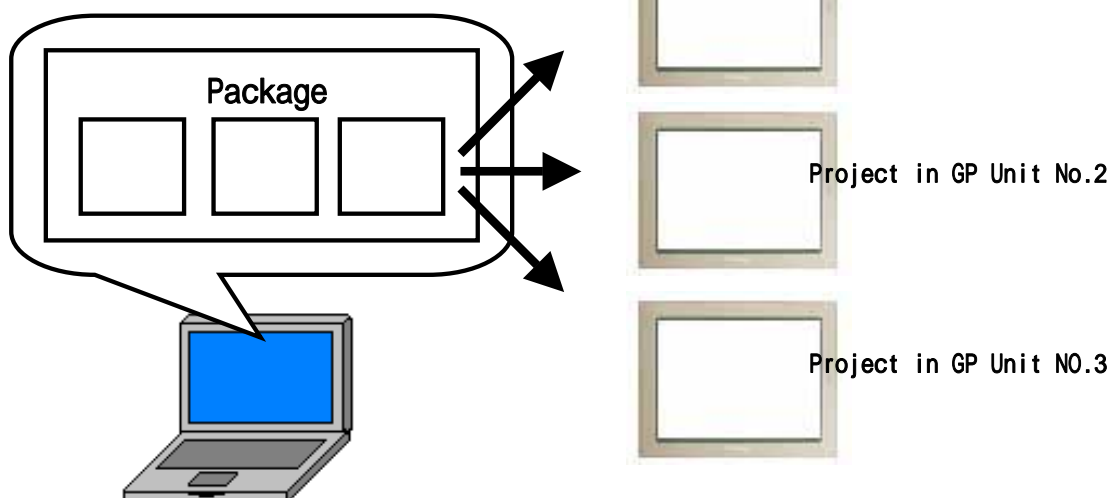


★ Hint

About Packages

By registering original pictures and parts, they can be displayed on separate screens or used on screens in other GP units.

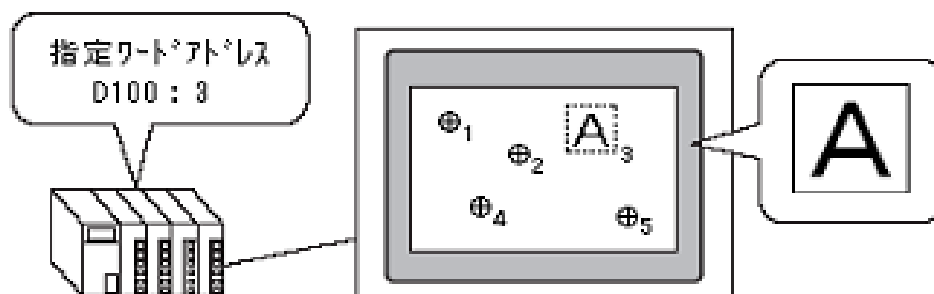
Example) Use a picture in several GP units.





How to move and display an object (1)

Use “Move display” (Mark) to move an image to a designated position according to a word address data.



Position/Setting procedure

Prepare an image (mark) to be displayed.



Click on the [Picture Display] icon.



Click on the screen to place it.



Double click on the picture display and then configure the settings.



Let's move and display products.

Display the conditions of product transportation on the production line.

[Setting Flow]

1. Open the base screen "8".
2. Select/place/Set up [Picture Display: Move Display (Mark)].

Open the base screen "8".

[Practice Version]

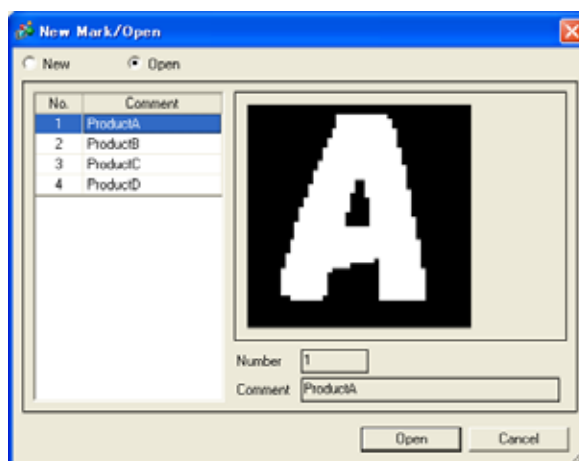
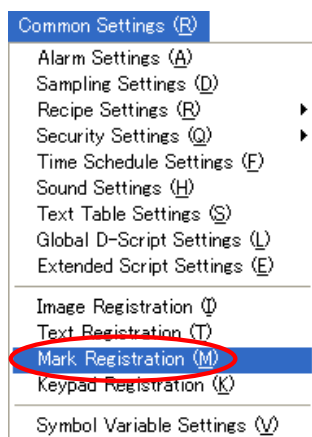


[Completed Version]



(1) Creating a displaying picture (mark)

Select [Mark Registration] in the [Common Settings] menu bar.



* For this practice data, the following pictures (marks) are already registered.

[Mark 1]



[Mark 2]



[Mark 3]



[Mark 4]

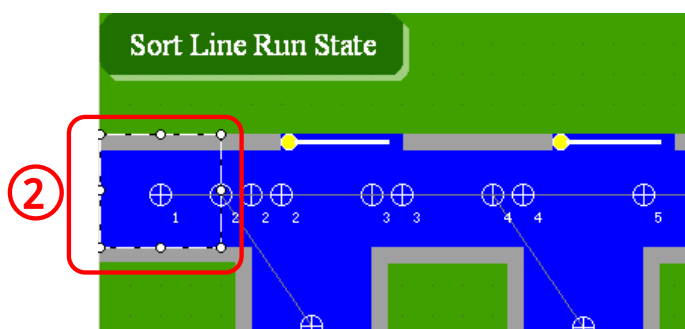


(2) Selecting/Placing a Picture Display

Click the [Picture Display] icon from the toolbar.



Click and place the picture display as desired.



(3) Basic Settings

Double click on the Picture Display.

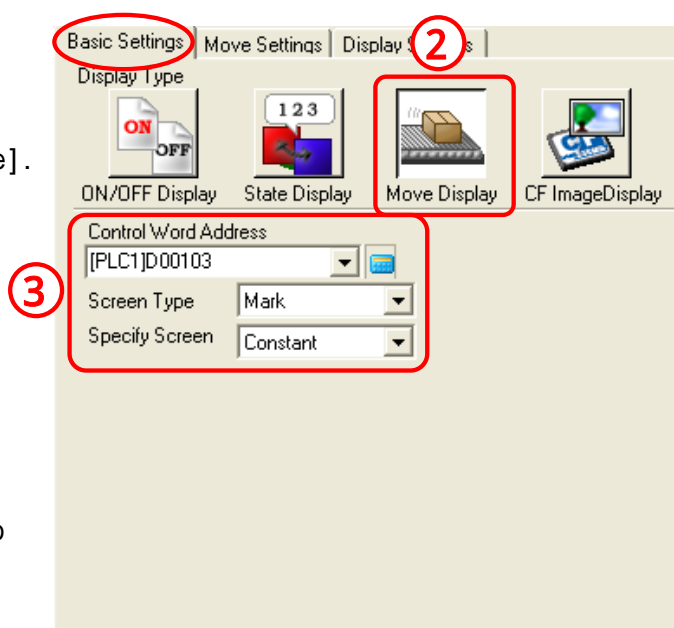
Select [Move Display] from [Display Type].

Control Word Address:

Set up a word address to store display position of a mark.

Screen Type: Designate the screen type for a move display.

Specify Screen: select whether or not to move and display a fixed image or move and display several images by switching.



[Constant]: Select a picture to be displayed from [Select Display]. Move and display a fixed picture.

[Address]: Set [Screen no. specified address] of the image to store the screen number of a move display. This allows several screen pictures to move and change in one Picture Display.

Here, set [Control Word Address] to "D103", [Screen Type] to "Mark", [Specify Screen] to "Constant".

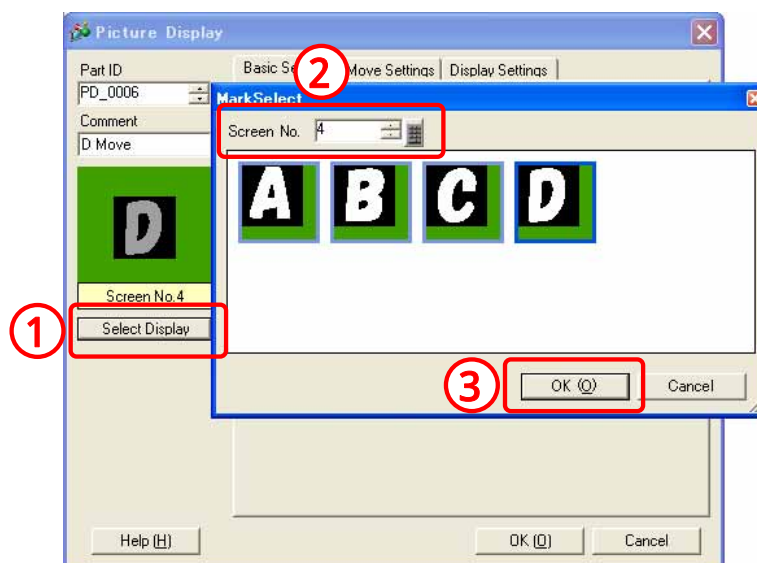
* The settings will differ depending on the selected [Screen Type]. In this section, the settings for Mark are explained.

(4) Selecting pictures to move and display.

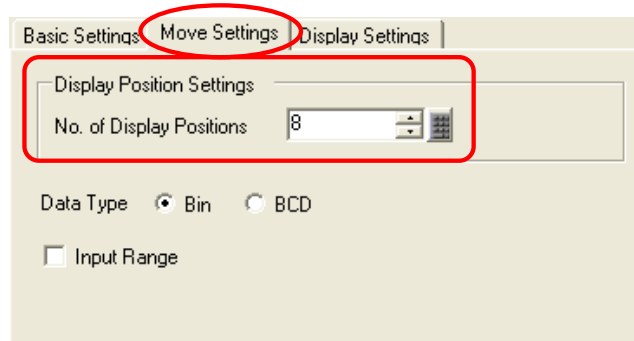
Click [Select Display].

Select Screen No. "4".

Click [OK].

**(5) Move Settings****No. of Display Positions:**

Set up the No. of Display Points to move the mark. Here, set the number to "8".

**(6) Display Settings****Display Size:**

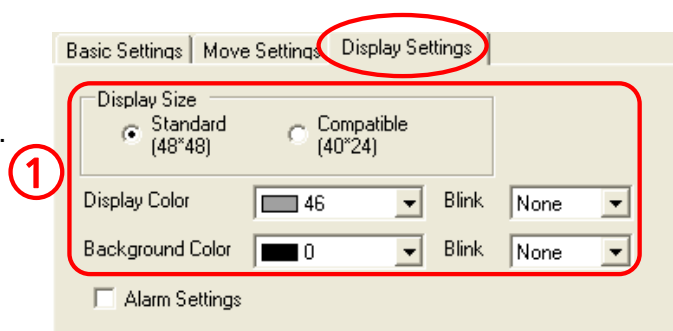
Select the size of the mark from "Standard(48x48)" or "Compatible(40*20)".

Display Color/Background Color/Blink:

Set a mark color and enable the blink feature.

Here, set [Display Size] to "Standard(48*48)" and set [Display Color] and [Background Color] according to your preference.

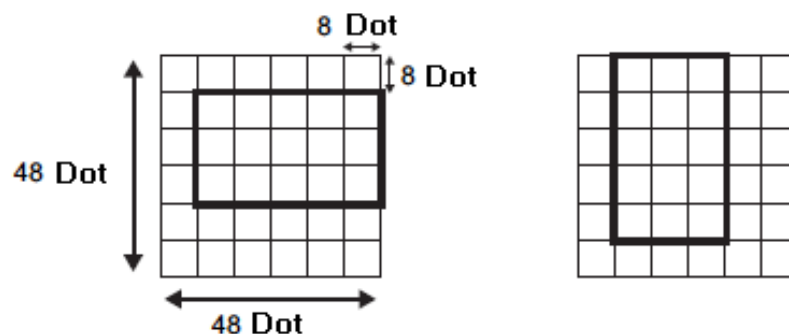
Click [OK] to complete settings.



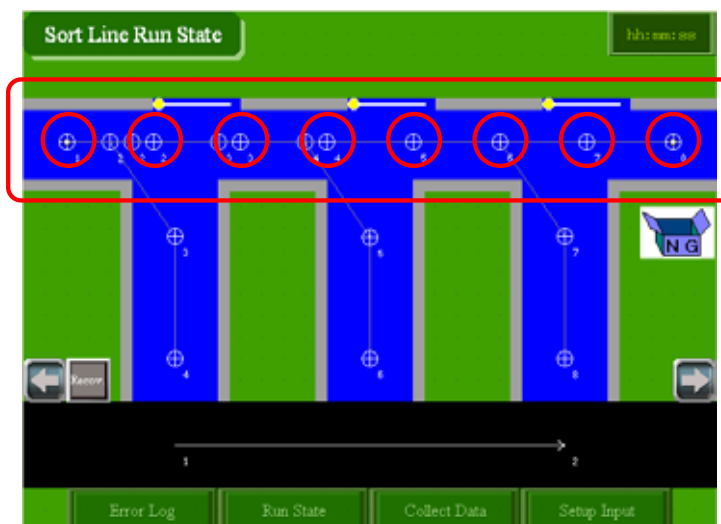
**Hint**

Standard: Select this when a mark is created outside of the bold frames in the following picture.

Compatibility: Select this when a mark was created within the bold frames in the following picture or was created on GP-PRO II or III.

**(7) Designating a display position**

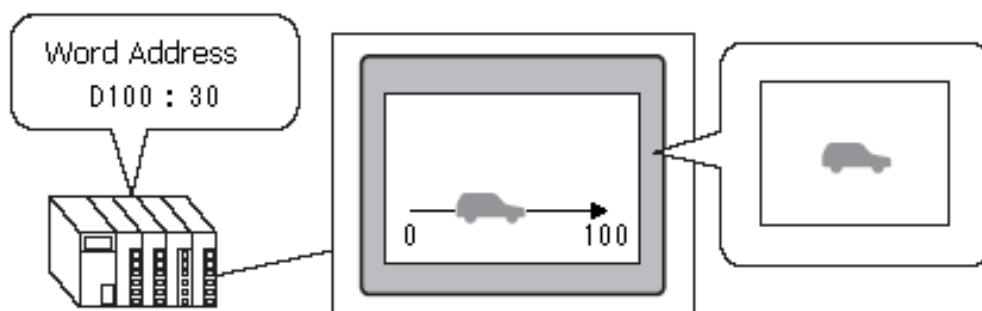
Display positions are arranged from the left to right sequence as shown in the illustration.





How to move and display an object (2)

Use a “Move Display (base screen/Image/Image CF)” to move a picture on a straight line (or outside of the range) according to the changes in a word address,



Arranging/Setting Procedure

Prepare a picture you want to display (Base screen/Image/Image CF).



Click the [Picture Display] icon.



Click on the screen to place the display.



Double click the display and configure settings.



Let's move and display a box along a straight line.

Move a box from left to right by touching a switch.

[Setting Flow]

1. Open the base screen "8".
2. Select/arrange/set up a "Picture Display: Move Display (base screen)".

Open the base screen "8".

[Practice Version]

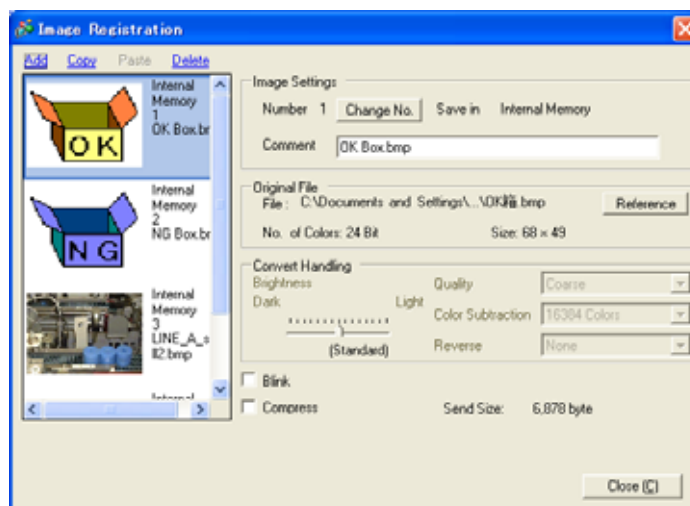
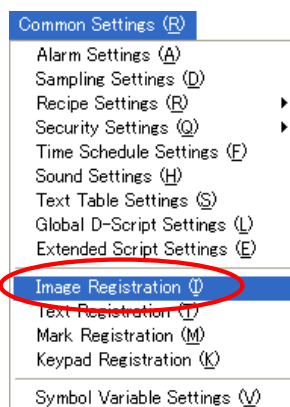


[Completed Version]



(1) Creating an image to move and display.

Select [Image Registration] from the [Common Settings] on the menu bar.



[Image 1]

* A picture similar to the one on the right is registered in the image registration for the practice training.

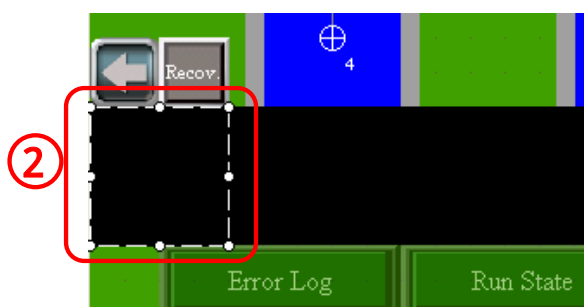


(2) Selecting/Placing a Picture Display

Click on the [Picture Display] icon from the toolbar.



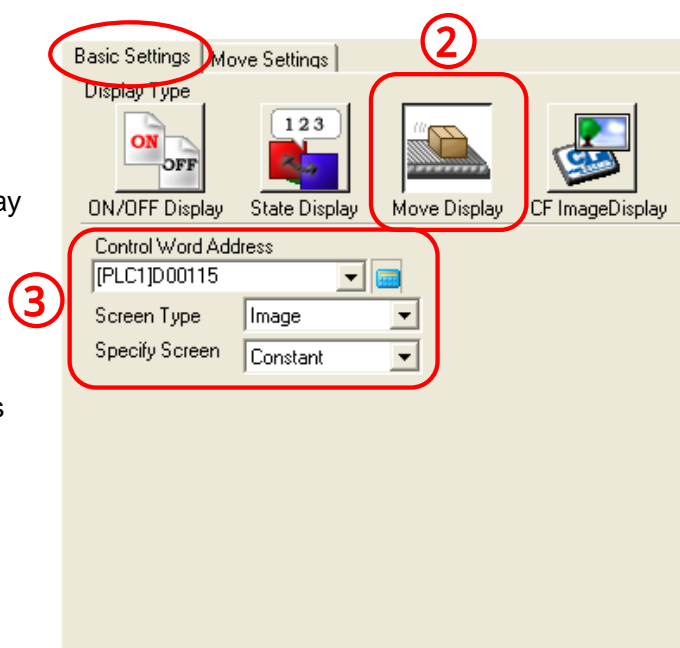
Place it by clicking any location on the panel.



(3) Basic Settings

Double click on the Picture Display.

Select [Move Display] from the [Display Type].



Control Word Address:

Set a word address to store the mark's display position data.

Screen Type: Select the screen type for the move display.

Specify Screen: select whether or not to move and display a fixed image or move and display several images by switching.

[Constant]: Select a picture to be displayed from [Select Display]. Move and display a fixed picture.

[Address]: Set [Screen no. specified address] of the image to store the screen number of the move display. This allows several screen pictures to move and change in one Picture Display.

Here, set [Control Word Address] to "D115", [Screen Type] to "Image", [Specify Screen] to "Constant".

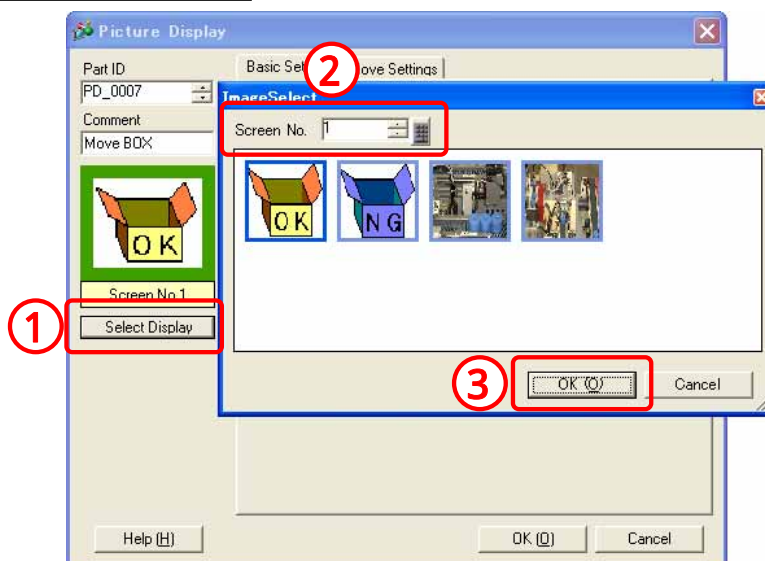
* The settings will differ depending on the selected [Screen Type]. In this section, the settings for Base Screen and Image are explained.

(4) Selecting a picture to move and display.

Click [Image Select].

Select Screen No. "1".

Click [OK].



(5) Move Settings

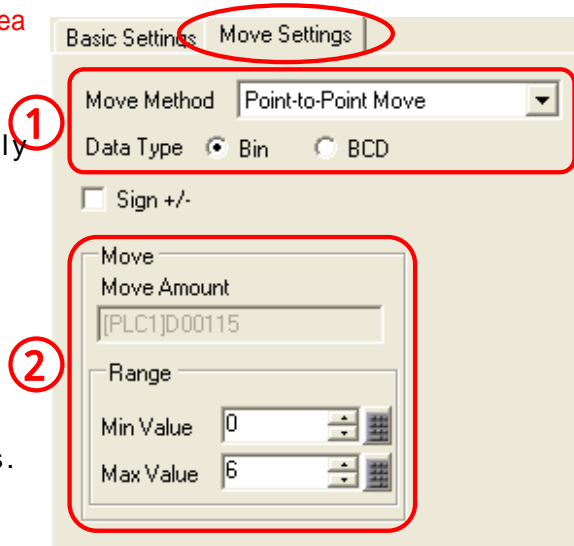
Move Method: Select the Move Method from “Area move” or “Point-to-Point Move”

“Area Move”: Move and display a picture freely within the specified area.

“Point-to-Point Move”: Move and display a picture between two specified points.

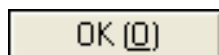
Move Amount: Display an address to store Move Amount

Range: Set the max value and min. value of data range between the two specified points.



Here, set [Move Method] to “Point-to-Point Move”, [Data Type] to “Bin”, [Min. Value] to “0” and [Max Value] to “6”.

Click [OK] to complete the settings.



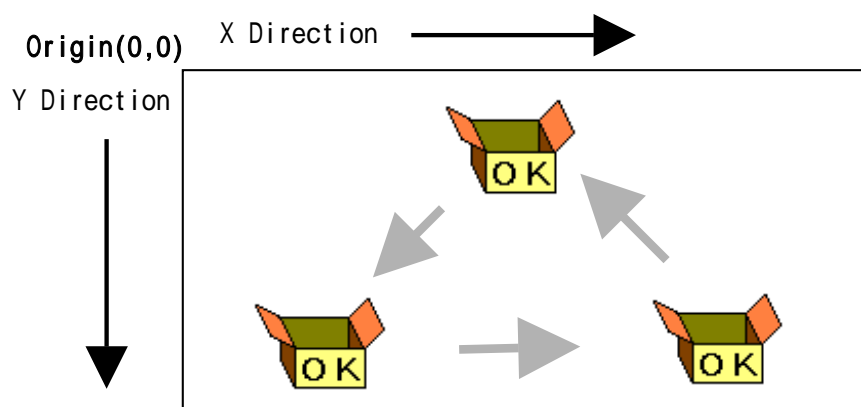
(6) Display Range Settings

Adjust an image display position by dragging the mouse as in the illustration on the right.



**Hint**

Selecting “Area Move” allows to express free two-dimensional movement using two consecutive word address data.



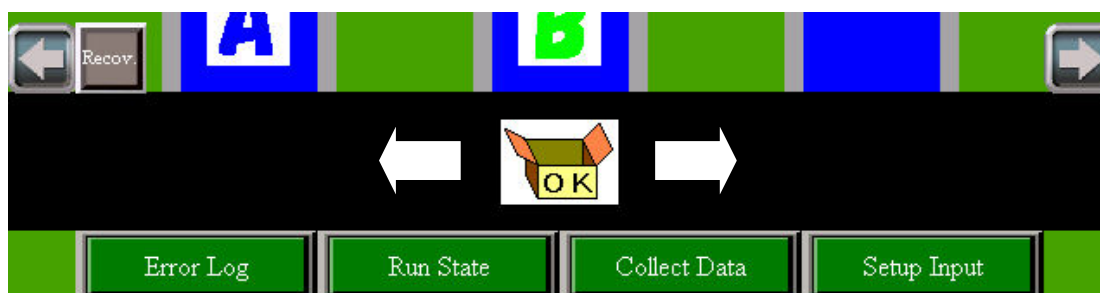
* The origin (0,0) is the starting point when the image is placed.

**Hint**

The “NG” box located on the right corner of the screen is placed by a “Image” called from a Call Screen.

**Caution**

When an image is displayed in Display Move mode, the background is filled in black. Please use black color for background by using a filled square.



* Black Filled Square is used for the background where the image moves in the practice screen.