Chapter 2

Run State Screen

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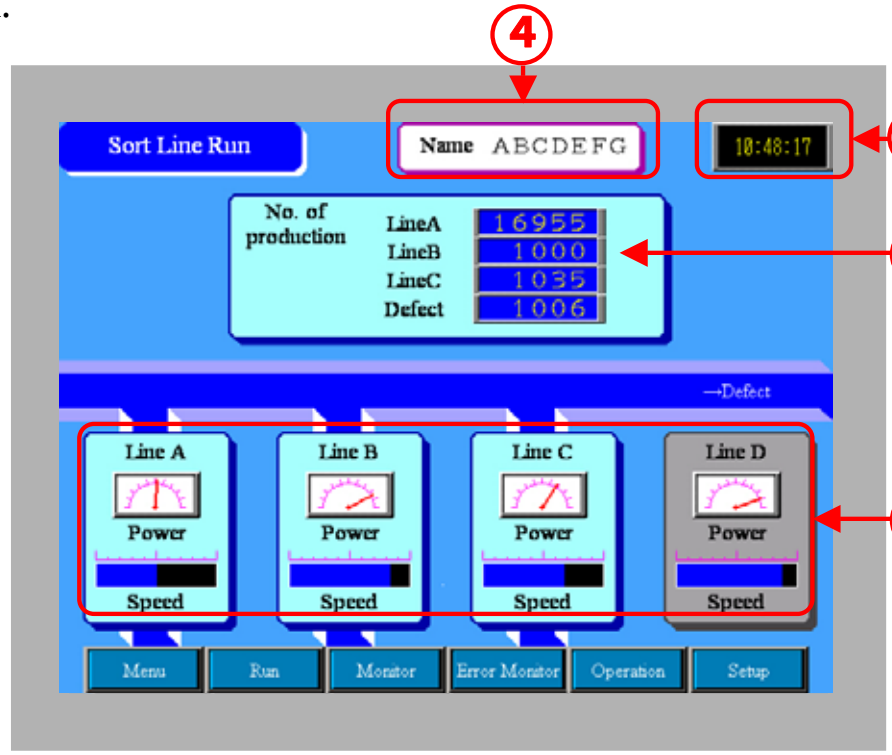
2.1

Run State Screen

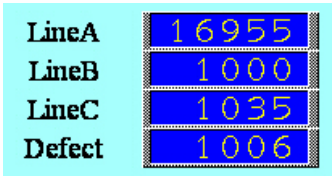
What's Run State Screen?

On the Run State Screen, a screen that shows data movement of the whole device can be created. The following will describe a current time display, a display of numeric data like production quantity, and a graph display of analog data like power or speed.

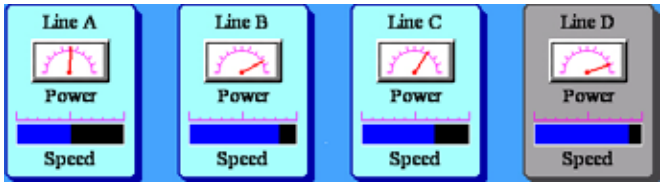


① Views the clock data inside of the GP and displays the current time. (->P.2-5〜 for details)

② Displays the production quantity of each line numerically. (->P.2-11〜for details)



③ Displays the value of the power and speed data for each line as a graph. (->P.2-19〜for details)



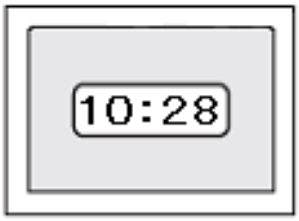
④ Displays text data like product names and lot numbers. (->P.2-27〜for details)

2.2

Time Display

How to display the current time (Time Display)

In order to display the current time on the display unit, use the [Data Display:Date/Time Display] feature. It's easy to display time referring to the clock data maintained in the GP's system data area.



• Placement/Setting Procedures

① From the menu bar's [Part], select [Data Display]->[Numeric Display] or click the [Data Display] icon.( )

② Drag the range for placement.

③ Double-click the Data Display and make settings.

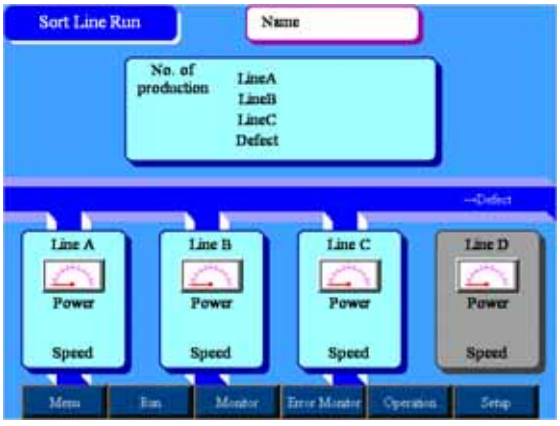
Let's display the current time.

The method to draw a Data Display that shows the current time is described.

[Setup Flow]
1. Open the base screen [2].
2. Select/Place/Set [Data Display:Date/Time Display].

Open the base screen [2].

[For Exercise]

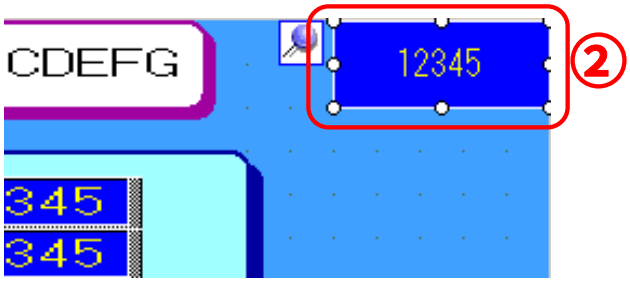


[Completed]

(1) Selecting/Placing the Data Display

① Click the [Data Display] icon from the Tool Bar.

② Drag the range for placement.



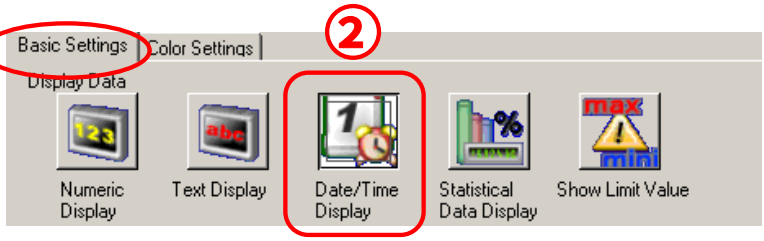
Hint!

To use the parts and drawings placed around the top or bottom of the screen for multiple screens, register the parts and drawings as Header/Footer. (->P.Intr.-16 for details)

(2) Selecting Date/Time Display

① Double-click the placed Data Display.

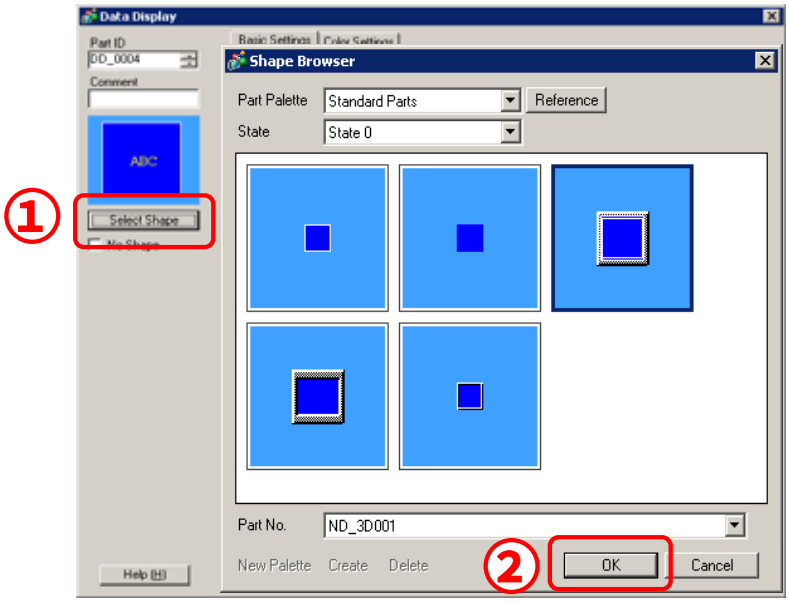
② Select [Date/Time Display] from the [Display Data].



(3) Selecting a picture

① Click [Select Shape] and select a picture for the display.

② After selecting the picture for the display, click [OK].

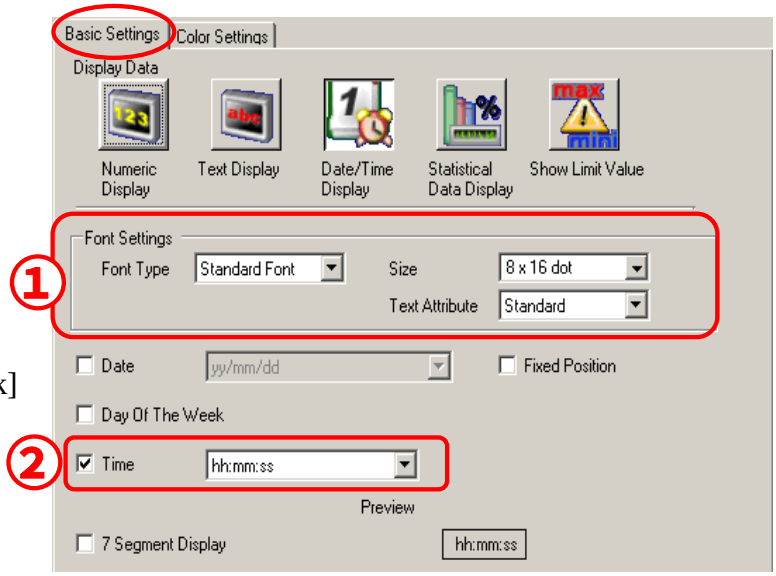


(4) Basic Settings

① Set [Font Setting] as you like.

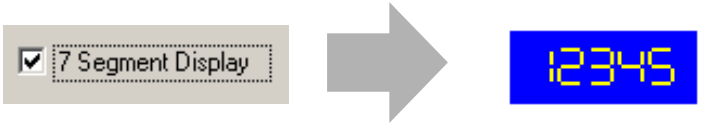
② Check [Time] and set the display method of time from the pull-down menu ( ) as you like.

*Checking [Date] and [Day Of The Week] will cause the date and the day of the week to display.



Hint!

Setting [7 Segment Display] in [Basic Settings] makes the display look like a calculator.



(5) Color Settings

① **Border Color:** Set the border color of the data display.

Numeric Value Color: Set the numeric value color of the data display.

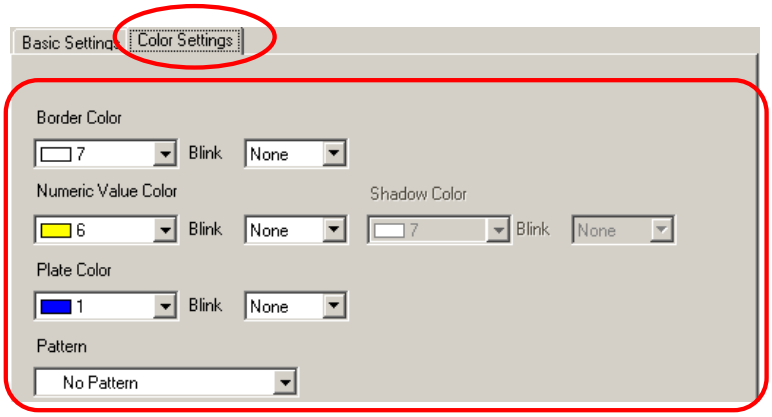
Shadow Color: Set the shadow color of digits in the display.

Plate Color: Set the background color of the data display.

Pattern: Set the background pattern of the data display.

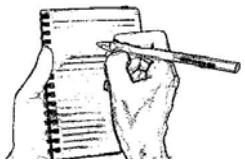
Pattern Color: Set the secondary color of the background pattern in the display.

Blink: Set Enabling/Disabling Blink Display and the Blink speed.



Set [Color Settings] as you like.

② Click [OK] to complete the settings.

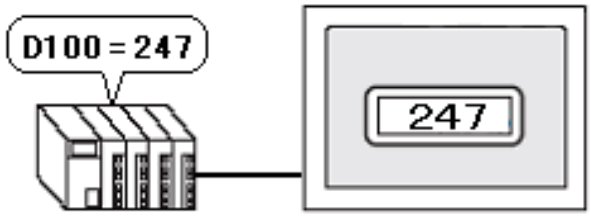


2.3

Numeric Display

How to display production quantity (Numeric Display)

In order to display production quantity on the Run Screen, the [Data Display: Numeric Display] feature is used. If you place and set it, data of the connected device is easily displayed numerically.



• Placement/Setting Procedures

①From the menu bar's [Part], select [Data Display]->[Numeric Display] or click the [Data Display] icon. ( ).

②Drag the range for placement.

③Double-click the Data Display and make settings.

実習

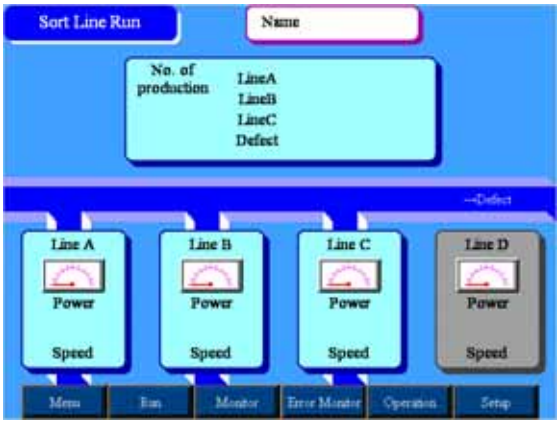
Let's display production quantity of each line with values.

The method to draw a Data Display that shows each line's quantity numerically is described.

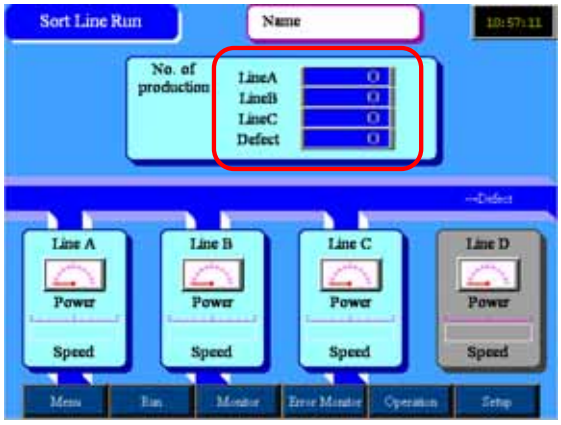
[Setup Flow]
1. Open the base screen [2].
2. Select/Place/Set [Data Display:Numeric Display].

Open the base screen [2].

[For Exercise]



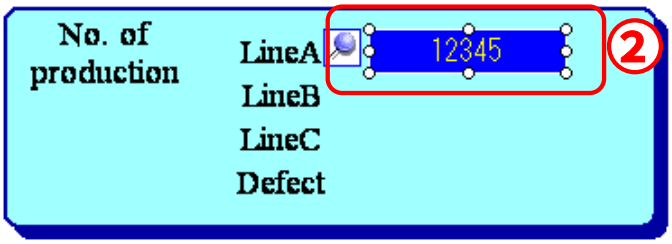
[Completed]



(1) Selecting/Placing the Data Display

① Click the [Data Display] icon from the Tool Bar.

② Drag the range for placement.

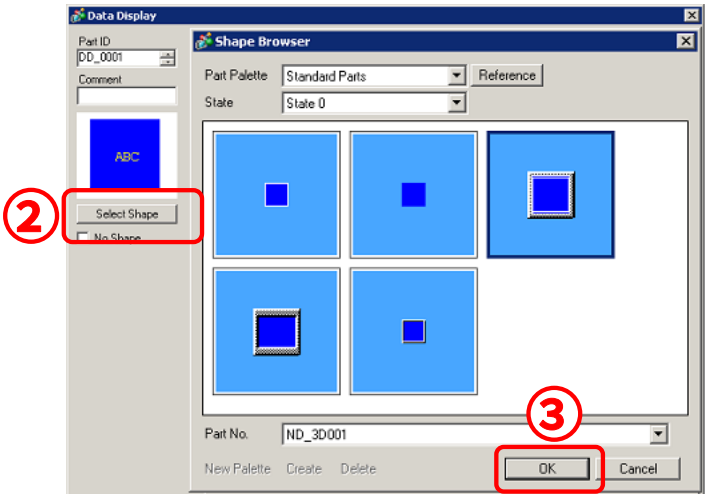


(2) Selecting a picture

① Double-click the placed [Data Display].

② Click [Select Shape] and select a picture for the display.

③ After selecting the picture, click [OK].

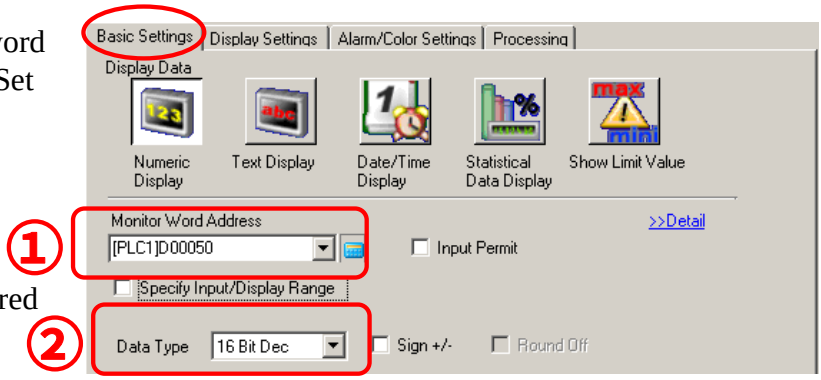


(3) Basic Settings

① For [Monitor Word Address], set the word address that stores the data to display. Set [D50] there.

② For [Data Type], set the type of the stored data.

Set [16 Bit Dec] for the [Data Type].

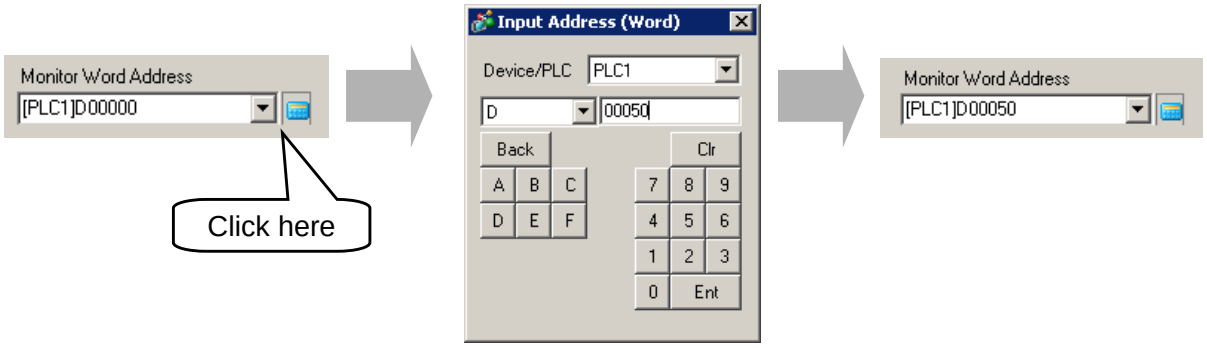


★ Hint!

To set monitor addresses, click  .

EX.) To set [D50],

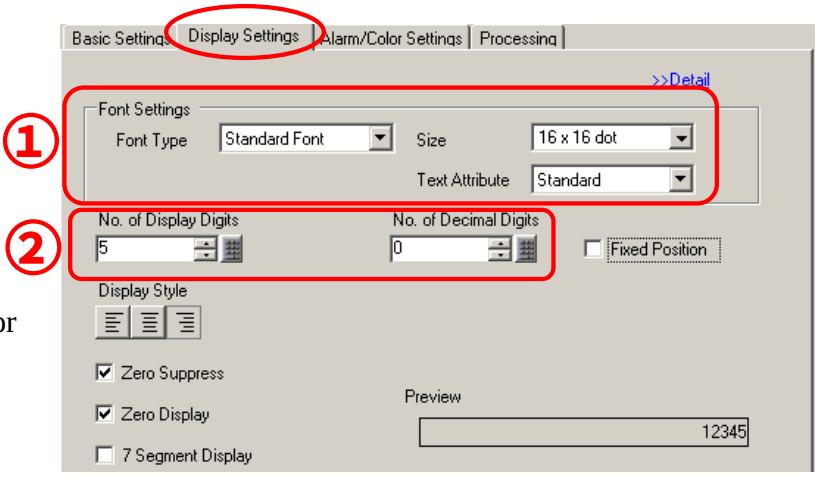
Set [D] for Device and [50] for Address then click [Ent].



(4) Display Settings

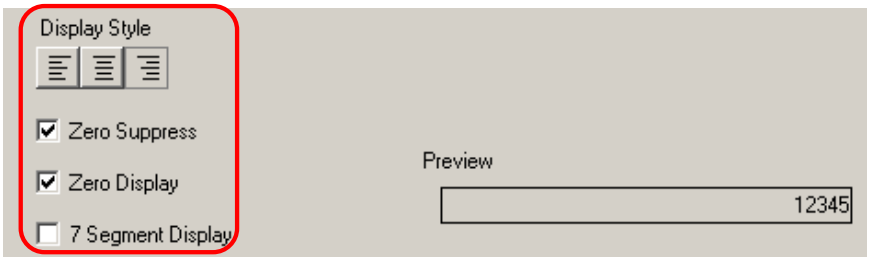
① For [Font Settings], set the font of the values to display.
Here, set [Standard Font] for [Font Type], [16 x 16 dot] for [Size], and [Standard] for [Text Attribute].

② Set [5] for [No. of Display Digits] and [0] for [No. of Decimal Digits.



Hint!

To change the display style of the values, make the following settings.



Display Style: Set the display position of the values from [To Left], [Center], and [To Right].

Zero Suppress: Set Display or Non-display of unnecessary zero(s).

Ex.) If the number of display digits is 5,
When checked, **1 2 3**
When unchecked, **0 0 1 2 3**

Zero Display: Set Display or Non-display of [0] when data is [0]

Ex.) When checked, **0**
When unchecked, No display

7 Segment Display: It makes the display like a calculator.

(5) Alarm/Color Settings

① **Border Color:** Set the border color of the data display.

Numeric Value Color: Set the numeric value color of the data display.

Shadow Color: Set the shadow color of digits in the display.

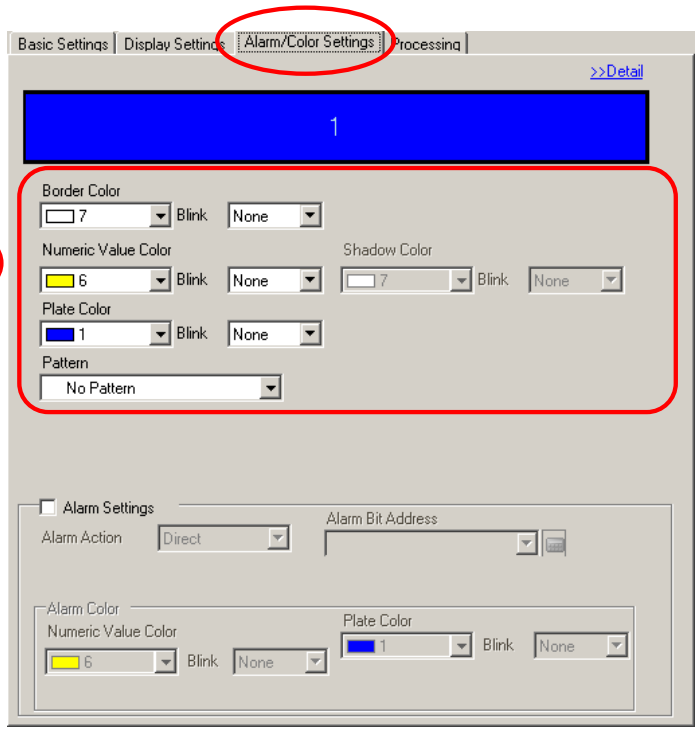
Plate Color: Set the background color of the data display.

Pattern: Set the background pattern of the data display.

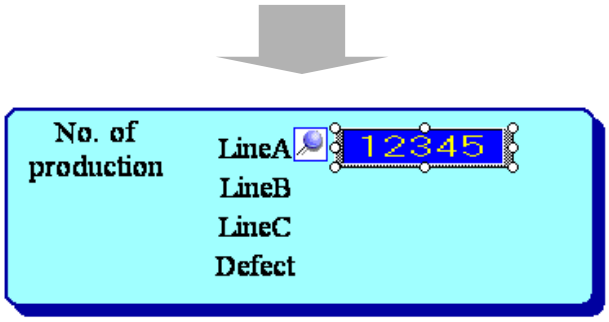
Pattern Color: Set the secondary color of the background pattern for the data display.

Blink: Set Enabling/Disabling Blink Display and the Blink speed.

Set the colors as you like.



② Click [OK] and complete the settings.

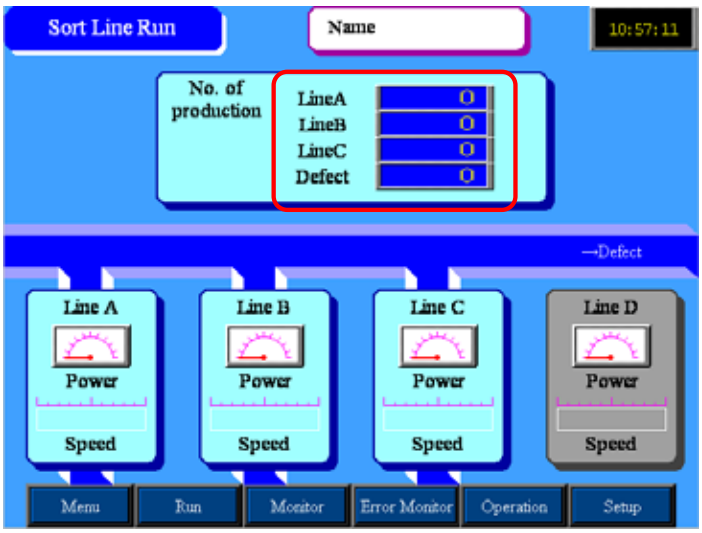


(6) Placing data displays for the others

Place a data display next to each label: [LineB], [LineC], and [Defect].

Set the addresses as shown below.

- LineB: [D51]
- LineC: [D52]
- Defect: [D53]



教えて！

To further customize data and display them with values…

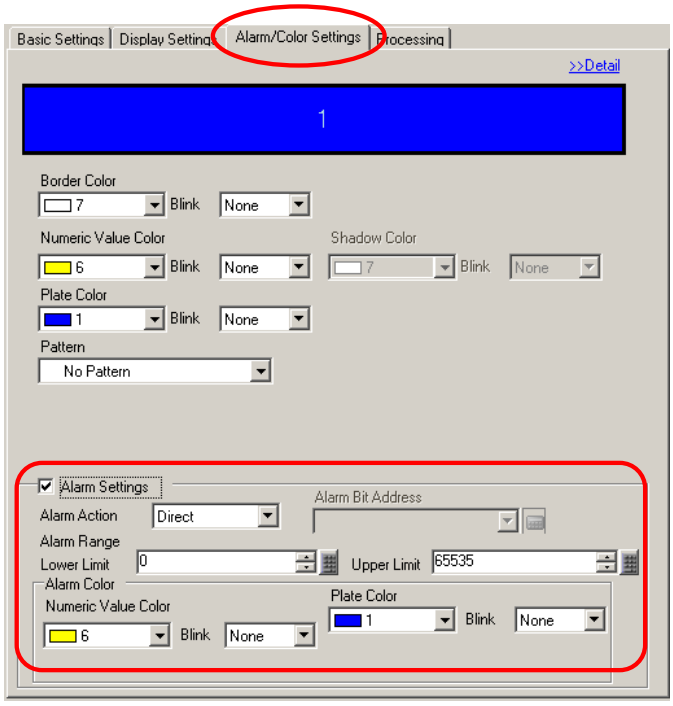
(1) Wish to change the color of the values for the alarm values and then display the alarm values in that color.

Alarm Settings: Set the alarm range. When the data is outside this range, the digits display in a different color.

Alarm Action: Select the Alarm Action from Direct, Address, or Change Color.

- Direct:The upper and the lower limits of Alarm are fixed. In Alarm Range, the upper/lower limits can be set directly.
- Address: The upper/lower limits of Alarm are dynamic. In Alarm Range, specify the addresses where the upper/lower limit values can be obtained.
- Change Color:When the alarm bit address turns ON, the data is displayed in the configured Alarm Colors.

Alarm Color: Set colors to display during Alarm state.



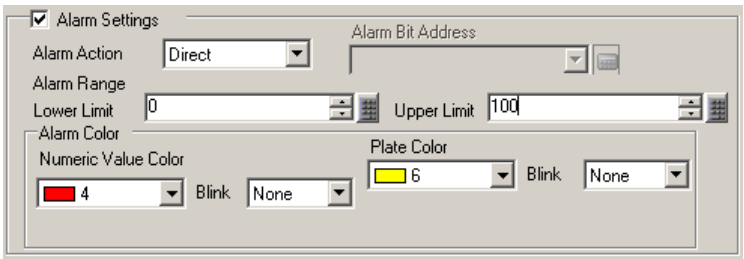
Ex.) If you wish to change the color and display the data when the display data is 101 or more,

①Check [Alarm Settings].

②Set [Direct] for [Alarm Action].

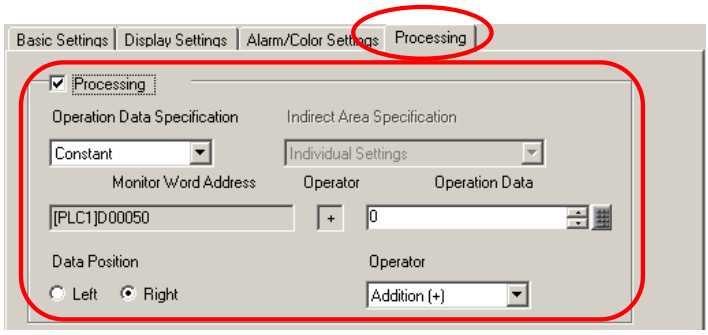
③Set [0] for [Lower Limit] and [100] for [Upper Limit] in [Alarm Range].

④Set [Red:4] for [Numeric Value Color] and [Yellow:6] for [Plate Color] in [Alarm Color].



(2) To display a calculated result based on the data.

Processing: Runs an operation on the data stored in the [Monitor Word Address] and displays the result.



Operation Data Specification: Select the method of obtaining the data to operate on from [Constant] or [Address].

- Constant:Set the fixed value as the data to operate on.
- Address:Set the address where the data to operate on is stored.

Indirect Area Specification: When [Address] is set for [Operation Data Specification], select the method of specifying an address from [Individual Settings] or [Area After Display Address].

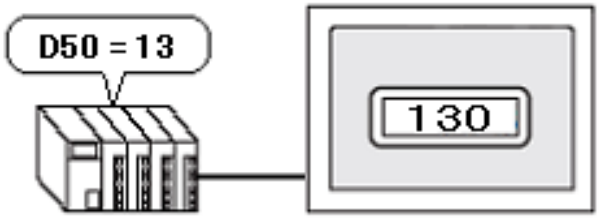
- Individual Settings: Specifies an independent word address for the operation data.
- Area After Display Address:Stores the operation data in the next address after the [Monitor Word Address].

Operation Data: When [Constant] is set for [Operation Data Specification], input the operation data directly. When [Address] is set, specify the address where the operation data is stored.

Data Position: Set the Left side or the Right side for the position of the operation data.

Operator: Select an operator from [Addition (+)], [Subtraction (-)], [Mult. (*)], [Division (/)], [Logical AND (&)], [Logical OR (|)], or [Exclusive OR (^)].

Ex.) To display the data ten times the value of the stored data.

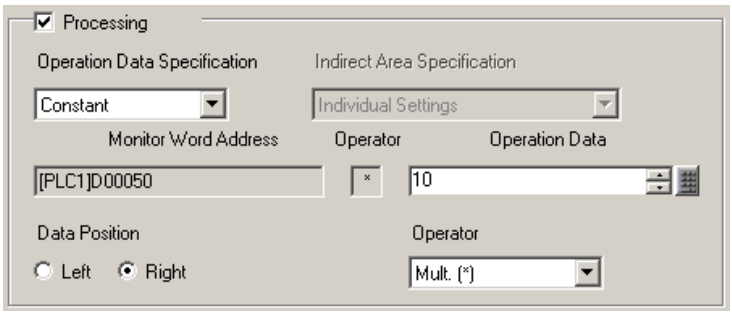


①Check [Processing].

②Set [Constant] for [Operation Data Specification].

③Set [Mult. (*)] for [Operator].

④Set [10] for [Operation Data].

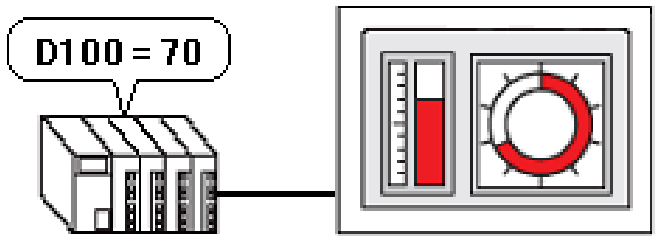


2.4

Graph Display

How to display a graph

To display analog data such as speed or power, a graph is often used. For the graph display, the [Graph:Normal Graph, Statistical Graph, Meter Graph] feature is used. Placing and configuring a [Graph] on the screen enables you to represent data of the connected device easily in a graph form.



• Placement/Setting Procedures

①From the menu bar's [Part], select [Graph] or click the [Graph] icon ( ).

②Drag the range for placement.

③Double-click the graph and make settings.

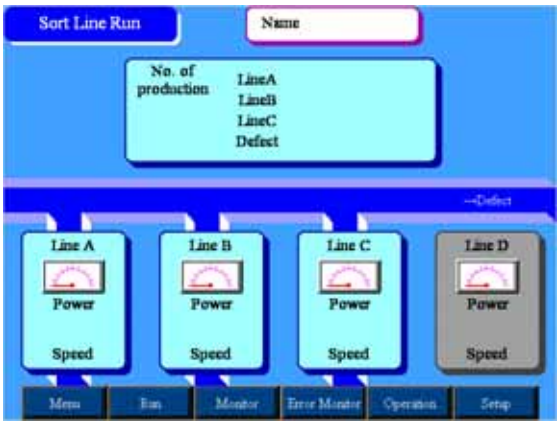
Let's display each line's speed in a bar graph.

The method to draw a bar graph that displays each line's speed is described.

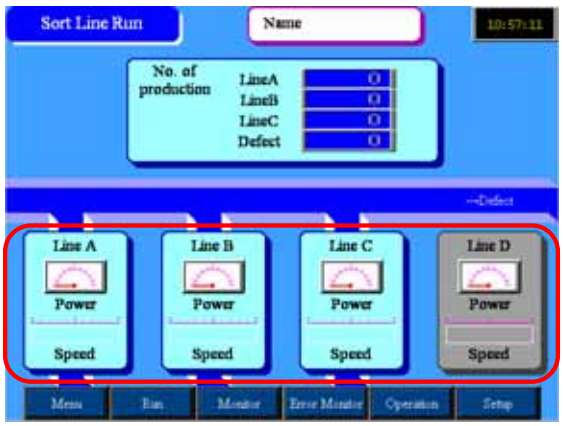
[Setup Flow]
1. Open the base screen [2].
2. Select/Place/Set [Graph:Normal Graph].

Open the base screen [2].

[For Exercise]



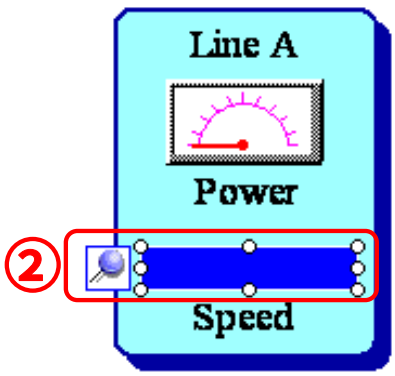
[Completed]



(1) Selecting/Placing a graph

① From the Tool Bar, click the [Graph]icon.

② Drag the area for placement.



(2) Basic Settings

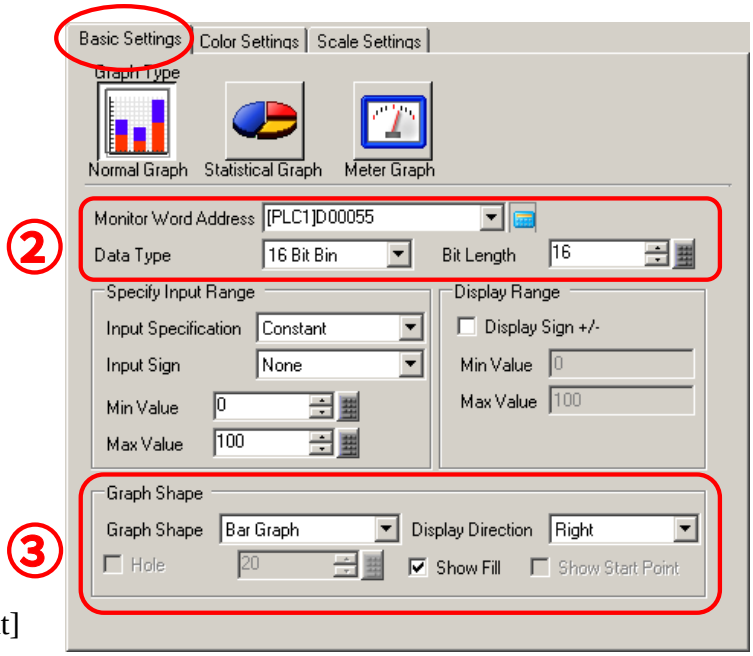
① Double-click the placed graph.

② **Monitor Word Address:**Set the word address where the data to display is stored.

Data Type: Set the type of the stored data.

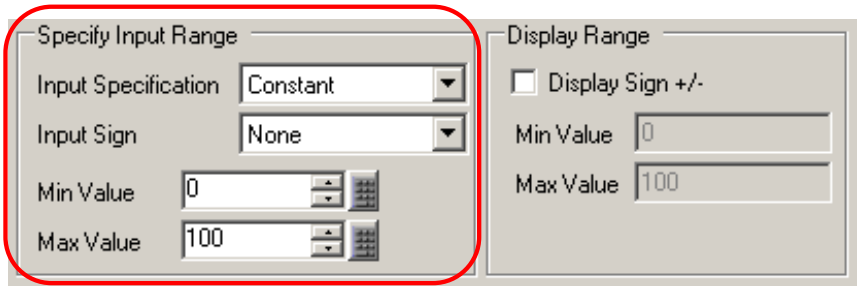
Set [D55] for [Monitor Word Address] and [16 Bit Bin] for [Data Type].

③ Set [Bar Graph] for [Graph Shape] and [Right] for [Display Direction].



Hint!

To change the range of the displayed data, make the settings in [Specify Input Range] of [Basic Settings].



Input Specification: When the Min/Max values are fixed, set [Constant]. When they are changeable, set [Address].

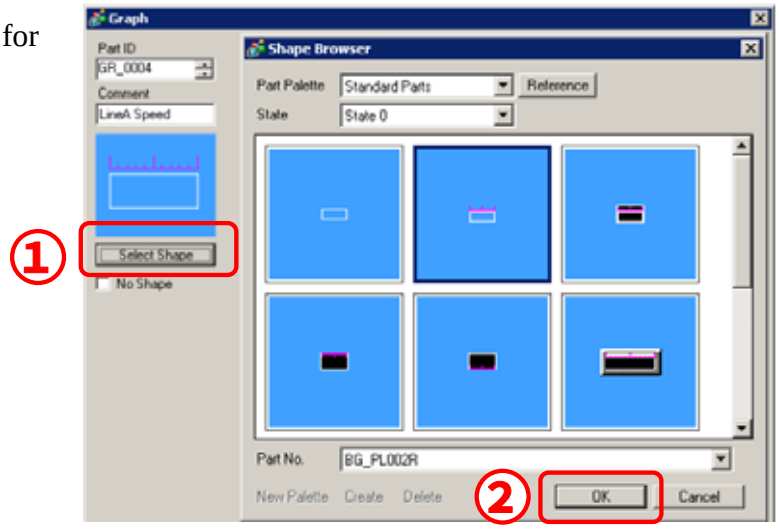
Input Sign: Set whether the data is signed or unsigned.

Min Value/Max Value: Set the Max/Min values of the Input Range. When [Address] is set for [Input Specification], specify the address that stores these values.

(3) Selecting a picture

① Click [Select Shape] and select a picture for the graph.

② After selecting the picture, click [OK].



(4) Color Settings

Display Color: Set the color of the graph.

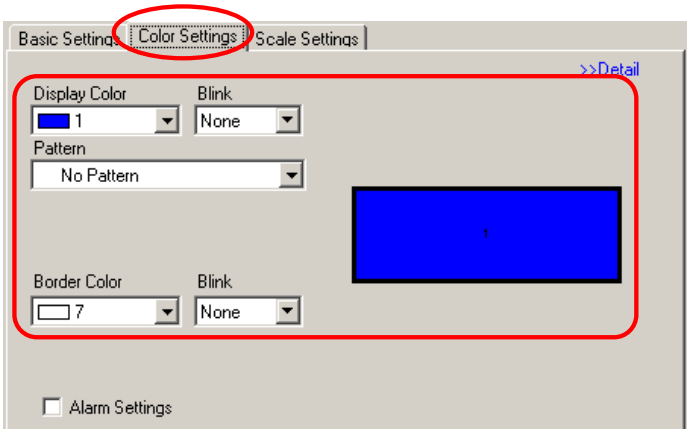
Pattern: Set the pattern of the graph.

Border Color: Set the border color of the graph.

Background Color: Set the background color of the graph.

Blink: Set Blinking.

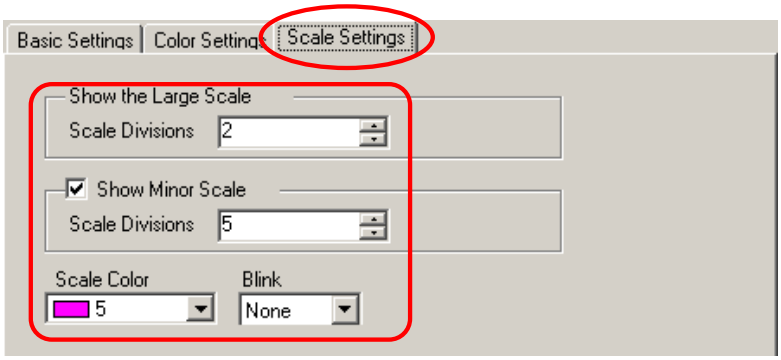
Set them as you like.

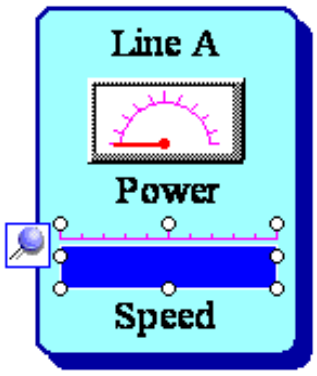


(5) Scale Settings

① Set the number of divisions and color of the scale.

② After setting them, click [OK].



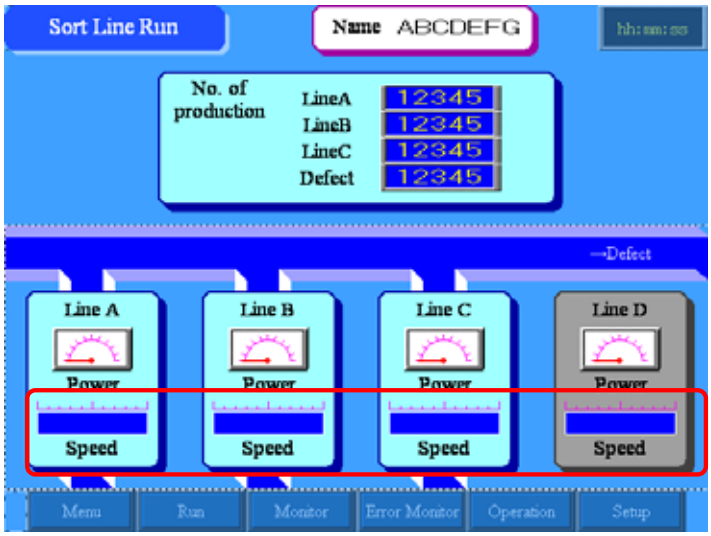


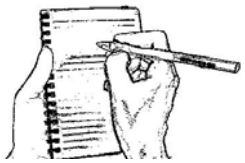
(6) Placing graphs for the others

Place a graph for each of [LineB], [LineC], and [LineD].

Set the addresses as shown below.

- LineB: [D56]
- LineC: [D57]
- LineD: [D58]





教えて！

To customize data more and display them in a bar graph!!

(1)To change the color graph displays when the value exceeds the alarm value.

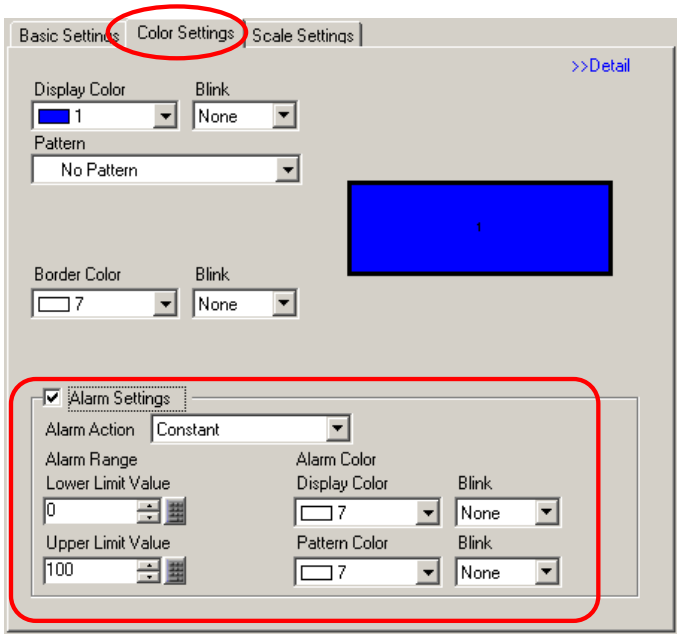
Alarm Settings: Set the alarm range. When the value is beyond the range, the displayed graph color is changed.

Alarm Action: Select Constant or Address for Alarm Action.

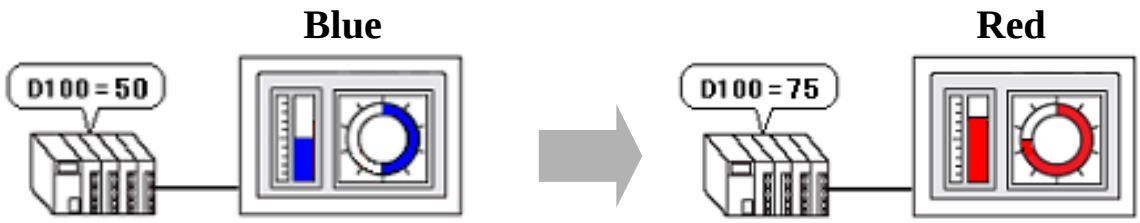
• Constant:The upper/lower limit values of Alarm are fixed. Set the upper/lower limit values directly in Alarm Range.

• Address：The upper/lower limit values of Alarm are dynamic. In Alarm Range, specify the addresses where the upper/lower limit values will be and set the upper/lower limit values in the specified addresses during runtime.

Alarm Color: Set each color to display during Alarm state.



Ex.) To display the graph in red when the display data becomes 71 or more.

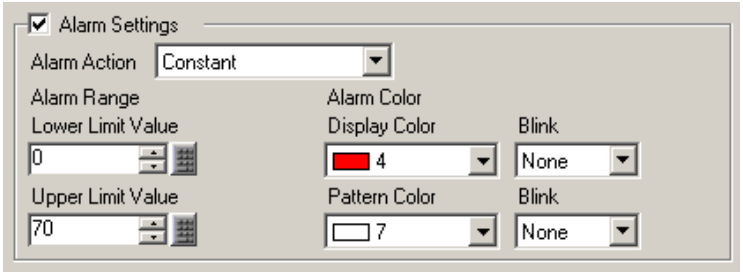


①Check [Alarm Settings].

②Set [Constant] for [Alarm Action].

③Set [0] for [Lower Limit Value] in Alarm Range and [70] for [Upper Limit Value].

④Set [Red:4] for [Display Color] in Alarm Color.

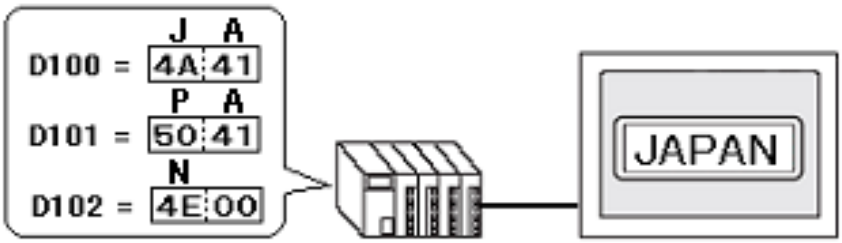


2.5

Product Name Display

How to display product names

In order to read the text data (ASCII code, Shift JIS code) stored in the connected device and display them, the [Data Display:Text Display] feature is used.
The [Data Display] enables you to read the text data stored in the specified word address and display it easily.



- **Placement/Setting Procedures**

①From the menu bar's [Part], select [Data Display:Text Display] or click the [Data Display] icon. ( )

②Drag the area for placement.

③Double-click the Data Display and make settings.

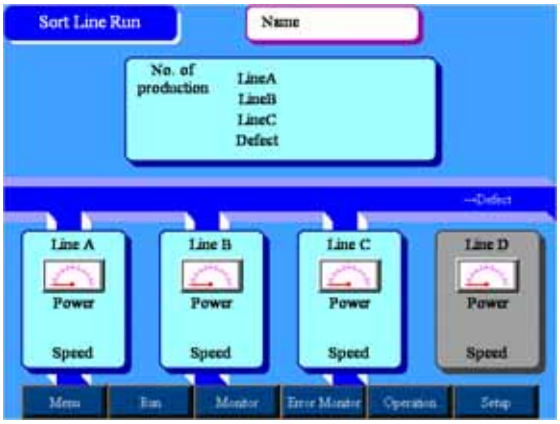
Let's display product names.

The method to draw a data display that shows product names is described.

[Setup Flow]
1. Open the base screen [2].
2. Select/Place/Set the [Data Display:Text Display].

Open the base screen [2].

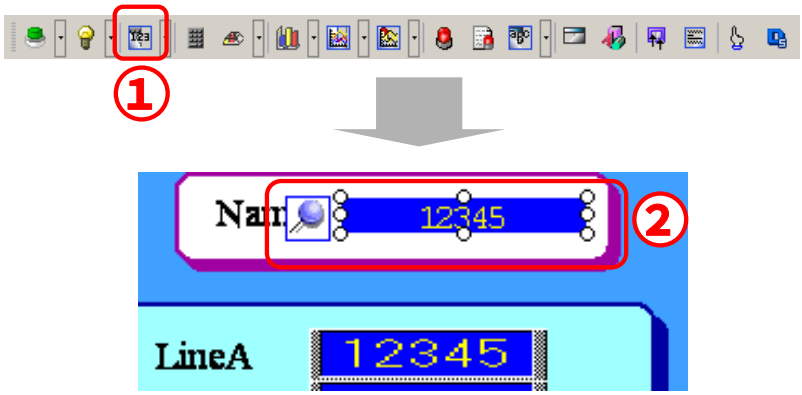
[For Exercise]



[Completed]

(1) Let's select and place the Data Display.

① Click the [Data Display] icon from the Tool Bar.



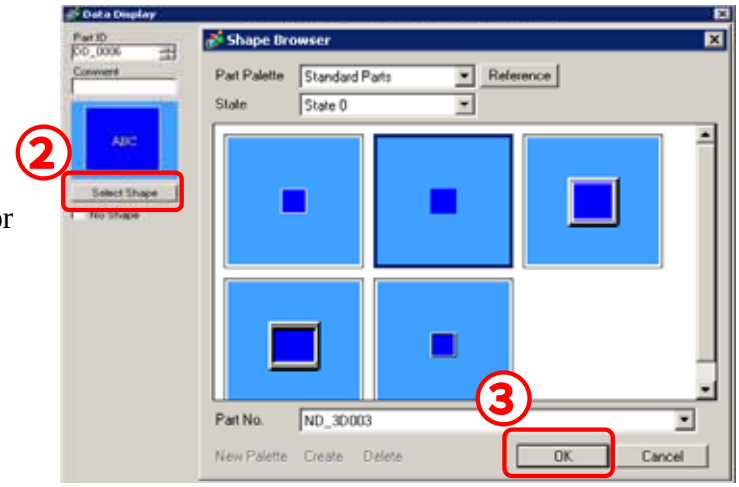
② Drag the range for placement.

(2) Let's select a picture.

① Double-click the placed data display.

② Click [Select Shape] and select a picture for the display.

③ After selecting the picture, click [OK].

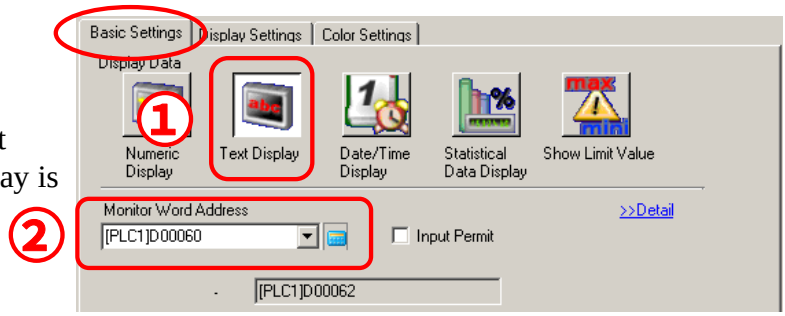


(3) Let's set Basic Settings

① Select [Text Display].

② For [Monitor Word Address], set the first word address where the text data to display is stored.
Here, set [D60].

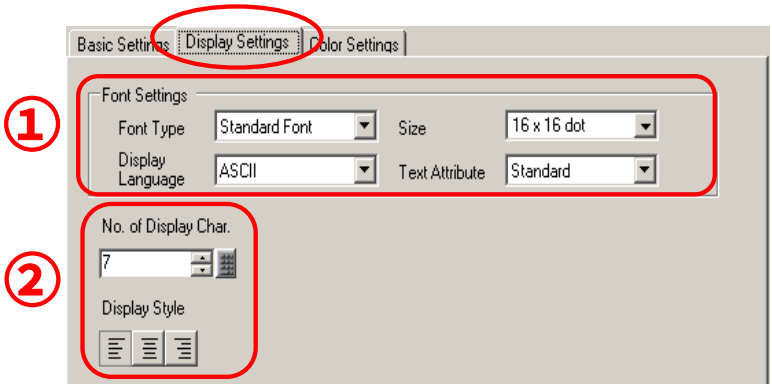
*For how to set addresses, refer to page, 2-15.



(4) Let's set Display Settings.

① In [Font Settings], set the font to use to display the text.
Here, set [Standard Font] for [Font Type], [16x16 dot] for [Size], [ASCII] for [Display Language], and [Standard] for [Text Attribute].

② Set [7] for [No. of Display Char.] and [Left] for [Display Style].



(5) Let's set Color Settings.

① Set [Black:0] for [Text Color], and [White:7] for [Plate Color].

② Click [OK] and complete the settings.

OK(O)