

Programmable Terminal NS Series

CX-Designer

Introduction Guide



General Precautions

The user must operate each product according to the performance specifications described in the operation manuals.

Before using the product under conditions which are not described in the manual or applying the product to nuclear control systems, railroad systems, aviation systems, vehicles, combustion systems, medical equipment, amusement machines, safety equipment, and other systems, machines and equipment that may have a serious influence on lives and property if used improperly, consult your OMRON representative.

Make sure that the ratings and performance characteristic of the product are sufficient for the systems, machines, and equipment, and be sure to provide the systems, machines, and equipment with double safety mechanisms.

This manual provides information for using the programmable terminal model NS12. Be sure to read this manual before attempting to use the software and keep this manual close at hand for reference during operation.

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Section I *Operation Flow*

Operation Flow

CX-Designer

NS8-V1

Host side (PLC)

Installing CX-Designer to a personal computer

Starting up the CX-Designer

Creating a screen

Setting Project Properties

Entering project title and labels

System Setting

Allocate system memory, set communication port etc...

Creating a Screen Data

Creating lamp, touch switch, numeral display and graph etc...

Test/ Validation

Checking errors on the CX-Designer

Transferring the screen data to NS Hardware

Start Operation

Maintenance and Inspection

Mount NS on the control panel

Refer to NS Setup Manual

Connecting power supply/ communication cable

Refer to NS Setup Manual

Power ON

System Menu Setting

Setting communication port

Refer to NS Setup Manual

Creating Ladder program

Power ON

Section CX-Designer

Creating simple screens using the CX-Designer (CX-D)

*A screen image depends on a CX-Designer system version; when you use a different system version from the one used in this manual, the screen image may not be the same.

*Certain settings depend on the hardware that you use. In this manual, NS8-V1 is used to create screens.

1. Preparations and settings

Introduction

This manual describes how to use the CX-Designer and its functions with a visual assistance in creating sample screens.

Necessary Equipment

Item

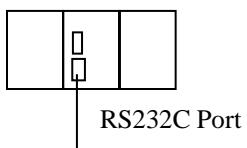
- CX-Designer
- NS Hardware
- PLC
- NS Hardware – PC Serial communication cable
- NS Hardware – PLC Serial communication cable
- PC

Model

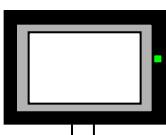
- NS-CXDC1-V[]
- NS8-TV1[]-V1
- CS Series, CJ Series
- XW2Z-S002
- XW2Z-200T
- Widows PC on which CX-Designer performs

Configuration & Communication Settings

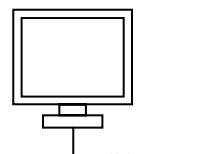
PLC



NS hardware



PC



NS Hardware

- Serial Port A NT Link (1:N), No. of units: 0, Communication Speed: High-speed
- Serial Port B Setting is not necessary

PLC

- Host Link Port Communication Speed: High-speed NT Link, Communication Mode: NT Link (1:N), NT Link Max. No. of units: 1

Allocation Address

The following PLC allocation addresses are used for sample screens shown in this manual.

Allocation Address	Description
00000.00	Power 1 Running / Stopped
00000.01	Power 2 Running / Stopped
00000.02	Power 3 Running / Stopped
00000.03	Power 4 Running / Stopped
00000.04	Power 5 Running / Stopped
00000.05	Power 6 Running / Stopped

Allocation Address	Description
DM100	Present value

Allocation Address	Description
00001.00	Alarm 1 Occurred / Released
00001.01	Alarm 2 Occurred / Released
00001.02	Alarm 3 Occurred / Released
00001.03	Alarm 4 Occurred / Released
00001.04	Alarm 5 Occurred / Released
00001.05	Alarm 6 Occurred / Released
00002.00	Alarm 7 Occurred / Released
00002.01	Alarm 8 Occurred / Released
00002.02	Alarm 9 Occurred / Released
00002.03	Alarm 10 Occurred / Released
00002.04	Alarm 11 Occurred / Released
00002.05	Alarm 12 Occurred / Released

Sample Screen

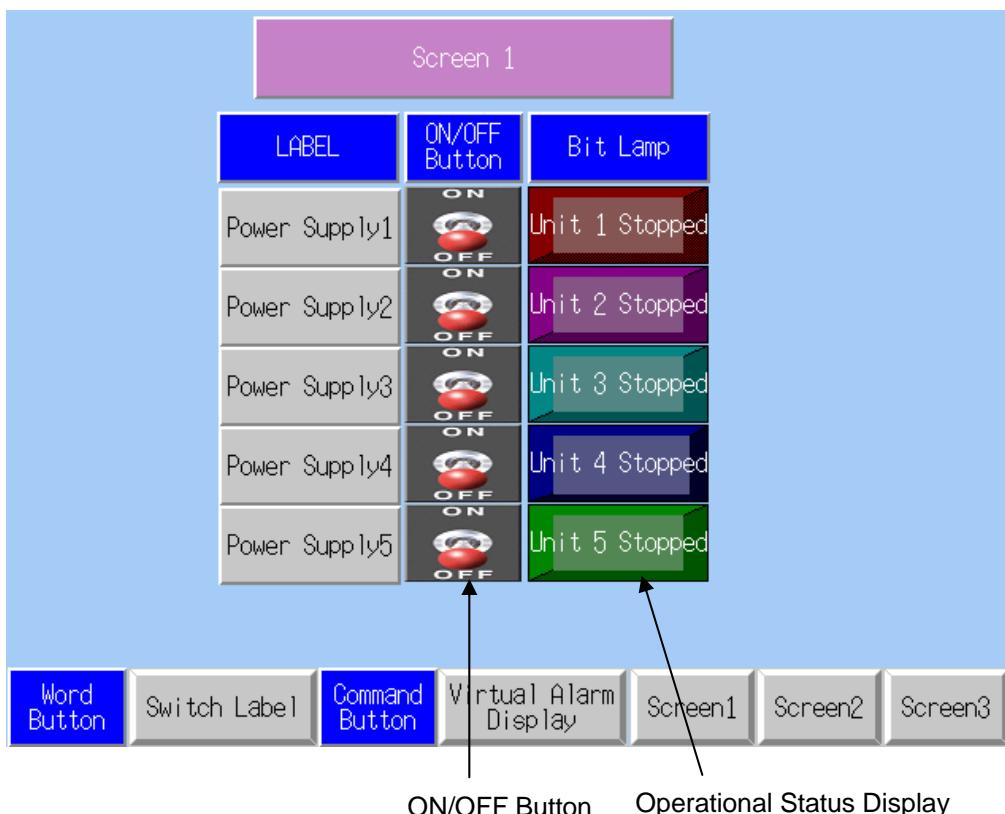
Create 5 screens using the CX-Designer.

All screens are designed to display labels in two languages (English/Dutch) with “Switch Label” function.

Screen 1

Here, you will create a screen that turns ON/OFF specified addresses of the PLC. On the screen 1, lamps (bit lamp) are lit/out according to the status of bits allocated to the PLC.

The screen below illustrates an example of a touch panel screen used to operate a machinery.



1. ON/OFF Button

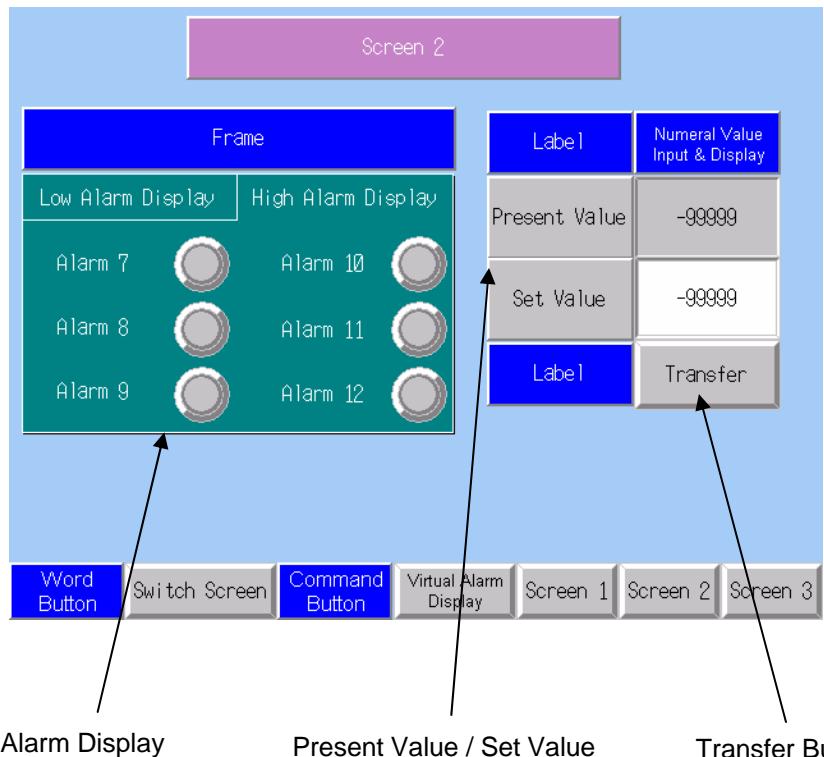
Press the button to switch ON/OFF status.

2. Operational Status Display

“RUN/STOP” lamp is lit/out in linked with the status of an ON/OFF button.

Screen 2

On Screen 2, you will create a screen with 2 functions: one is a frame where more than one small screens are displayed by switching a tab; the other is to write values to memories in the PLC.



1. Alarm Display

Is used to switch a Low Alarm Display and a High Alarm Display by pressing the tab of the Frame function.

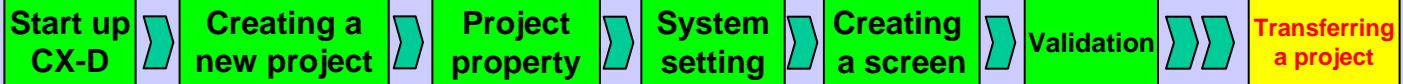
Alarm lamps are respectively allocated to bits of the PLC as shown in the table on page 4.

2. Present Value / Set Value

An object that displays the numeral value of an address is used to show the content of the PLC memory as a present value.

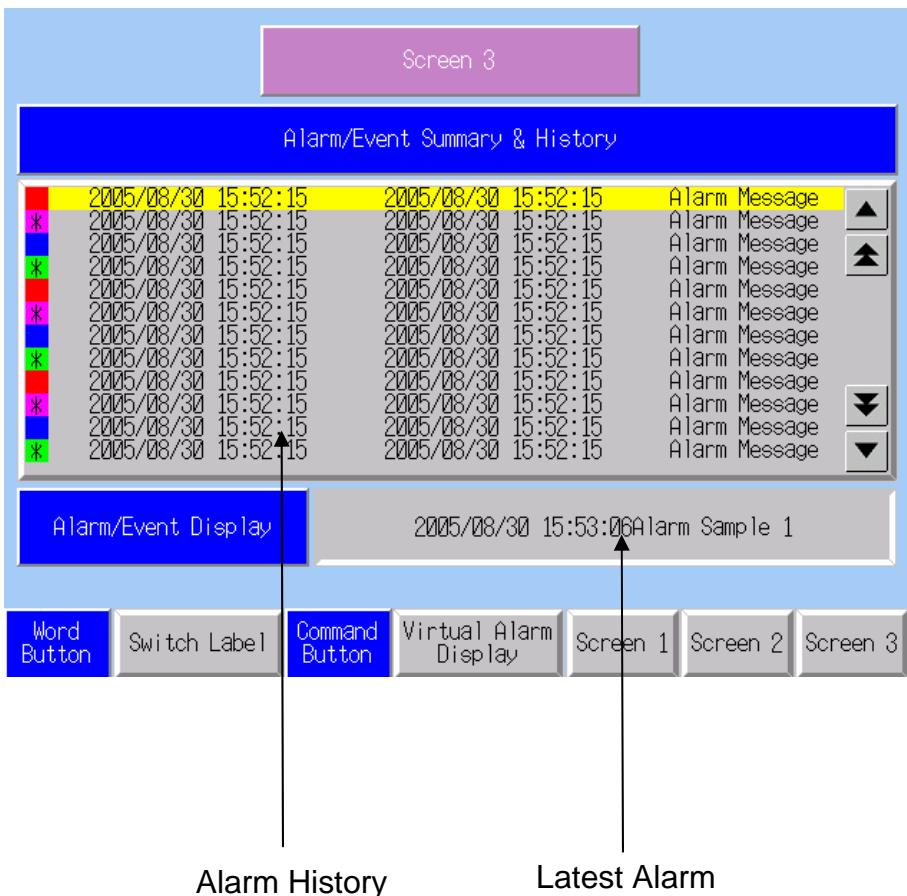
3. Set Value/Transfer Button

Numeral Display & Input object lets the user to enter numeral values. In this manual, you will create a screen where values entered by the user are saved in the NS's internal memory area and be transferred to the PLC memory areas by pressing the Transfer button.



Screen 3

NS has a function that shows the ON/OFF status of a specified bit as an alarm history. On screen 3, you will generate a virtual alarm on the pop-up screen (described later) and display its history.



1. Alarm History

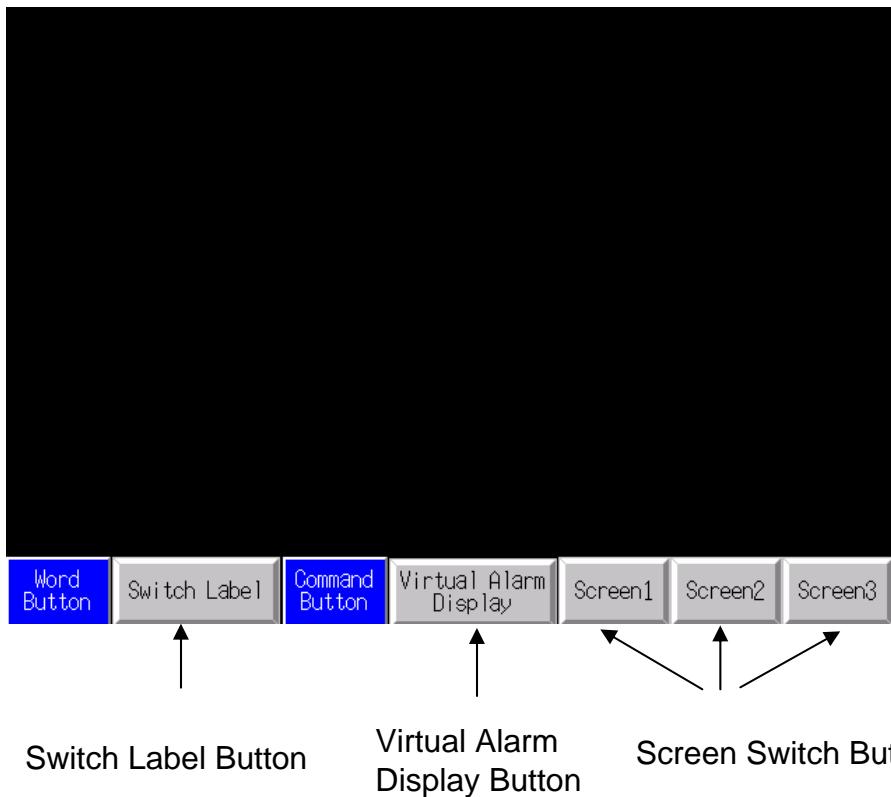
Displays a virtual alarm history that was occurred and cancelled on the pop-up screen.

2. Latest Alarm

Displays the latest virtual alarm that has occurred on the pop-up screen.

Sheet 1

A sheet is a screen that contains objects commonly used on several screens. In this manual, you will create a sheet with a “Switch Label” function to switch labels between English and Dutch, a function to display a screen (to be described later) for generating a virtual alarm, and a function to switch screens.



1. Switch Label Button

Press this button to show a pop-up menu from which you can switch a label in English and Dutch.

2. Virtual Alarm Display Button

Press this button to display the pop-up screen (to be described later) with a Virtual Alarm Display button.

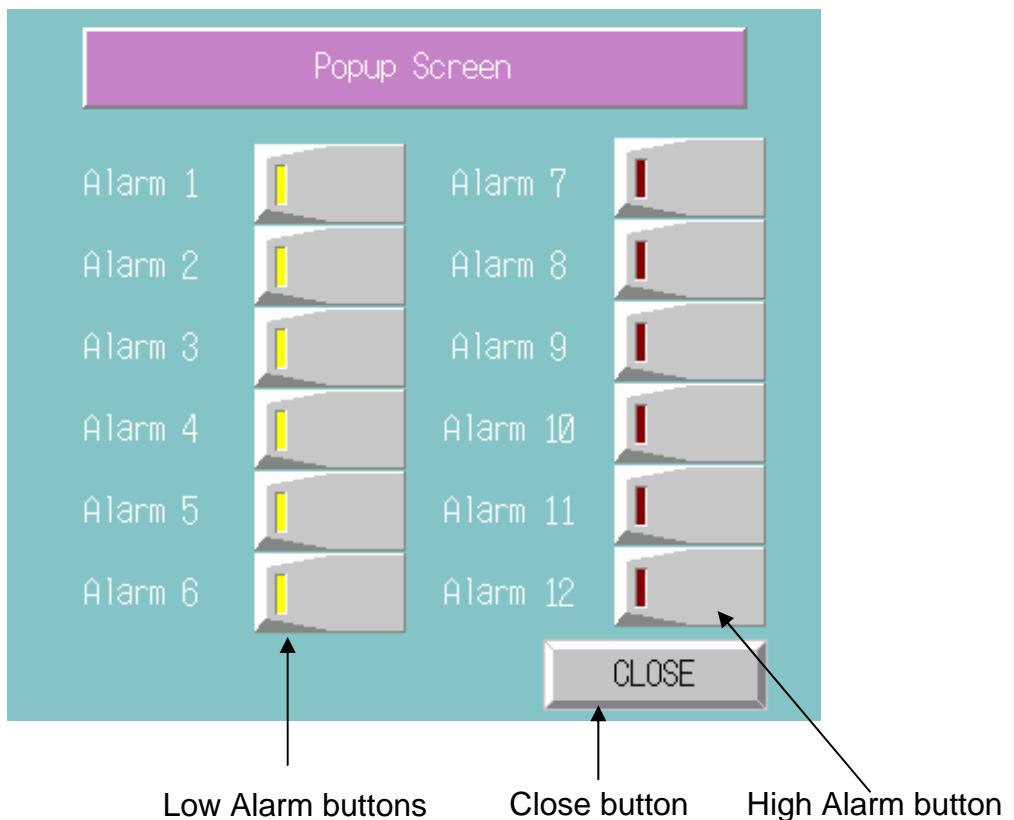
3. Screen Switch Button

Press a button to display the screen number (1 to 3) shown on the button .

Pop-up Screen

A pop-up screen is a small screen that can be displayed as needed on top of another screen.

You will create a pop-up screen that turns ON/OFF the PLC allocation addresses 00001.00 to 0001.05, and 00002.00 to 0002.05 and generate/cancel virtual alarms.



1. Low Alarm button

Press this button to switch ON/OFF (Occurrence/Recovery).

2. High Alarm button

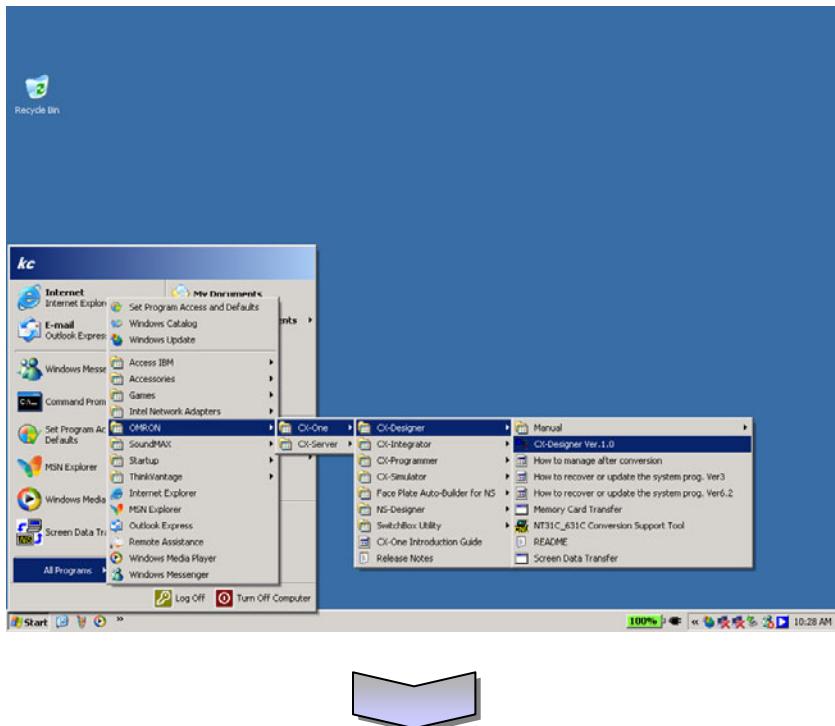
Press this button to switch ON/OFF (Occurrence/Recovery).

3. Close button

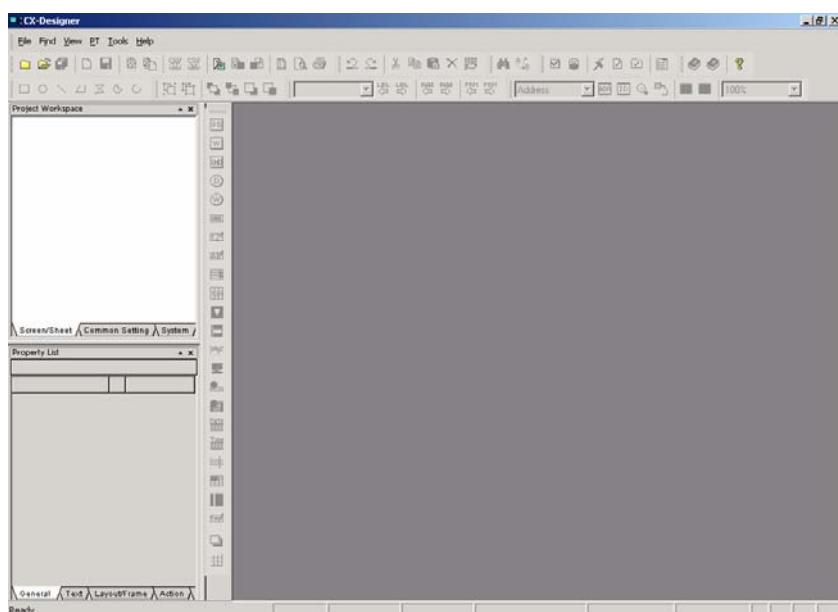
Closes the pop-up screen.

2. Starting up the CX-Designer

Select [Start]-[Program]-
[Omron]-[CX-One]
-[CX-Designer]
-[CX-Designer Ver. xx]
(CX-Designer Ver. 1.0
is used here.)



When the CX-Designer is started up, the main window will appear.



Start up CX-D

Creating a new project

Project property

System setting

Creating a screen

Validation

Transferring a project

3. Creating a new project

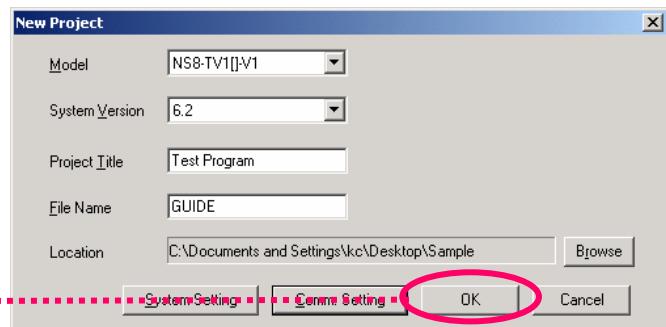
Left-click the icon



Set as follow:
[Model name]
NS8-TS1[]-V1
[System Version]
System Ver.6.2 (* Note)
[Project Title]
Enter a title.
"Test Program" is entered here.
[File Name]
Enter a file name.
"GUIDE" is entered here.
[Location]
Specifies a location where the file is saved.
The file is saved in
[C:\Documents and Settings\kc\Desktop\Sample] here.

Click

OK



* Note the following points when you enter the project name.

-A file name can be as long as 42 characters including extension (.IPP).

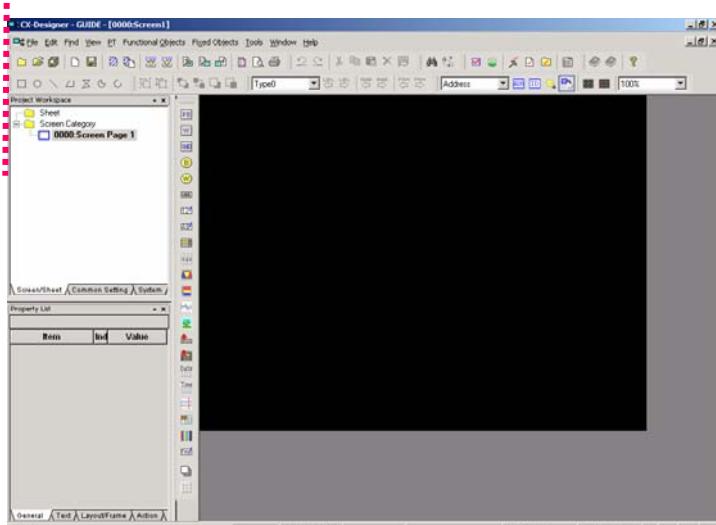
-A file name may use any number or letter, underscore(_), and dollar mark(\$).

If project name is not entered correctly(e.g. using wide size characters etc...)

the error occurs when transferring data.



It is now ready to create a screen.



Enter a title name.
"Screen 1" is entered here.

Click

OK

*System Ver.6.2 is used here.
Select [System Version] according to yours

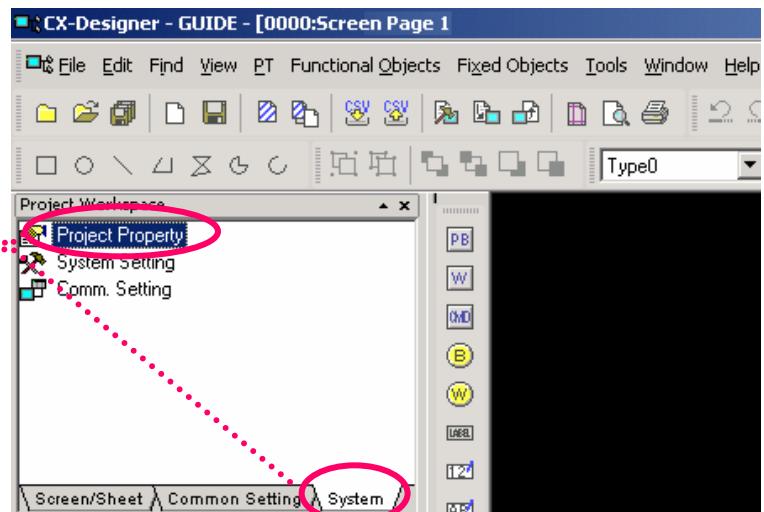
4. Setting project properties

Making settings for a project data.

In this section, you will make a project that is able to show two language labels – English and Dutch by switching them. Here, it is necessary to set a project property for a label switching function is required.

Click the [System] tab in the project workspace.

Double-click [Project Property]



Click the [Switch Label] tab.

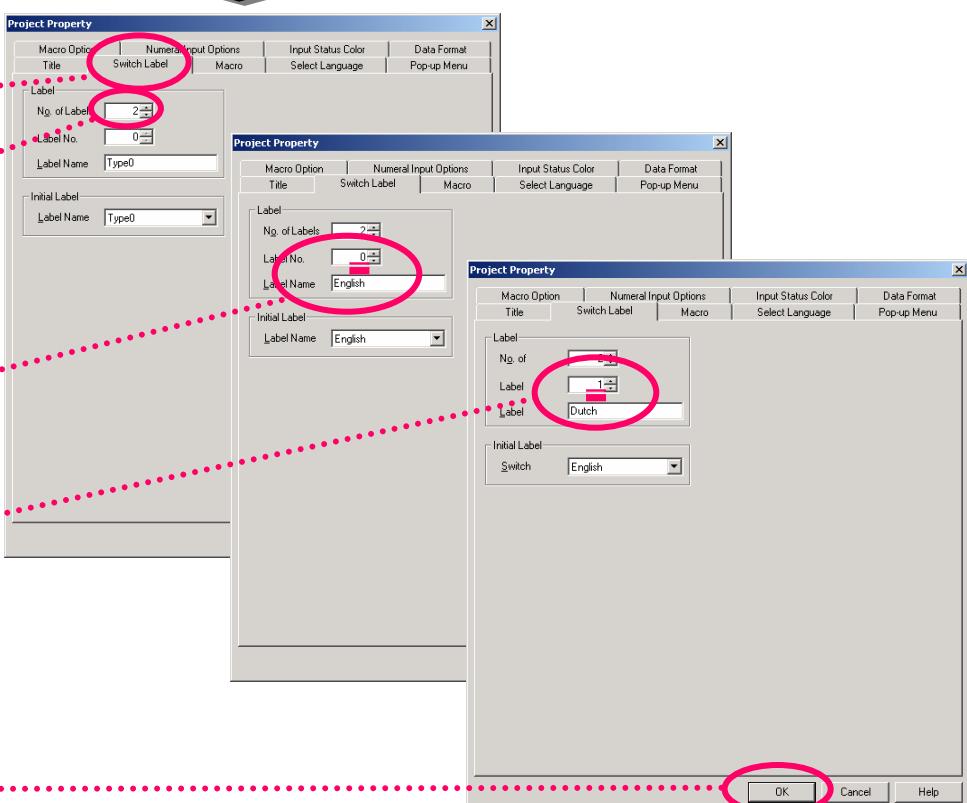
Set 2 for No. of Labels.

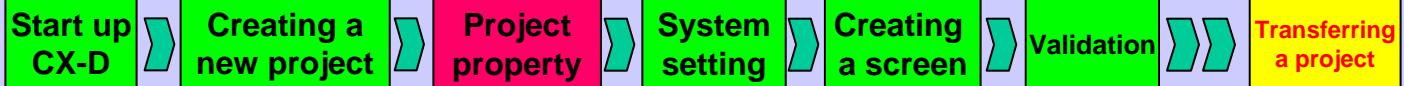
Set 0 to Label No. and enter English as a label name.

Set 1 to Label No. and enter Dutch as a label name.

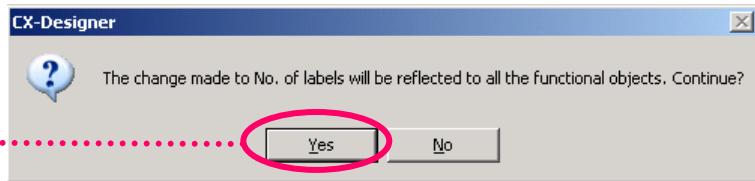
Click

OK

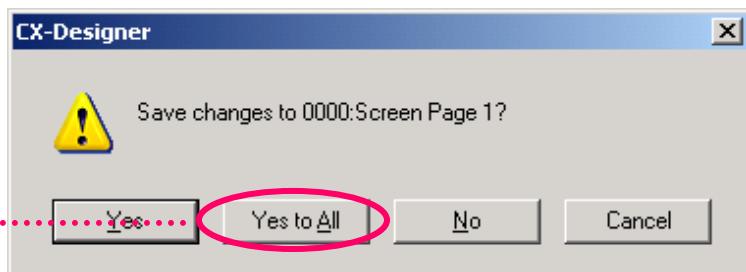




Click [Yes]



Click [Yes to All]

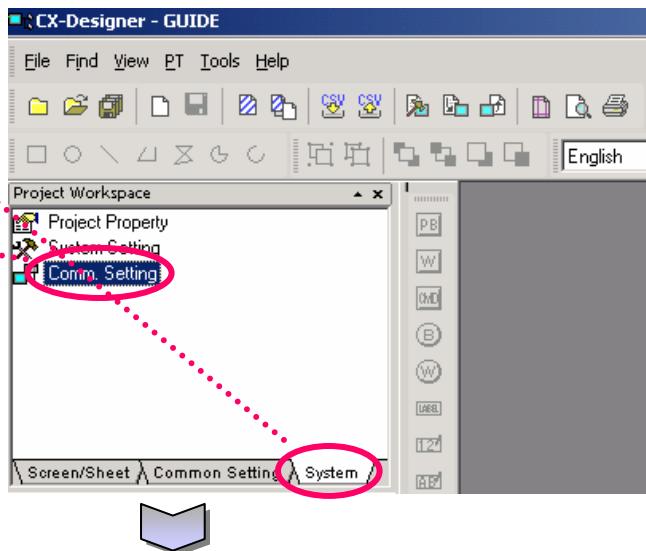


5 Communications settings

Click [System] in the Project Workspace.

Double-click [Comm. Setting].

Making communications settings for the NS hardware to connect with the PLC.
In this manual, you will connect the NS to the PLC thru Serial port A.



Click [Serial Port A]

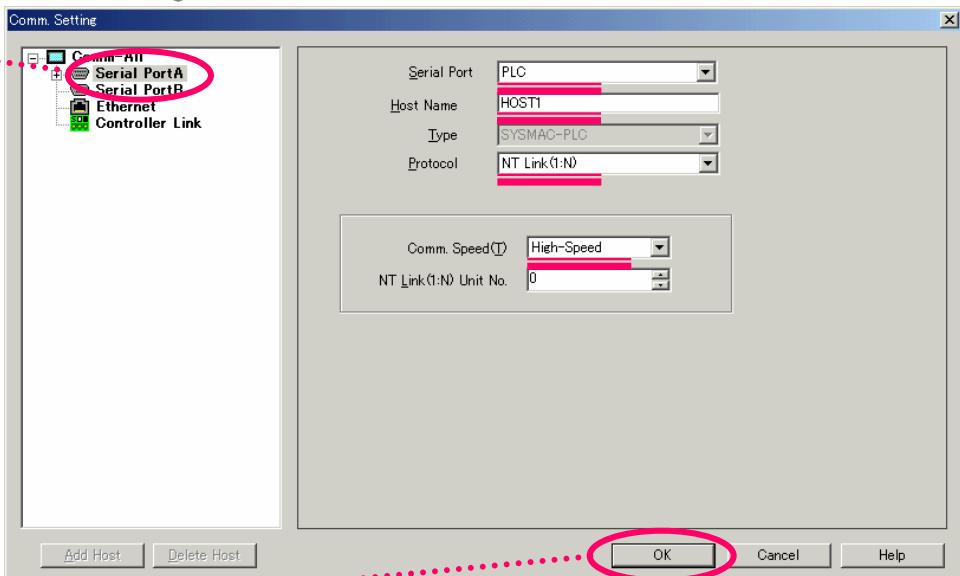
Set as follow:

Serial Port
→[PLC]
Host Name
→[HOST1]
Protocol
→[NT Link(1:N)]
Comm. Speed
→[High-speed]

[Comm.-All], [Ethernet],
[Controller Link] settings
are not required.

Click

OK

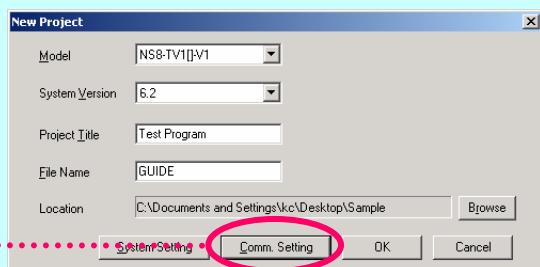


<Note>

You can make communication settings when creating a new project.

Click [Comm. Setting] in the New Project dialog box as described in 3 "Creating a new project".

Comm. Setting



6. System settings

Click [System] in the "Project Workspace".

Double-click [System Setting].

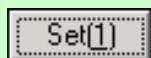
Allocate a word to the PLC for controlling screen No.



Click the [Initial] tab



Click



Set as follow:

Host name

→ [HOST 1]

Word

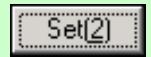
→ "0"

Area Type

→ [Data Memory (DM)]



Set address in the same way as [Set(1)]



Host name

→ [HOST 1]

Word

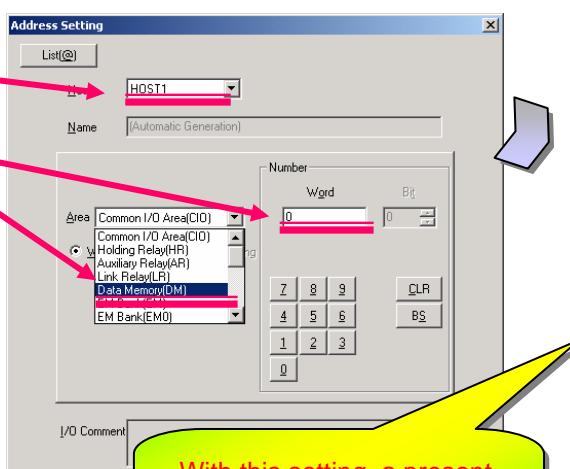
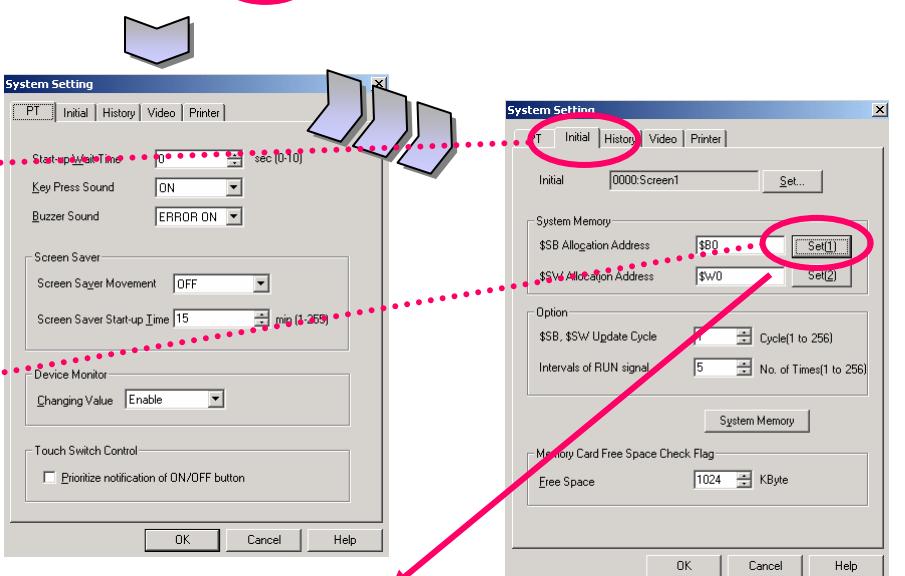
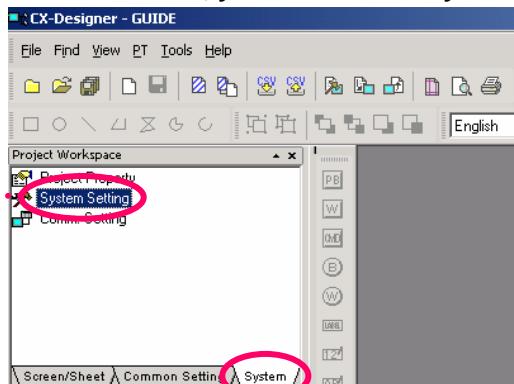
→ "10"

Area Type

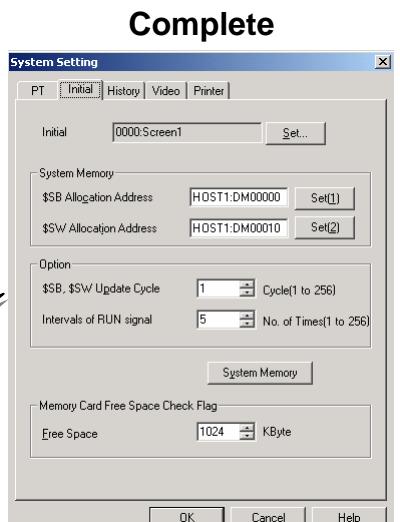
→ [Data Memory (DM)]

Allocating NS system memory areas to the PLC.

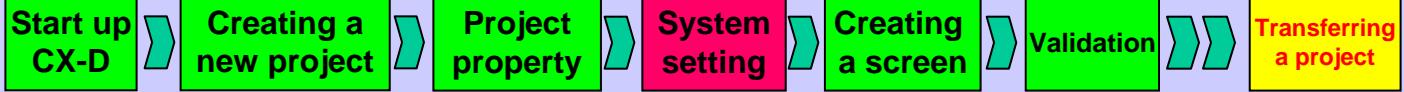
System memory area is memory area that is used to control the NS from the host (PLC) or to notify operation status from the NS to the host.
In this manual, you will allocate system memory areas to the PLC.



With this setting, a present value of DM0010CH is shown on the PT.



Complete

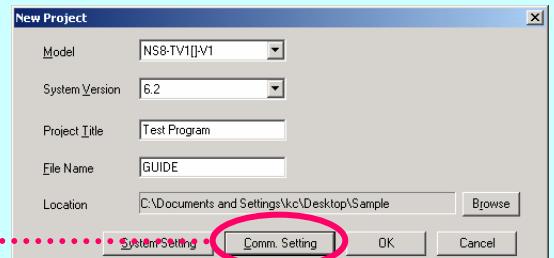


<Note>

You can make system settings when creating a new project.

Click [System Setting] in the New Project dialog box as described in 3 "Creating a new project".

System Setting

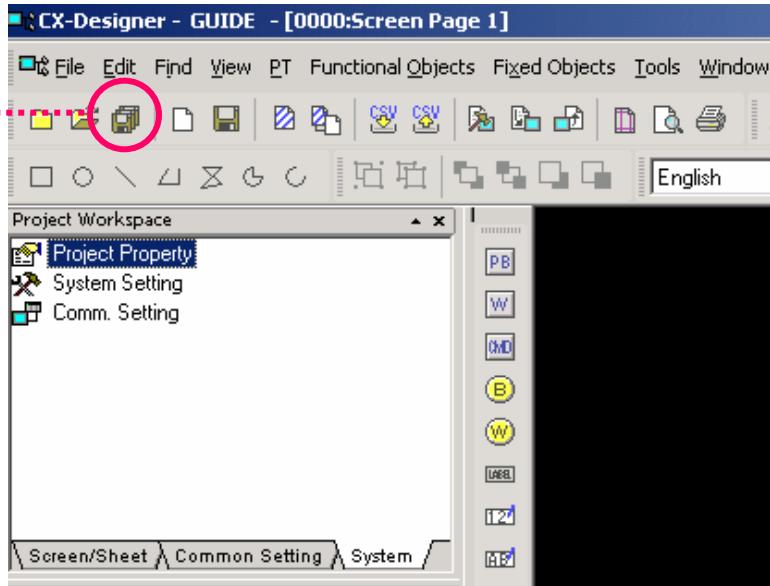


7. Saving a project

Saving a whole project.

In this manual, you will save the project's system settings and screens/sheets all together.

Click the icon.



<Note>

We recommend to save projects and screens frequently.

8. Screen properties

Making basic settings when creating a new screen.
In this manual, you will change the screen background color.

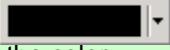
Click the [Screen/Sheet] tab in the project workspace.

Right-click the [0000: Screen Page 1] to display the menu.

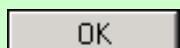
Click [Screen Property] on the menu.

The screen property dialog appears.

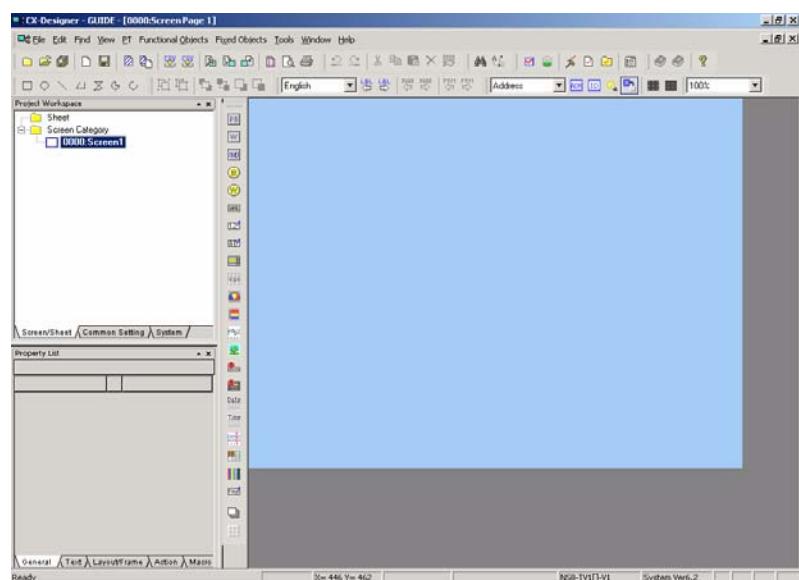
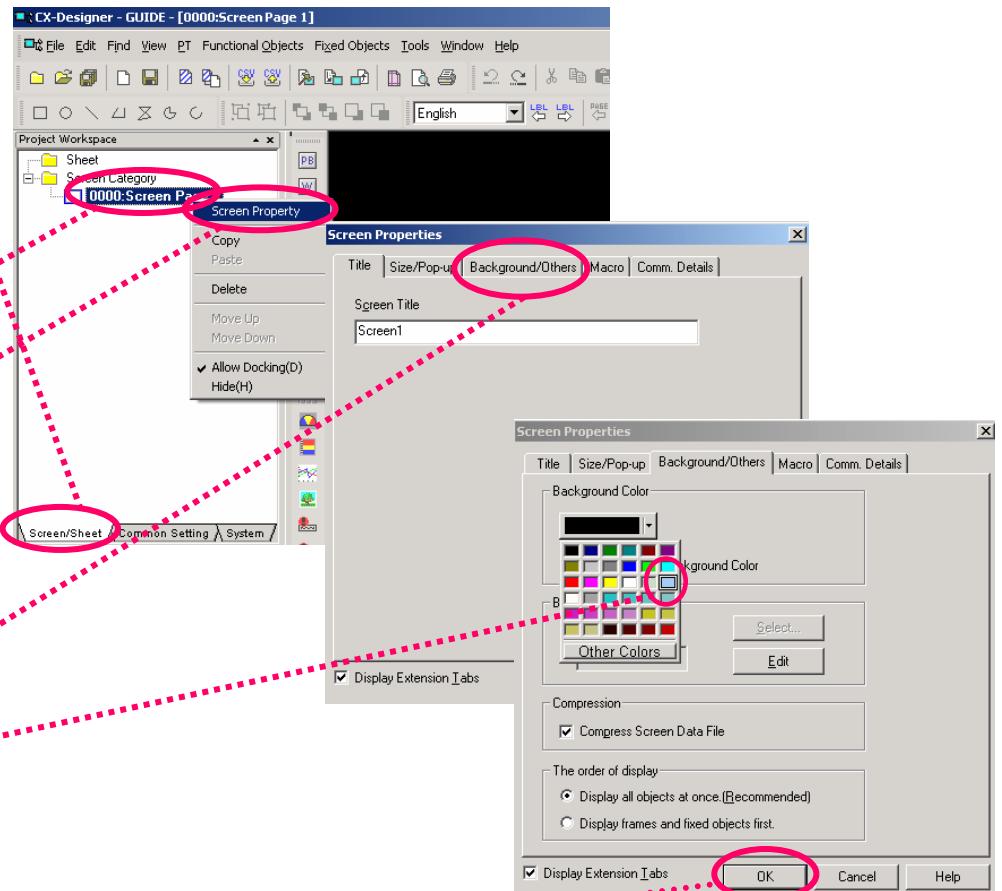
Click the [Background/Other] tab.

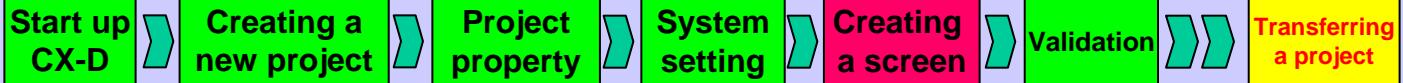
Click  to display the color selection dialog and select a background color.

Click



Completed image





9. Displaying a text

Creating a text object on the screen. A text object is used to display a fixed character string.

In this manual, it is used for a string character that displays a screen title or item name and does not have a special function.

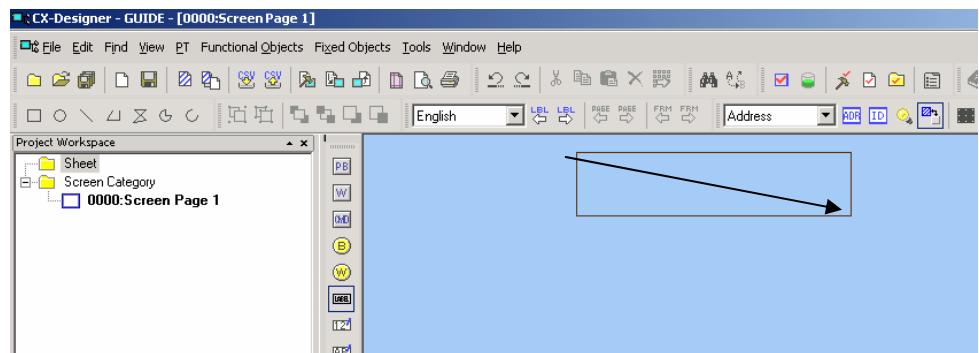
Click the [Text] icon



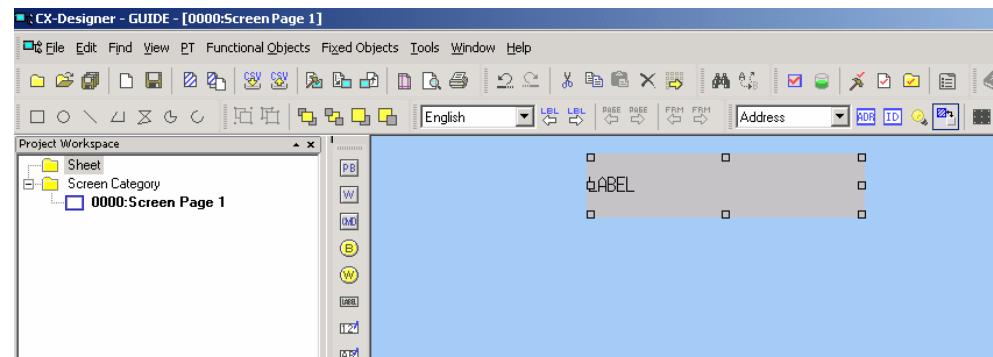
on the list.



Drag & drop the mouse on the editing screen till you get the size you want. (The size and position of the object can be changed later.)



A new text object is created as shown on the right.



Start up
CX-D

Creating a
new project

Project
property

System
setting

Creating
a screen

Validation

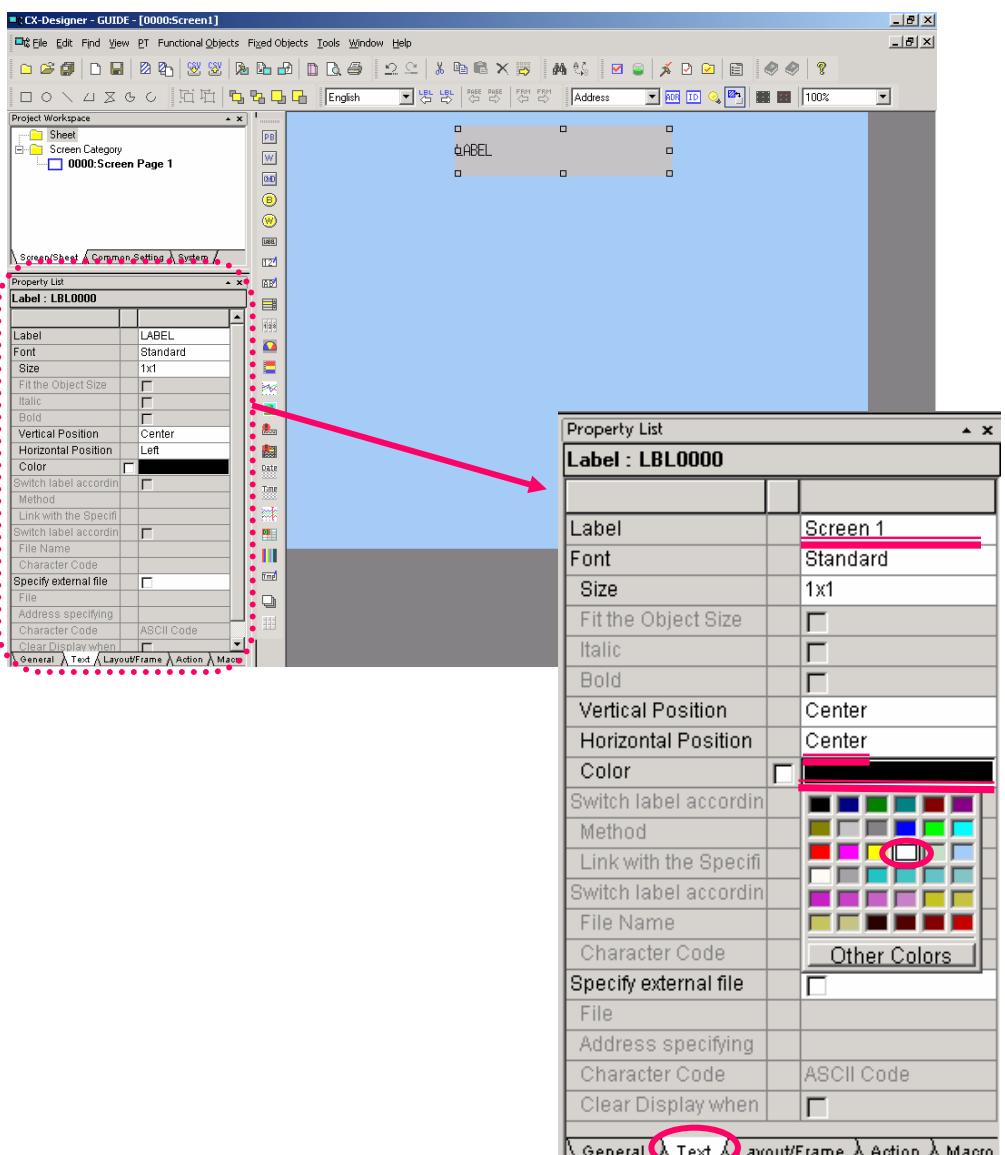
Transferring
a project

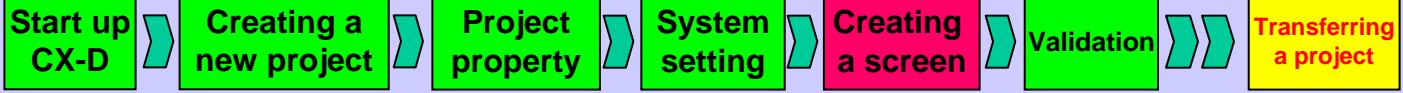
The property list is displayed by clicking the text object to display.

Click the property list and set as follow:

Text tab
[Label]
→ "Screen1"
Vertical position
→ [Center]
Horizontal position
→ [Center]

Select a color.

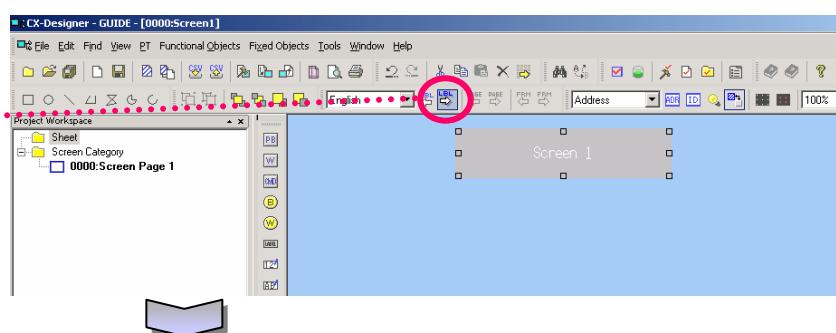




Click



to switch to the [Dutch] label.



Set the following items on the property list.

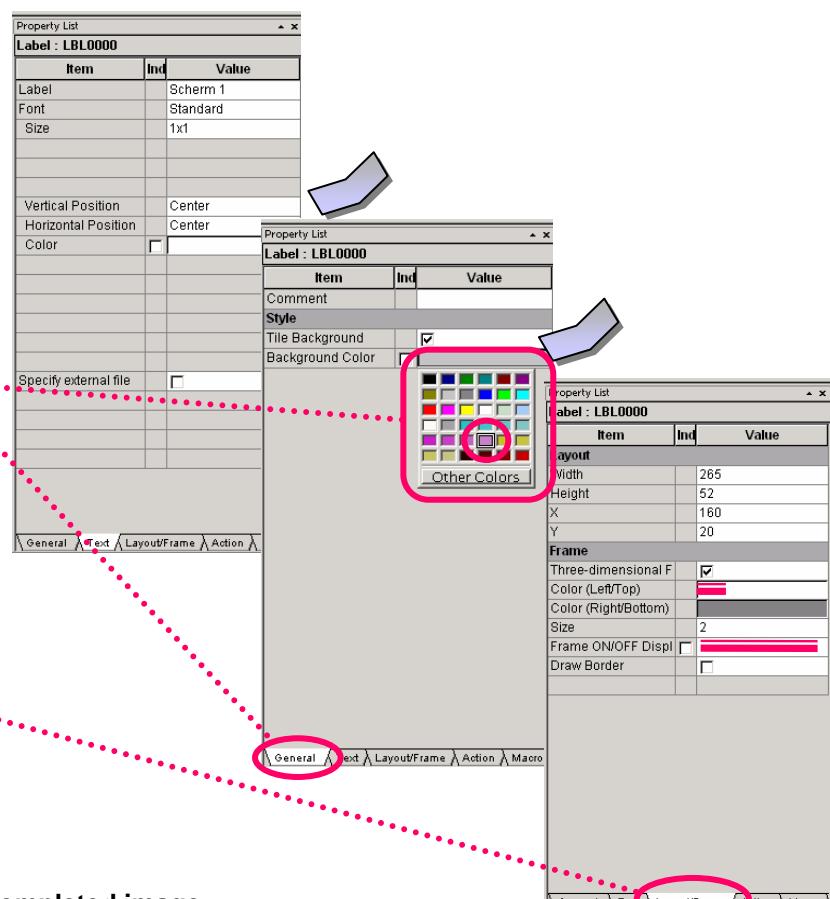
Text tab

[Label]

→ "Screen 1"

[Horizontal Position]

→ "Center"



Click the [General] tab on the property list.

Click the [Background Color] and select a color.

Select the [Layout/Frame] tab.

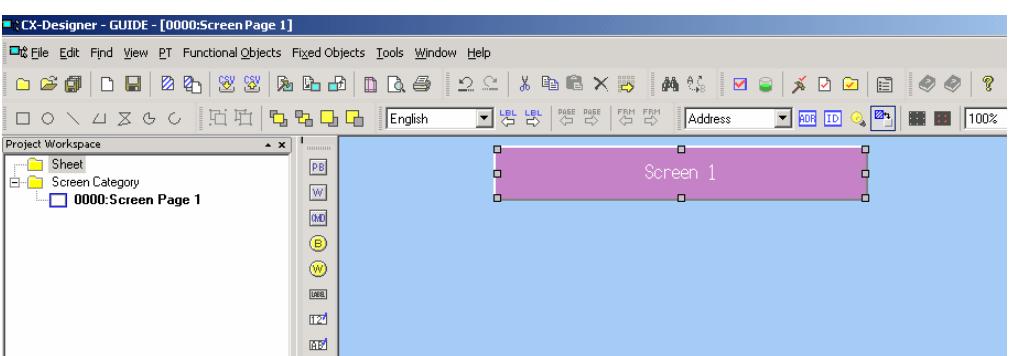
Check "Three-dimensional Frame" check box.

Set "2" to [Size].



to switch back to the [English] label.

Completed image



10. ON/OFF Button

Create a text object by referring to a "Display a Text".

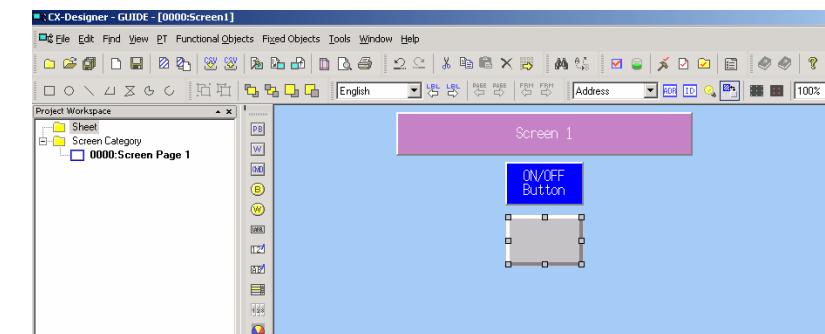
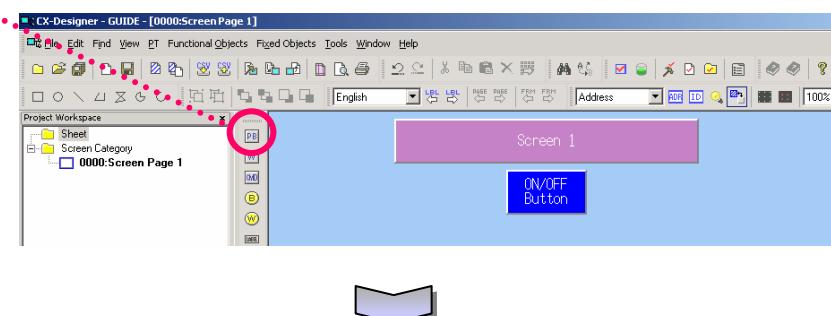
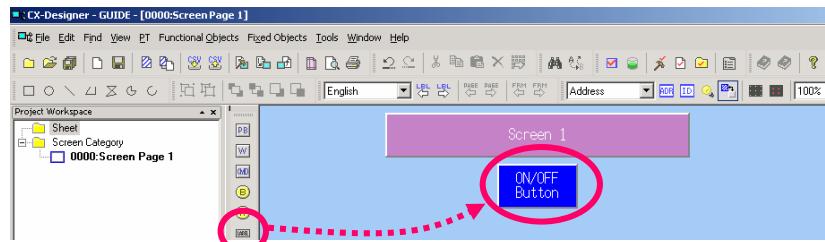
Click the [ON/OFF] icon



on the list.

Creating a ON/OFF button on the screen.

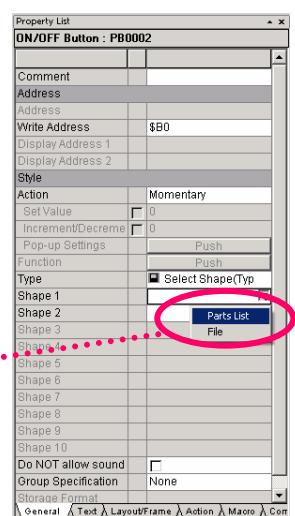
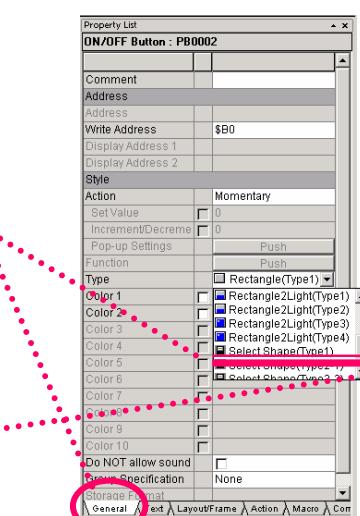
ON/OFF Button has a function that goes ON/OFF according to the ON/OFF states of specified address (bit) by operation such as touch switch input.
In this manual, a button is used as ON/OFF button and Occurred/Cancelled button of virtual alarms.



Drag and drop a mouse to make a shape, same as performed for the text object on page 19.

Select the [General] tab.

Click [Type] and select "Select Shape (Type 1)".



Click "Shape 1" and



Select "Parts List"

Click



to display the [BMPfiles] pull-down menu.

Select "Switches-Toggle&Dip" in the BMPfiles.

Select the shape.

Check [Pair].

Click



Click [Action] in the ON/OFF button property list and select [Alternate].

Click [Write Address] and



Set as follow:

Host
→ [HOST1]Area
→ [Common I/O Area
(CIO)]Word
→ [0]Bit
→ [0]

Click

Then,
complete.

Select Shape

- Shape Types
- BMPfiles
 - Customized
 - Lamps
 - Meters
 - Others
 - PipesandValve
 - Switches
 - Symbol

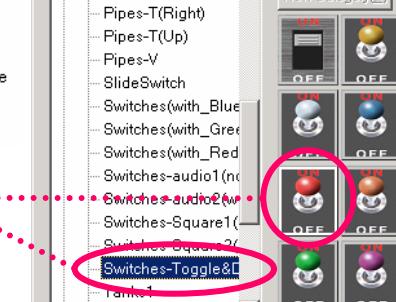
Select Shape

- Shape Type
- Pipes-T(Down)
 - Pipes-T(Left)
 - Pipes-T(Right)
 - Pipes-T(Up)
 - Pipes-V
 - SlideSwitch
 - Switches-with_Blue
 - Switches-with_Green
 - Switches-with_Red
 - Switches-audio1(none)
 - Switches-audio2(w)
 - Switches-Square1(white)
 - Switches-Square2(white)
 - Switches-Toggle&Dip
 - Tanks1
 - Tanks2

Selected Type

Switches-Toggle

New Category(E)

 ON Shape OFF Shape

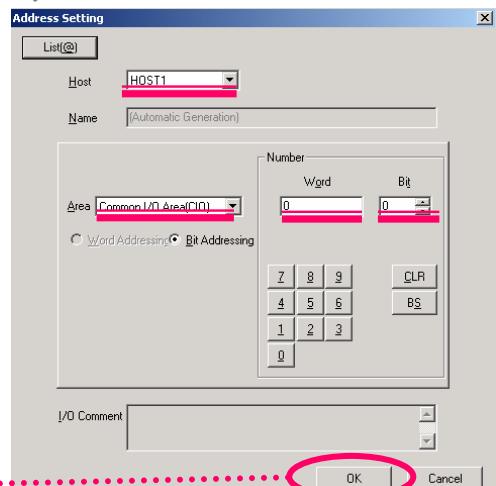
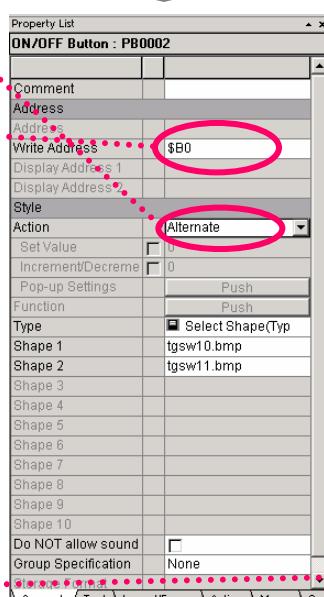
Done



Cancel



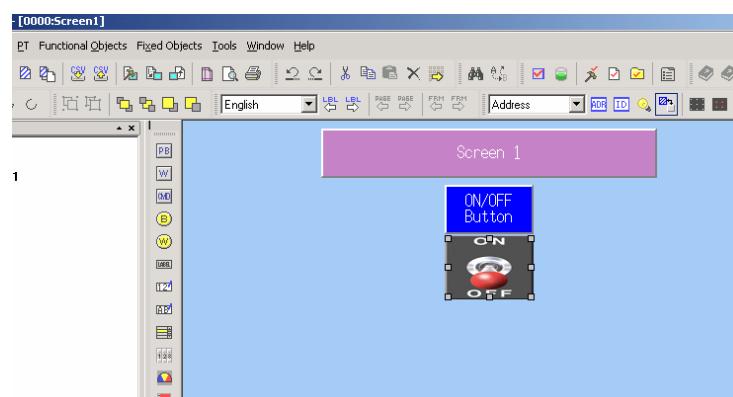
Click [Action] in the ON/OFF button property list and select [Alternate].



OK

Cancel

Completed image.



11. Repeat function

11-1 Repeat function (Button)

Right-click the created button.

Select [Repeat(R)] from the pop-up menu.

Set as follow:

[Qty]

Horizontal → [1]
Vertical → [5]

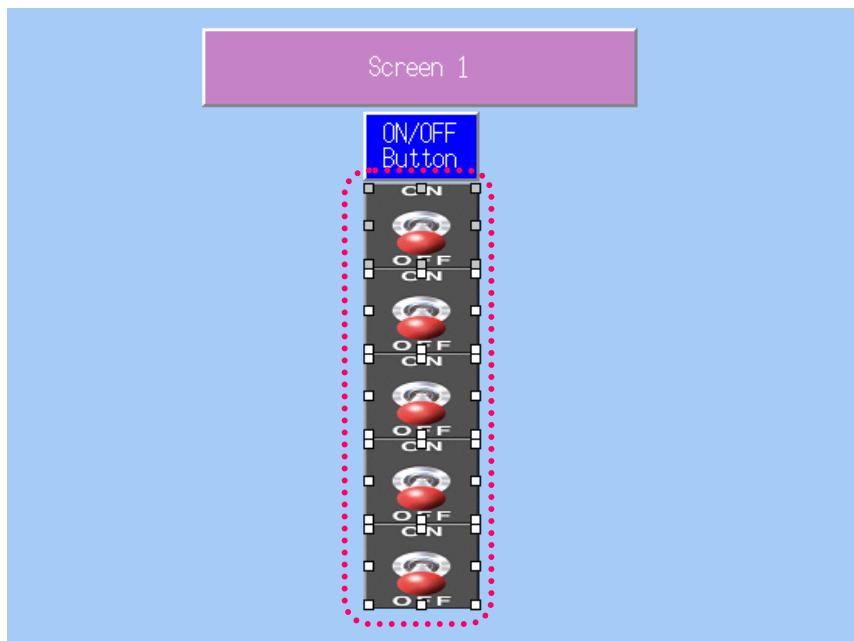
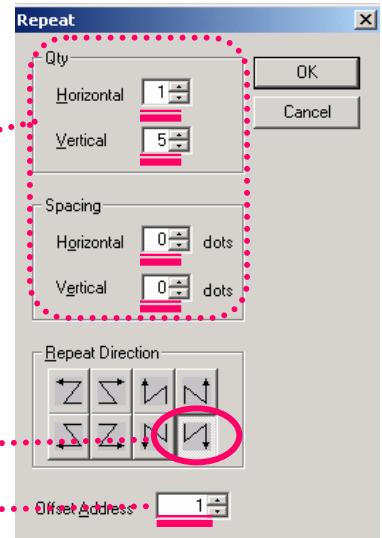
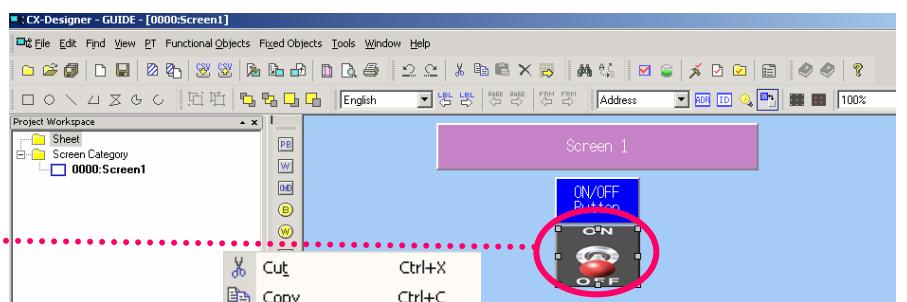
[Spacing]

Horizontal → [0]
Vertical → [0]

Select a repeat direction.

Set 1 to [Offset Address].

Using a [Repeat] function to copy a object already created.
In this manual, you will copy an ON/OFF button with [Repeat] function.



Start up
CX-D

Creating a
new project

Project
property

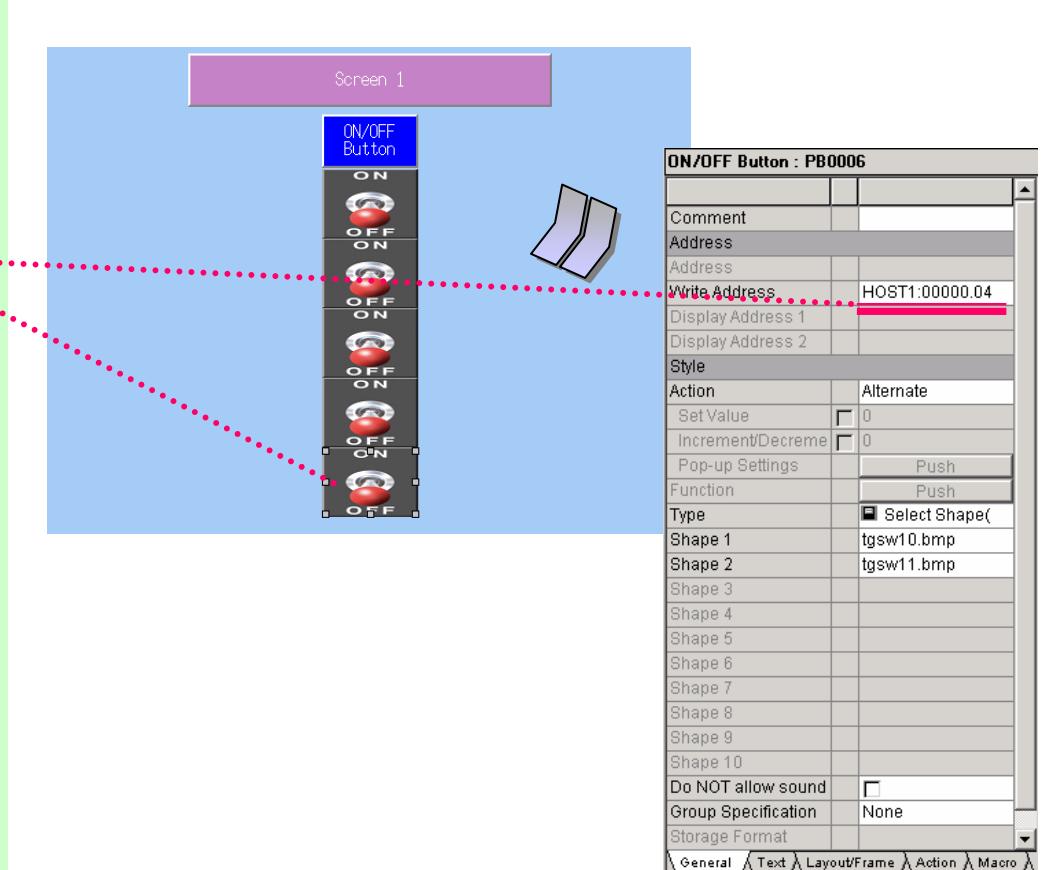
System
setting

Creating
a screen

Validation

Transferring
a project

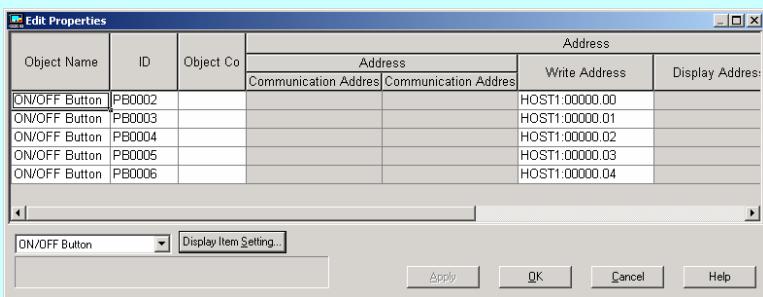
You can check an allocated address of a functional object (switch) from the [Property list].



<Note>

You can display and edit a list of allocated addresses by selecting ON/OFF button in the Edit Properties dialog box.

See "11-2. Repeat Function (Label)" for how to use "Edit Properties".



11-2 Repeat Function (Text)

Add two more texts as shown on the right by referring to "9 Displaying a Text".

Upper text

[Label]

→ "Label"

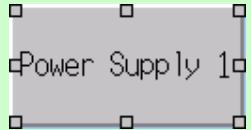
Bottom text

[Label]

→ "Power Supply 1"



Right-click this button,



then select [Repeat] from the pull-down menu.



Enter Qty:

Horizontal

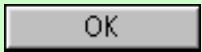
→ [1]

Vertical

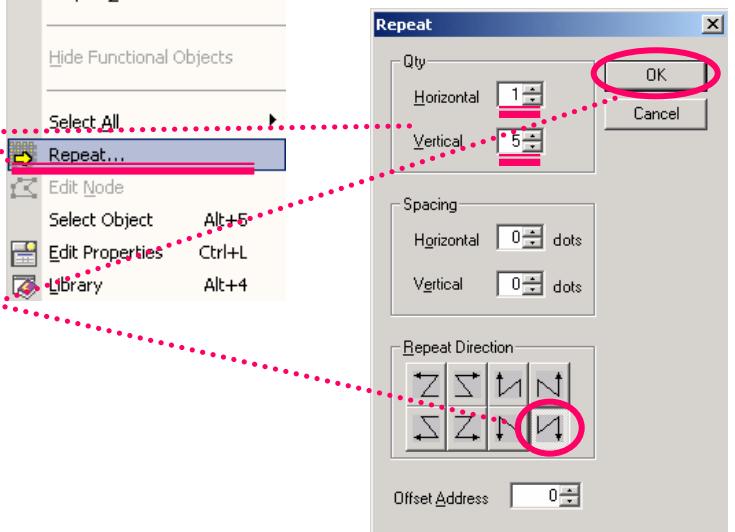
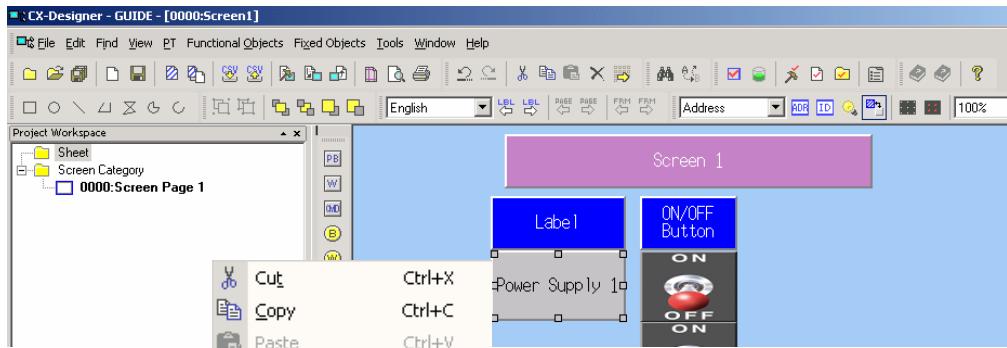
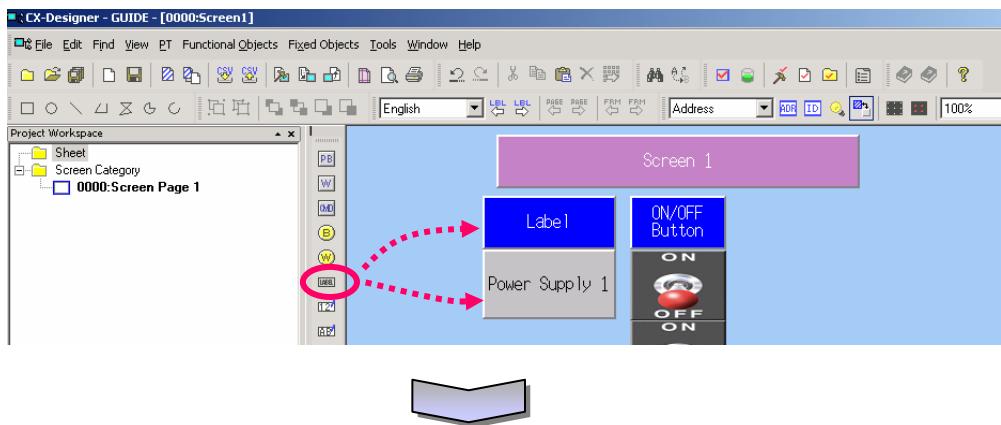
→ [5]

Select a repeat direction

Click



Using [Repeat] function to copy a text object to create multiple objects.
In this manual, you will copy a text object using this function.



Start up
CX-D

Creating a
new project

Project
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Power Supply 1

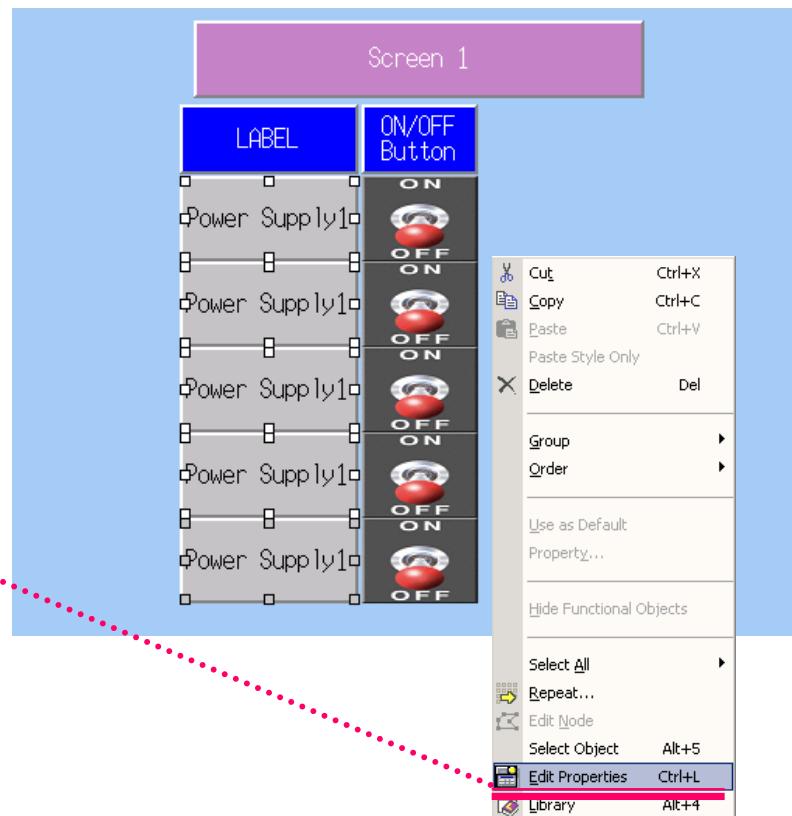
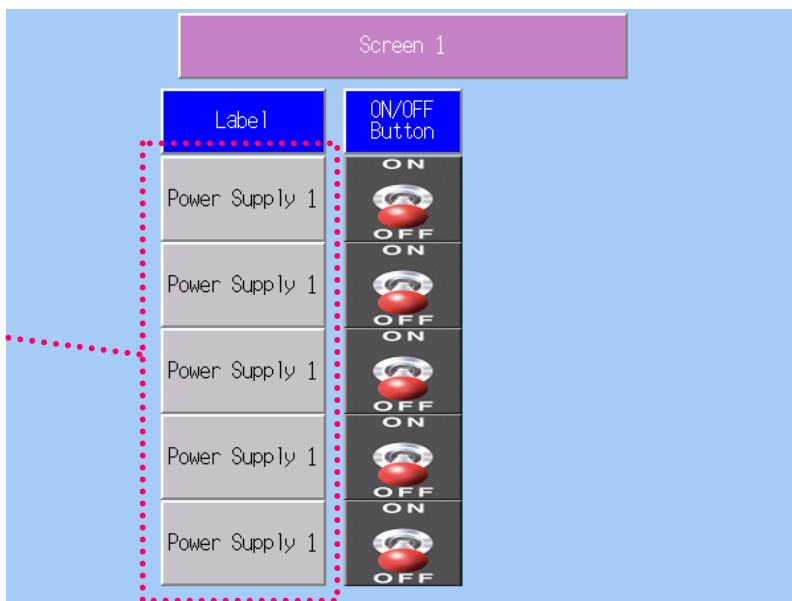
Five labels are copied.

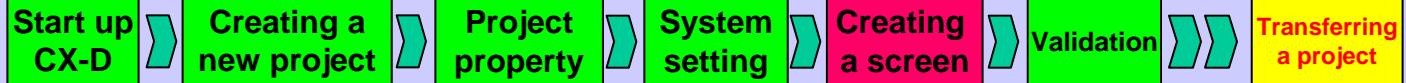


Enclose whole texts
while dragging the mouse.

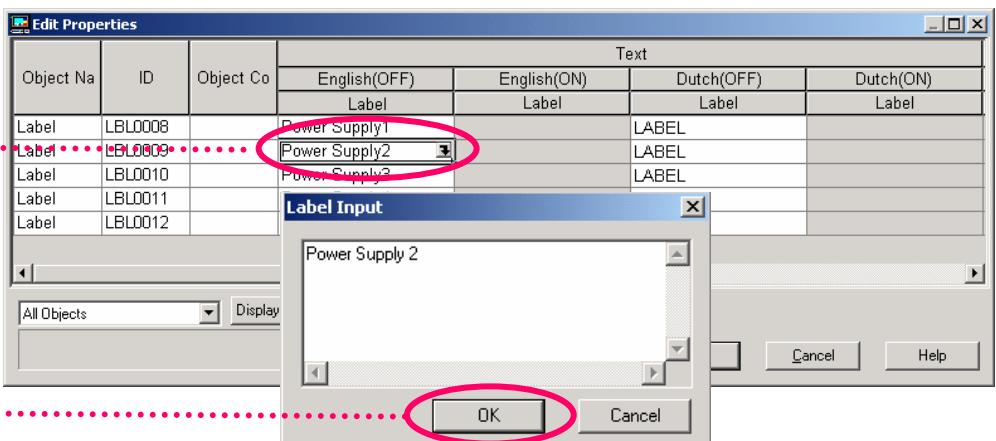
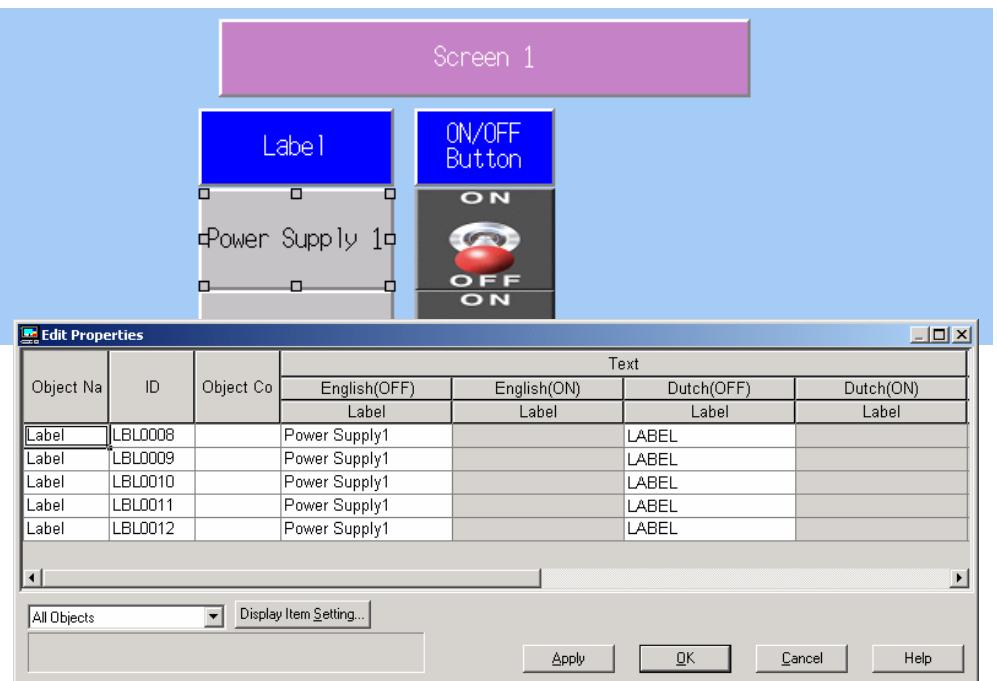


With all the texts selected,
right-click to display the
pull-down menu and
select [Edit Properties].





The [Edit Properties] dialog for the selected text objects appear.



English(OFF)
label and click



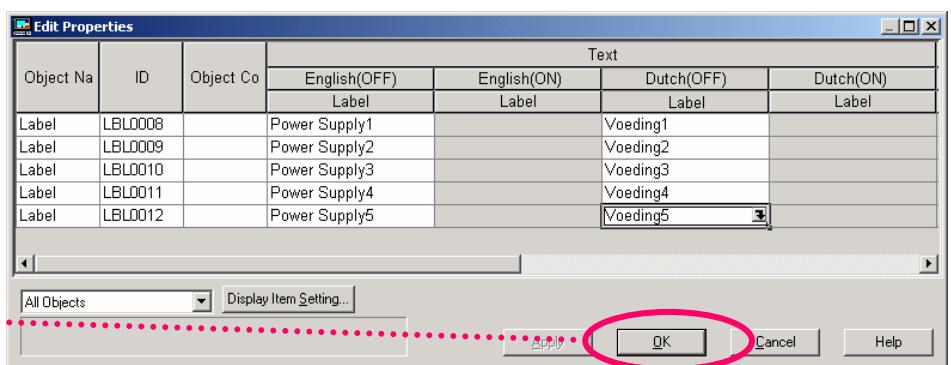
Enter [Power Supply 2].

Click



Enter "Power Supply1 to 5" to English (OFF), and "Voeding1 to 5" to Dutch (OFF) in the same way above.

Click



Start up
CX-D

Creating a
new project

Project
property

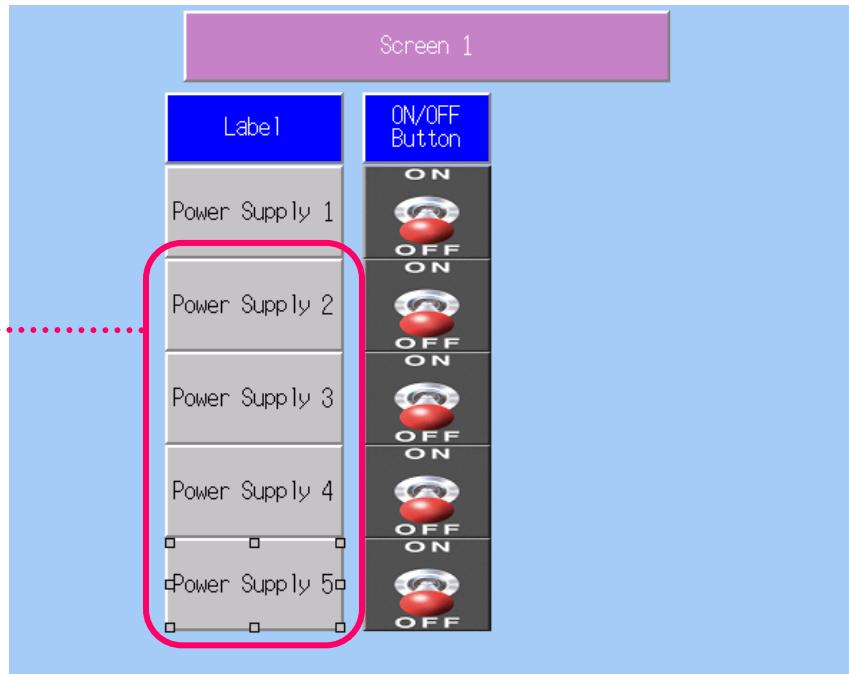
System
setting

Creating
a screen

Validation

Transferring
a project

The label displays are
changed.

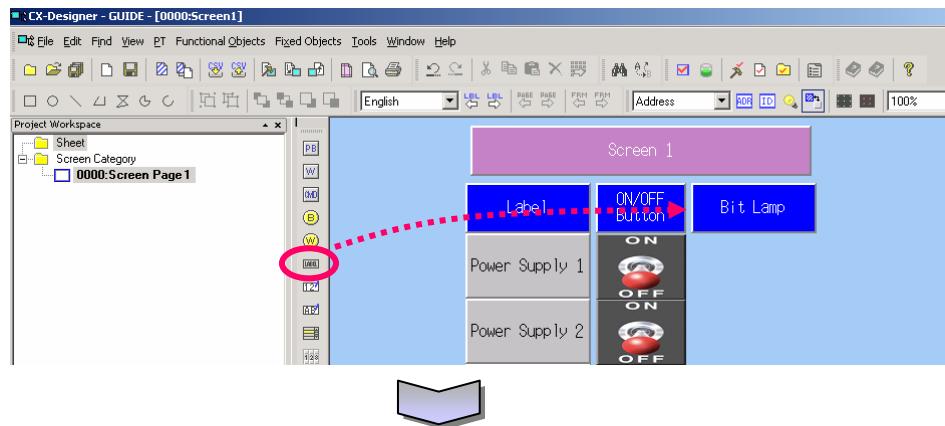


12. Bit Lamp

Create a label as shown on the right by referring to the "9. Displaying a Text".

[Label]
→ "Bit Lamp"

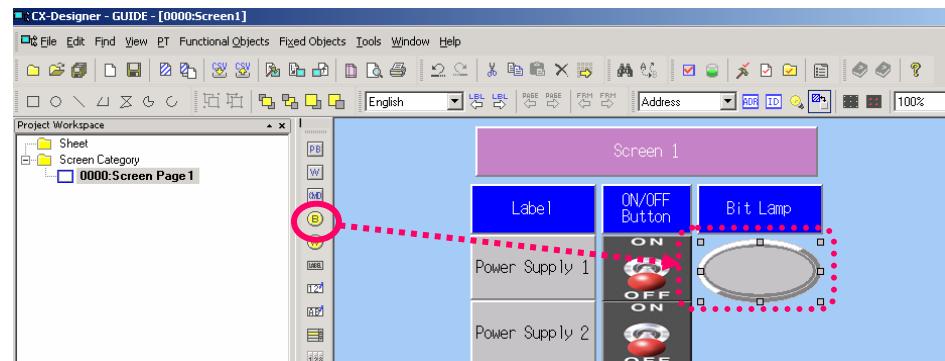
Creating bit lamps on the screen.
Bit lamp is an object that switches display color according to ON/OFF status of an address. In this manual, you will create bit lamps that link to ON/OFF button status.



Click



Drag the object until you get the size you want.



Change settings on the property list.

Click [Display Address 1] and



Host
→ [HOST1]

Area
→ [Common I/O Area (CIO)]

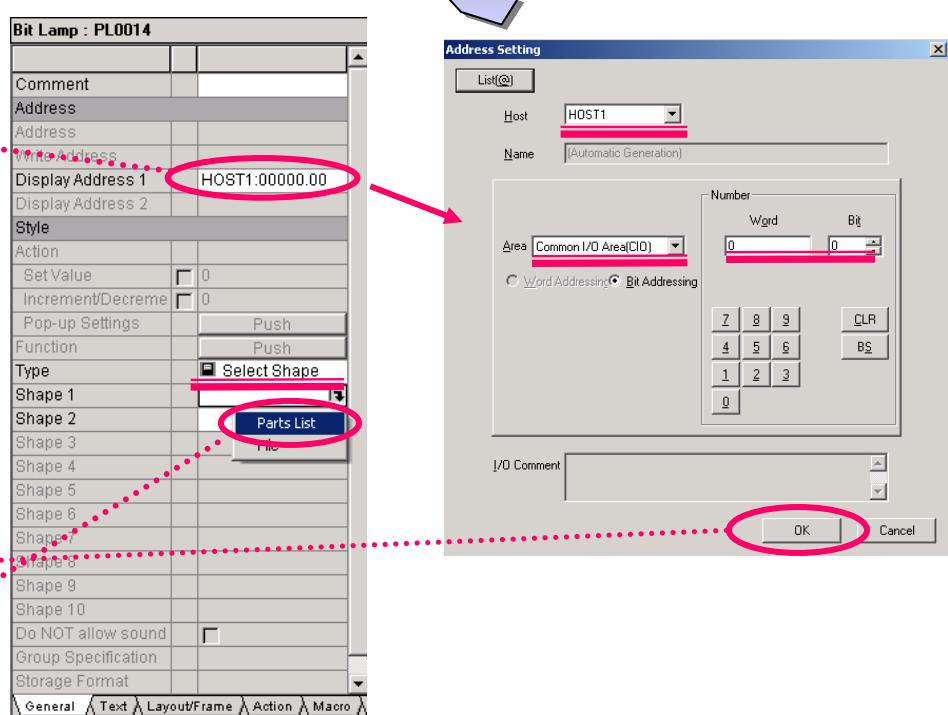
Word
→ [0]

Bit
→ [0]

Click

OK

Click "Select Type" from [Type].

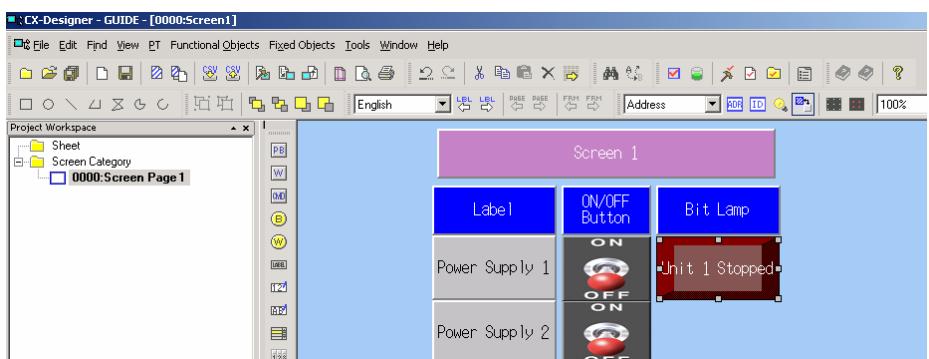
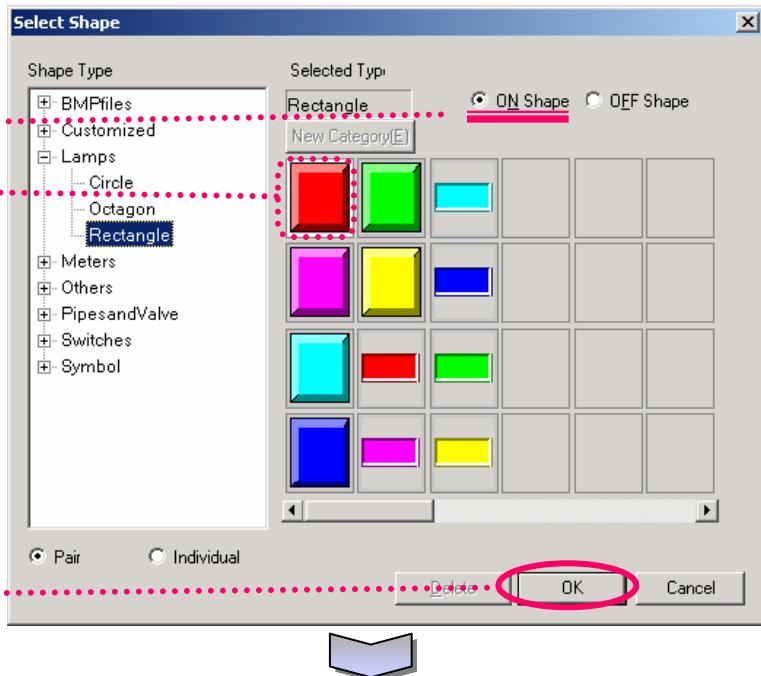


Check [ON Shape].

Select a shape.

Click

OK

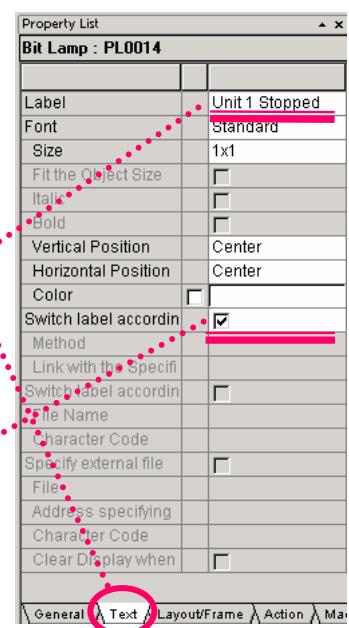


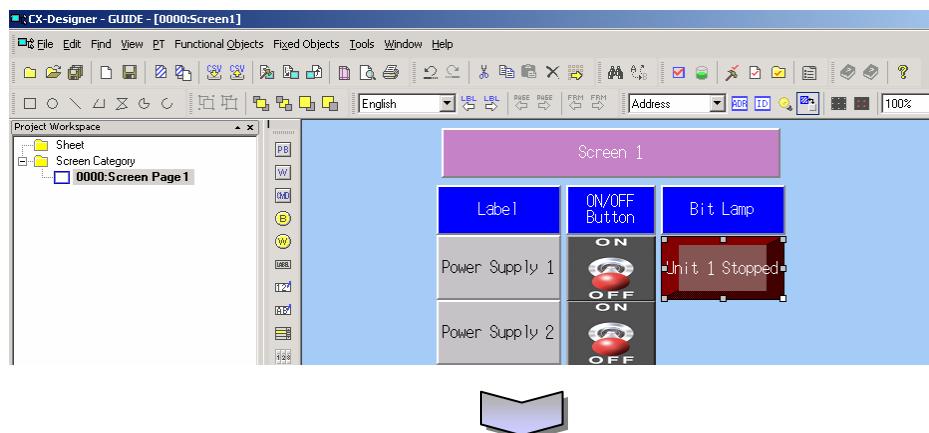
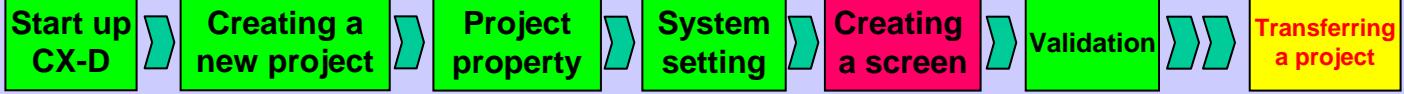
Click the property list and set the following items.

Double-click the [Text] tab.

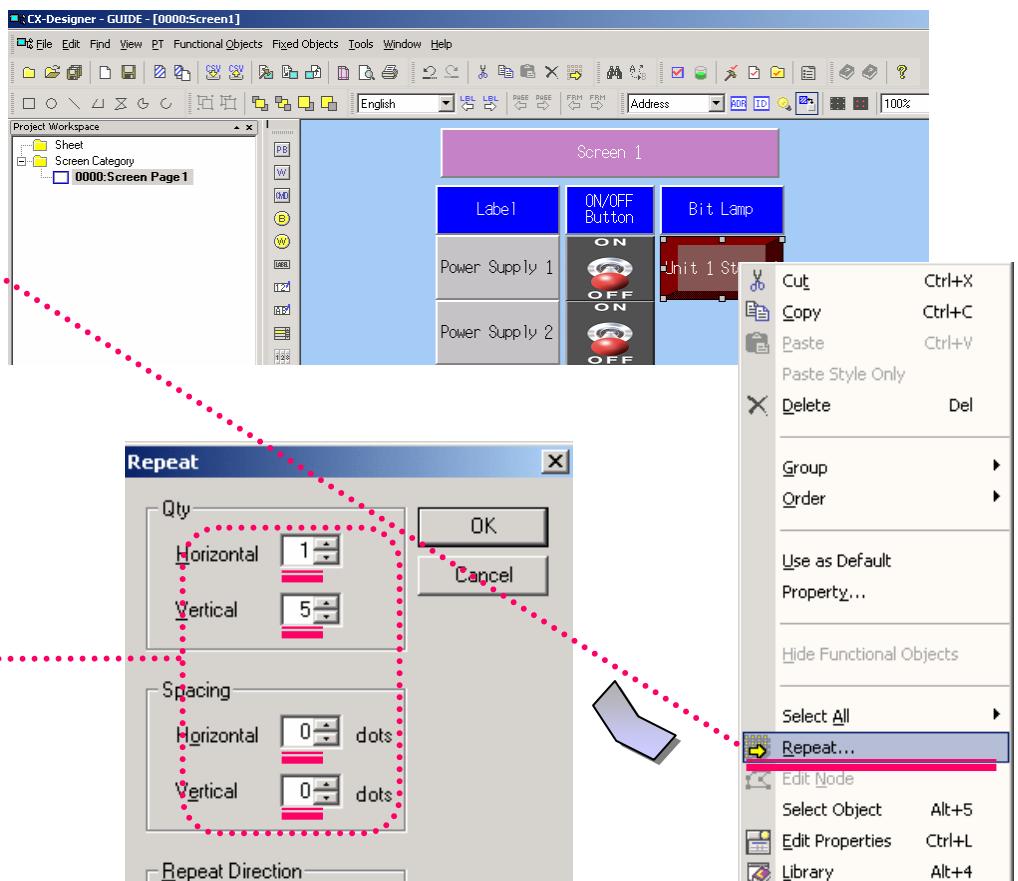
[Label]
→ “Unit 1
Stopped”

[Switch according to
the value]
→ Check the box





Right-click the button and click [Repeat] from the pull-down menu.



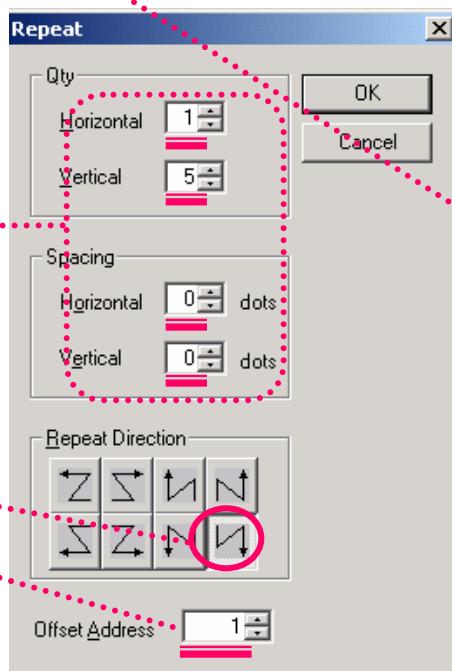
Set as follow:

[Qty]
Horizontal → "1"
Vertical → "5"

[Spacing]
Horizontal → "0"
Vertical → "0"

[Repeat Direction]

[Offset Address] → 1



Start up
CX-D

Creating a
new project

Project
property

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a screen

Validation

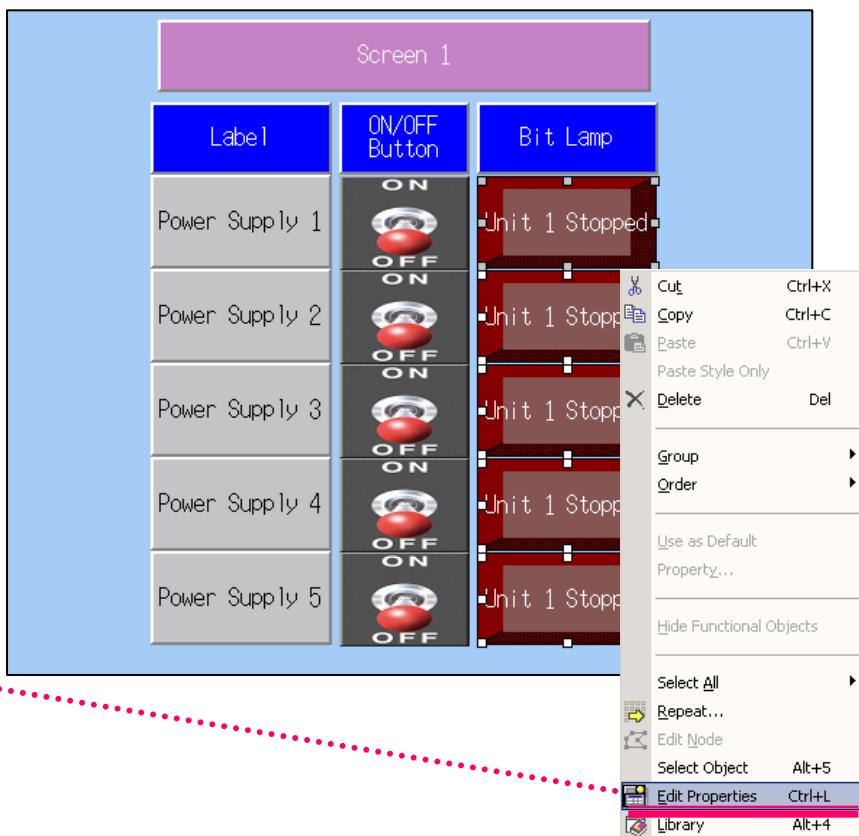
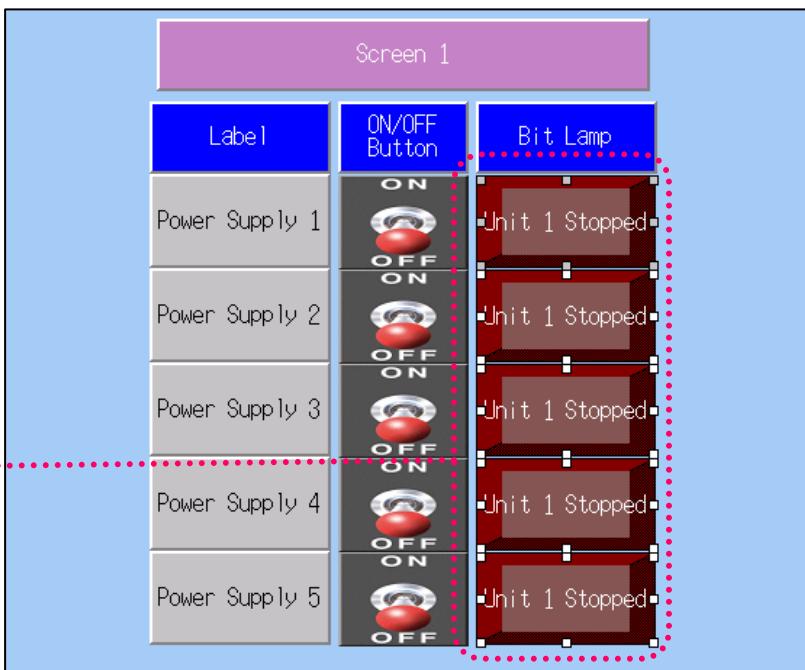
Transferring
a project



Five buttons are copied.



Enclose whole bit lamps
while dragging the mouse.



With all bit lamps selected,
right-click the mouse to
display the pull-down
menu and click
[Edit Properties].

Change texts by referring to "11-2 Repeat Function (Text)".

Enter as follow:

English (OFF)

→ "Unit 1 Stopped" to "Unit 5 Stopped"

English (ON)

→ "Unit 1 Running" to "Unit 5 Running"

Dutch (OFF)

→ "Unit1 Inactief" to "Unit5 Inactief"

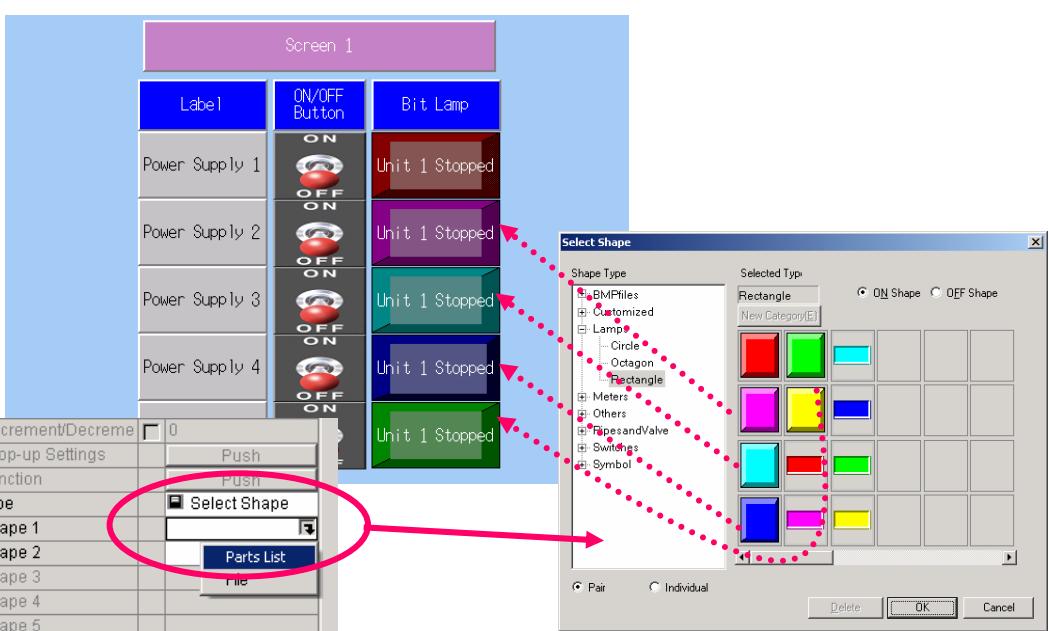
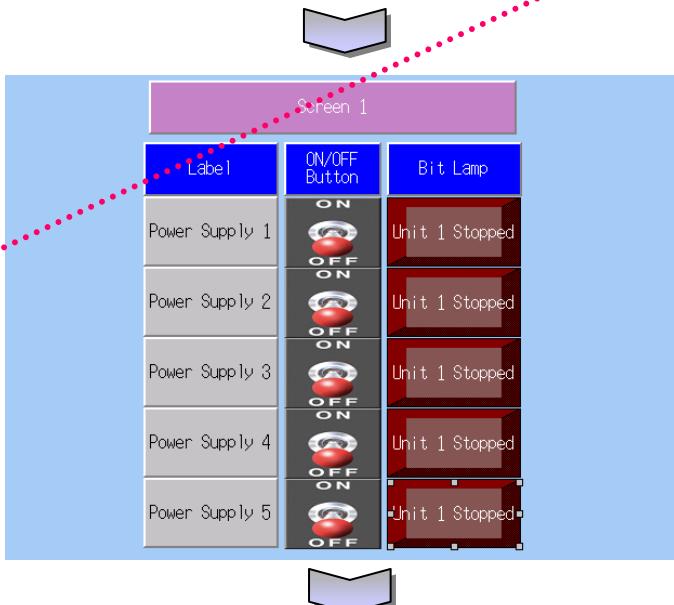
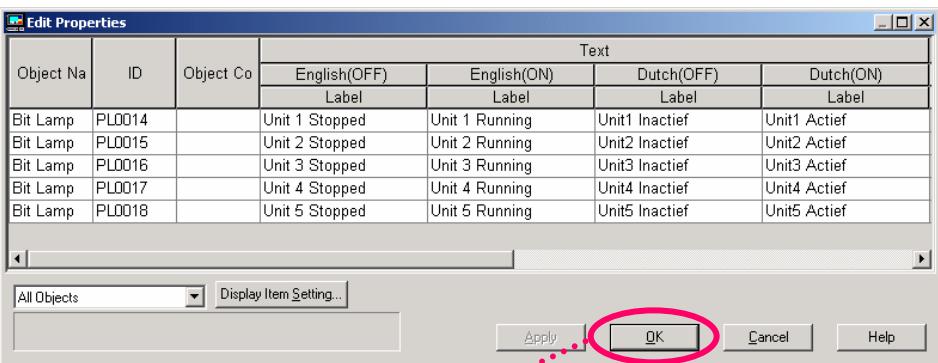
Dutch (ON)

→ "Unit1 Actief" to "Unit5 Actief"

Click

OK

Bit lamp labels are changed.



Change a lamp type for Units 2 to 5 on the property list in the same way you created "Unit 1 Stopped".

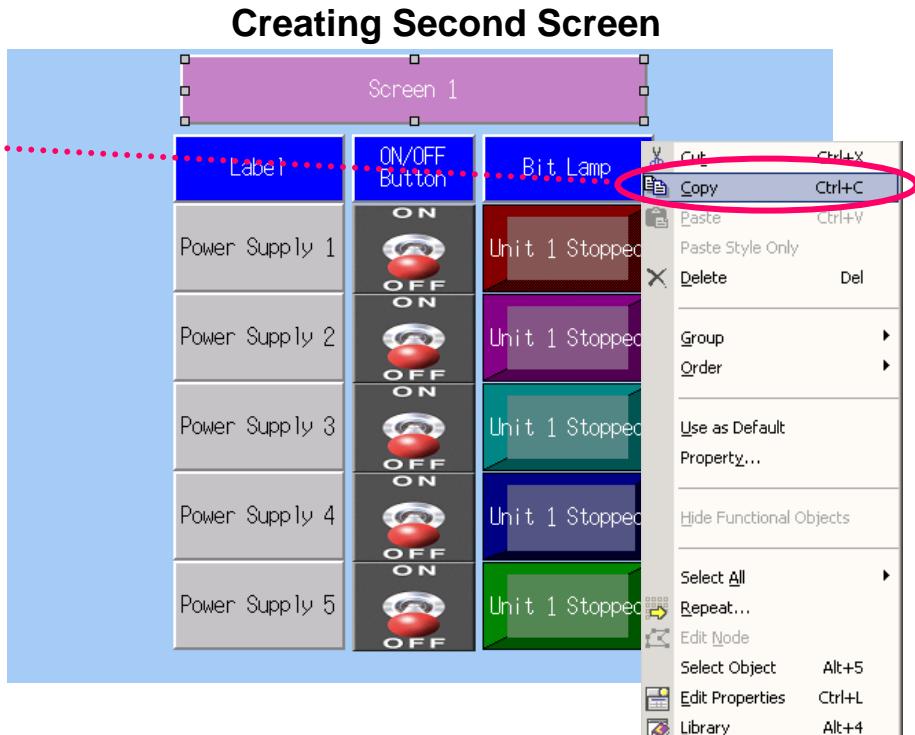
13. Adding a screen

Adding a new screen.

In this manual, you will first create screen 0001 and copy the title label of the screens 0000 to 0001.

Copy the title label of screen 1.

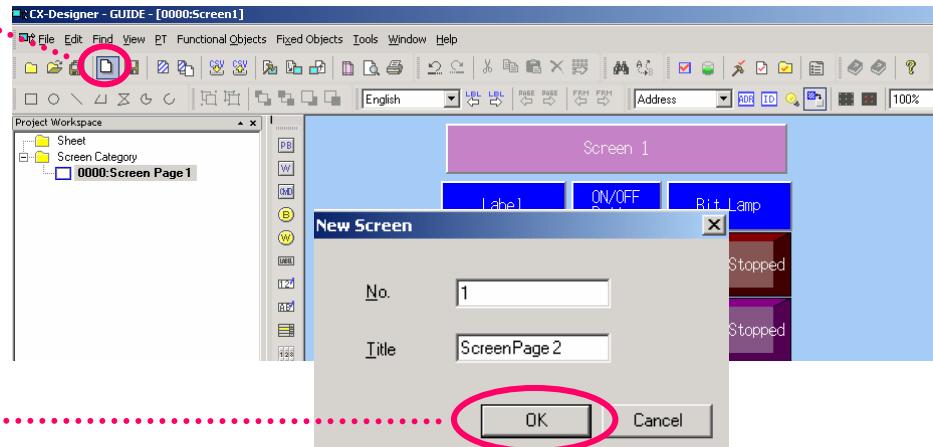
Right-click the object and select [Copy].



Left-click [New screen] icon.



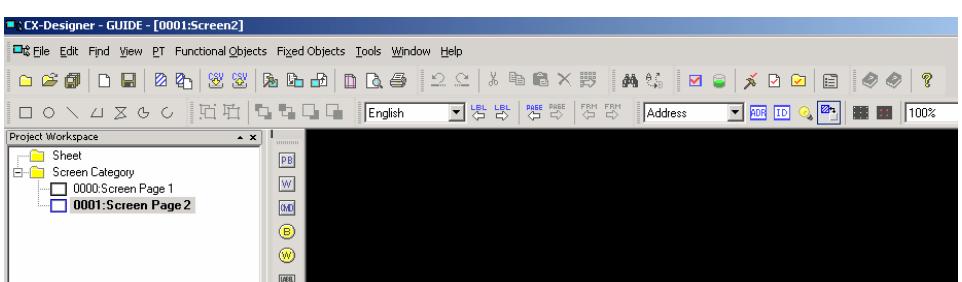
Open the New Screen menu.

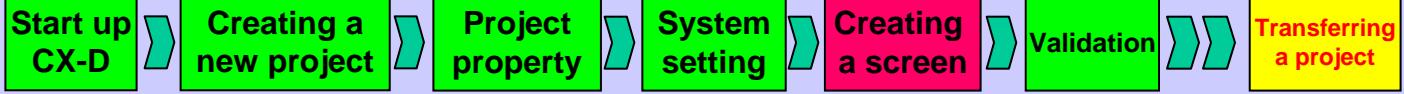


Enter "Screen 2" to [Title].

Click

OK



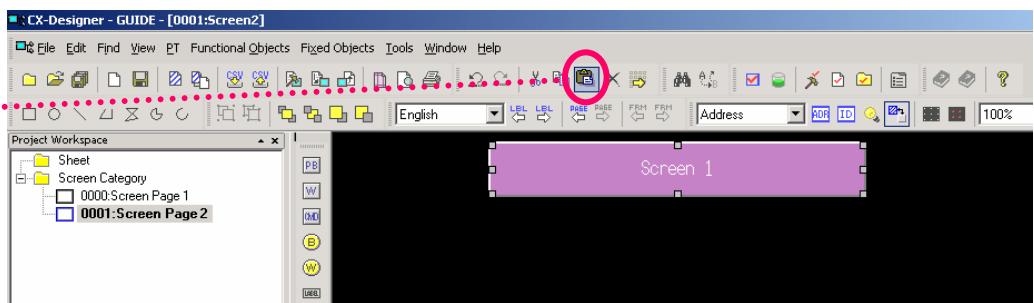


Click

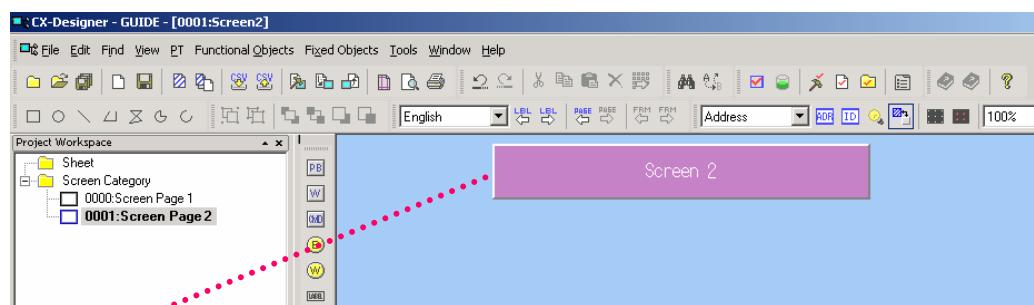


or [Ctrl] + [V].

A label object is copied.



Change [Background] in the screen property dialog by referring to "8. Screen properties".



Set as follow from the text object property list.

[Label]
→ Screen 2



14. Frame

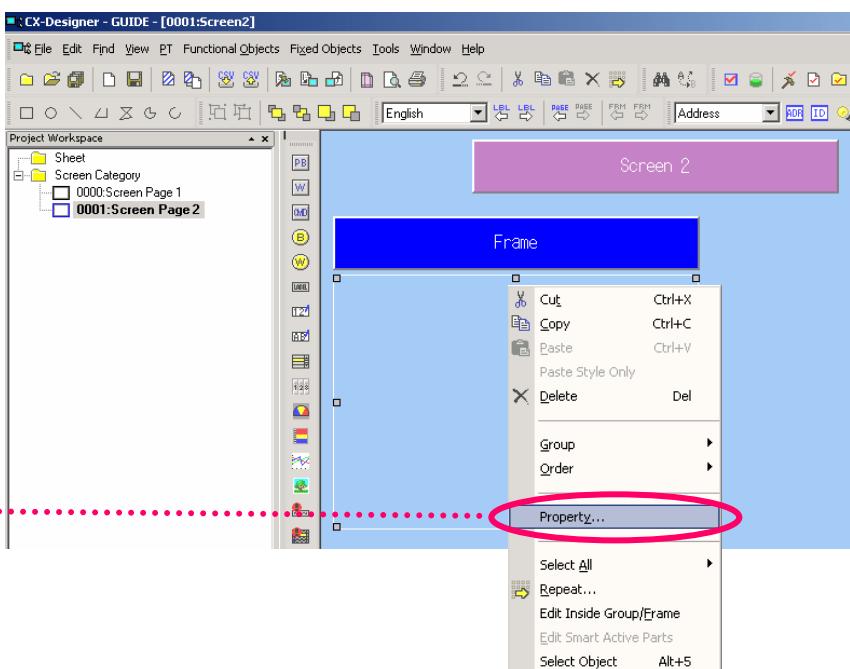
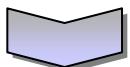
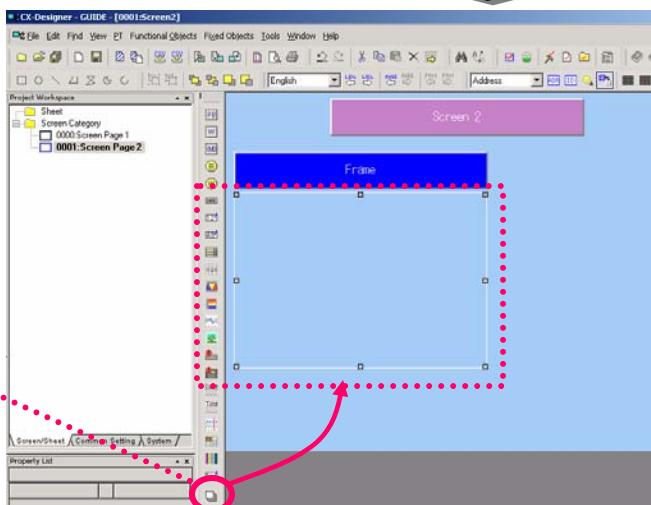
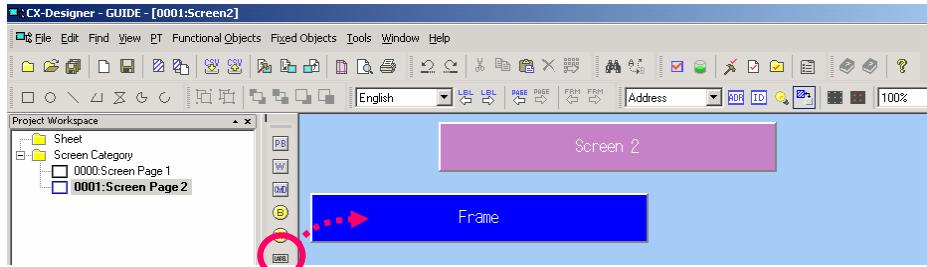
Create a label as shown on the right by referring to "9 Display a Text."

[Label]
→ "Frame"



Select the icon
and drag it until you get the size you want.

Frame is an object that changes a displayed text on objects that have a page switch function. In this manual, a frame is used to switch a low alarm and a high alarm display.



Right-click the object and select [Property] from the pull-down menu.

Start up
CX-D

Creating a
new project

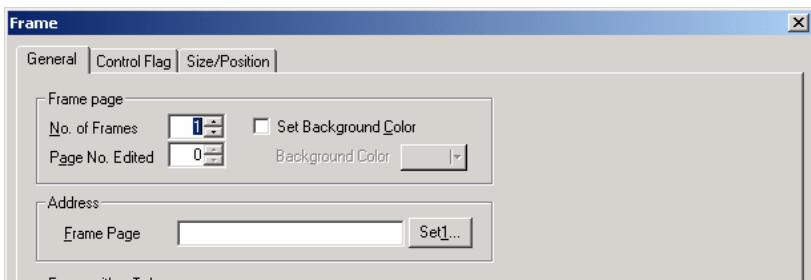
Project
property

System
setting

Creating
a screen

Validation

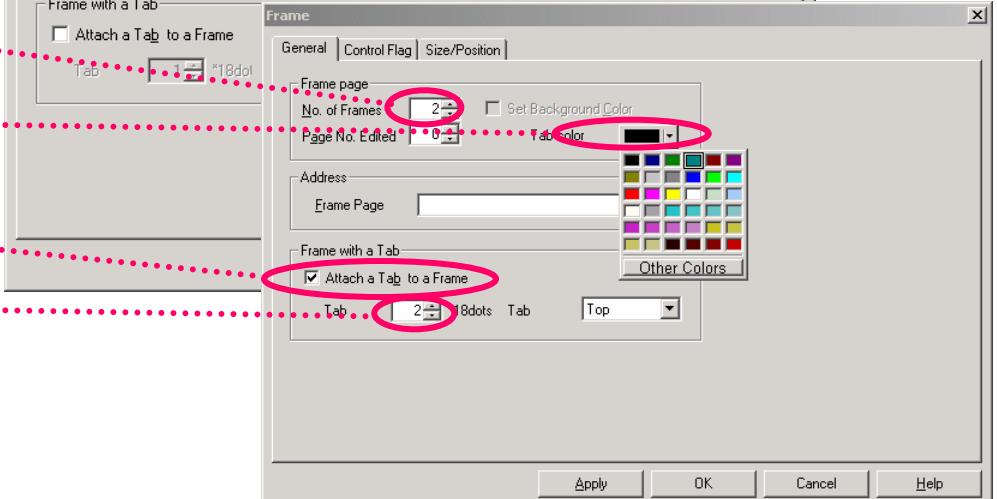
Transferring
a project



Select as follow:
[No. of Frames]
→ "2"

Select a color

Check the [Frame with a
tab] box.
[Height] → "2"



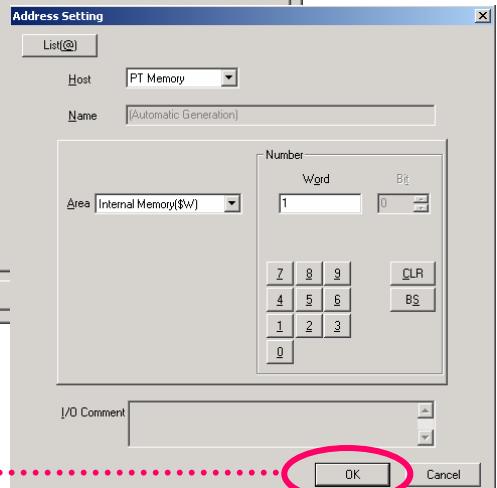
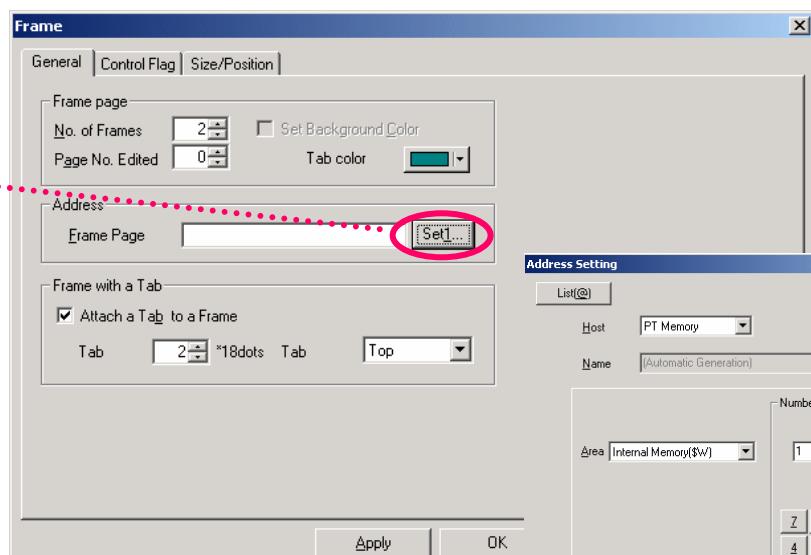
Set as follow from the
address setting menu.

Set1...

Host Name
→ [PT memory]

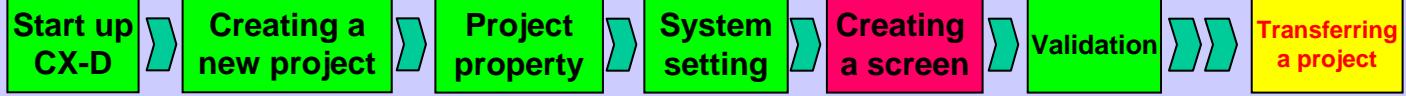
Area Name
→ [Internal memory
(\$W)]

Word
→ [1]

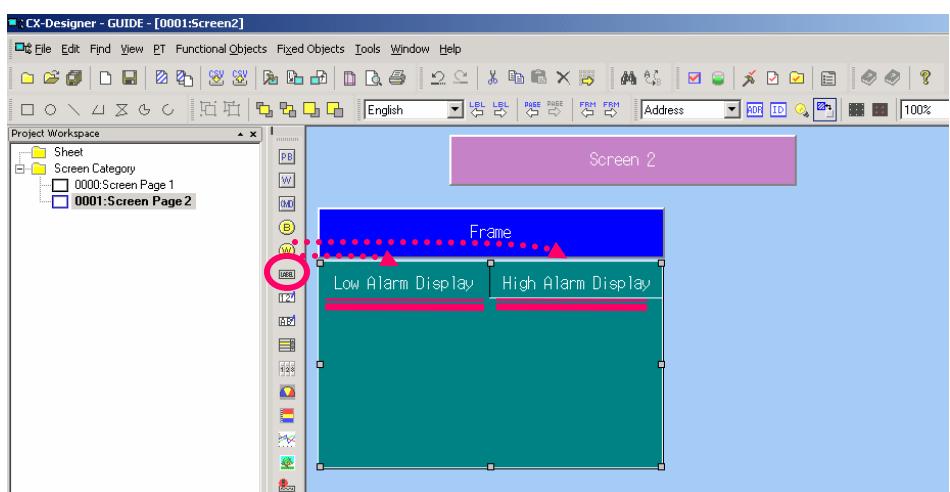
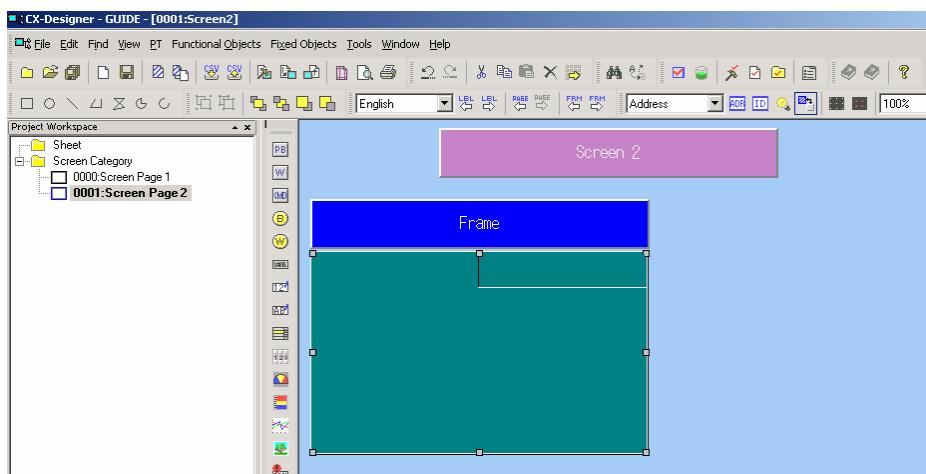
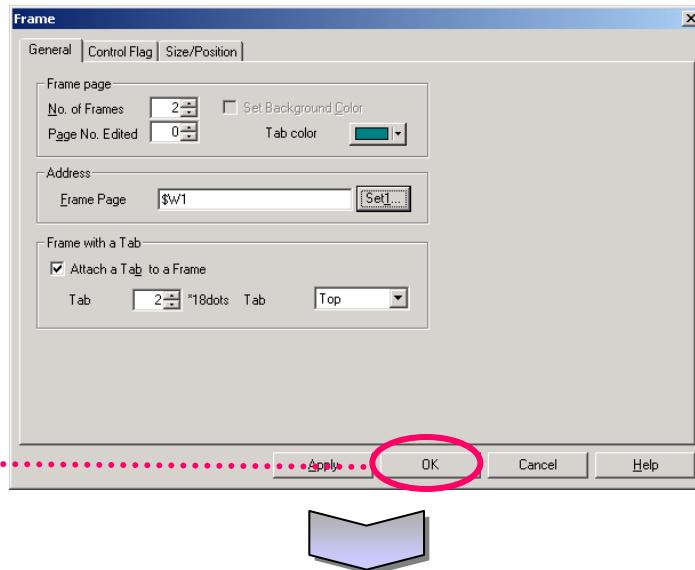


Click

OK



Click



Create two labels as shown on the right by referring to "9. Displaying a Text".

[Label]

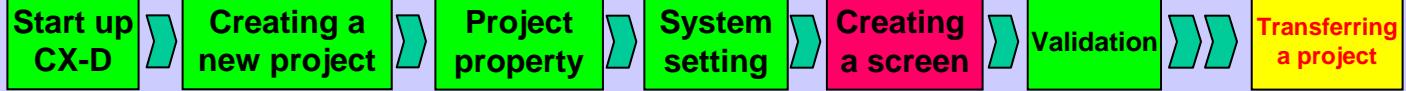
→ "Light Alarm Display"

[Tile Background]
→ Uncheck the box.

[Label]

→ "High Alarm Display"

[Tile Background]
→ Uncheck the box.

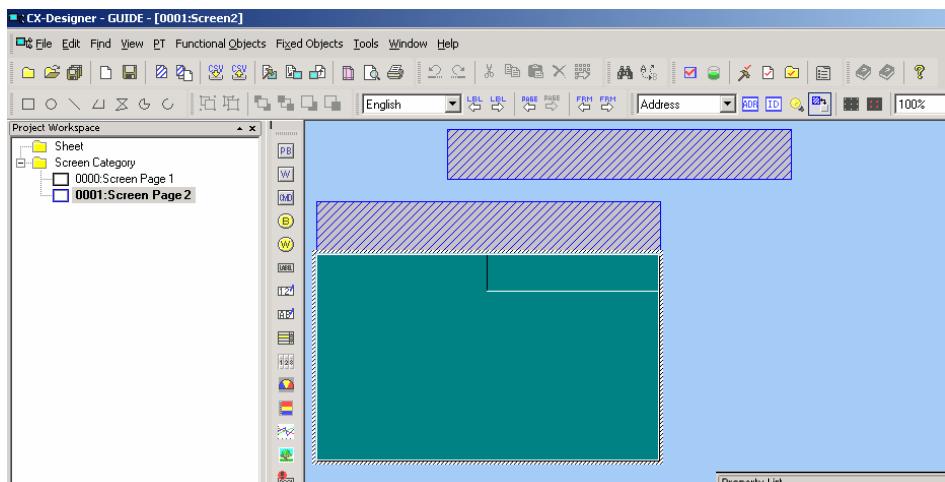
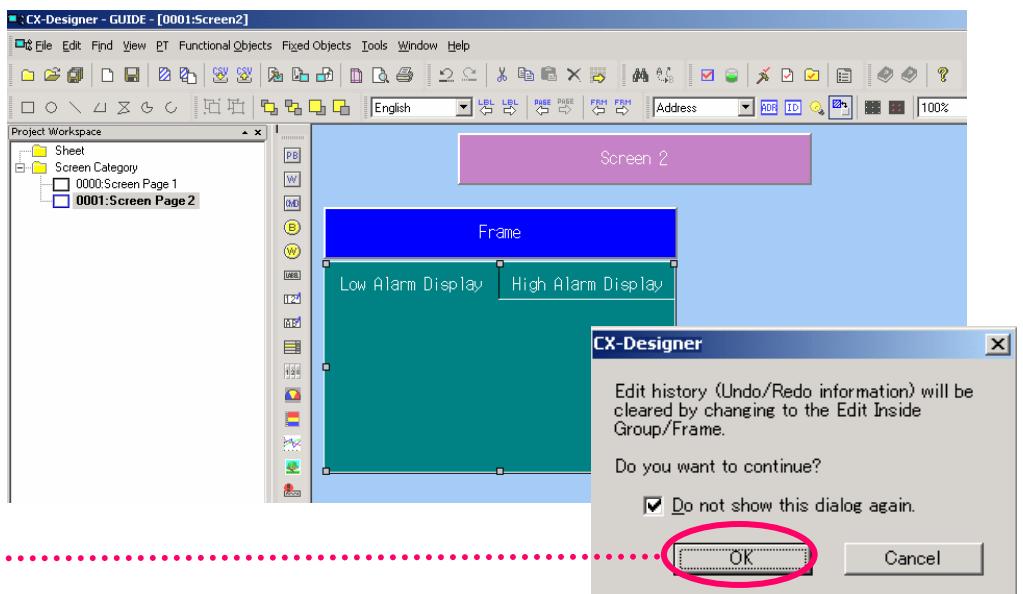


Double-click the frame object.

Check the “Do not show this dialog again” box.

Click

OK



Create a bit lamp by referring to “12. Bit Lamp”.

Enter the following settings for [Display Address 1] in the property list.

Host

→ [HOST 1]

Area Name

→ [Common I/O Area (CIO)]

Word

→ [1]

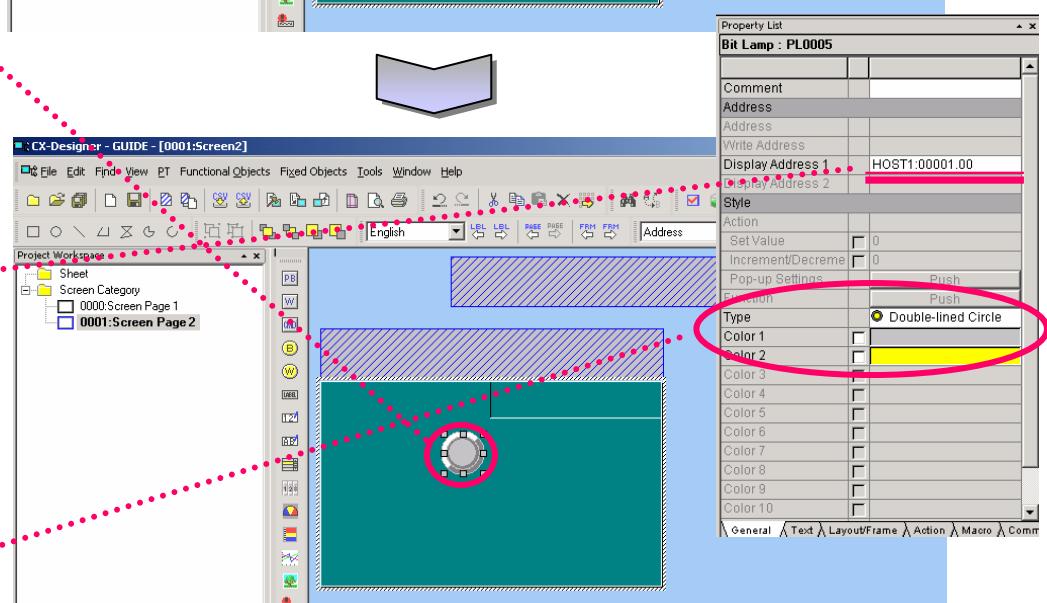
Bit

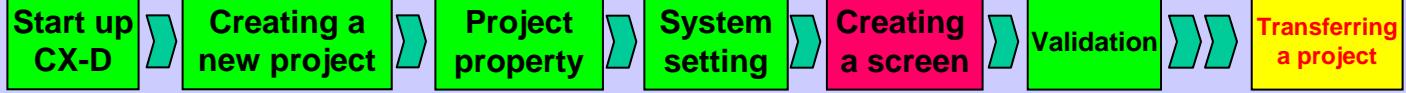
→ [0]

[Type]

→ Double-line Circle

Set [Color 1] and [Color 2].





Create six bit lamps
by referring to "11.
Repeat function".

Set as follow:

[Qty]
Horizontal
→ "2"
Vertical
→ "3"

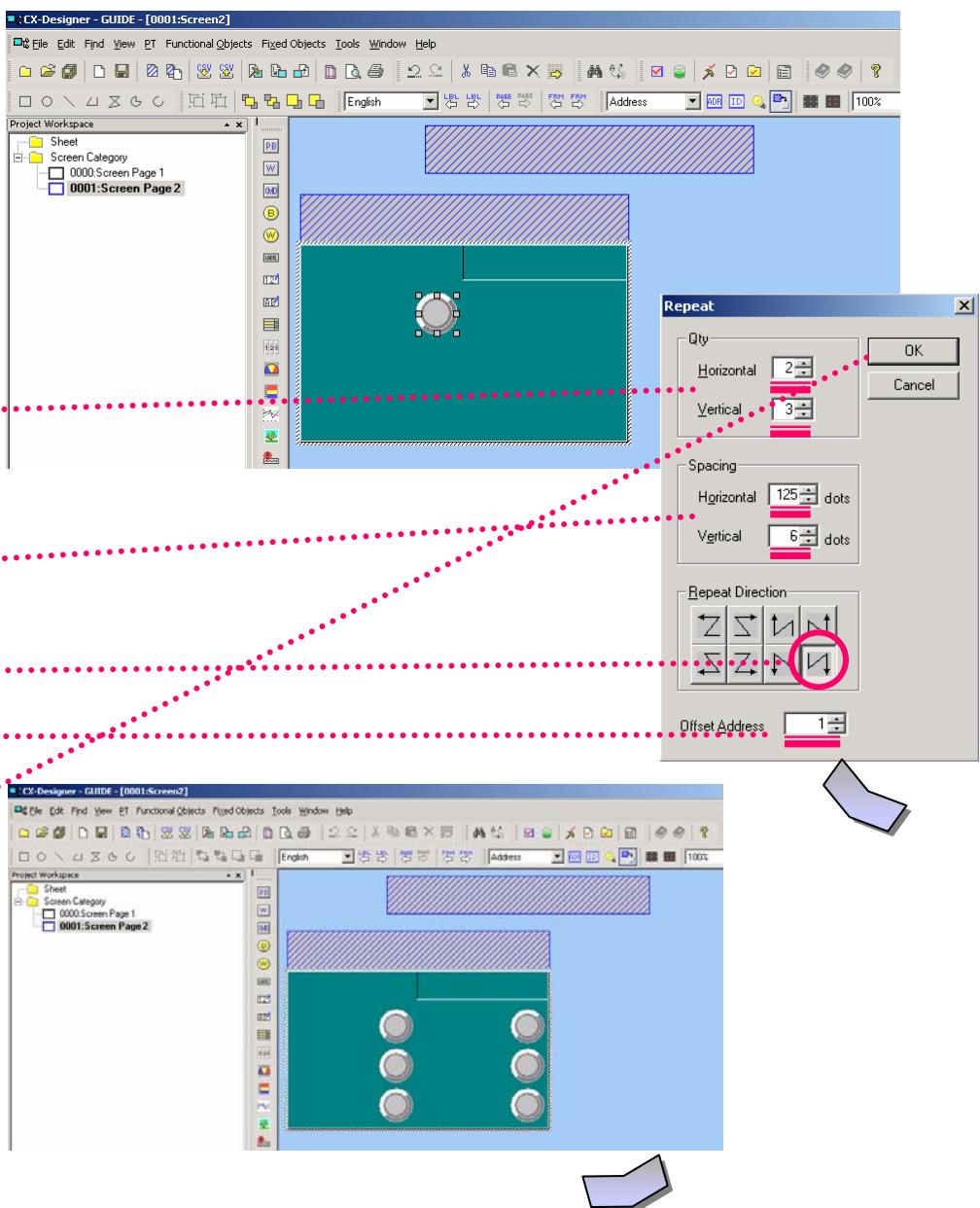
[Spacing]
Horizontal
→ 125"
Vertical
→ "6"

Repeat direction

Set "1" to [Offset Address]

Click

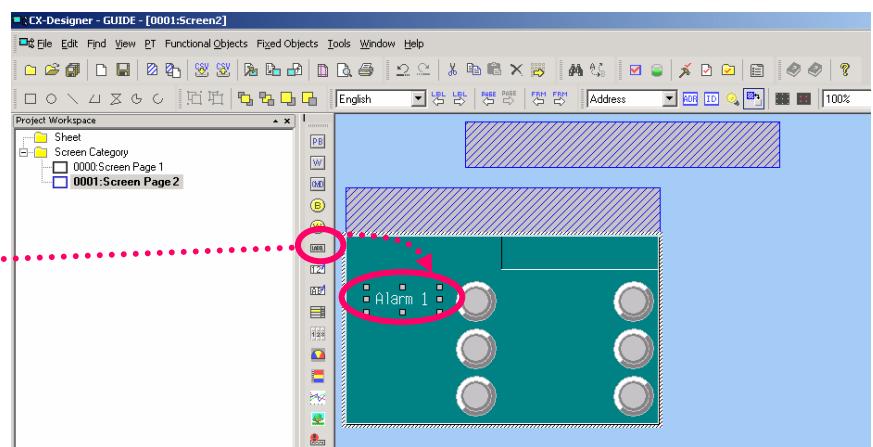
OK



Create a label "Alarm1"
by referring to "9.
Displaying a Text".

[Label]
→ "Alarm 1"

[Tile Background]
→ Uncheck the box.



Start up CX-D

Creating a new project

Project property

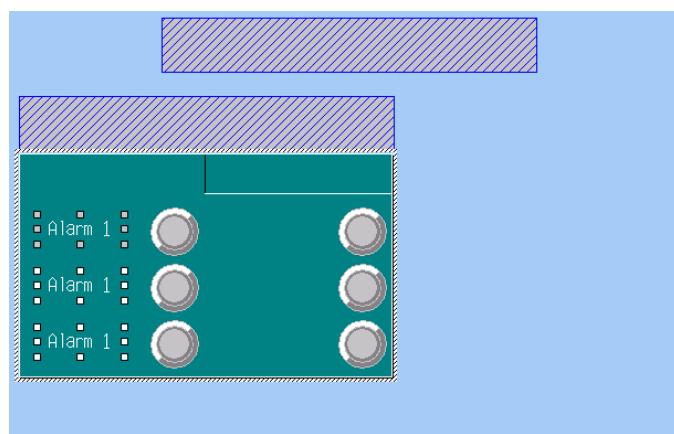
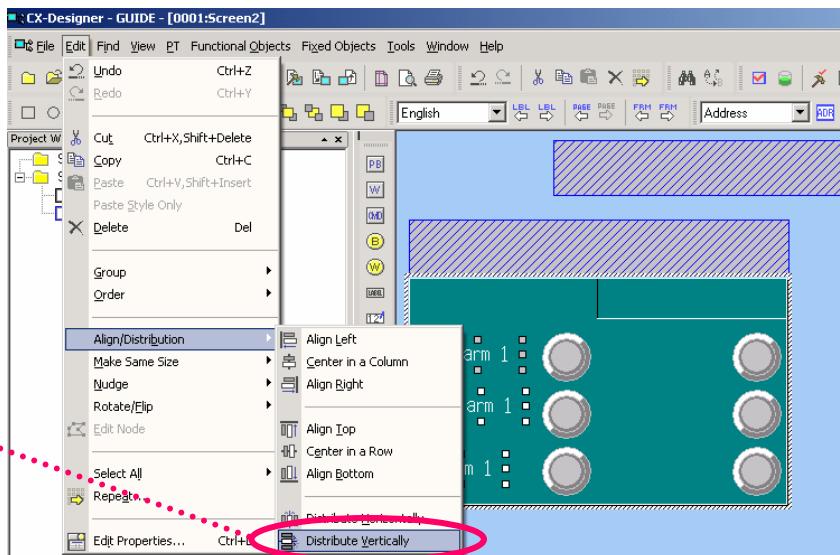
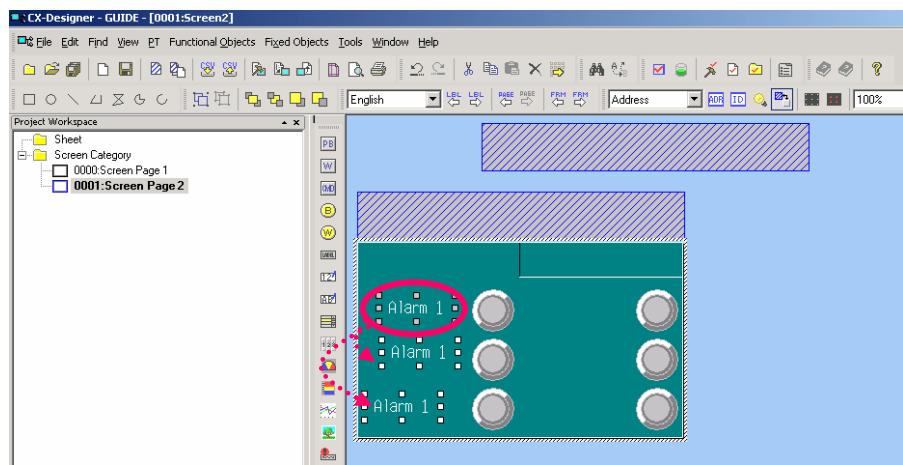
System setting

Creating a screen

Validation

Transferring a project

Copy a label object by dropping & dragging the label "Alarm 1" while holding down the [Ctrl] key.



With three labels selected, select as follow:

[Edit] menu
-[Align/Distribution]
-[Distribute Vertically]

With three labels selected, select as follow:

[Edit] menu
-[Align/Distribution]
-[Align Left]

Start up
CX-D

Creating a
new project

Project
property

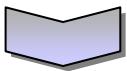
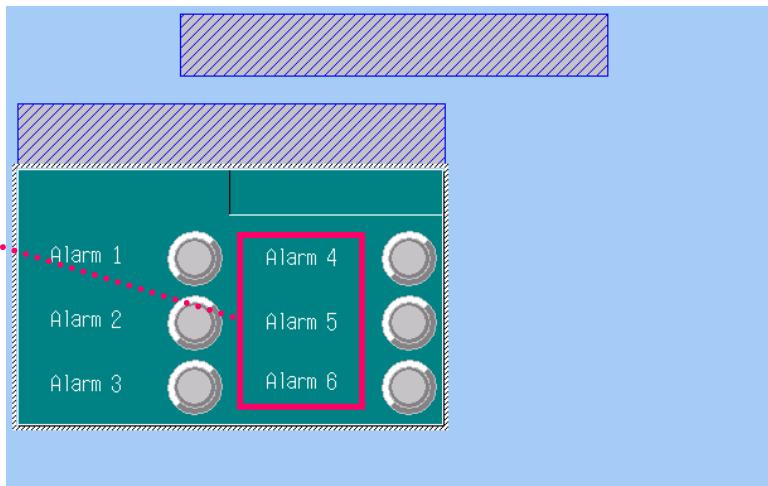
System
setting

Creating
a screen

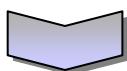
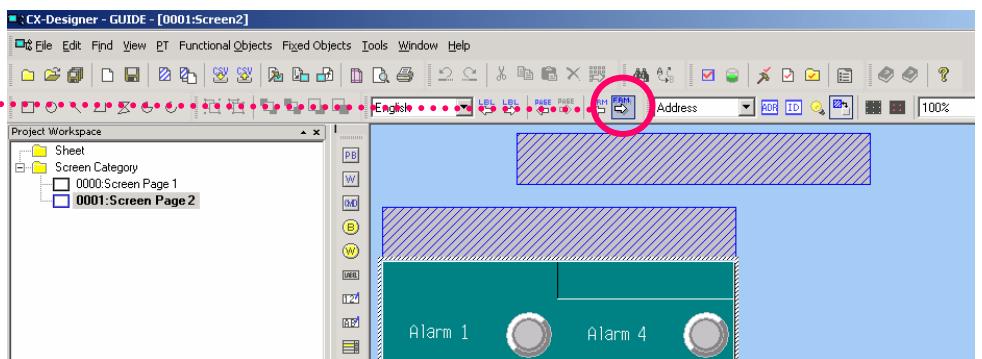
Validation

Transferring
a project

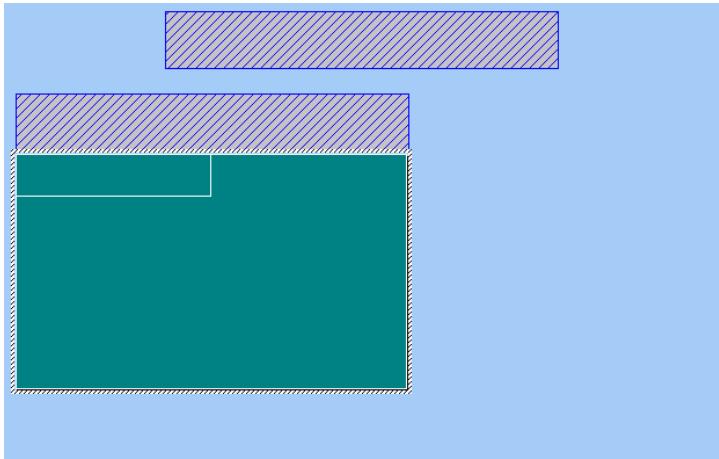
Create labels "Alarm 4 to 6" in the way you created "Alarms 1 to 3".

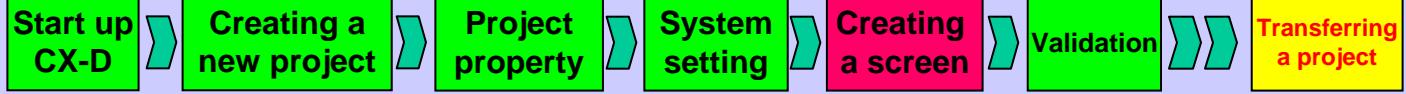


Left-click



The next page of the
Frame object (page 1) is
displayed.





Create a bit lamp by referring to "12. Bit Lamp".

Set [Display Address 1] from the property list as follow:

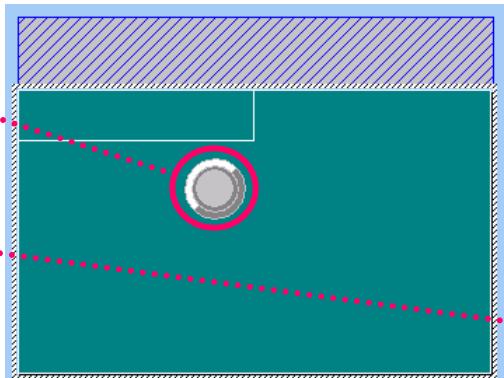
Host
→ [HOST 1]

Area
→ [Common I/O Area (CIO)]

Word
→ [2]

Bit
→ [0]

[Type]
→ Double-lined Circle
Select [Color 1] and [Color 2]



Create 6 bit lamps by referring to "11. Repeat function".

Set as follow:

[Qty]
Horizontal
→ "2"

Vertical
→ "3"

[Spacing]
Horizontal
→ 125"

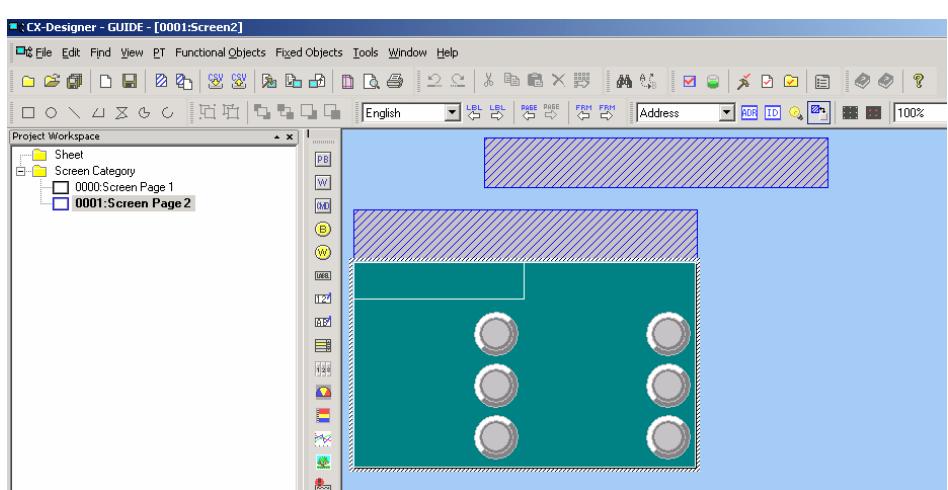
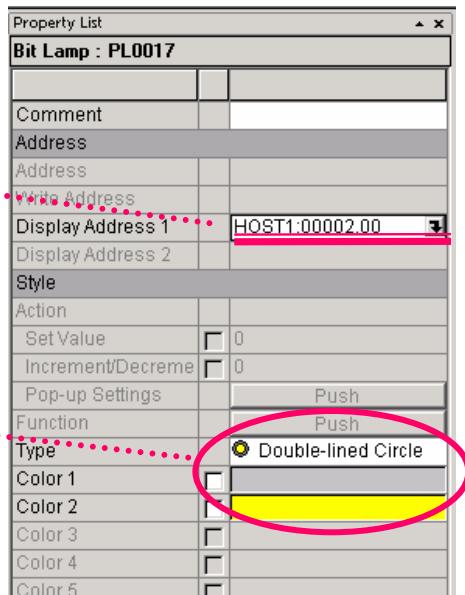
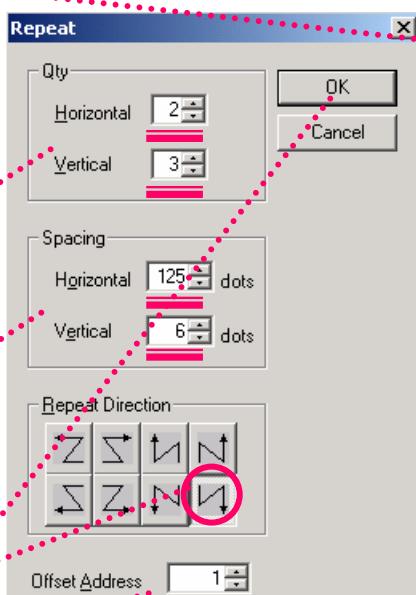
Vertical
→ "6"

Repeat direction

Set "1" to [Offset Address]

Click

OK



Start up CX-D

Creating a new project

Project property

System setting

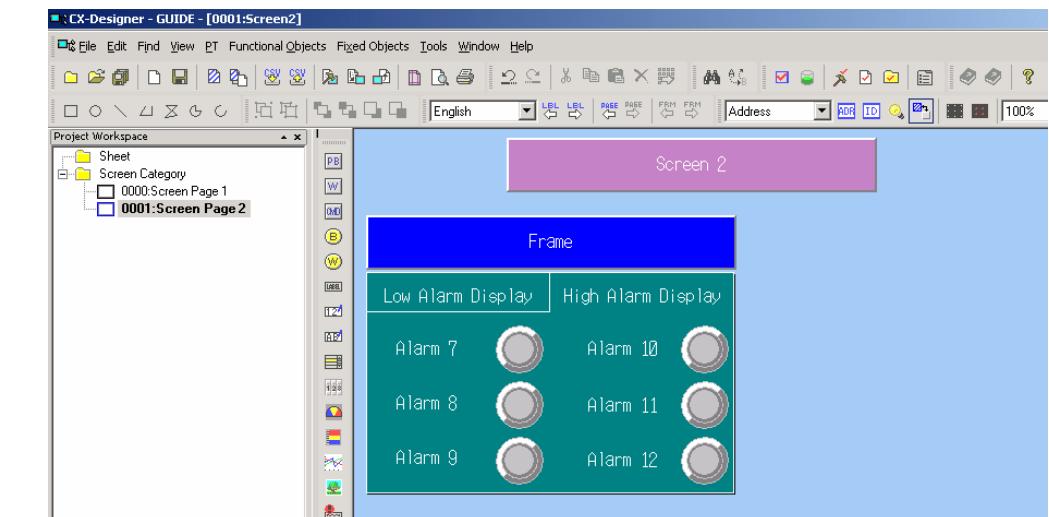
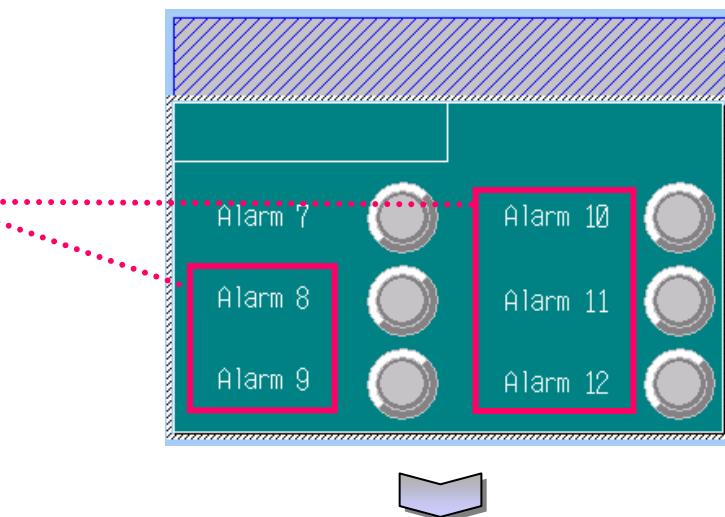
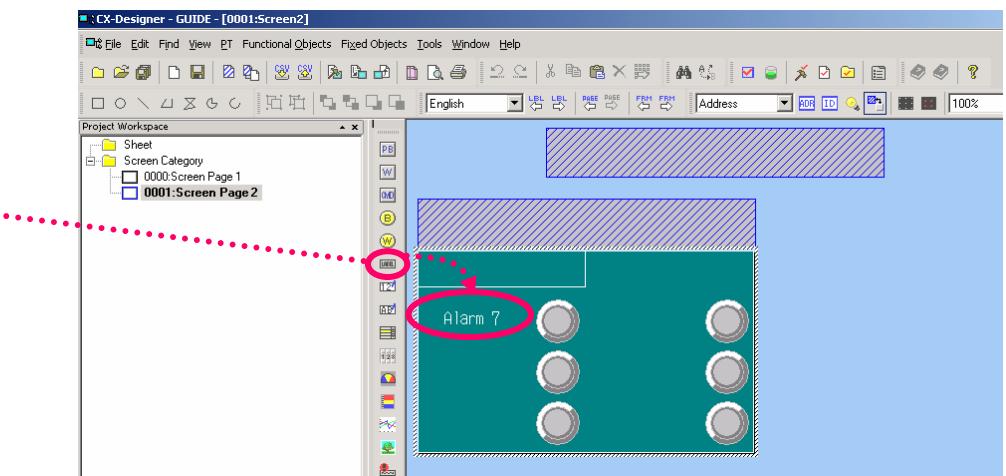
Creating a screen

Validation

Transferring a project

Create a label as shown on the right by referring to "9. Displaying a Text".

[Label]
→ "Alarm 7"
[Tile Background]
→ Uncheck it.

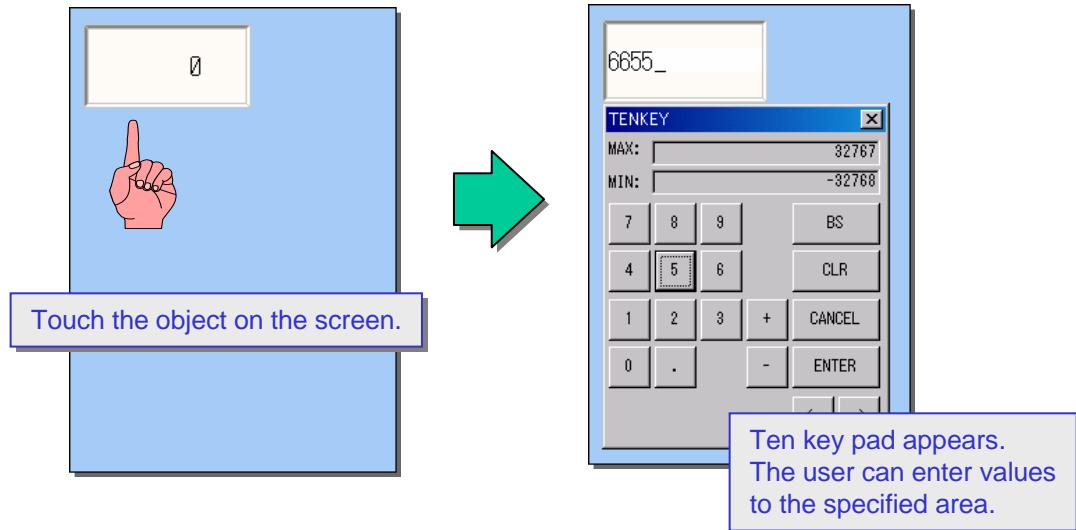


Create labels for "Alarms 8 to 12" in the way you created "Alarms 1 to 6".

Click any area on the screen except frame objects to finish "Edit Inside Group/Frame".

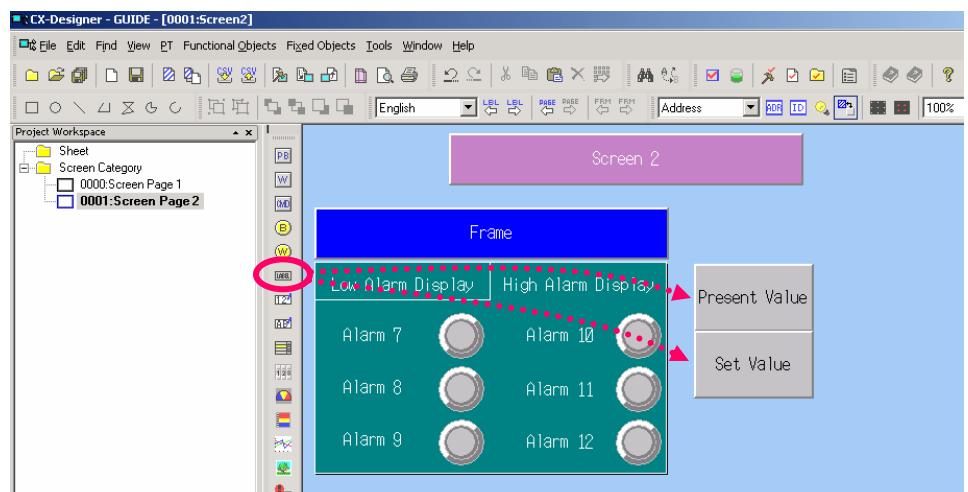
15. Numeral Display & Input

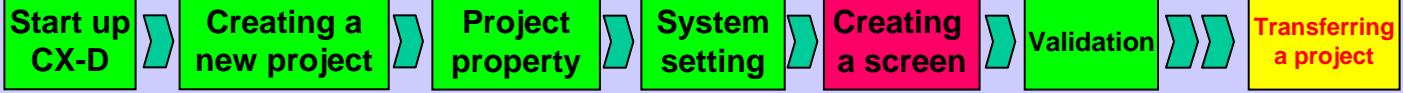
Numeral Display & Input is an object that displays data of an address as numeral value and changes data by inputting numeral value from a virtual key board.



Create labels as shown on the right by referring to "9. Displaying a Text".

Upper
[Label]
→ "Present Value"
Lower
[Label]
→ "Set Value".





Select the Numeral Display& Input icon



and place it next to the label "Present Value".

Set as follow from the object property list.

Common tab
[Enable input]

→ Uncheck the box.

[Display]

→ Uncheck the box.

[Numeral Display]

→ Check the box.

General tab

[Address]

→ "HOST 1 DM00100"

[Display Format]

→ "Decimal"

[Storage Format]

→ "INT (Signed 1 word)"

[Integer]

→ "5"

[Decimal]

→ "0"

Select the Numeral Display & Input icon from the object list



Set as follow from the object property list.

Common tab

[Enable Input]

→ Check the box.

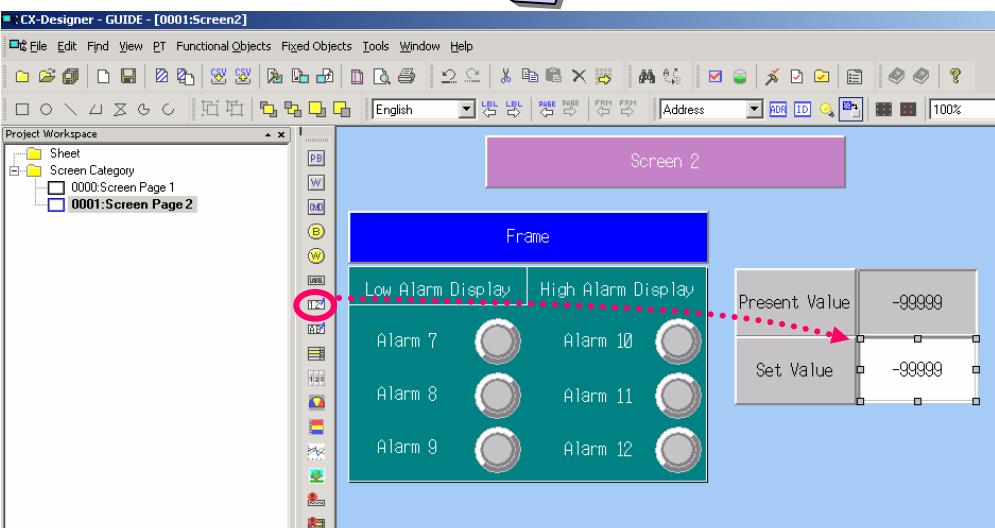
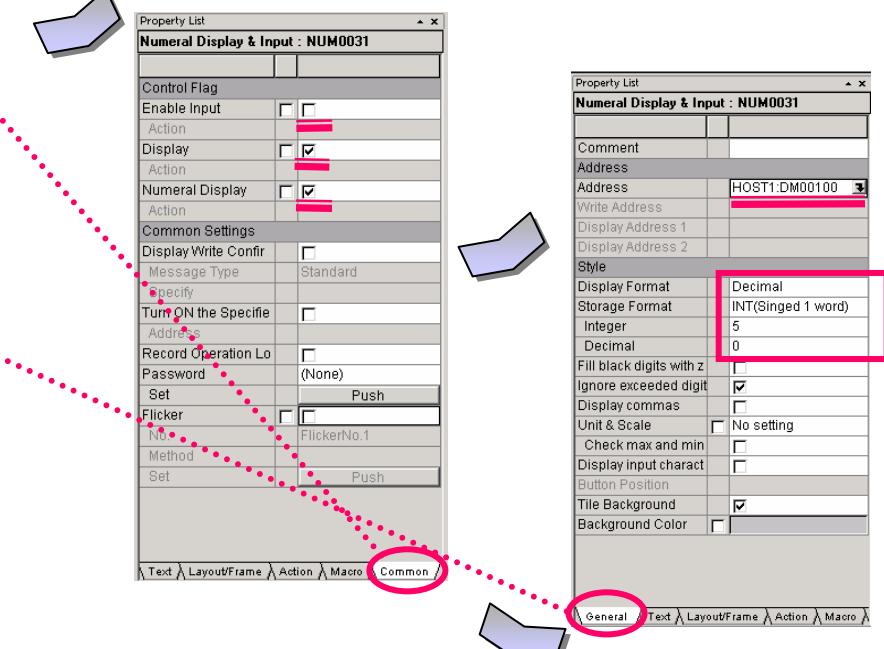
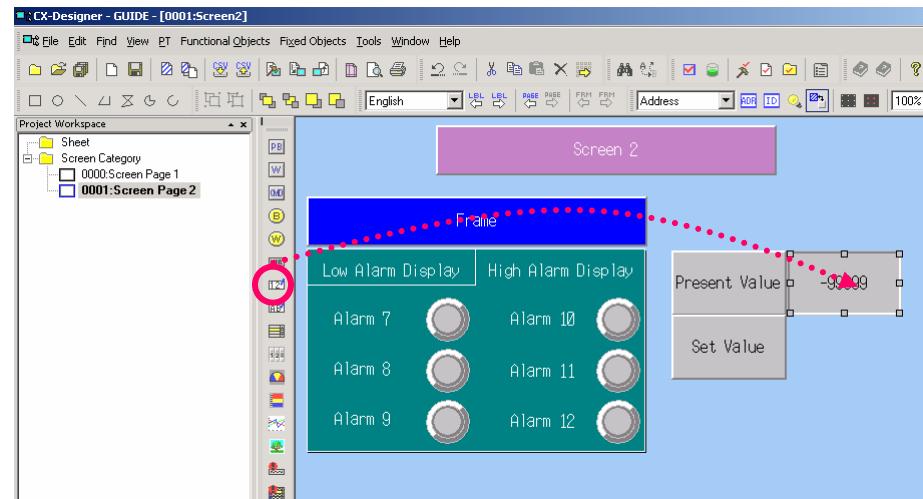
General tab

[Address]

→ "\$W0"

[Background]

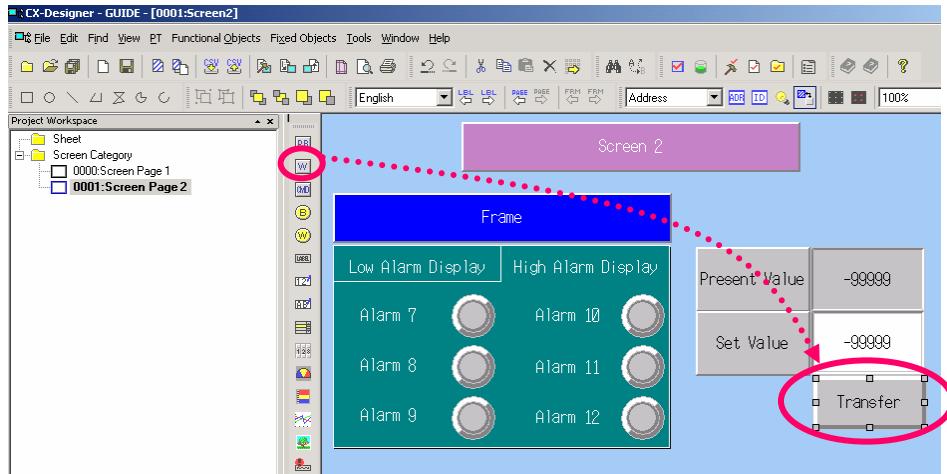
→ "White"



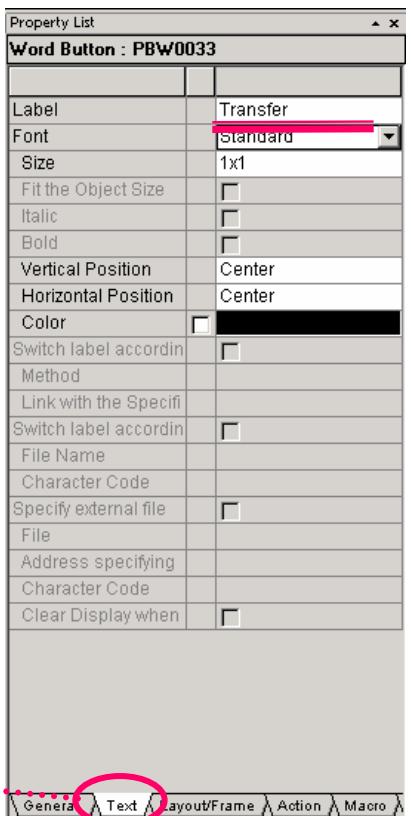
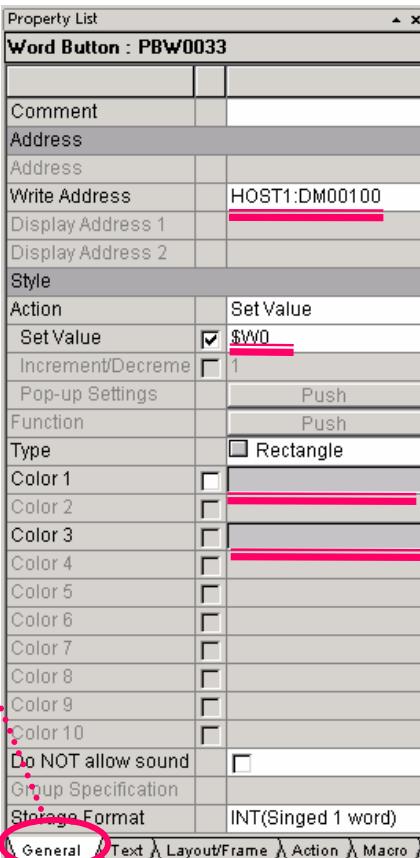
16. Word Button

Using a Word button.

Word button is an object that writes constants to the address (DM etc...) when it is pressed, or increases/decreases the value of the address. It is possible to display a pop-up menu and select the value from constants. In this manual, you will create a word button to write the set value (Internal address) to the present value (PLC address).



Paste a Word button.



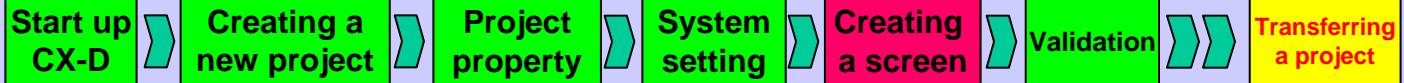
Set as follow on the object property list.

General tab
 [Address]
 → "HOST1 DM00100"
 [Action]
 → "Set Value"
 [Set Value]
 → "\$W0"

Also set [Color 1] and [Color 3].

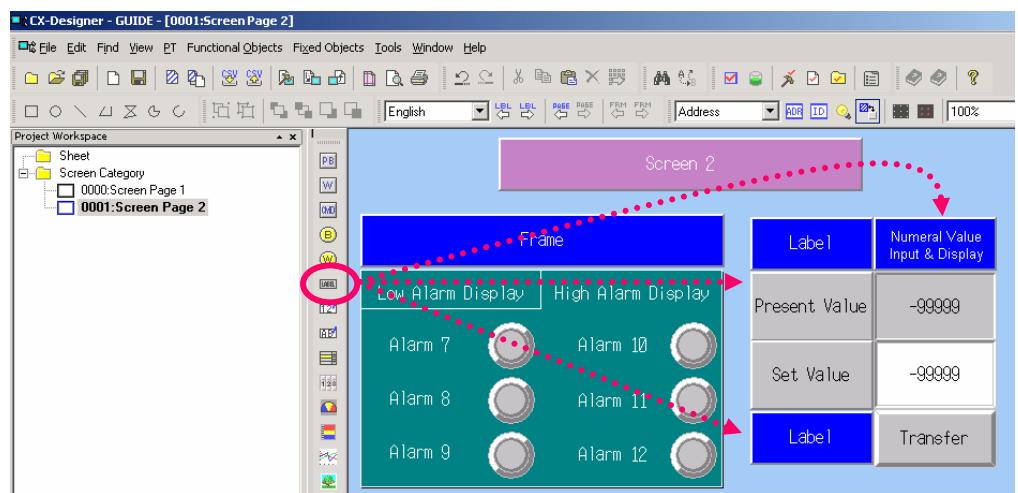
Text tab

[Label]
 → "Transfer"



Create three labels by referring to "9. Displaying a Text".

- [Label] → "Label"
- [Label] → "Numerical Value Input & Display"
- [Label] → "Word Button"

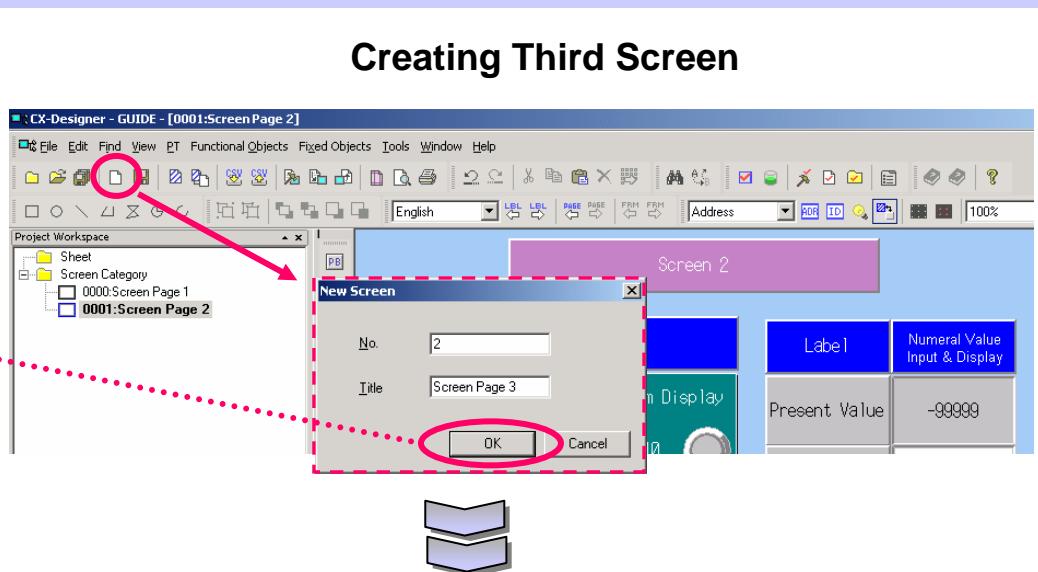


Create three labels by referring to "13. Add a Screen".

Click



A new screen is created.



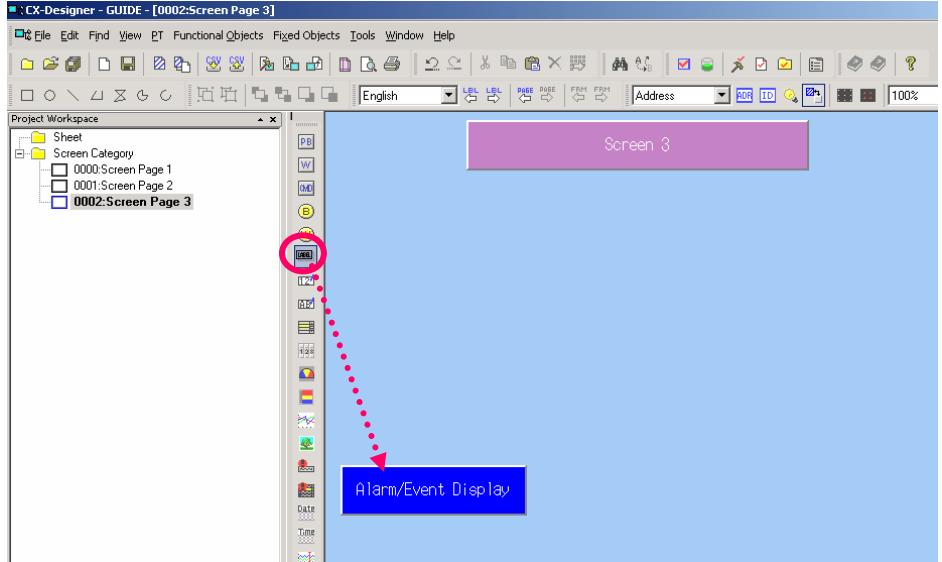
17. Alarm/Event Display

Alarm/Event Summary is a functional object that displays a current recorded alarm/event in one line. Normally, the highest priority alarm/event is displayed, but it is also possible to display more than one alarm/event occurring at the same time according to the priority by specifying flowing string. In this manual, It is used to display low alarm, high alarm, and running status (event).

Create a label as shown on the right by referring to "9. Displaying a Text".

[Label]

→ "Alarm/Event Display"



Start up CX-D

Creating a new project

Project property

System setting

Creating a screen

Validation

Transferring a project

Select the Alarm/Event Display icon



on the list.



Create an Alarm/Event Display where you want it.



Double-click the object to display its property.



Double-click

Uncheck "Low Alarm".

Check "Date" and "Time".

Click Register Alarm/Event...

[Register Alarm/Event...](#)



Click

[Add...](#)

Set as follow:

[Message]

→ "Alarm 1"

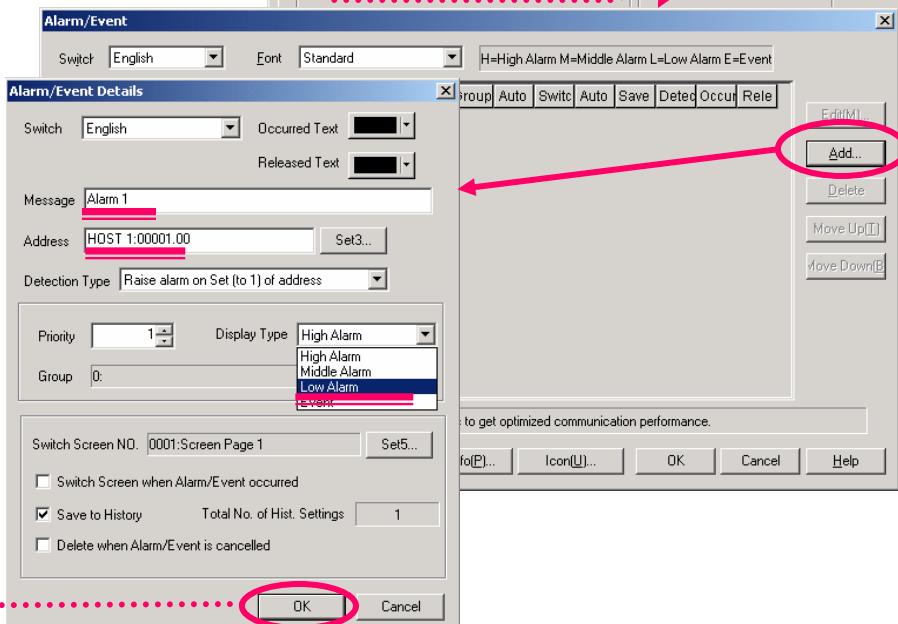
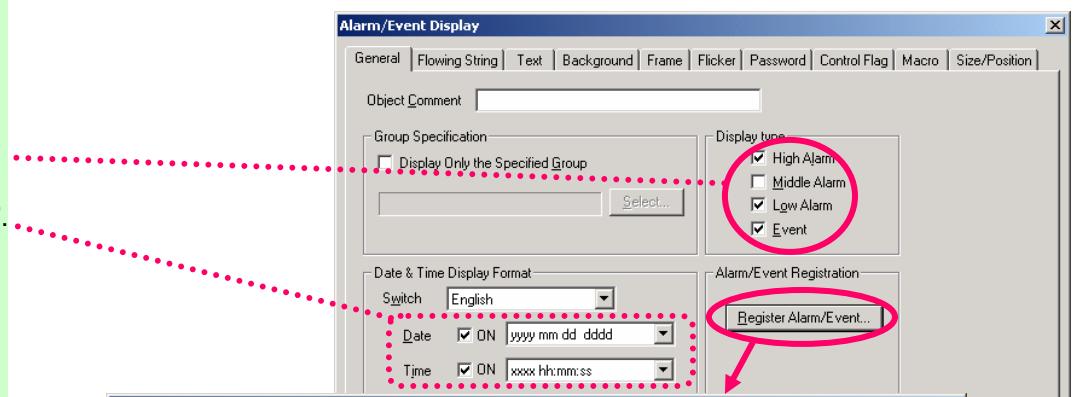
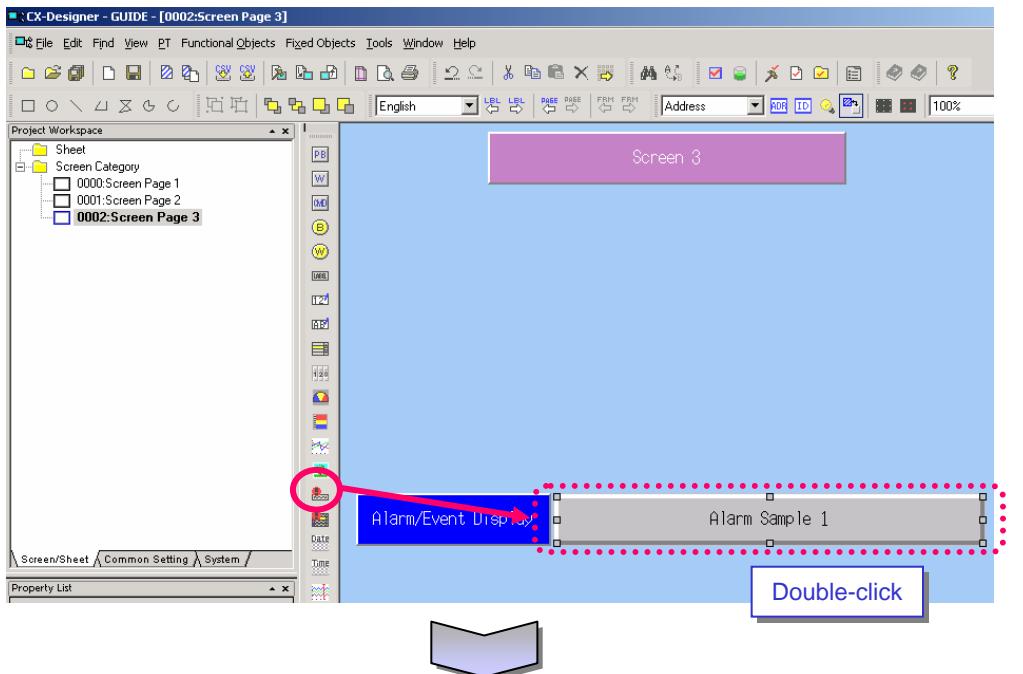
[Address]

→ "Host1:00001.00."

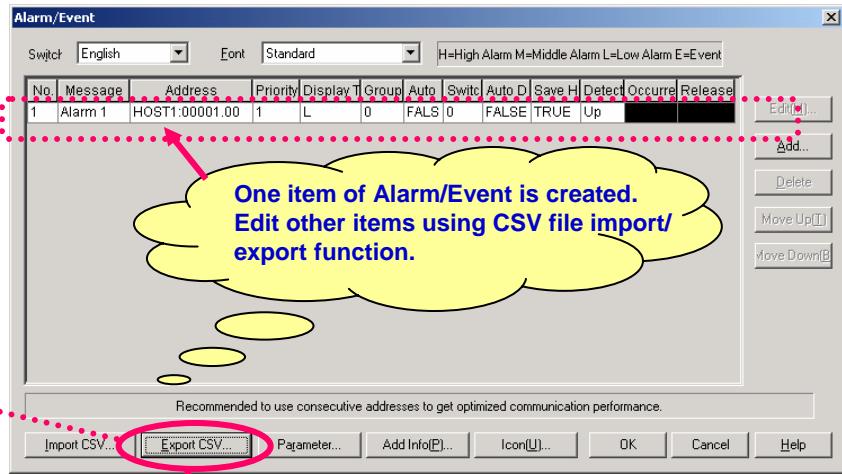


Click

[OK](#)

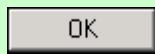


Click Export CSV



Select "ASCII Code".

Click



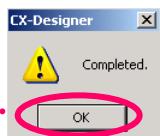
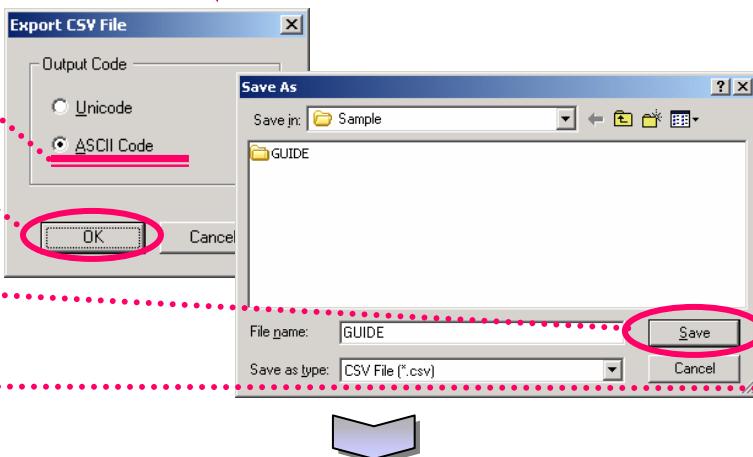
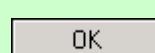
Enter a file name.

"GUIDE" is used here.

and click



Click



Read the file saved above with EXCEL. (Select [Data] menu – [Get External Data] – Import Text File...).

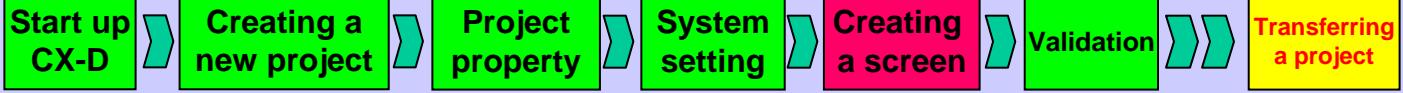
A	B	C	D	E	F	G	H	I	J	K	L	M
1	Address	Priority	Display Type	Group No.	Group Name	Auto Switch Screen	Screen No.	Auto Deletion	Save History	Occurred	Released	Detection
2	HOST1:000010.00	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge
3												
4												
5												

A	B	C	D	E	F	G	H	I	J	K	L	M
1	Address	Priority	Display Type	Group No.	Group Name	Auto Switch Screen	Screen No.	Auto Deletion	Save History	Occurred	Released	Detection
2	HOST1:000010.00	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge
3												
4												
5												
6												
7												
8												
9												

Left-click the right bottom of the cell and draw the mouse down while holding it down.

A	B	C	D	E	F	G	H	I	J	K	L	M
1	Address	Priority	Display Type	Group No.	Group Name	Auto Switch Screen	Screen No.	Auto Deletion	Save History	Occurred	Released	Detection
2	HOST1:000010.00	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge
3	HOST1:000010.01											
4	HOST1:000010.02											
5	HOST1:000010.03											
6	HOST1:000010.04											
7	HOST1:000010.05											
8												
9												

Only the numeral value in the character string is incremented.



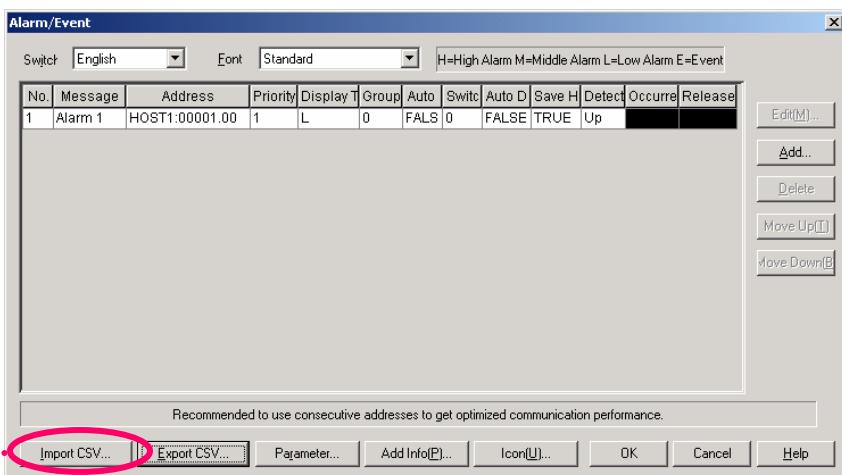
Complete the following table using operation described on the previous page as well as Copy & Paste function.

A	B	C	D	E	F	G	H	I	J	K	L	M	N							
Address	Priority	Display Ty	Group No.	Group	NaN	Auto	Switc	Screen	No	Auto	Delet	Save Histo	Occurred	Released	Detection	Label	Alarm	Message	Label1	Alarm Mes
2 HOST1:001	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Alarm 1				Alarm 1			
3 HOST1:001	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Alarm 2				Alarm 2			
4 HOST1:001	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Alarm 3				Alarm 3			
5 HOST1:001	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Alarm 4				Alarm 4			
6 HOST1:001	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Alarm 5				Alarm 5			
7 HOST1:001	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Alarm 6				Alarm 6			
8 HOST1:001	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Alarm 7				Alarm 7			
9 HOST1:001	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Alarm 8				Alarm 8			
10 HOST1:001	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Alarm 9				Alarm 9			
11 HOST1:001	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Alarm 10				Alarm 10			
12 HOST1:001	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Alarm 11				Alarm 11			
13 HOST1:001	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Alarm 12				Alarm 12			
14 HOST1:001	1	event	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Unit 1 Start Running				Unit1 Actief			
15 HOST1:001	1	event	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Unit 2 Start Running				Unit2 Actief			
16 HOST1:001	1	event	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Unit 3 Start Running				Unit3 Actief			
17 HOST1:001	1	event	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Unit 4 Start Running				Unit4 Actief			
18 HOST1:001	1	event	0		FALSE	0	FALSE	TRUE	0	0	0	posedge	Unit 5 Start Running				Unit5 Actief			
19																				
20																				

When you finish editing, save the file.

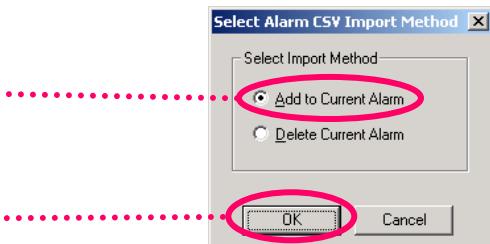


Go back to work on the CX-Designer.



Click Import CSV

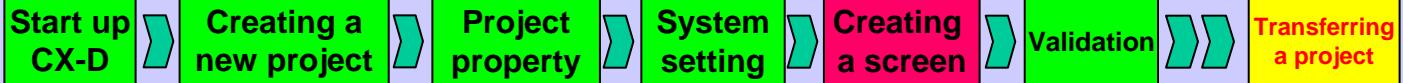
Import CSV...



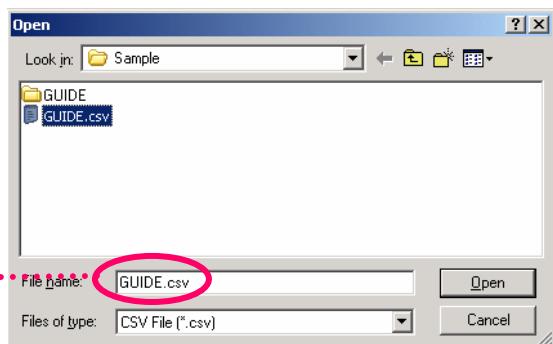
Check "Add to Current Alarm".

Click

OK



Specify the file name that was saved on the previous page.

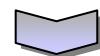
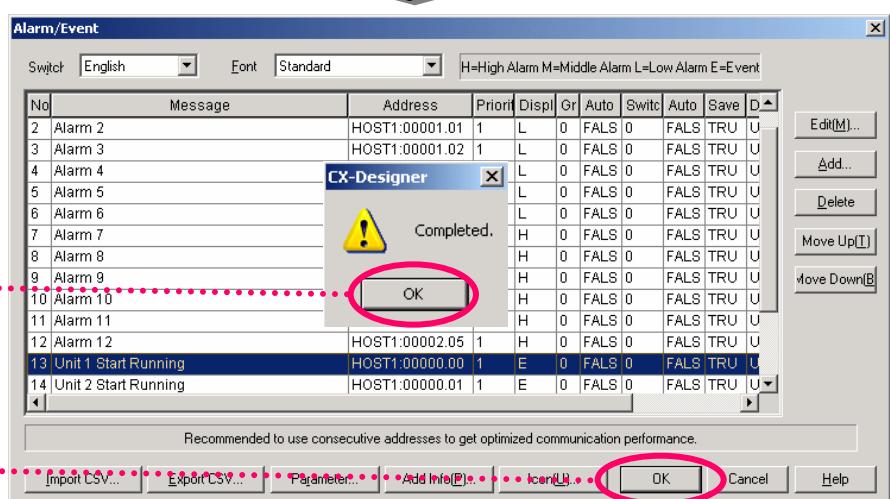
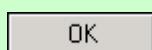


The “Completed” message is displayed to indicate that a file has been read.

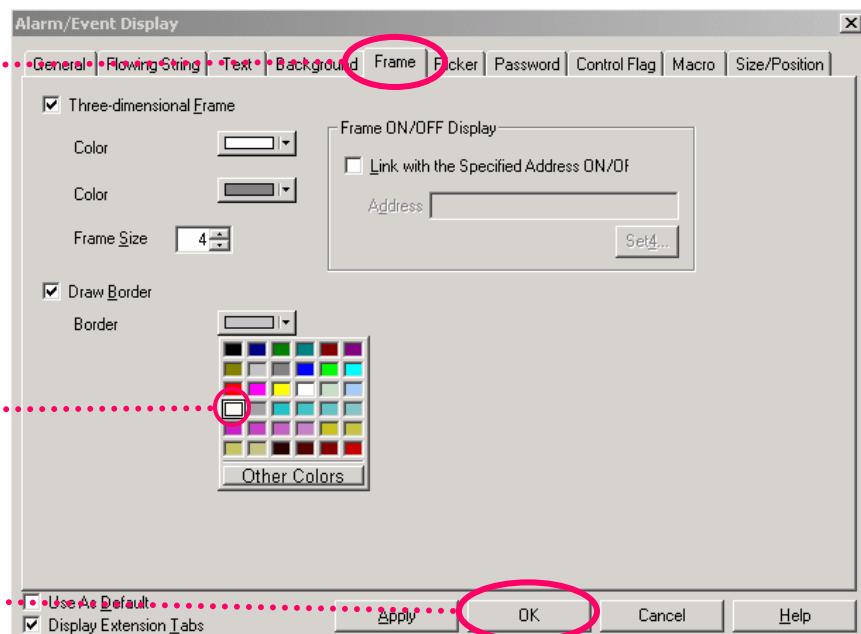
Click



Click



Click the Frame tab.



Select a color.



Click

18. Alarm/Event Summary&History

Alarm/Event Summary & History is an object that displays current alarms/events in a list. You can specify display order such as checked time, priority and frequency. In this manual, it is used to display the status (Occurrence/Recovery) of light alarms, and high alarms.

Select Alarm /Event Summary & History



on the list



Create Alarm/Event Summary &History on the screen.



Double-click the object to display its property.

Set properties as follow:

[Display Data]
→ Check Alarm History

Check "High Alarm" and "Low Alarm".

[Date] → yyyy/mm/dd
[Time] → hh:mm:ss

Click

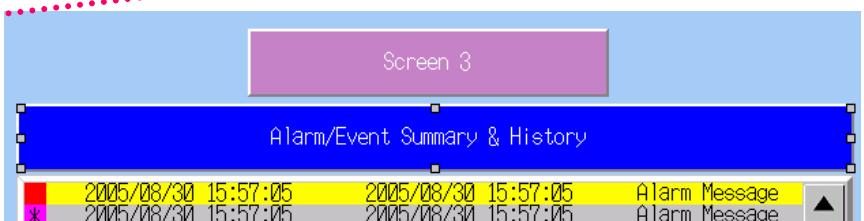
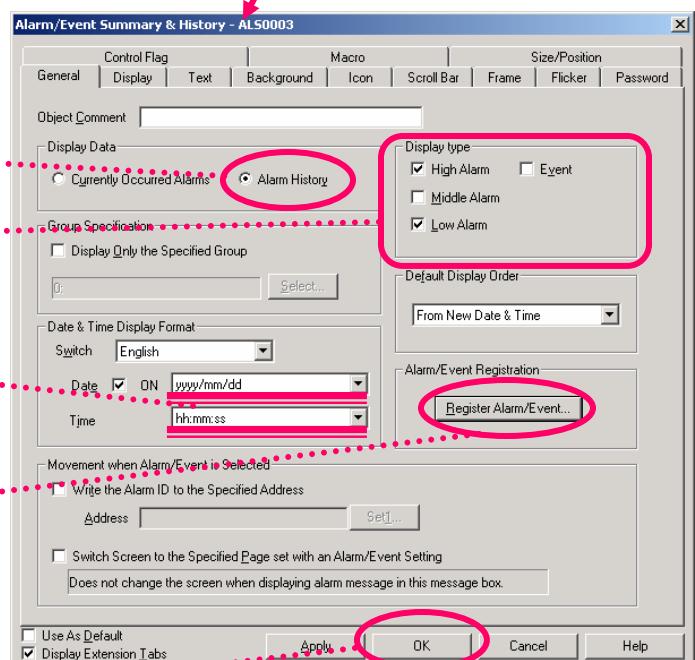
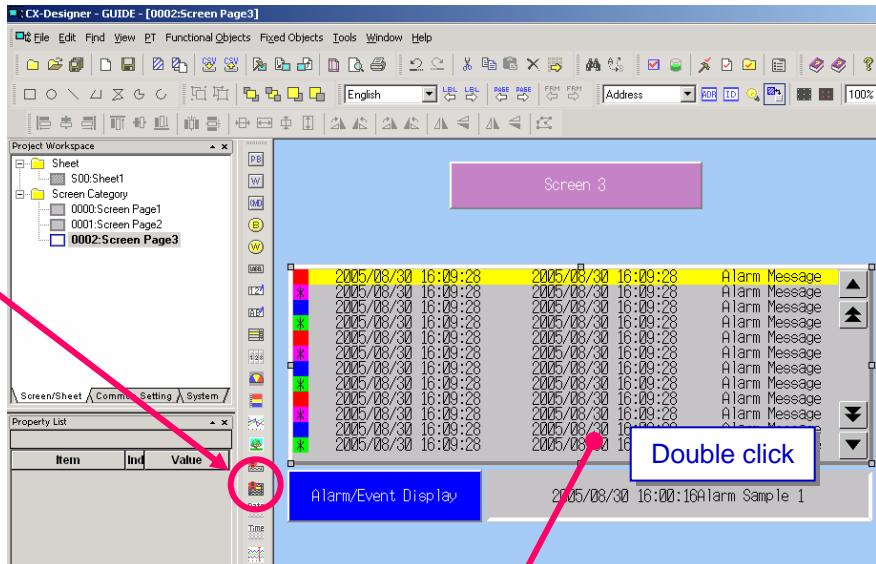
Register Alarm/Event...

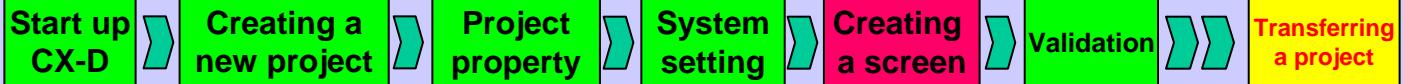
Check the settings.

Click

OK

Add a label and name it as "Alarm/Event Summary & History".





19. Pop-up Screen

Usually only one screen is displayed on the NS hardware, however, a pop-up screen can be overlapped on the normal screen.

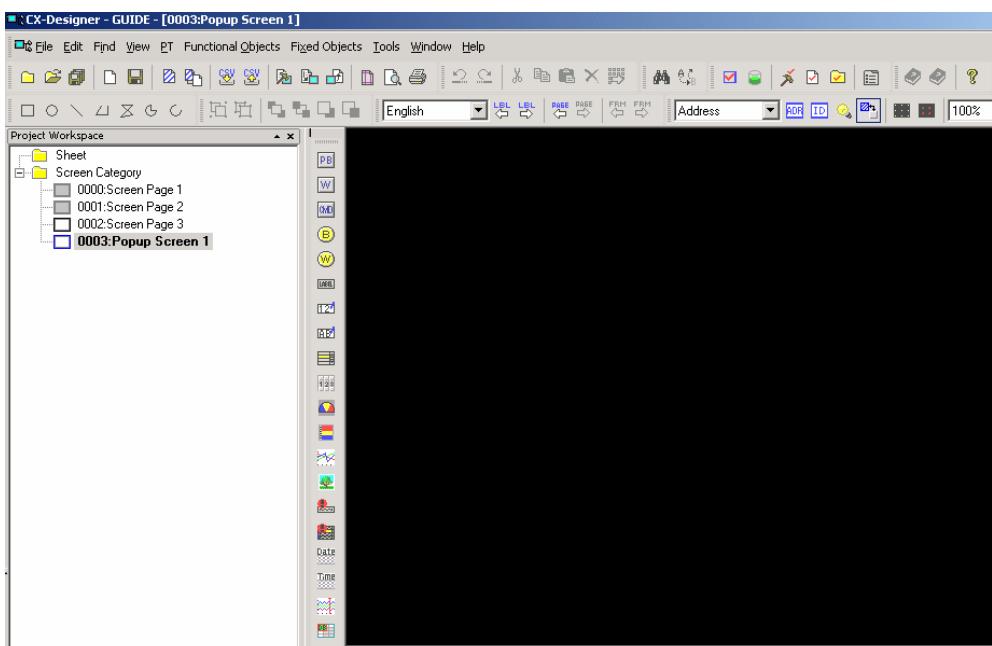
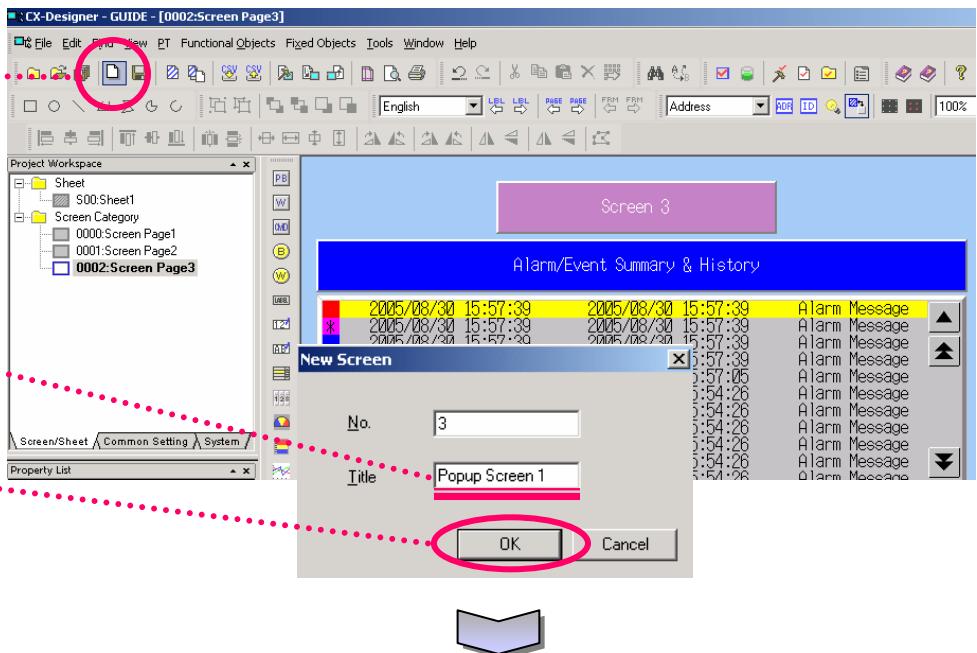
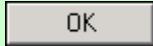
In this manual, you will create a button on a pop-up screen to generate/cancel low and high alarms.

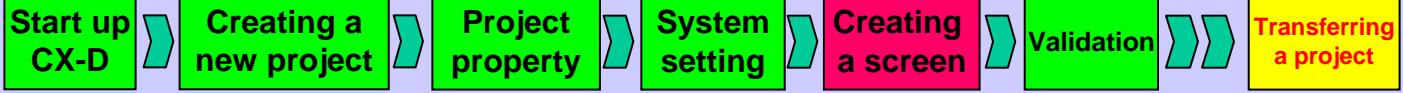
Click the icon to open the New Screen menu.



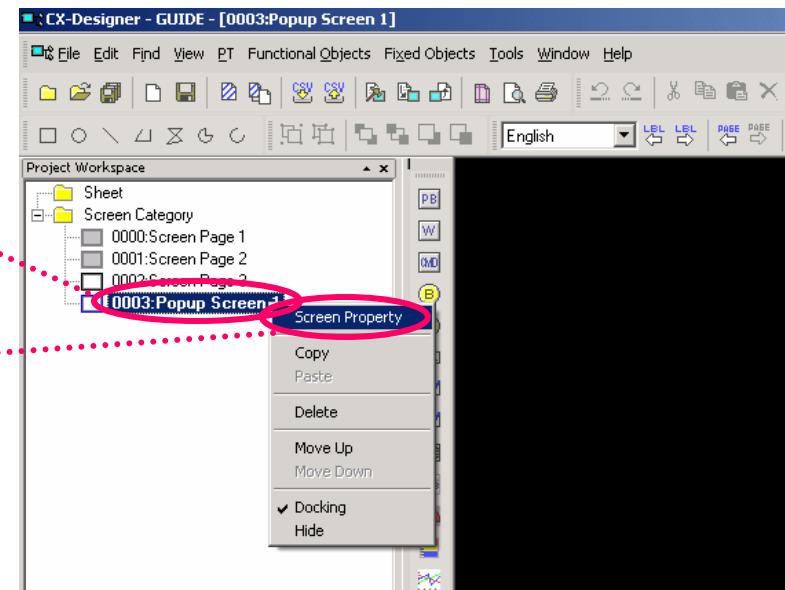
Enter "Pop-up Screen 1" in [Title].

Click



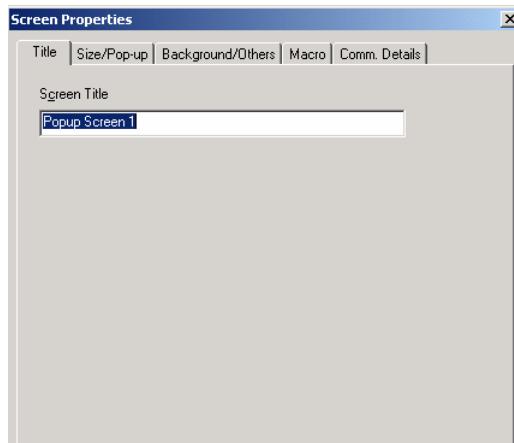


Right-click [0003: Pop-up Screen 1] in the Project Workspace to display the menu.

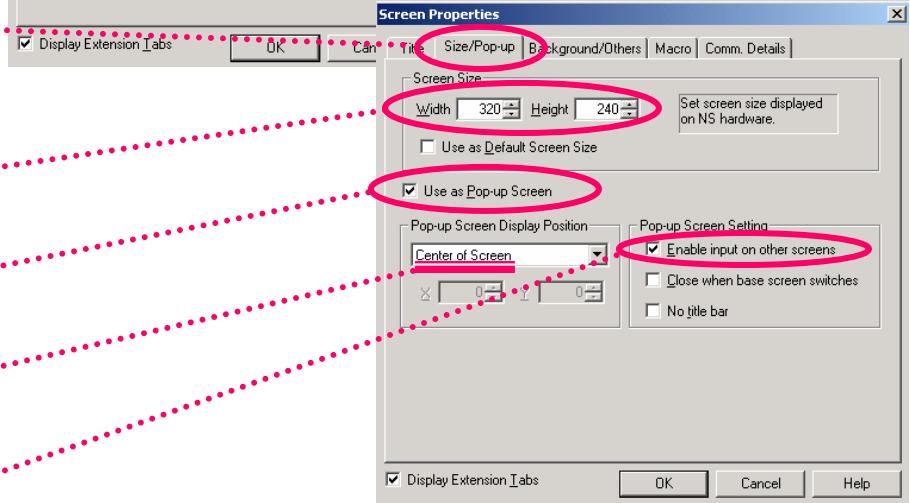


Click "Screen Property" from the menu.

The Screen Property Dialog appears.



Click the [Size/Pop-up] tab.



Set screen size as follow:
[Width]

→ "320"

[Height]
→ "240"

Check "Use as Pop-up Screen".

[Pop-up Screen Display Position]
→ "Center of Screen"

[Pop-up Screen Setting]
→ Check "Enable input on Other screens".

Start up
CX-D

Creating a
new project

Project
property

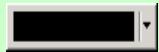
System
setting

Creating
a screen

Validation

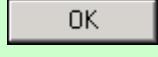
Transferring
a project

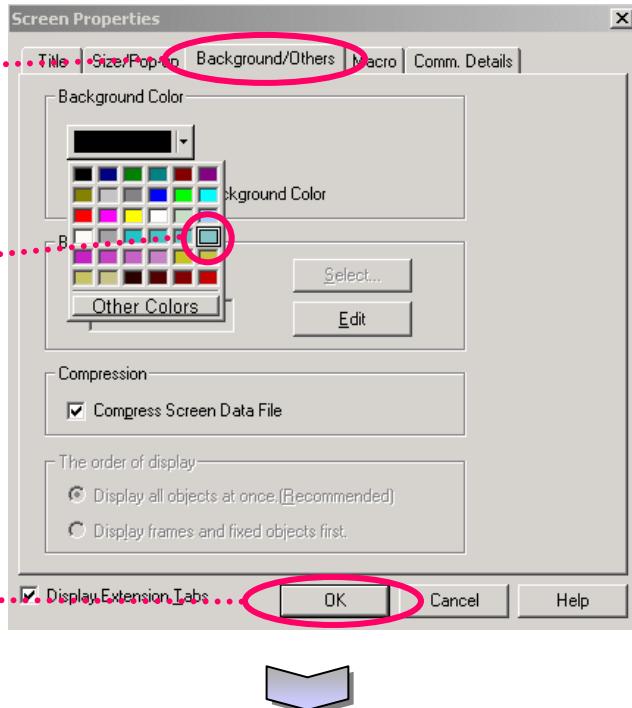
Click the [Background/
Others] tab.

Click Background
Color 

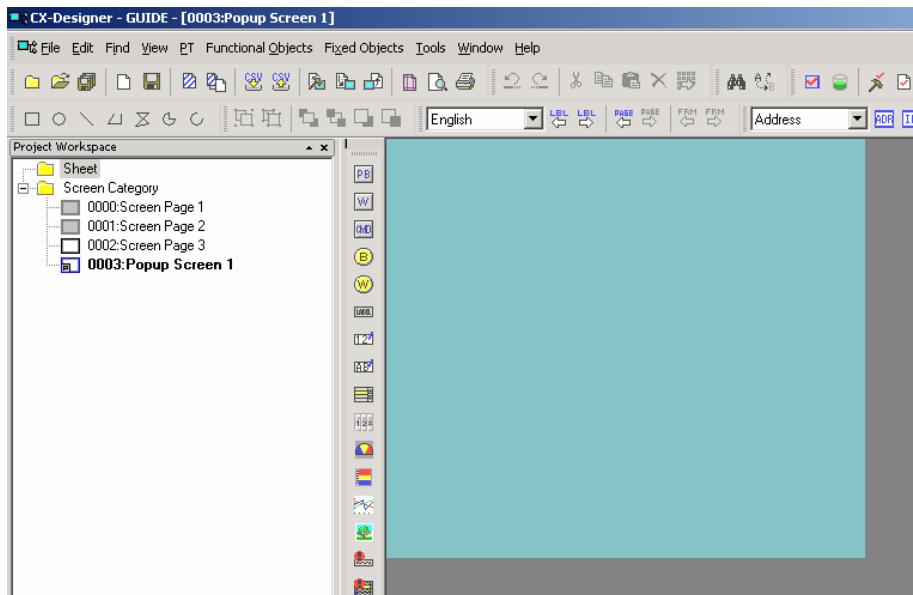
and select a color
from the color
selection dialog.

Click

 OK

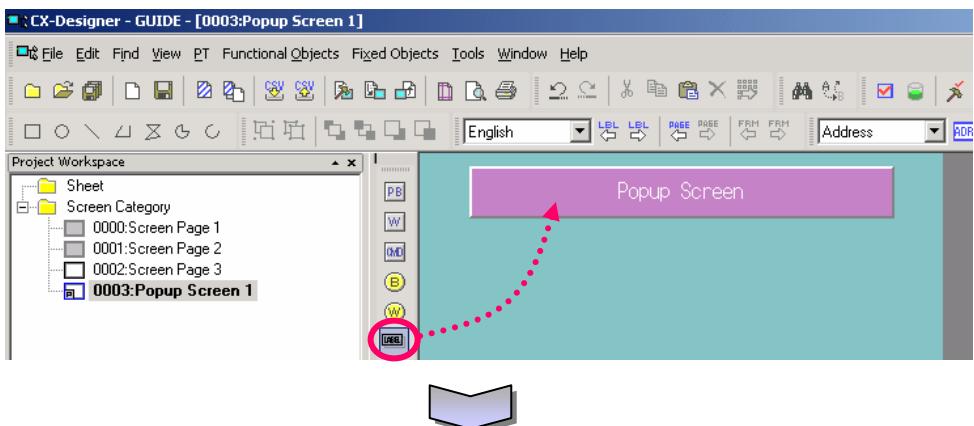


- Screen size set in this property will be the pop-up screen size -



Create a label as shown on the right by referring to "9. Displaying a Text".

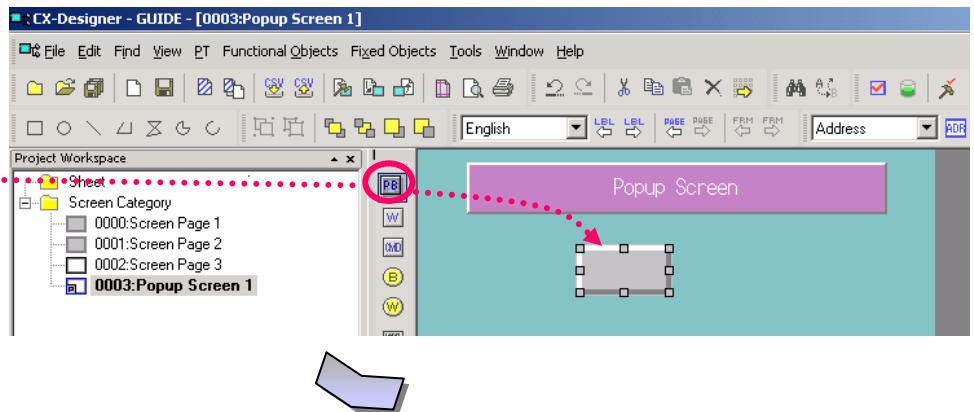
[Label]
→ "Pop-up Screen"



Select the ON/OFF button



on the list.



On the object property list, set as follow:

General tab
[Address]

→ "HOST1: 00001.00"

[Action]

→ "Alternate"

[Type]

→ "Select Shape"

(Type1)"

[Shape 1]

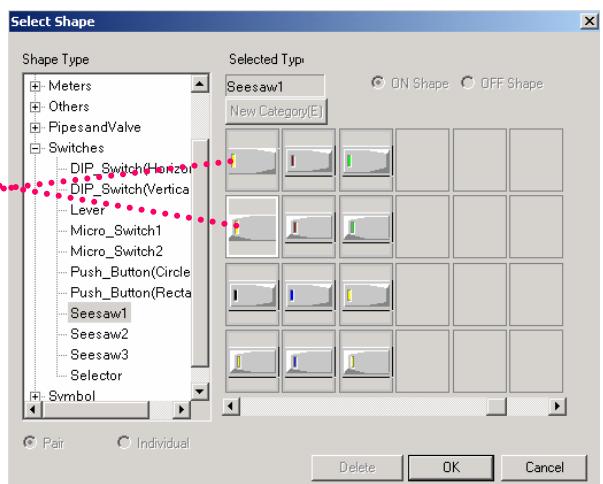
→ Click

to display the Select the Shape dialog box and select a switch.

[Shape 2]

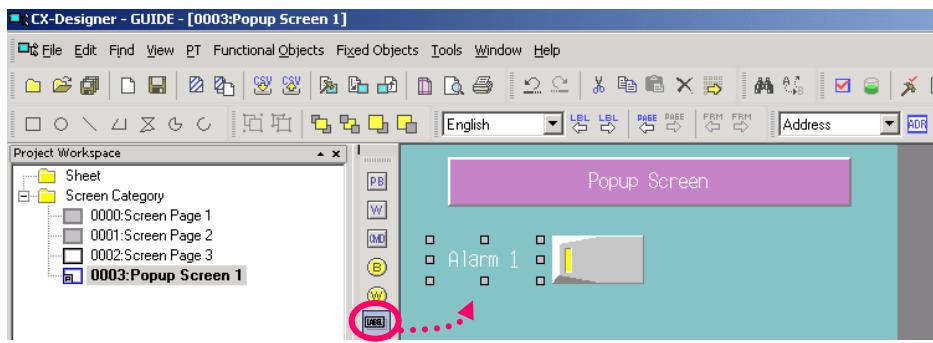
→ Click

to display the Select Shape dialog box and select a switch.



Create a label as shown on the right by referring to "9. Displaying a Text".

[Label]
→ "Alarm 1"



Create six ON/OFF buttons and labels using the Repeat function.

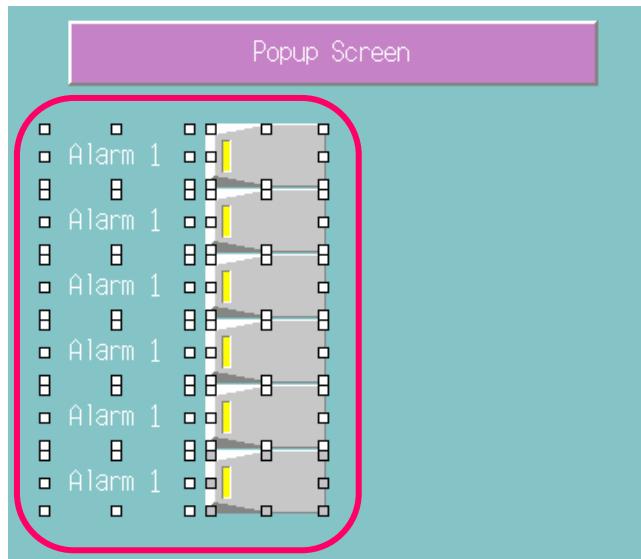
Repeat Function

[Qty]
Horizontal → "1"
Vertical → "6"

[Spacing]
Horizontal → "0"
Vertical → "0"

[Offset Address] → "1"

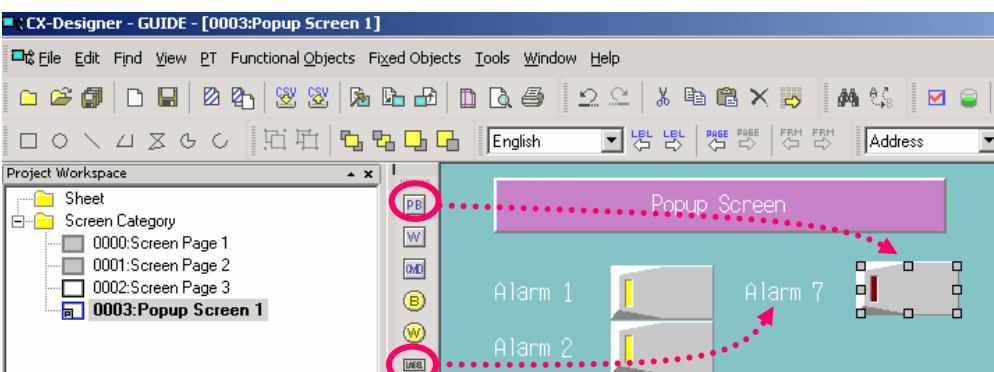
Enter an object label as "Alarm 1" to "Alarm 6" respectively.



Create an ON/OFF button and label it as "Alarm 7" in the way you made "Alarm 1".

Set the text object property list as follow:

[Label]
→ "Alarm 7"



Set the ON/OFF button property list as follow :

General tab

[Address]

→ "HOST1: 00002.00"

[Action]

→ "Alternate"

[Type]

→ "Select Shape"

(Type1)"

[Shape 1]

→ Click



to display the Select Shape dialog box and

select the switch

"SS1042.VEC".

[Shape 2]

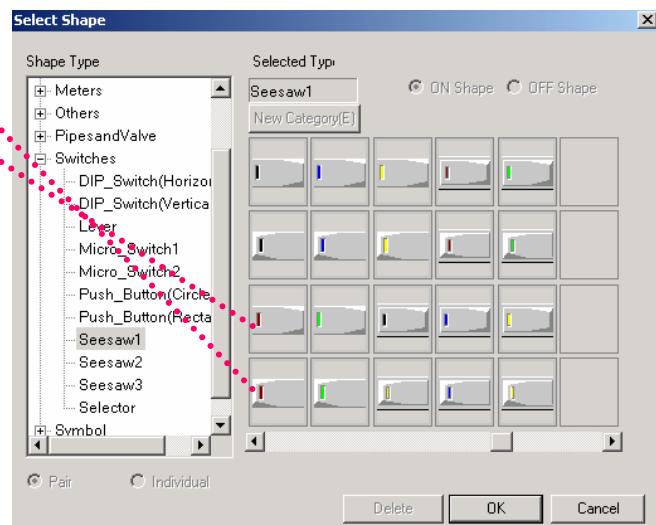
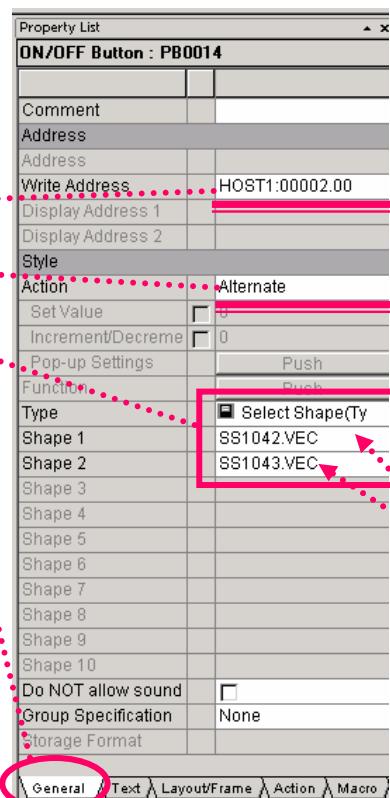
→ Click



To display the Select Shape dialog box and

select the switch

"SS1043.VEC"



Create six ON/OFF buttons and labels using the Repeat function.

Repeat function

Set as follow:

[Qty]

Horizontal → "1"

Vertical → "6"

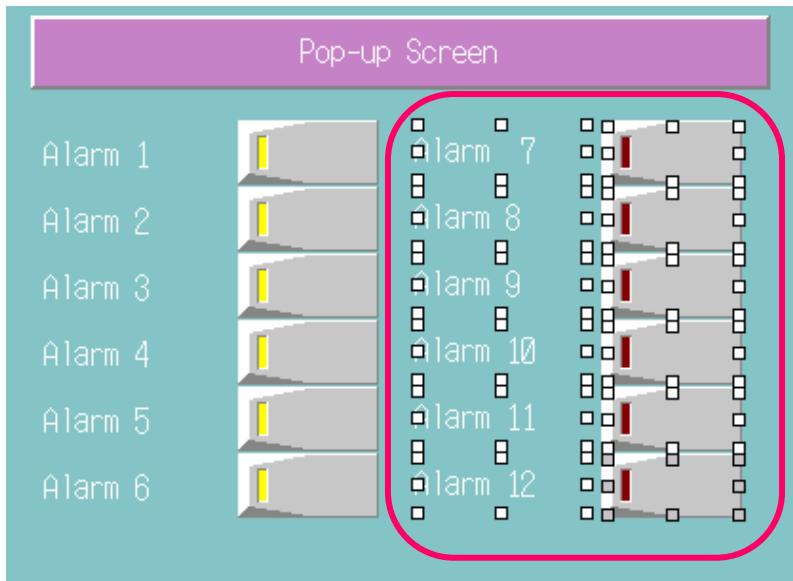
[Spacing]

Horizontal → "0"

Vertical → "0"

[Offset Address] → "1"

Enter an object label as "Alarm 7" to "Alarm 12" respectively.



Start up CX-D

Creating a new project

Project property

System setting

Creating a screen

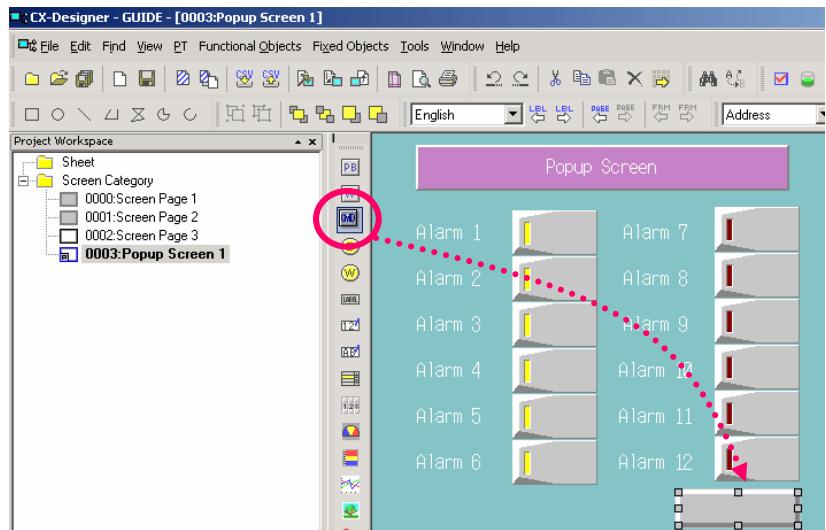
Validation

Transferring a project

Select the Command button

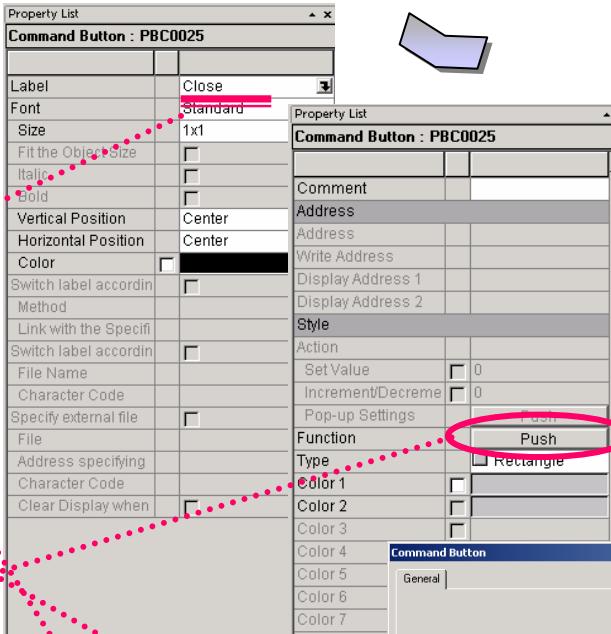


on the list.



Set the object property list as follow.

Text tab
[Label]
→ "Close"

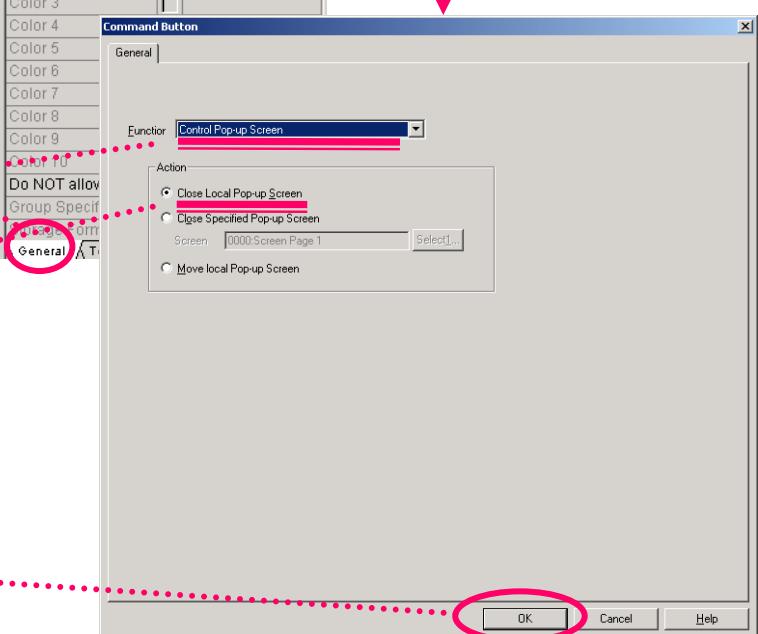


General tab
[Function]

Click

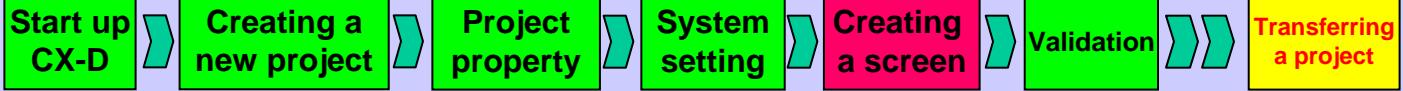
Push

[Function]
→ "Control Pop-up"
Screen"
[Action]
→ "Close Local Pop-up
Screen"



Click

OK



20. Sheet

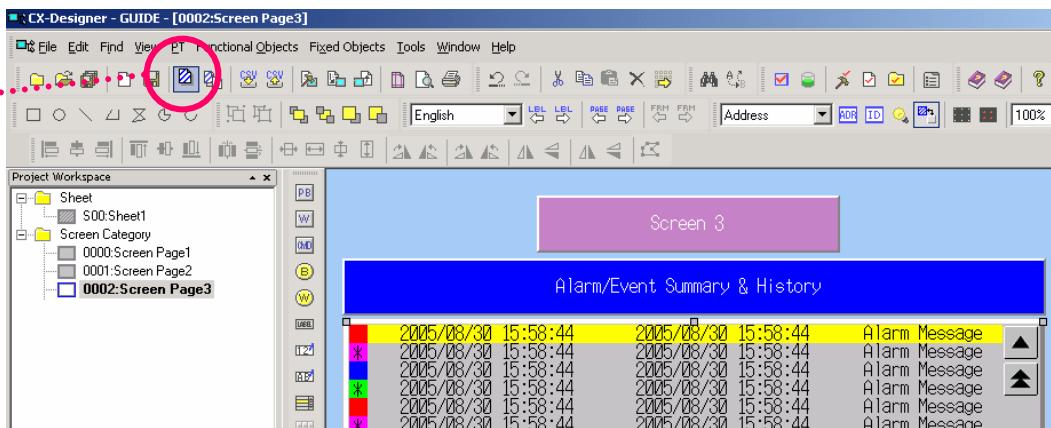
Sheet is a screen that is able to be overlapped on a normal screen and displayed. If you create functional objects on a sheet that you want to use for more than one screen, those objects can be used on all screens applied to the sheet just by setting at [apply sheet].

In this manual, you will create a Switch Label button, a Pop-up Display button, and a Switch Screen button in the sheet, that are commonly used on screens 1 to 3.

Select the Sheet icon.

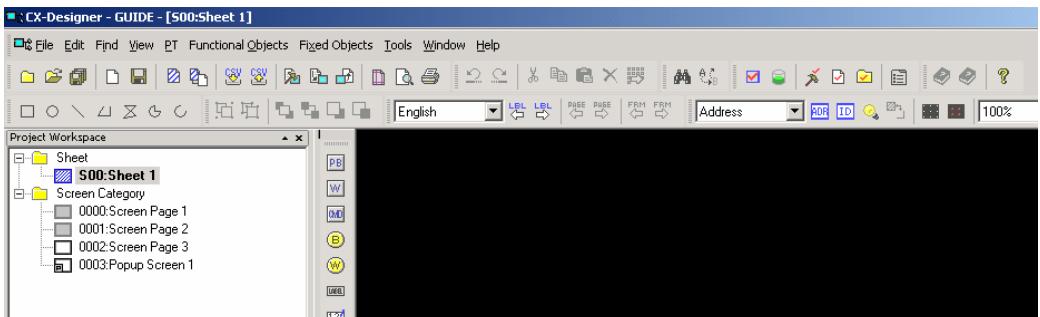


Enter "Sheet 1" in Title.



Click

A new sheet is created.



21. Word Button/Command Button

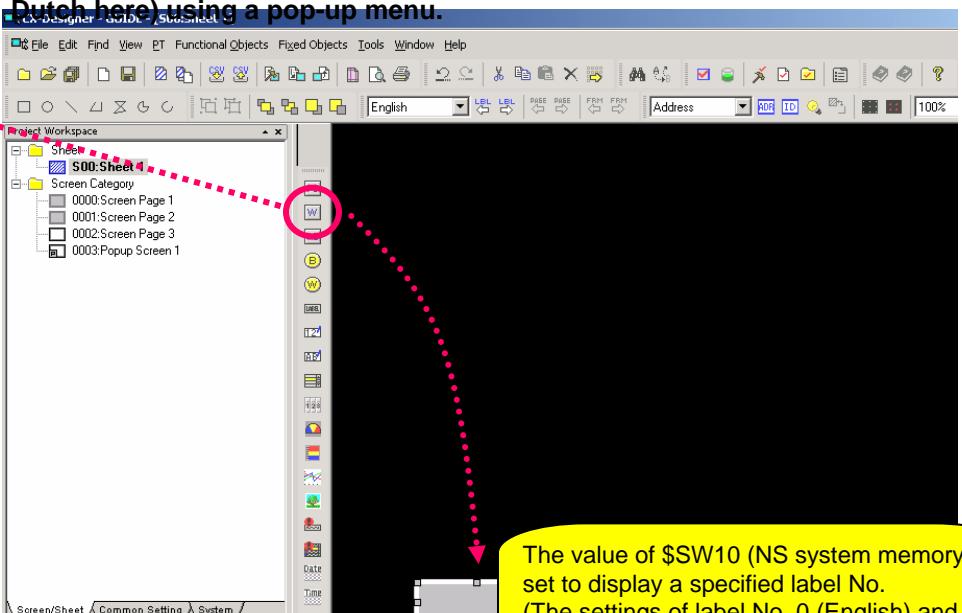
21-1 Switch label button

Click the Word button



on the list

Word button is an object that writes constants to a specified address when it is pressed, or increases/decreases a value of the specified address. It is possible to write a specified value to the item selected from a pop-up menu. In this manual, you will make a button to switch labels (switching English and Dutch here) using a pop-up menu.



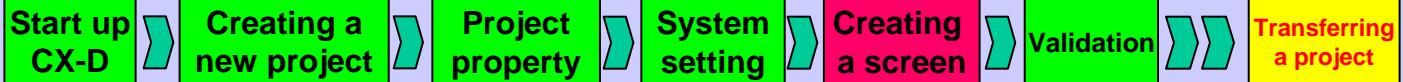
The value of \$SW10 (NS system memory) is set to display a specified label No. (The settings of label No. 0 (English) and No. 1 (Dutch) made to the initial project property are applied.)

Property List	
Word Button : PBW0000	
Comment	
Address	
Address	
Write Address	\$SW10
Display Address 1	
Display Address 2	
Style	
Action	Display Pop-up Menu
<input type="checkbox"/> SetValue	<input type="checkbox"/> Set Value
<input type="checkbox"/> Increment/Decrement	<input type="checkbox"/> Increment/Decrement
Pop-up Settings	Display Pop-up Menu
Function	Push
Type	Rectangle
Color 1	<input type="checkbox"/>
Color 2	<input type="checkbox"/>
Color 3	<input type="checkbox"/>
Color 4	<input type="checkbox"/>
Color 5	<input type="checkbox"/>
Color 6	<input type="checkbox"/>
Color 7	<input type="checkbox"/>
Color 8	<input type="checkbox"/>
Color 9	<input type="checkbox"/>
Color 10	<input type="checkbox"/>
Do NOT allow sound	<input type="checkbox"/>
Group Specification	
Storage Format	INT(Singed 1 word)
General	
Text	
Layout/Frame	
Action	
Macro	
Co	

Property List	
Word Button : PBW0000	
Comment	
Address	
Address	
Write Address	\$SW10
Display Address 1	
Display Address 2	
Style	
Action	Display Pop-up Menu
<input type="checkbox"/> SetValue	<input type="checkbox"/> 0
<input type="checkbox"/> Increment/Decrement	<input type="checkbox"/> 1
Pop-up Settings	Push
Function	PUSH
Type	Rectangle
Color 1	<input type="checkbox"/>
Color 2	<input type="checkbox"/>
Color 3	<input type="checkbox"/>
Color 4	<input type="checkbox"/>
Color 5	<input type="checkbox"/>
Color 6	<input type="checkbox"/>
Color 7	<input type="checkbox"/>
Color 8	<input type="checkbox"/>
Color 9	<input type="checkbox"/>
Color 10	<input type="checkbox"/>
Do NOT allow sound	<input type="checkbox"/>
Group Specification	
Storage Format	INT(Singed 1 word)
General	
Text	
Layout/Frame	
Action	
Macro	
Co	

Set as follow in the object property list:
General tab
[Write Address]
→ "\$W10"
[Action]
→ "Display Pop-up Menu"

Click the Push button of the Pop-up Settings on the General tab.

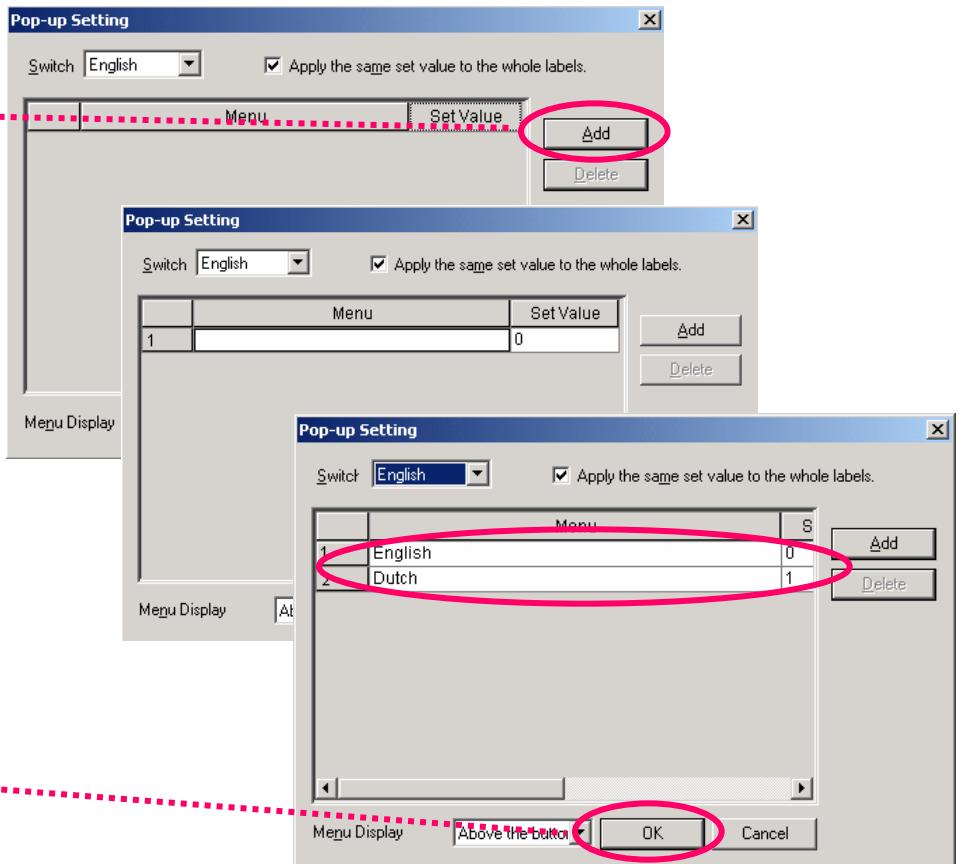


Click

Add

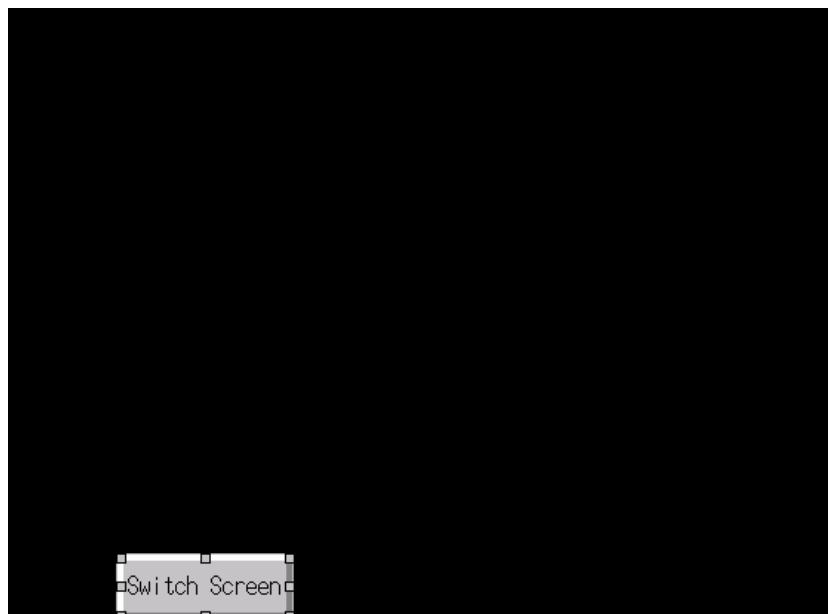
Add the following settings in the Pop-up settings:

- [1] [Menu] → "English"
- [Set Value] → "0"
- [2] [Menu] → "Dutch"
- [Set Value] → "1"



Click

OK



21-2 Switch screen button

Using a command button.

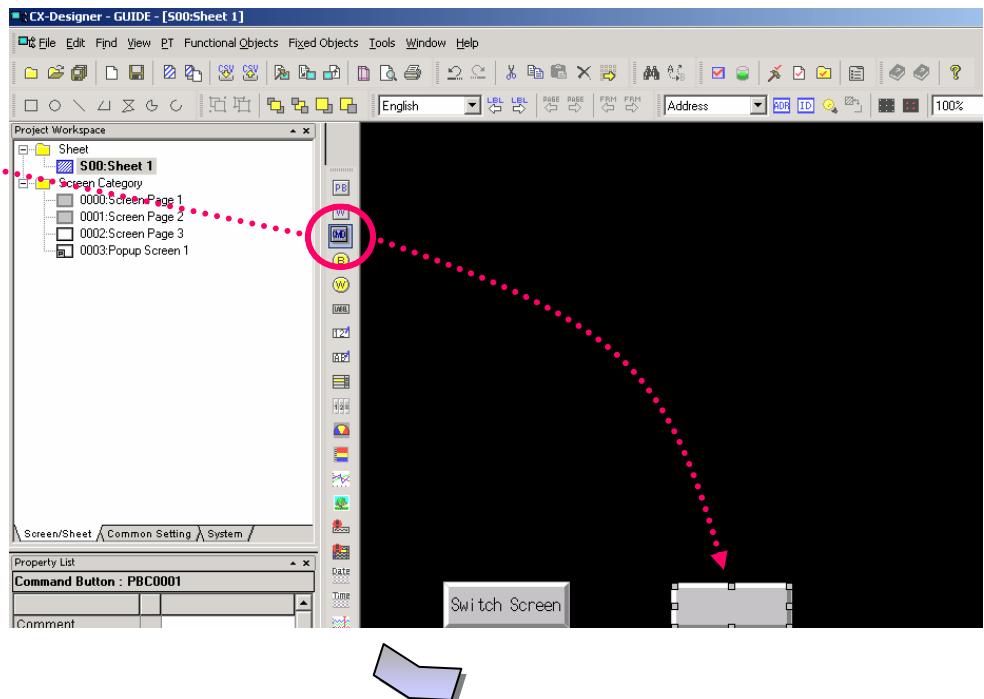
Command button is a object to switch screens and send a string code.

In this manual, it is used to switch the virtual alarm pop-up screen and screens 1 to 3. Create a command button to display the pop-up screen on the sheet created on the previous page.

Click the Command button

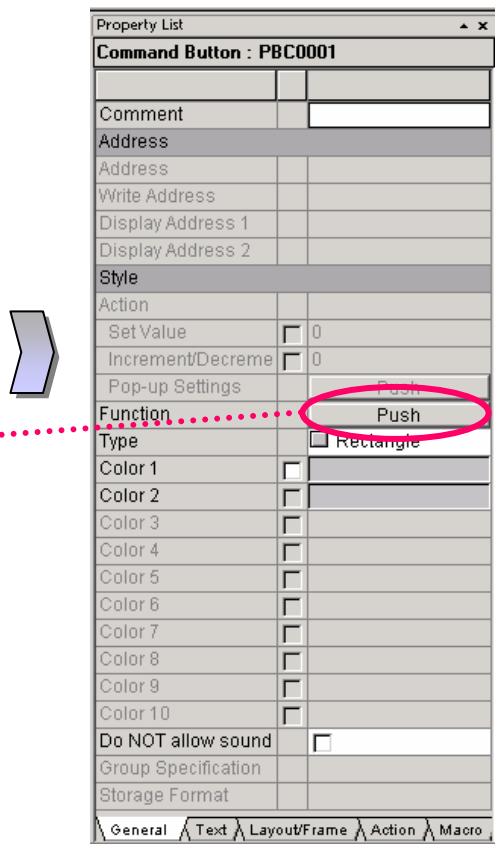
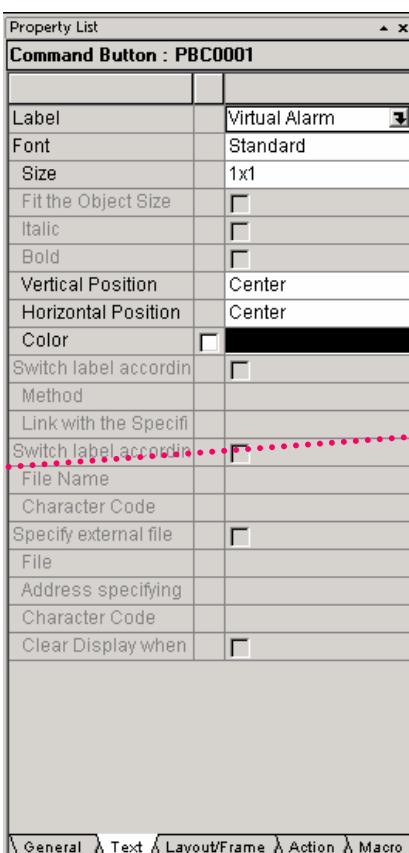


on the list

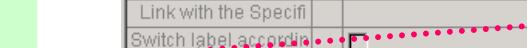


Set as follow on the object property list:

Text tab
[Label]
→ "Virtual Alarm
Display"



Click the Push button of [Function] on the General tab.



Start up CX-D

Creating a new project

Project property

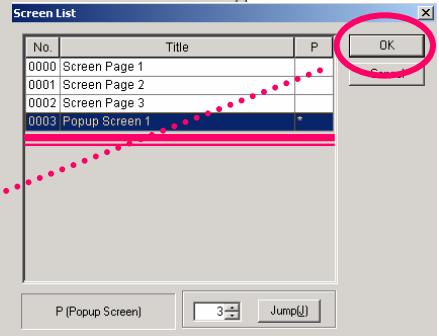
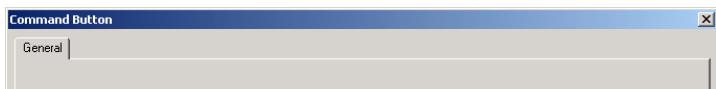
System setting

Creating a screen

Validation

Transferring a project

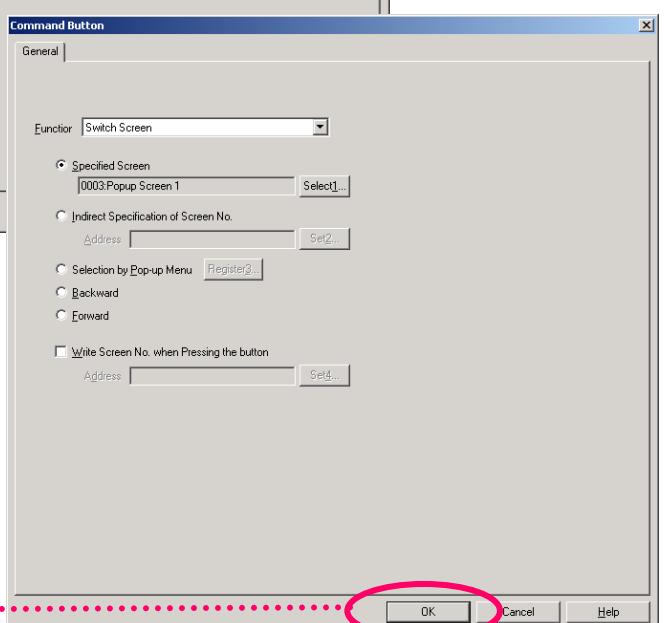
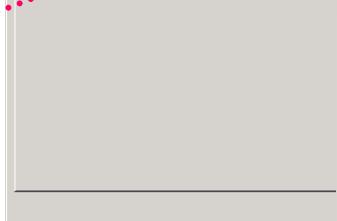
Click the [Select] button.



The Screen List dialog appears.
Select "Pop-up 1" and

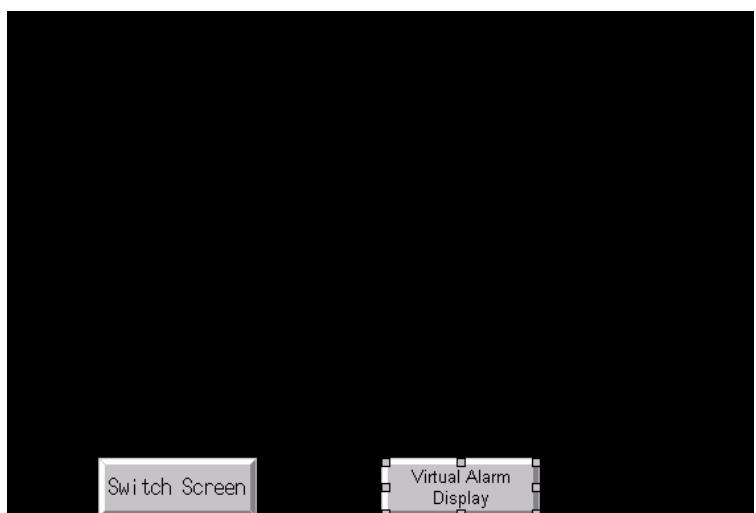
Click

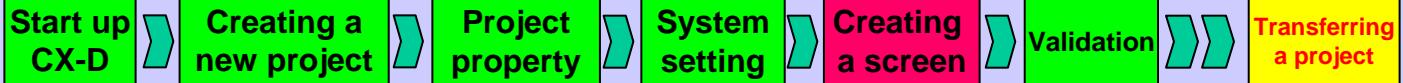
OK



Click

OK





Create a screen switching button (CMD button) labeled as Screen 1 to Screen 3 in the way you made "Virtual Alarm Display".

Click the PUSH button on the right side of [Function] to display the dialog. Set each button as follow:

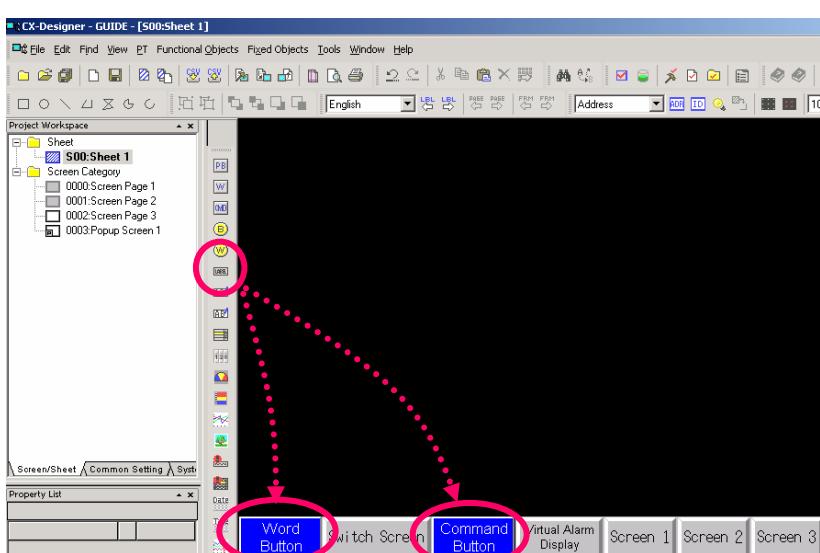
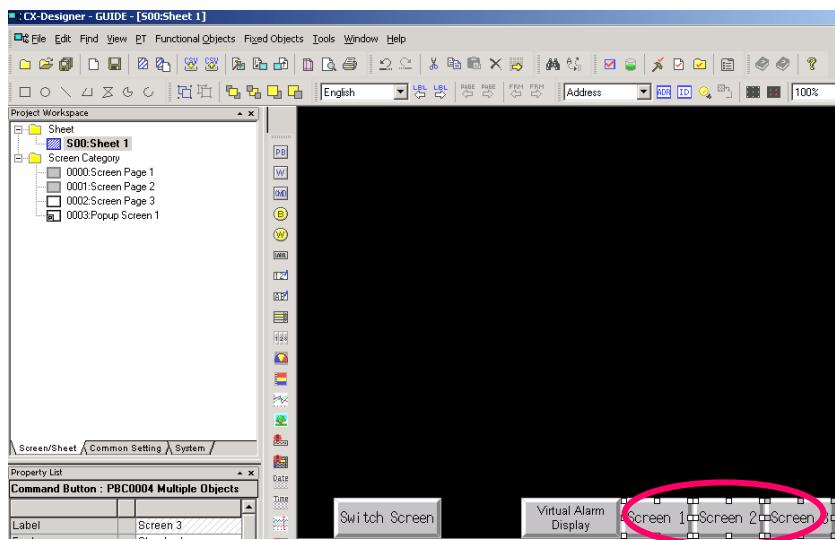
[Screen 1]
[Specified Screen]
→ "0000: Screen 1"

[Screen 2]
[Specified Screen]
→ "0001: Screen 2"

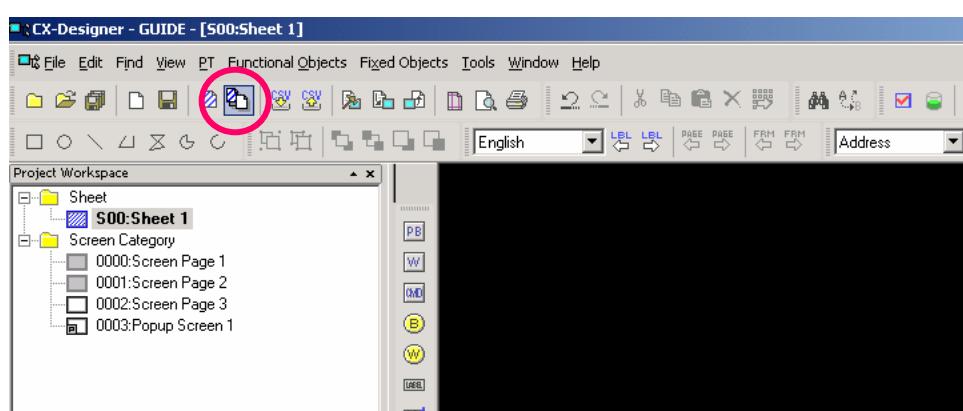
[Screen 3]
[Specified Screen]
→ "0002: Screen 3"

Create two labels as shown on the right by referring to "9. Displaying a Text".

[Label]
→ "Word Button"
[Label]
→ "Command Button"



Click the Apply Sheet button.



Start up
CX-D

Creating a
new project

Project
property

System
setting

Creating
a screen

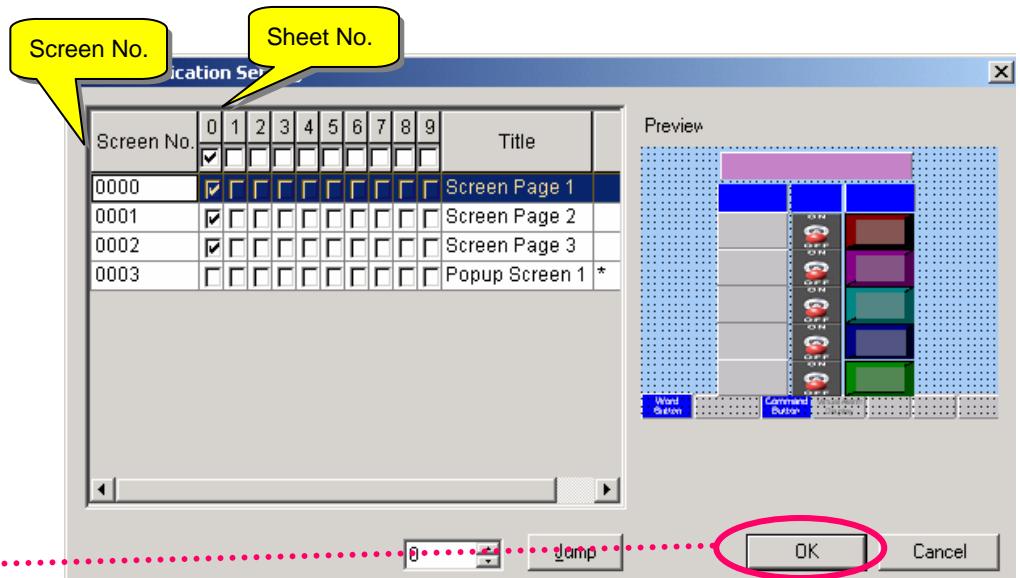
Validation

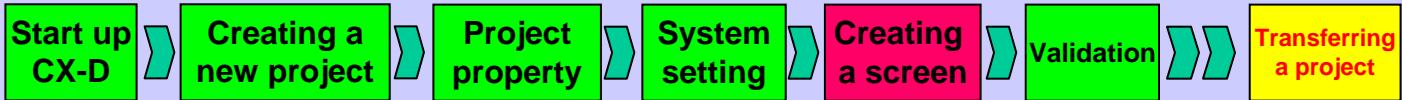
Transferring
a project

Check the Sheet No. 0 boxes to all of the Screen No. 0000 to 0003.

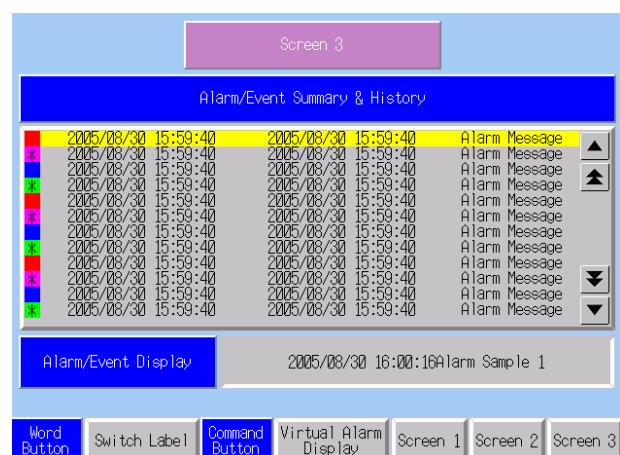
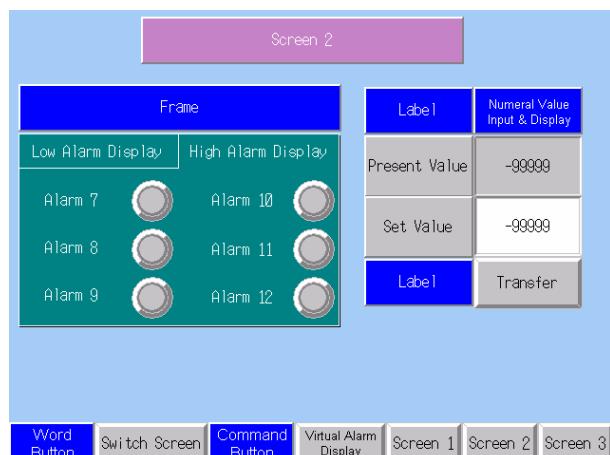
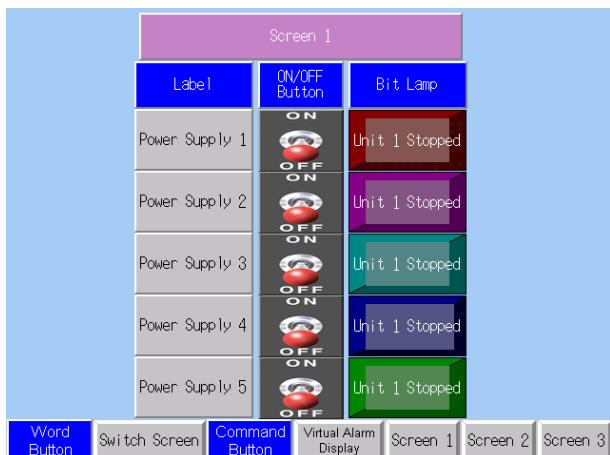
Click

OK





These are the three screens created so far.



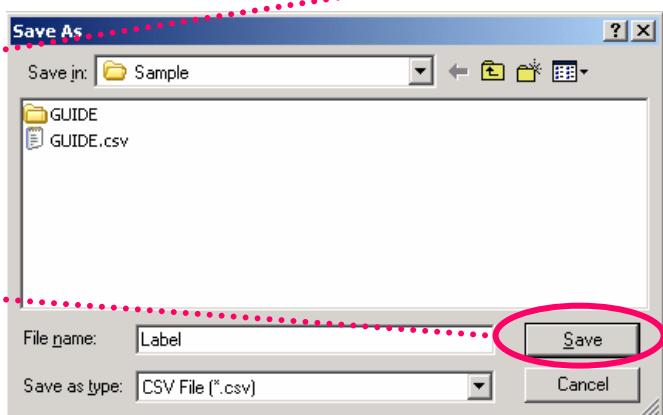
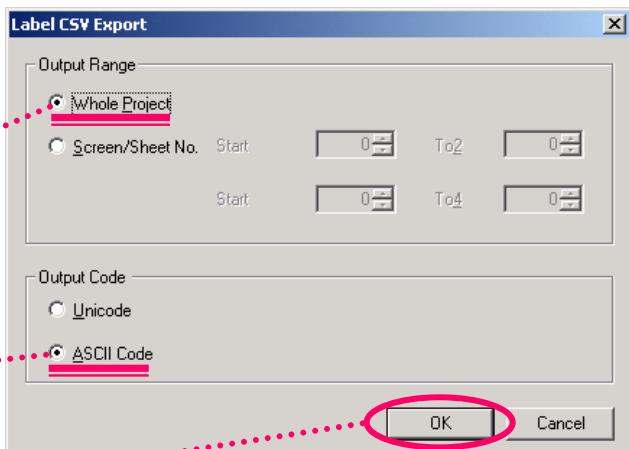
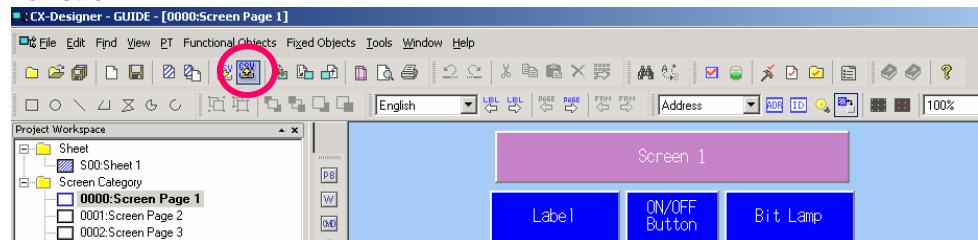
22. Creating another Language label

22-1 Creating a Dutch label

Click the [CSV File Export] button.



Up to 16 different labels (characters) can be set for each functional object. In this manual, you will create a project with two labels, English and Dutch, that can be switched by a one-touch operation using the label switching function.



Check [Label/Message] in the [Target].

Click

OK

Check [Whole Project] in the [Output Range].

Check [ASCII Code] in the [Output Code].

Click

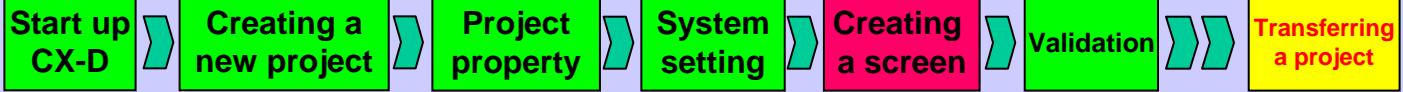
OK

Enter a file name (here Label) and click Save.

Save

Click

OK



Read the file saved on the previous page with EXCEL. (Select [Data] menu – [Get External Data] – Import Text File...].

Microsoft Excel - Label.csv

	A	B	C	D	E	F	G
1	PRJ						
2	Project/Sc Title	Parts ID	Parts Com	Property	English	Dutch	
3	Project			AlarmMessage-0	Alarm 1	Alarm 1	
4	Project			AlarmMessage-1	Alarm 2	Alarm 2	
5	Project			AlarmMessage-2	Alarm 3	Alarm 3	
6	Project			AlarmMessage-3	Alarm 4	Alarm 4	
7	Project			AlarmMessage-4	Alarm 5	Alarm 5	
8	Project			AlarmMessage-5	Alarm 6	Alarm 6	
9	Project			AlarmMessage-6	Alarm 7	Alarm 7	
10	Project			AlarmMessage-7	Alarm 8	Alarm 8	
11	Project			AlarmMessage-8	Alarm 9	Alarm 9	



Microsoft Excel - Label.csv

	A	B	C	D	E	F	G
31	Screen-0	Screen Page1	PB0006	Caption-ON	LABEL	LABEL	
32	Screen-0	Screen Page1	LBL0007	Caption	Power Supply1	Voeding1	
33	Screen-0	Screen Page1	LBL0008	Caption	Power Supply2	Voeding2	
34	Screen-0	Screen Page1	LBL0009	Caption	Power Supply3	Voeding3	
35	Screen-0	Screen Page1	LBL0010	Caption	Power Supply4	Voeding4	
36	Screen-0	Screen Page1	LBL0011	Caption	Power Supply5	Voeding5	
37	Screen-0	Screen Page1	LBL0012	Caption	Bit Lamp	Bit Lamp	
38	Screen-0	Screen Page1	LBL0013	Caption	Caption-OFF	Unit 1 Stopped	Unit1 Inactief
39	Screen-0	Screen Page1	PL0014	Caption-ON	Unit 1 Running	Unit1 Actief	
40	Screen-0	Screen Page1	PL0014	Caption-OFF	Unit 2 Stopped	Unit2 Inactief	
41	Screen-0	Screen Page1	PL0015	Caption-ON	Unit 2 Running	Unit2 Actief	
42	Screen-0	Screen Page1	PL0015	Caption-OFF	Unit 3 Stopped	Unit3 Inactief	
43	Screen-0	Screen Page1	PL0016	Caption-ON	Unit 3 Running	Unit3 Actief	
44	Screen-0	Screen Page1	PL0016	Caption-OFF	Unit 4 Stopped	Unit4 Inactief	
45	Screen-0	Screen Page1	PL0017	Caption-ON	Unit 4 Running	Unit4 Actief	
46	Screen-0	Screen Page1	PL0017	Caption-OFF	Unit 5 Stopped	Unit5 Inactief	
47	Screen-0	Screen Page1	PL0018	Caption-ON	Unit 5 Running	Unit5 Actief	
48	Screen-1	Screen Page2	LBL0000	Caption	Screen 2	Schemer 2	
50	Screen-1	Screen Page2	LBL0001	Caption	Frame	Frame	
51	Screen-1	Screen Page2	LBL0003	Caption	Light Alarm Display	Laag Alarm View	
52	Screen-1	Screen Page2	LBL0004	Caption	High Alarm Display	Hog Alarm View	

Enter labels in Dutch
for the Screen Page 1.

.....

Start up
CX-D

Creating a
new project

Project
property

System
setting

Creating
a screen

Validation

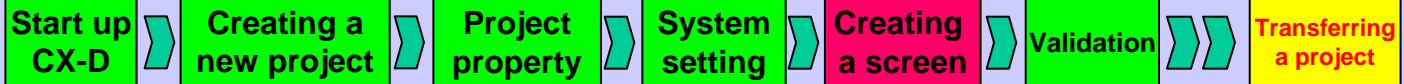
Transferring
a project

Microsoft Excel - Label.csv						
					English	Dutch
49	Screen-1	Screen Page2	LBL0000		Caption	Screen 2
50	Screen-1	Screen Page2	LBL0001		Caption	Frame
51	Screen-1	Screen Page2	LBL0003		Caption	Light Alarm Display
52	Screen-1	Screen Page2	LBL0004		Caption	High Alarm Display
53	Screen-1	Screen Page2	PL0005		Caption	
54	Screen-1	Screen Page2	PL0006		Caption	
55	Screen-1	Screen Page2	PL0007		Caption	
56	Screen-1	Screen Page2	PL0008		Caption	
57	Screen-1	Screen Page2	PL0009		Caption	
58	Screen-1	Screen Page2	PL0010		Caption	
59	Screen-1	Screen Page2	LBL0011		Caption	Alarm 1
60	Screen-1	Screen Page2	LBL0012		Caption	Alarm 2
61	Screen-1	Screen Page2	LBL0013		Caption	Alarm 3
62	Screen-1	Screen Page2	LBL0014		Caption	Alarm 4
63	Screen-1	Screen Page2	LBL0015		Caption	Alarm 5
64	Screen-1	Screen Page2	LBL0016		Caption	Alarm 6
65	Screen-1	Screen Page2	PL0017		Caption	
66	Screen-1	Screen Page2	PL0018		Caption	
67	Screen-1	Screen Page2	PL0019		Caption	
68	Screen-1	Screen Page2	PL0020		Caption	
69	Screen-1	Screen Page2	PL0021		Caption	
70	Screen-1	Screen Page2	PL0022		Caption	
71	Screen-1	Screen Page2	LBL0023		Caption	Alarm 7
72	Screen-1	Screen Page2	LBL0024		Caption	Alarm 8
73	Screen-1	Screen Page2	LBL0025		Caption	Alarm 9
74	Screen-1	Screen Page2	LBL0026		Caption	Alarm 10
75	Screen-1	Screen Page2	LBL0027		Caption	Alarm 11
76	Screen-1	Screen Page2	LBL0028		Caption	Alarm 12
77	Screen-1	Screen Page2	LBL0029		Caption	Present Value
78	Screen-1	Screen Page2	LBL0030		Caption	Set Value
79	Screen-1	Screen Page2	PBW0033		Caption	Transfer
80	Screen-1	Screen Page2	LBL0034		Caption	Word Button
81	Screen-1	Screen Page2	LBL0035		Caption	Numerical Input & Display
82	Screen-1	Screen Page2	LBL0036		Caption	Label
83	Screen-2	Screen Page3	LBL0000		Caption	Screen 3

Microsoft Excel - Label.csv						
					Screen Page 3	
83	Screen-2	Screen Page3	LBL0000		Caption	Screen 3
84	Screen-2	Screen Page3	LBL0001		Caption	Alarm/Event Display
85	Screen-2	Screen Page3	LBL0004		Caption	Alarm/Event Summary & History
86	Screen-3	Pop-up Screen1	LBL0000		Caption	Pop-up Screen

Enter labels in Dutch for
the Screen Pages 2 to 3.

"\n" n character strings is
a line feed.



Enter labels in Dutch for the Pop-up Screen.

"\n" in character strings is a line feed.

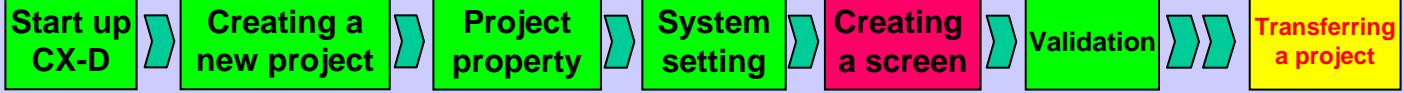
Microsoft Excel -

File Edit View Window Help

Pop-up Screen 1 English Dutch

H130

A	B	C	D	E	F	G
86	Screen-3	Pop-up Screen1 LBL0000		Caption	Pop-up Screen	Pop-up Scherm
87	Screen-3	Pop-up Screen1 PB0001		Caption-OFF		
88	Screen-3	Pop-up Screen1 PB0001		Caption-ON		
89	Screen-3	Pop-up Screen1 LBL0002		Caption	Alarm 1	Alarm 1
90	Screen-3	Pop-up Screen1 LBL0003		Caption	Alarm 2	Alarm 2
91	Screen-3	Pop-up Screen1 LBL0004		Caption	Alarm 3	Alarm 3
92	Screen-3	Pop-up Screen1 LBL0005		Caption	Alarm 4	Alarm 4
93	Screen-3	Pop-up Screen1 LBL0006		Caption	Alarm 5	Alarm 5
94	Screen-3	Pop-up Screen1 LBL0007		Caption	Alarm 6	Alarm 6
95	Screen-3	Pop-up Screen1 PB0008		Caption-OFF		
96	Screen-3	Pop-up Screen1 PB0008		Caption-ON		
97	Screen-3	Pop-up Screen1 PB0009		Caption-OFF		
98	Screen-3	Pop-up Screen1 PB0009		Caption-ON		
99	Screen-3	Pop-up Screen1 PB0010		Caption-OFF		
100	Screen-3	Pop-up Screen1 PB0010		Caption-ON		
101	Screen-3	Pop-up Screen1 PB0011		Caption-OFF		
102	Screen-3	Pop-up Screen1 PB0011		Caption-ON		
103	Screen-3	Pop-up Screen1 PB0012		Caption-OFF		
104	Screen-3	Pop-up Screen1 PB0012		Caption-ON		
105	Screen-3	Pop-up Screen1 LBL0013		Caption	Alarm 7	Alarm 7
106	Screen-3	Pop-up Screen1 PB0014		Caption-OFF		
107	Screen-3	Pop-up Screen1 PB0014		Caption-ON		
108	Screen-3	Pop-up Screen1 LBL0015		Caption	Alarm 8	Alarm 8
109	Screen-3	Pop-up Screen1 LBL0016		Caption	Alarm 9	Alarm 9
110	Screen-3	Pop-up Screen1 LBL0017		Caption	Alarm 10	Alarm 10
111	Screen-3	Pop-up Screen1 LBL0018		Caption	Alarm 11	Alarm 11
112	Screen-3	Pop-up Screen1 LBL0019		Caption	Alarm 12	Alarm 12
113	Screen-3	Pop-up Screen1 PB0020		Caption-OFF		



Enter labels for [Sheet] in Dutch.

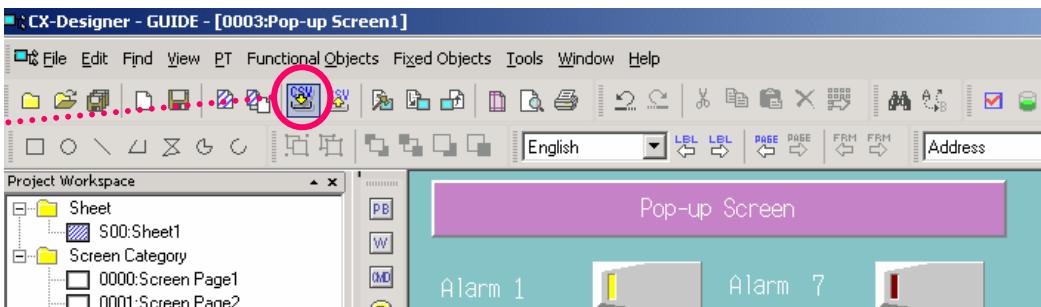
"\n" n character strings is a line feed.

Sheet

English **Dutch**

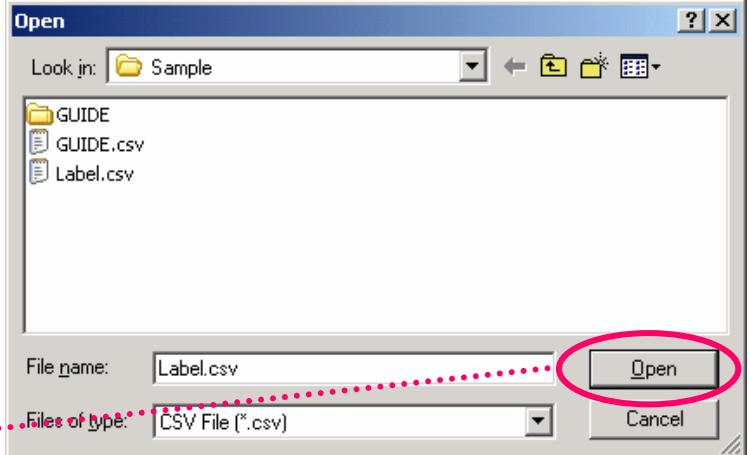
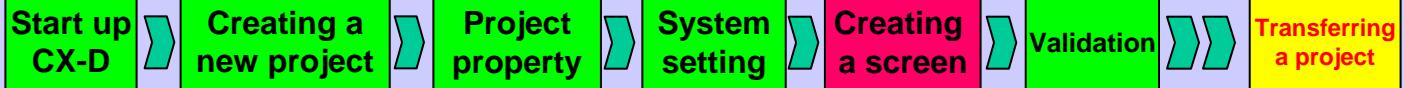
A	B	C	D	E	F	G	H
123	Screen-3	Pop-up Screen1	PBC0025	Caption	Close	Sluiten	
124	Sheet-0	Sheet1	PBW0000	Caption	Switch Label	Verande\nLabel	
125	Sheet-0	Sheet1	PBW0000	MenuName	English	Engels	
126	Sheet-0	Sheet1	PBW0000	MenuName	Japanese	Japans	
127	Sheet-0	Sheet1	PBC0001	Caption	Virtual Alarm\nDisplay	VirtueelAlarm\nWeergave	
128	Sheet-0	Sheet1	PBC0002	Caption	Screen 1	Scherm 1	
129	Sheet-0	Sheet1	PBC0003	Caption	Screen 2	Scherm 2	
130	Sheet-0	Sheet1	PBC0004	Caption	Screen 3	Scherm 3	
131	Sheet-0	Sheet1	LBL0005	Caption	Word\nButton	Word\nKnop	
132	Sheet-0	Sheet1	LBL0006	Caption	Commando\nButton	Commando\nKnop	
133							
134							
135							
136							

Save the file when you have finished editing.



Click

OK



Enter the file name that has just been specified and click the [Open] button.



Click





English Labels

Screen 1

Screen 1			
Label	On/Off Button	Bit Lamp	
Power Supply1		 Unit 1 Stopped	
Power Supply2		 Unit 2 Stopped	
Power Supply3		 Unit 3 Stopped	
Power Supply4		 Unit 4 Stopped	
Power Supply5		 Unit 5 Stopped	

Word Button	Switch Label	Command Button	Virtual Alarm Display	Screen1	Screen2	Screen3
----------------	--------------	-------------------	--------------------------	---------	---------	---------

Screen 2

The screenshot shows a LabVIEW front panel titled "Screen 2". It features a "Frame" section with three displays: "Low Alarm Display", "High Alarm Display", and "Numerical Display & Input". Below the displays are three sets of buttons labeled "Alarm 1", "Alarm 2", and "Alarm 3" respectively. Each set contains two circular buttons. To the right of the frame is a "Label" section with four buttons: "Present Value", "Set Value", "Hold Button", and "Transfer".

Word Button	Switch Label	Command Button	Virtual Alarm Display	Screen 1	Screen 2	Screen 3
----------------	--------------	-------------------	--------------------------	----------	----------	----------

Screen 3

Pop-up Screen

Dutch Labels

Schem 1		
Label	Aan/Uit Knop	Bij Lamp
Voeding1		Unit1 Inactief
Voeding2		Unit2 Inactief
Voeding3		Unit3 Inactief
Voeding4		Unit4 Inactief
Voeding5		Unit5 Inactief

Nord
Knop Verande-
Label Commando
Knop VirtueelAlarm
Weergave Schem 1 Schem 2 Schem 3

Screen 2

Frame		Label		Numeriek Weergeave & Invoer
Laag Alarm View	Hoog Alarm View	Huidige Waarde	-99999	
Alarm 1		Alarm 4		
Alarm 2		Alarm 5		
Alarm 3		Alarm 6		
Word Knoep		Versturen		

Wond Knop	Verande Label	Commando Knop	Virtueel Alar m Weergave	Schem 1	Schem 2	Schem 3
--------------	------------------	------------------	-----------------------------	---------	---------	---------

Screen 3

Pop-up Screen

Bewertung

Alarm 1		Alarm 7	
Alarm 2		Alarm 8	
Alarm 3		Alarm 9	
Alarm 4		Alarm 10	
Alarm 5		Alarm 11	
Alarm 6		Alarm 12	

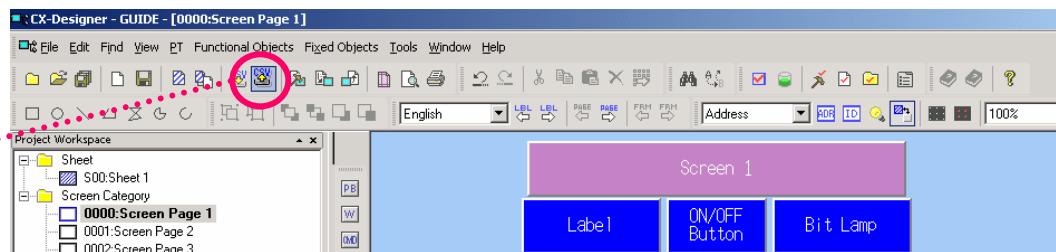
Alarm 1		Alarm 7	
Alarm 2		Alarm 8	
Alarm 3		Alarm 9	
Alarm 4		Alarm 10	
Alarm 5		Alarm 11	
Alarm 6		Alarm 12	

22-2 Setting Alarm/Event in Dutch

Making settings for alarm/event in Dutch.

In this manual, you will create a project with two language labels, English and Dutch.

Click the [CSV File Export] button.



Check [Alarm/Event] in the [Target].



Click



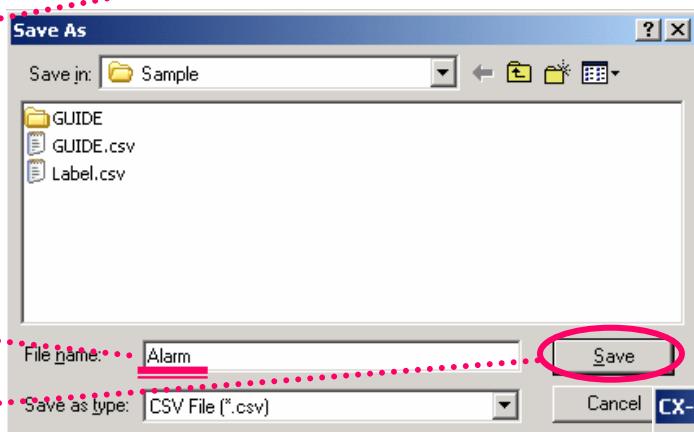
Check [ASCII Code] in the [Output Code].



Click

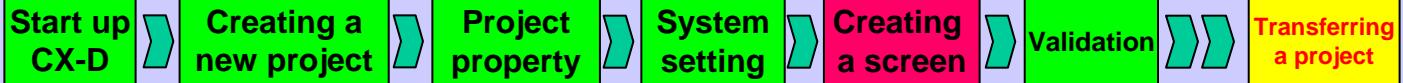


Enter a file name (Alarm is used here) and click



Click





Read the file save on a previous page with EXCEL. (Select [Data] menu – [Get External Data] – Import Text File...].

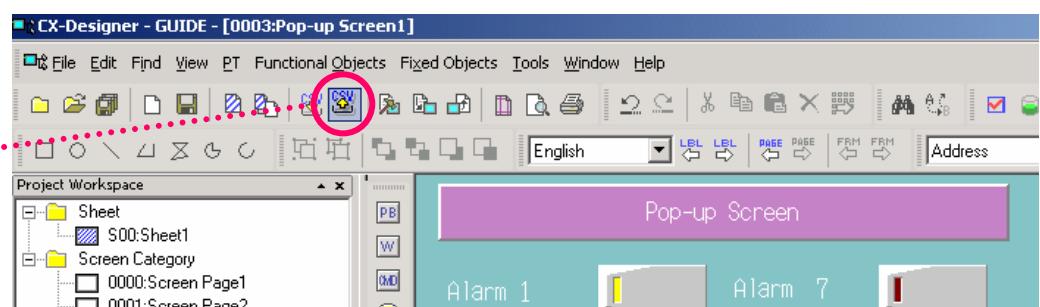
Microsoft Excel - GUIDE.csv

A	B	C	D	E	F	G	H	I	J	K	L	M	N									
Address	Prior	Display	Ty	Group	No.	Auto	Swit	Screen	N	Auto	Del	Save	His	Occurr	Releas	Detection	Label0	Alarm	Message	Label1	Alarm	Message
2 HOST1:00001.00	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge						Alarm 1					
3 HOST1:00001.01	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge						Alarm 2					
4 HOST1:00001.02	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge						Alarm 3					
5 HOST1:00001.03	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge						Alarm 4					
6 HOST1:00001.04	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge						Alarm 5					
7 HOST1:00001.05	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge						Alarm 6					
8 HOST1:00002.00	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge						Alarm 7					
9 HOST1:00002.01	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge						Alarm 8					
10 HOST1:00002.02	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge						Alarm 9					
11 HOST1:00002.03	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge						Alarm 10					
12 HOST1:00002.04	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge						Alarm 11					
13 HOST1:00002.05	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge						Alarm 12					
14 HOST1:00000.00	1	event	0		FALSE	0	FALSE	TRUE	0	0	posedge						Unit 1 Start Running					
15 HOST1:00000.01	1	event	0		FALSE	0	FALSE	TRUE	0	0	posedge						Unit 2 Start Running					
16 HOST1:00000.02	1	event	0		FALSE	0	FALSE	TRUE	0	0	posedge						Unit 3 Start Running					
17 HOST1:00000.03	1	event	0		FALSE	0	FALSE	TRUE	0	0	posedge						Unit 4 Start Running					
18 HOST1:00000.04	1	event	0		FALSE	0	FALSE	TRUE	0	0	posedge						Unit 5 Start Running					

Microsoft Excel - GUIDE.csv

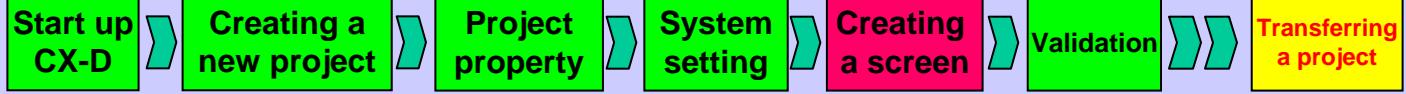
A	B	C	D	E	F	G	H	I	J	K	L	M	N									
Address	Pri	Disp	Ty	Grp	No.	Auto	Swit	Screen	N	Auto	Del	Save	His	Occurr	Released	Detection	Label0	Alarm	Message	Label1	Alarm	Message
2 HOST1:00001.00	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge					Alarm 1						
3 HOST1:00001.01	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge					Alarm 2						
4 HOST1:00001.02	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge					Alarm 3						
5 HOST1:00001.03	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge					Alarm 4						
6 HOST1:00001.04	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge					Alarm 5						
7 HOST1:00001.05	1	lowalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge					Alarm 6						
8 HOST1:00002.00	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge					Alarm 7						
9 HOST1:00002.01	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge					Alarm 8						
10 HOST1:00002.02	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge					Alarm 9						
11 HOST1:00002.03	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge					Alarm 10						
12 HOST1:00002.04	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge					Alarm 11						
13 HOST1:00002.05	1	highalarm	0		FALSE	0	FALSE	TRUE	0	0	posedge					Alarm 12						
14 HOST1:00000.00	1	event	0		FALSE	0	FALSE	TRUE	0	0	posedge					Unit 1 Start Running						
15 HOST1:00000.01	1	event	0		FALSE	0	FALSE	TRUE	0	0	posedge					Unit 2 Start Running						
16 HOST1:00000.02	1	event	0		FALSE	0	FALSE	TRUE	0	0	posedge					Unit 3 Start Running						
17 HOST1:00000.03	1	event	0		FALSE	0	FALSE	TRUE	0	0	posedge					Unit 4 Start Running						
18 HOST1:00000.04	1	event	0		FALSE	0	FALSE	TRUE	0	0	posedge					Unit 5 Start Running						

Write [lowalarm],
[highalarm], and [event]
In Dutch.



Click the [Import CSV
File] button.





Check [Alarm/Event] in the [Target].

Click

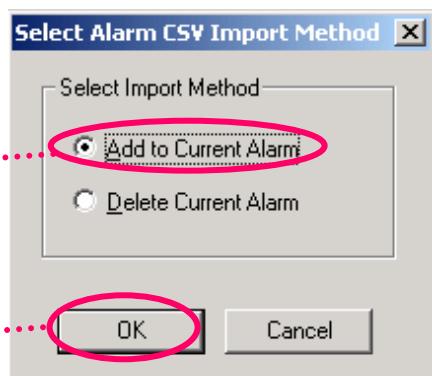
OK



Check [Add to Current Alarm] in the [Selected Import Alarm].

Click

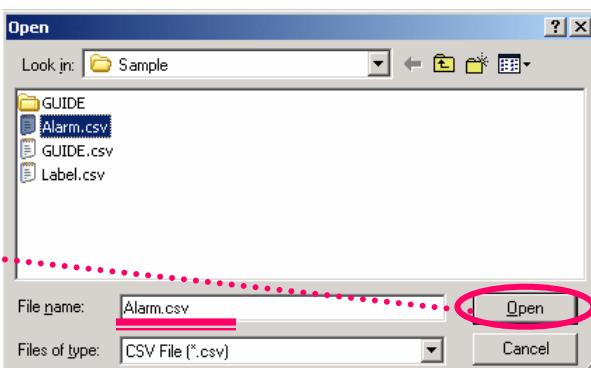
OK



Enter the file name that has just been specified and click the [Open] button.

Click

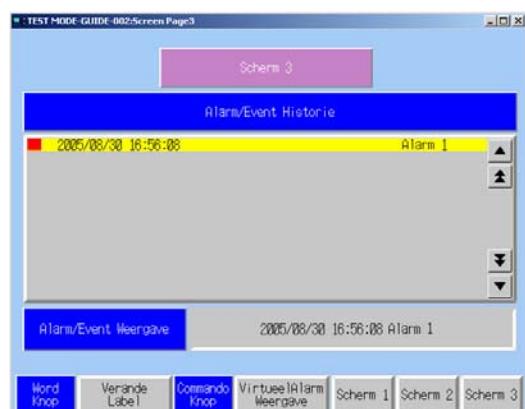
OK



English Label



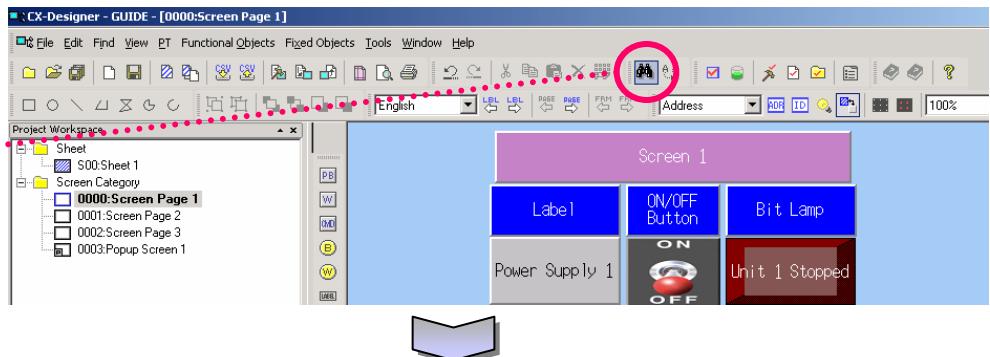
Dutch Label



23. Useful Functions

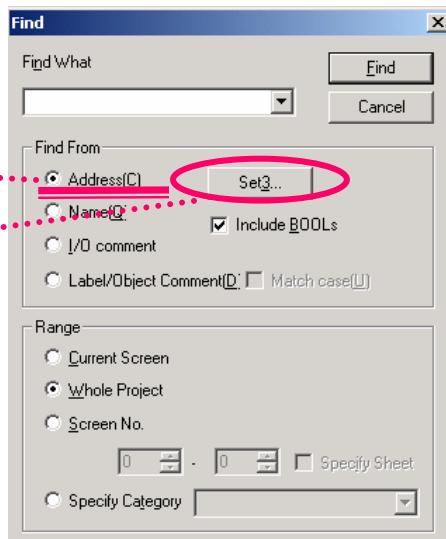
23-1 Find (Address)

Click the [Find] button.

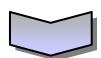


Check [Address] in the [Find What].

Set3...



Click



Host

→ [HOST 1]

Area

→ [Common I/O Area (CIO)]

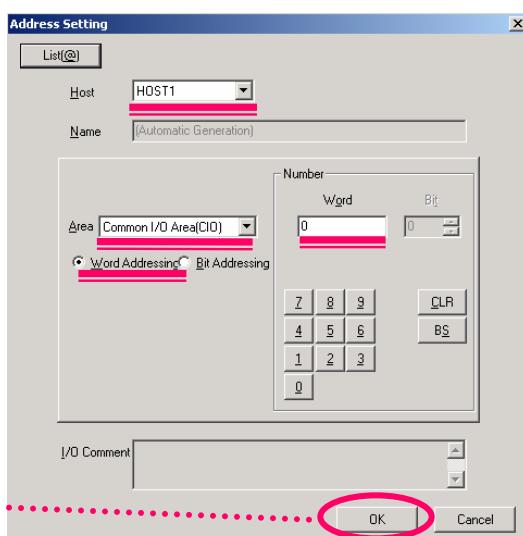
→ Check "Word Addressing"

Word

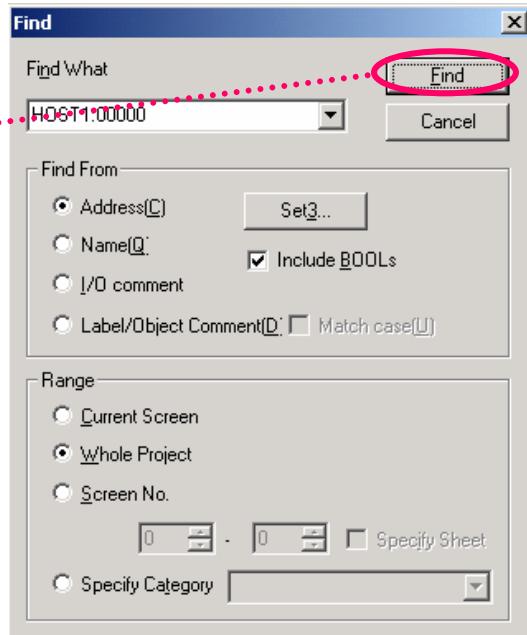
→ [0]

Click

OK

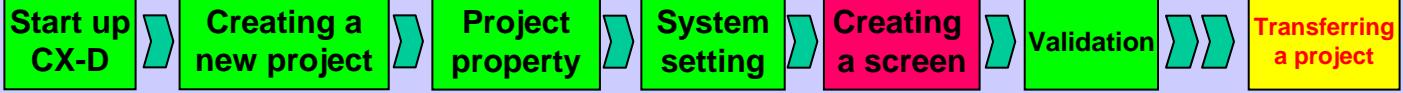


Click the [Find] button.



Page	ID	Host	Name	Address	I/O Comment	Label	Object Comment	Detailed Information
0000	PLD0018	HOST1	AutoGen8	00000.04				Bit Lamp : Display Address
0000	PLD0017	HOST1	AutoGen8	00000.03				Bit Lamp : Display Address
0000	PLD0016	HOST1	AutoGen7	00000.02				Bit Lamp : Display Address
0000	PLD0015	HOST1	AutoGen6	00000.01				Bit Lamp : Display Address
0000	PLD0014	HOST1	AutoGen5	00000.00				Bit Lamp : Display Address
0000	FB0006	HOST1	AutoGen8	00000.04				ON/OFF Button : Write Address
0000	FB0005	HOST1	AutoGen8	00000.03				ON/OFF Button : Write Address

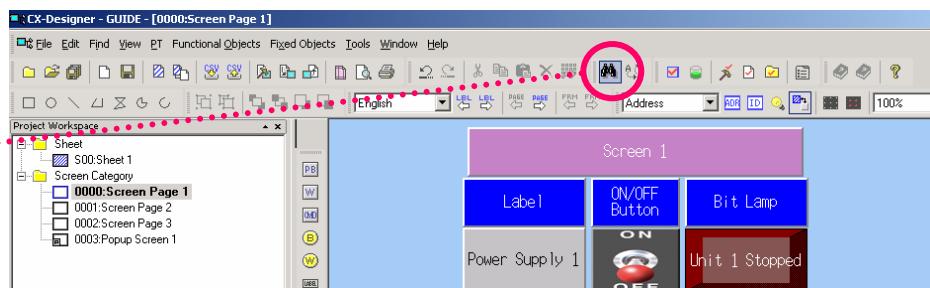
Search results are displayed as a list.



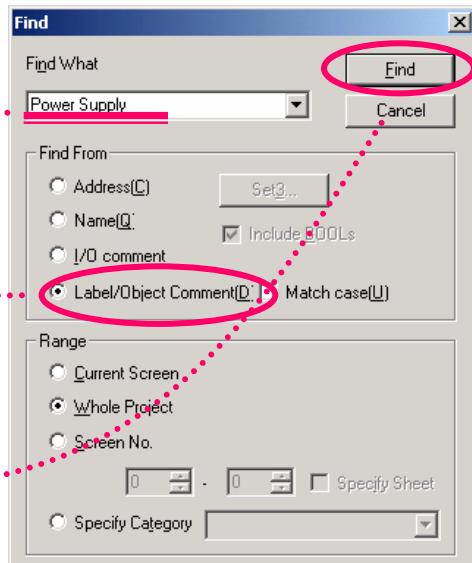
23-2 Find (Label)

Searching labels and object comments used in a project.
In this manual, you will search labels including the character string “Power Supply”.

Click the [Find] button.

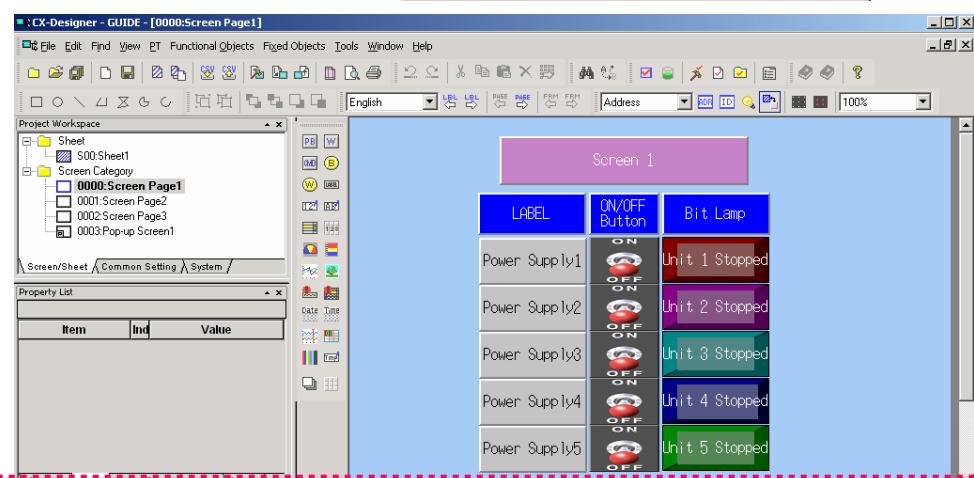


Enter “Power Supply” in [Find What].



Check [Label/Object Comment(D) in the [Find From]

Click



Search results are displayed in a list.

Page	ID	Host	Name	Address	I/O Comment	Label	Object Comment	Detailed Information
0000	LBL0012				Power Supply	Label	Label	
0000	LBL0011				Power Supply	Label	Label	
0000	LBL0010				Power Supply	Label	Label	
0000	LBL0009				Power Supply	Label	Label	
0000	LBL0008				Power Supply	Label	Label	

23-3 Select Object

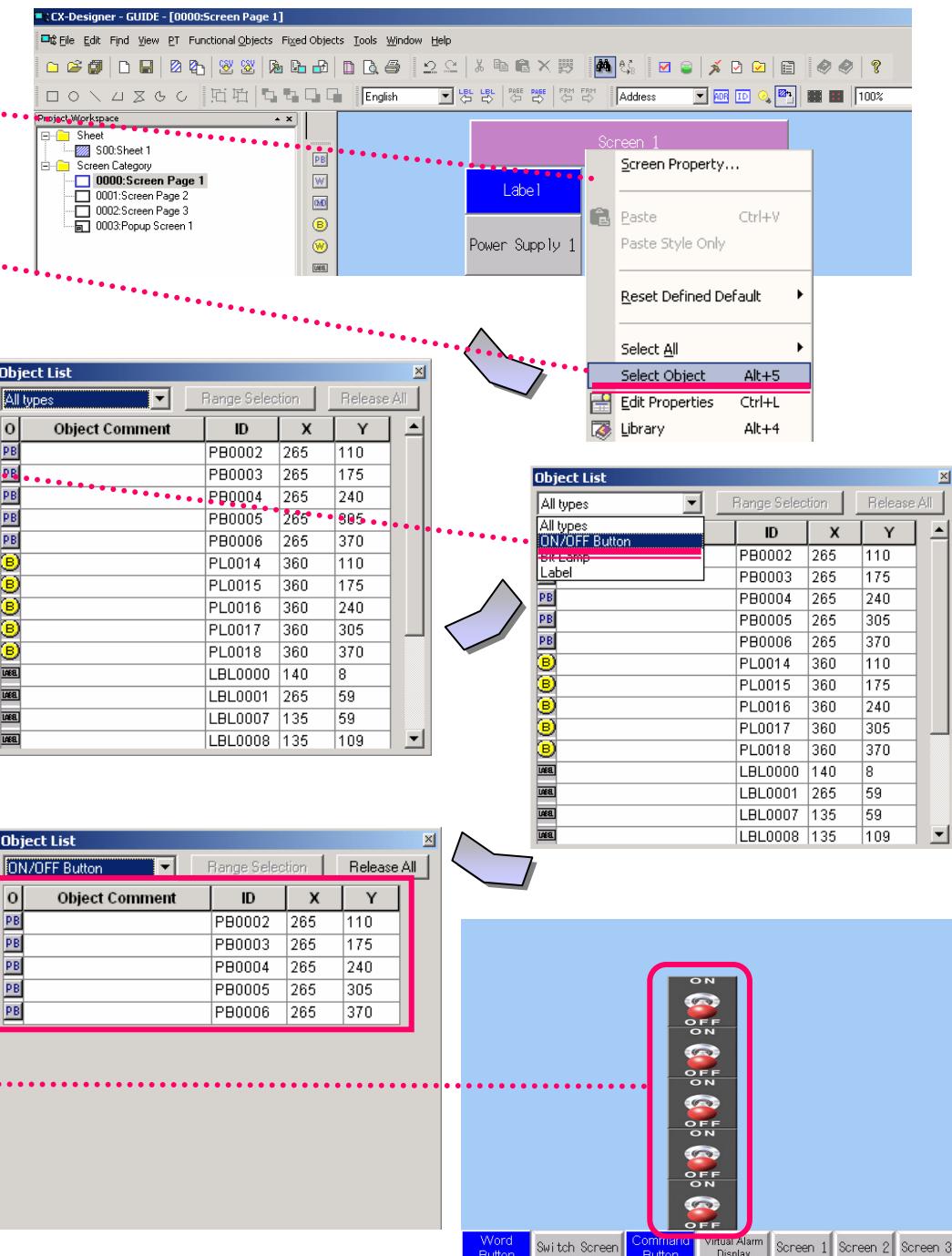
Using “Select Object” function facilitates your search for certain kinds of objects when many kinds of objects are on a screen.
In this manual, you will select ON/OFF buttons.

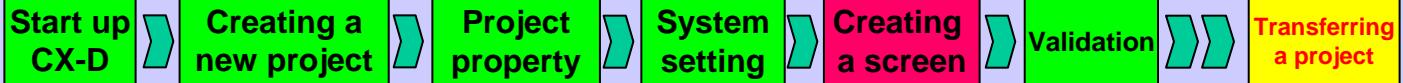
Right-click the screen to display the pull-down menu.

Click [Select Object].

Click [ON/OFF Button].

The ON/OFF Buttons are displayed .





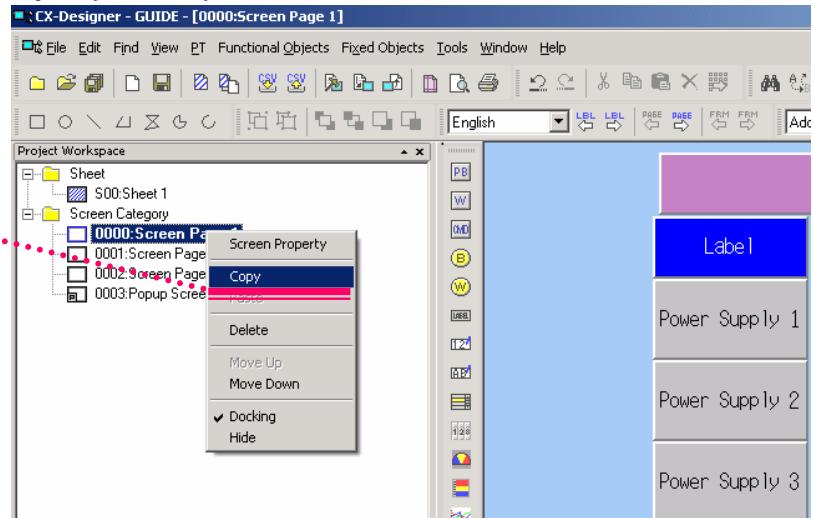
23-4 Reuse of screen (by copying)

“Reuse of Screen” is a function to use an already-made screen and copy them to another project.

In this manual, you will reuse Screen Page 1 made in the sample project (GUIDE) to another project (GUIDE 2).

Right-click [0000: Screen Page 1] on the Project Workspace to display the pull-down menu.

Click [Copy].

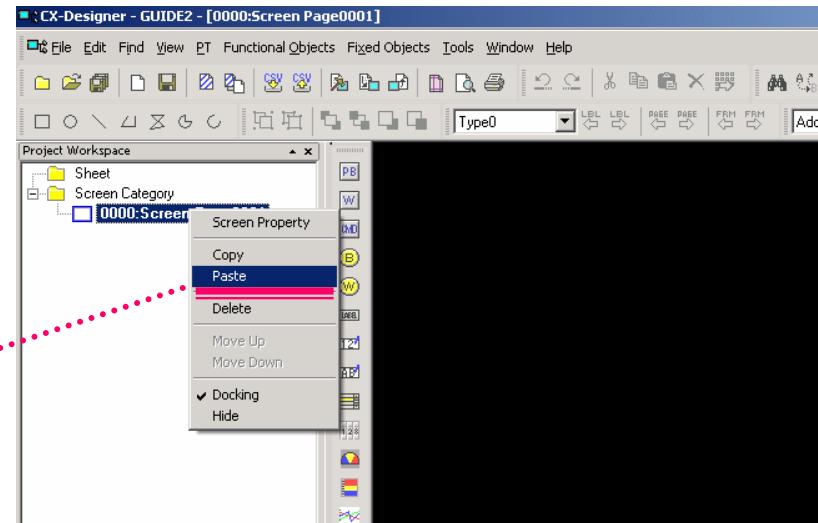


Start-up another CX-Designer and create a project “GUIDE 2” by referring to “3. New Project”.

Do not close the CX-Designer on which you have been editing the project “GUIDE”.

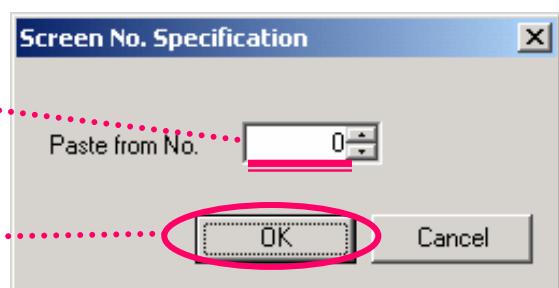
Right-click [Screen Page] to display the pull-down menu.

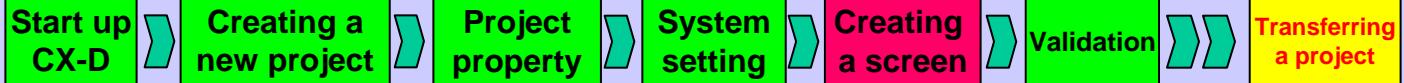
Click [Paste].



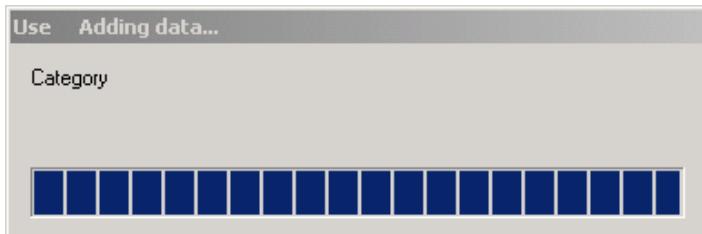
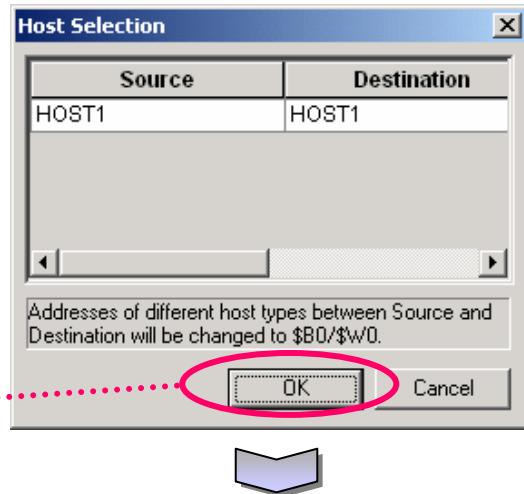
Enter [Paste from No.]. (“0” is set in this manual.)

Click OK

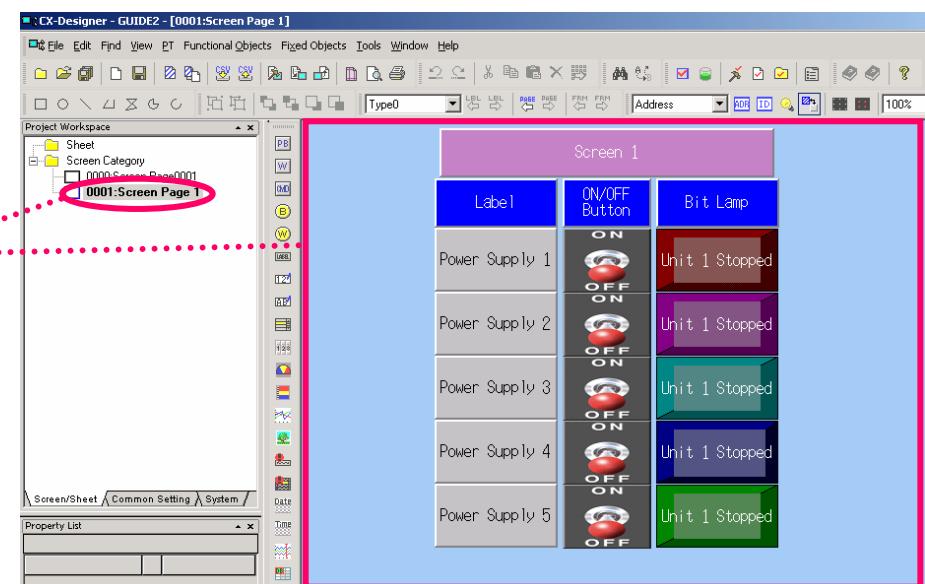




Click



The process dialog appears.



[0001: Screen Page 1] is added.

24. Test function

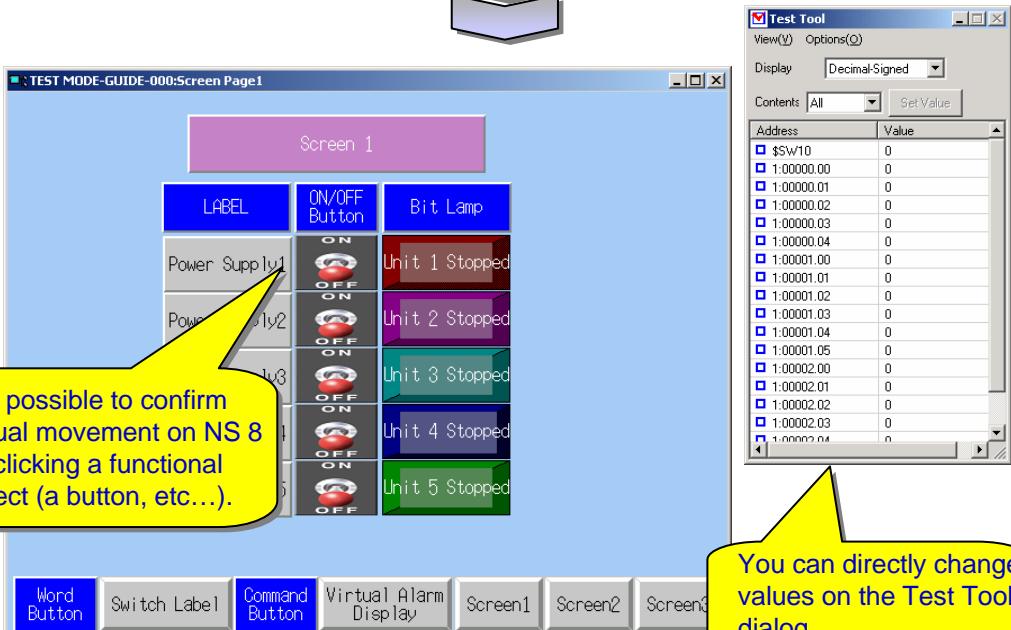
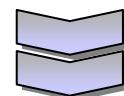
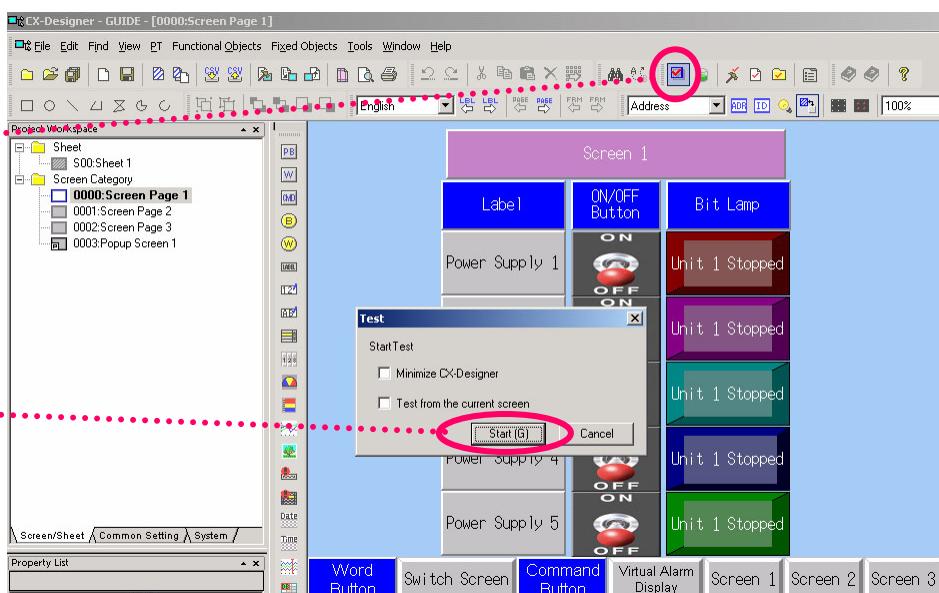
Click the [Test] button.



Click the [Start] button.



The first screen “0000: Screen Page 1” and the Test Tool dialog appear.



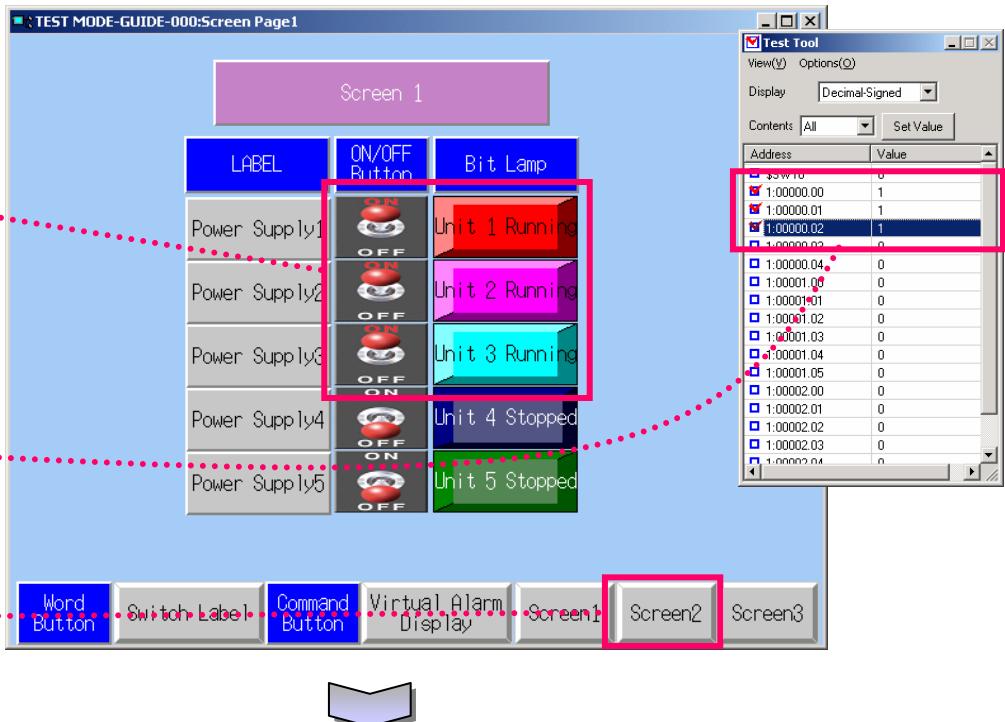
[Confirming a movement of ON/OFF buttons and bit lamps of “Power Supply 1 to 5”.]

The Power Supply (1 to 3) bit lamps will lit by turning ON the ON/OFF buttons.

You can check that the addresses of the Power Supply (1 to 3) is turned ON on the Test Tool dialog.

Click the Screen 2.

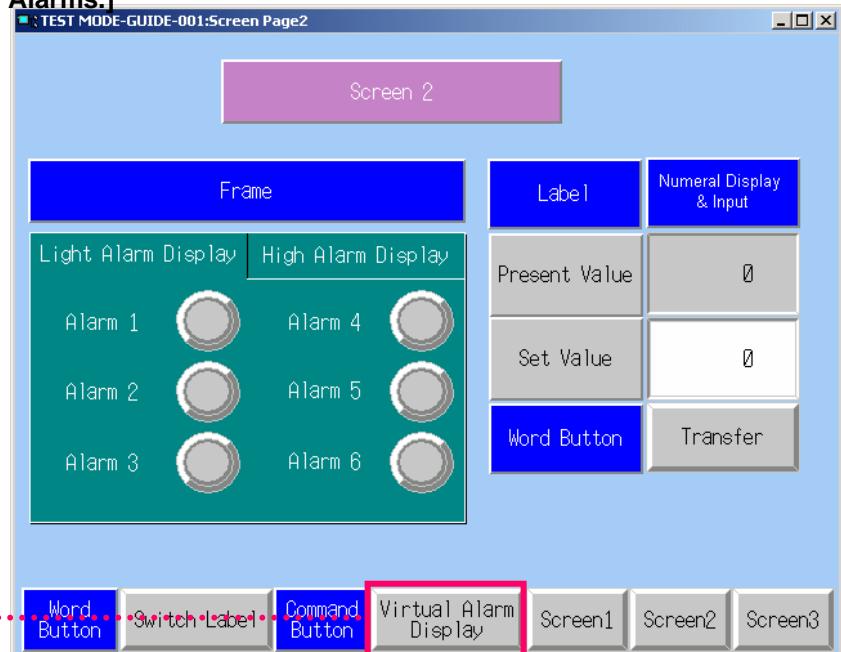
Screen 2



[Check the ON/OFF buttons and bit lamps of Alarms.]

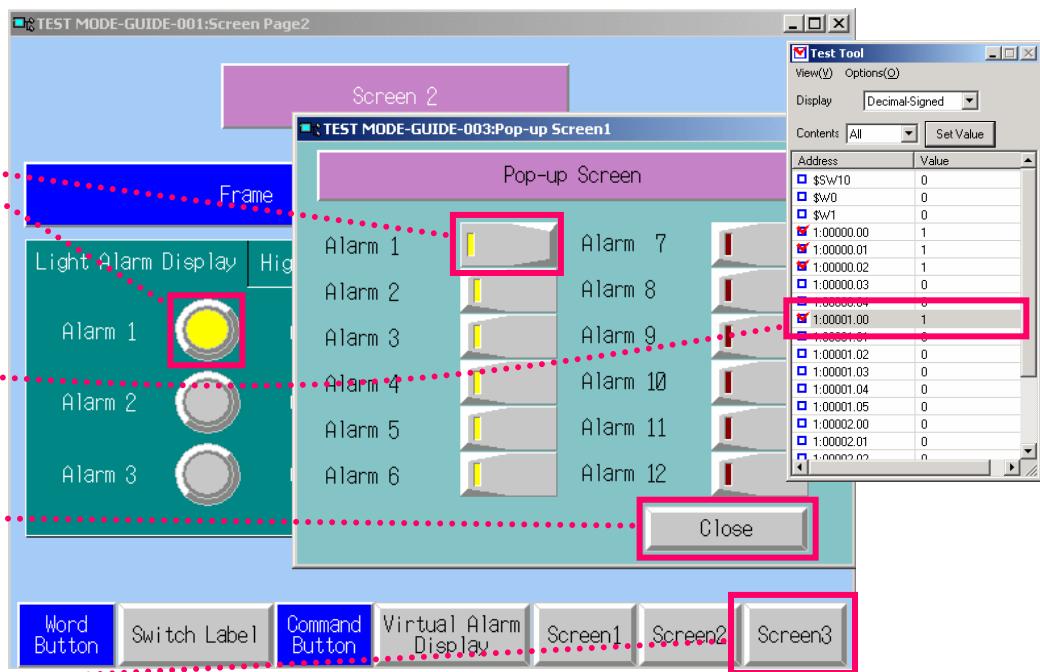
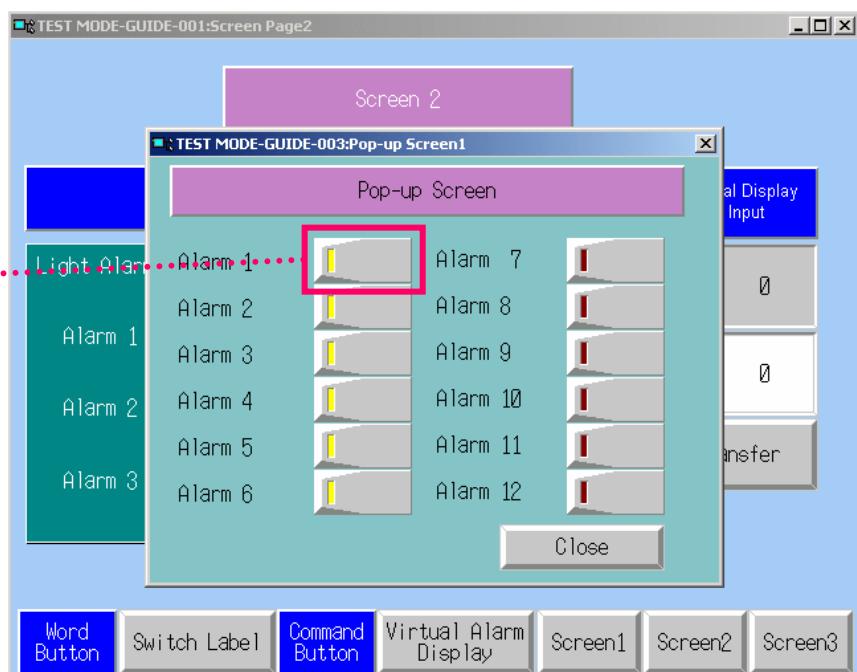
Click the Virtual Alarm Display.

Virtual Alarm Display



Pop-up Screen appears.

Turn ON the ON/OFF button of Alarm 1.



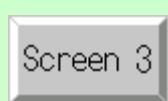
Alarm bit 1 is lit by turning ON the ON/OFF button of Alarm 1.

You can also check that the address of the Alarm 1 is turned ON on the Test Tool dialog.

Click the Close button.



Click the Screen 3 button.



Start up
CX-D

Creating a
new project

Project
property

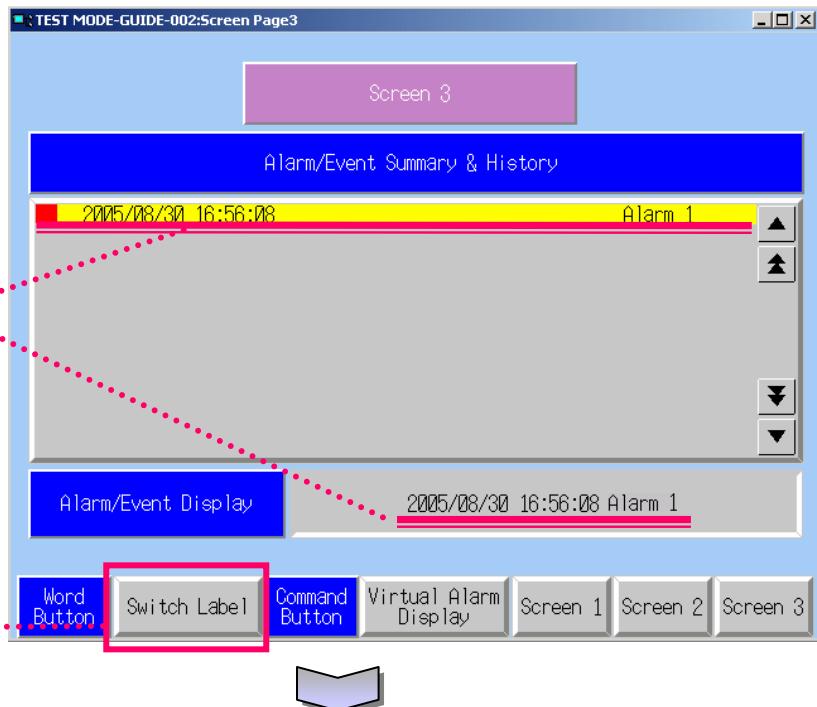
System
setting

Creating
a screen

Validation

Transferring
a project

[Confirming a movement of Alarm/Event.]

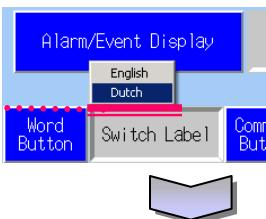


You can check the alarm
that was occurred on the
previous page.

Click the Switch Label
button.

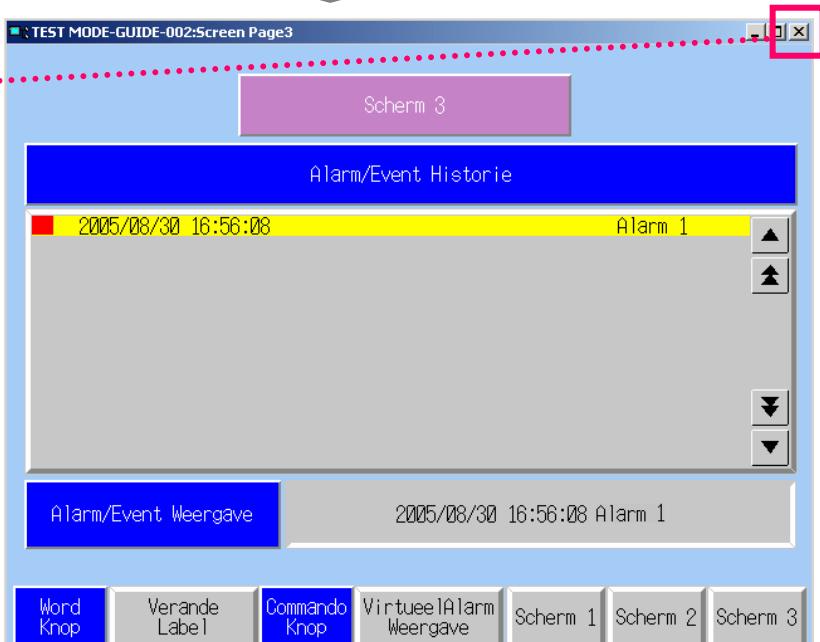
Switch Label

[Check a movement of the Switch Label button.]



Click [Dutch] in
the menu.

Click the [X] button to end
the Test tool.



Business Index

Section 3 Transferring a project

Transferring project data

Transferring projects created on CX-Designer to the NS hardware.
There are six ways to transfer a project: serial cable, Modem, Ethernet, Controller link, USB and Memory card.

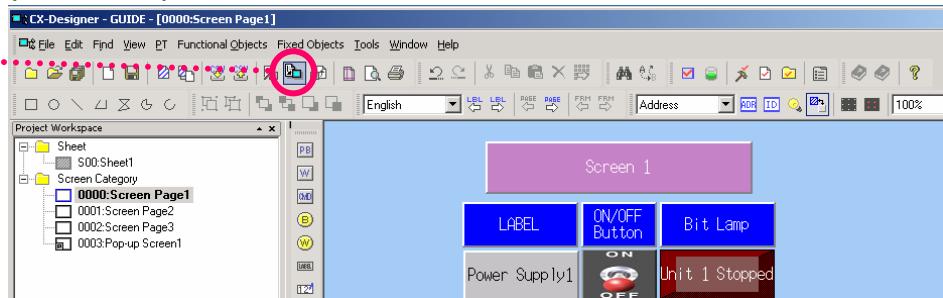
In this manual, you will transfers project data via serial cable and using a memory card.

1. Transferring project data via serial cable(RS232C)

Before you start...

Connect the NS hardware to the personal computer with the communication cable (XW2Z-S002).

Click

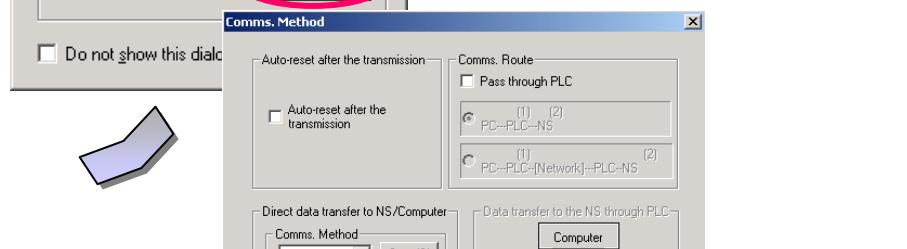


Click the Setting button.

Setting

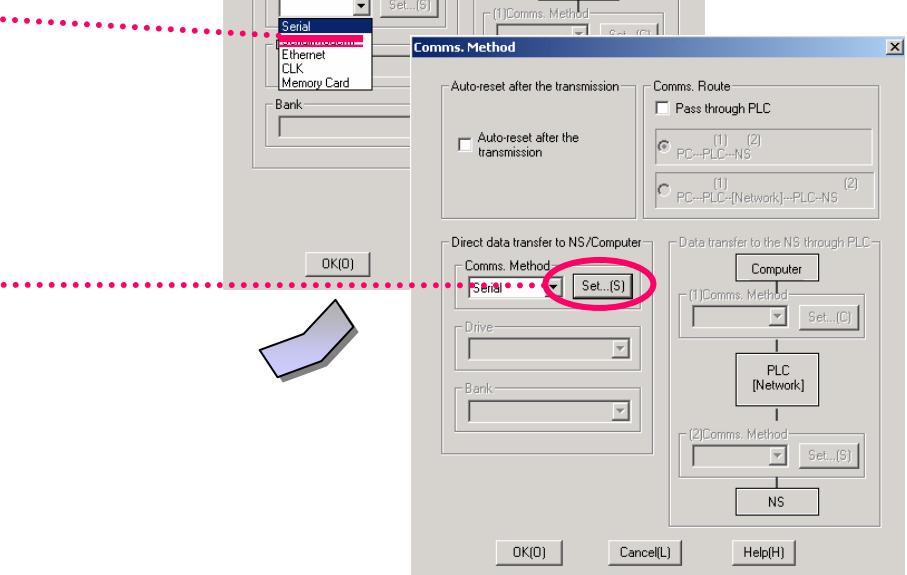


Select "Serial" from the Comms. Method pull-down menu.



Click the Set... button.

Set... (S)



Start up
CX-D

Creating a
new project

Project
property

System
setting

Creating
a screen

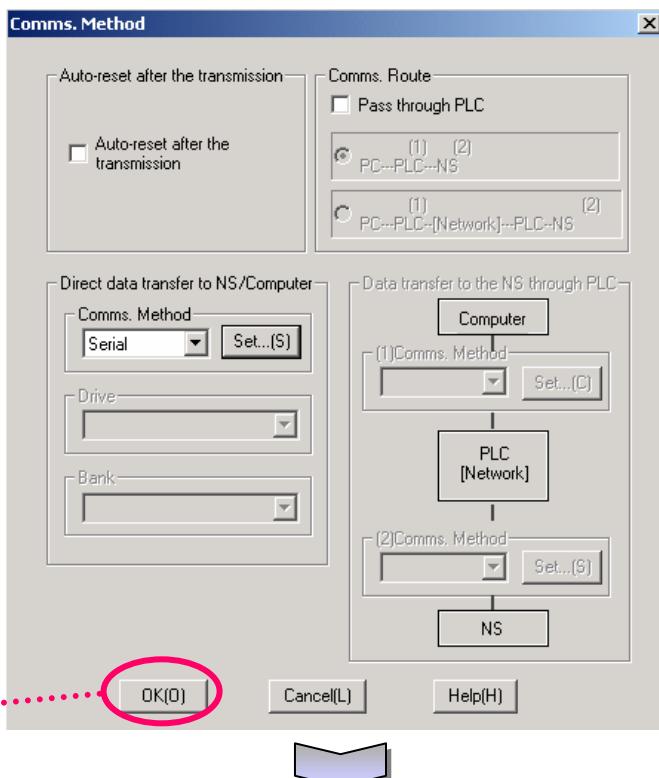
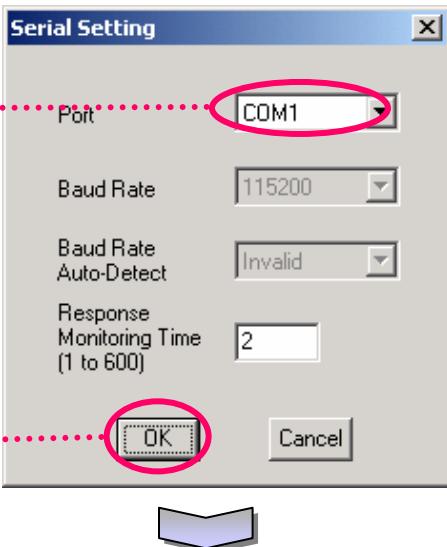
Validation

Transferring
a project

Select [Port] for connection. "COM1" is selected here. Select COM port to be used to connect with the NS hardware according to your working environment.

Click

OK

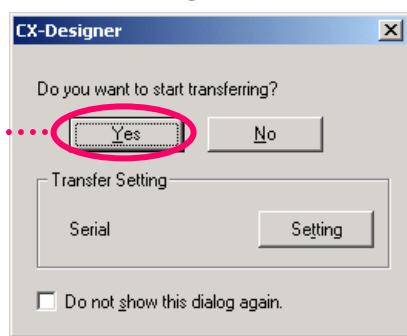


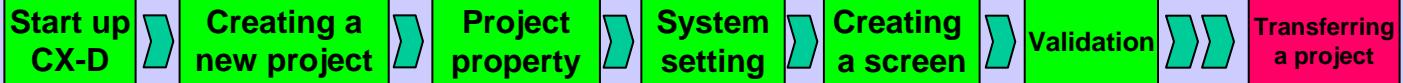
Click

OK(0)

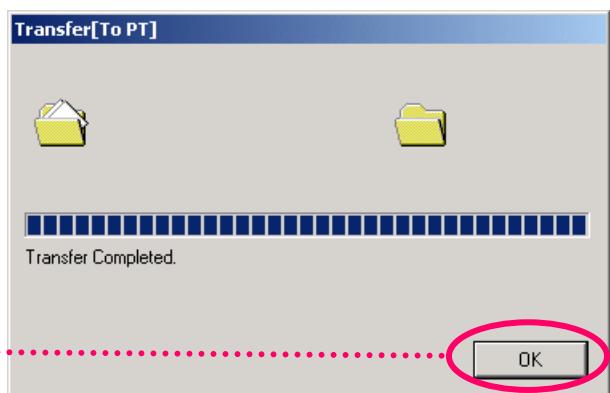
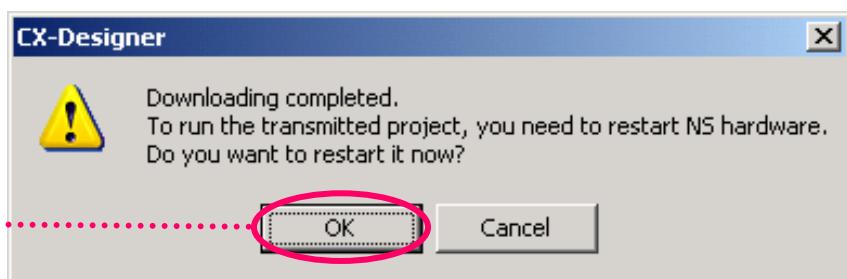
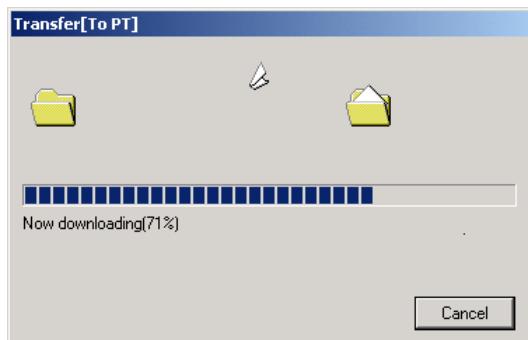
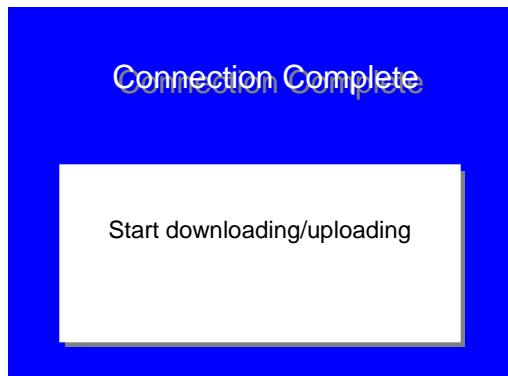
Click the Yes button.

Yes





NS hardware screen changes to the transfer preparation screen.



The transfer processing dialog appears.

On the NS hardware, the process bar appears, too.

Click



to restart the NS hardware.

Click

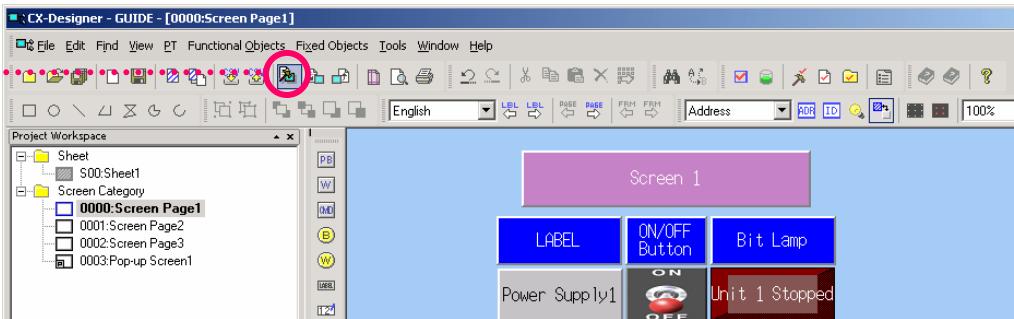


2. Transferring project data using a memory card

Click



Before you start...
Install the memory card to the personal computer.



Change the settings to the "Direct data transfer to NS/Computer" on the Comm. Method dialog.

[Comms. Method]
→ "Memory Card"
[Drive]
→ "H"

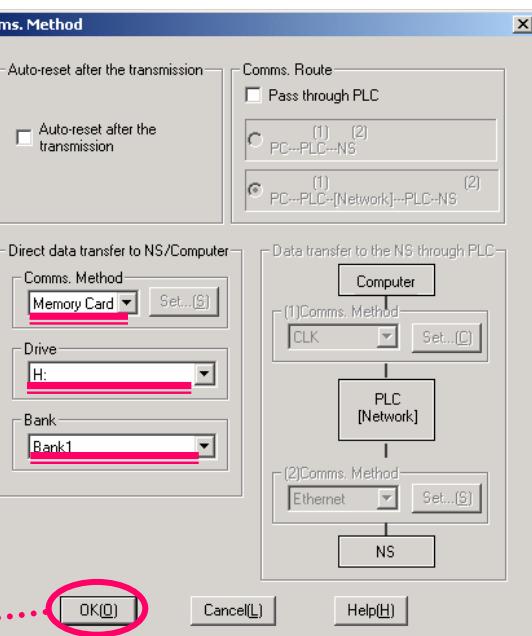
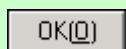
*Select the drive to which the memory card is installed.

[Bank]

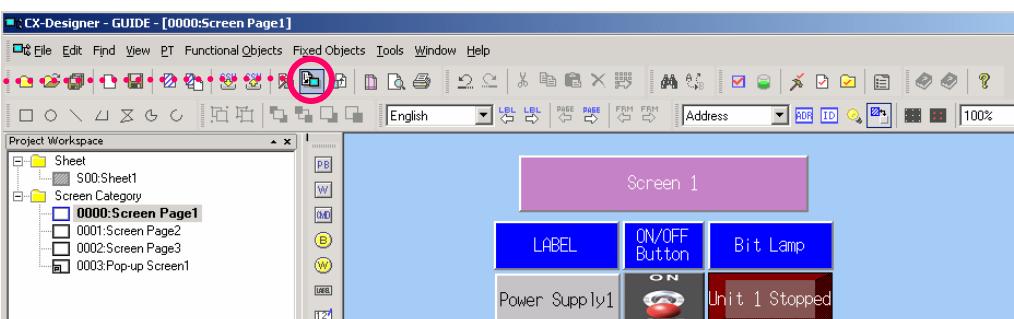
→ "Bank 1"

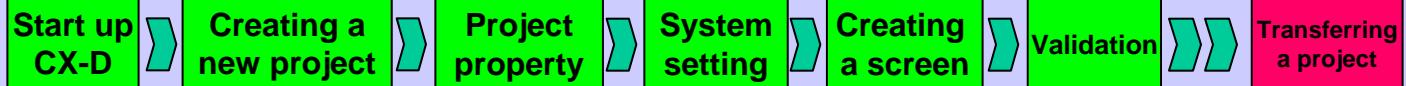
*There are four banks available for memory cards. One project is downloaded to a bank. Here, you specify the bank to be transferred.

Click

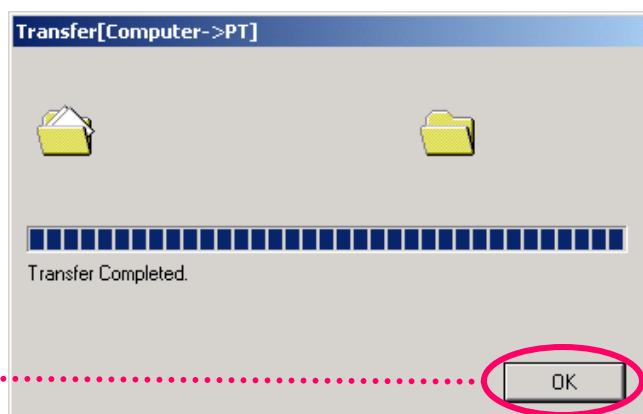
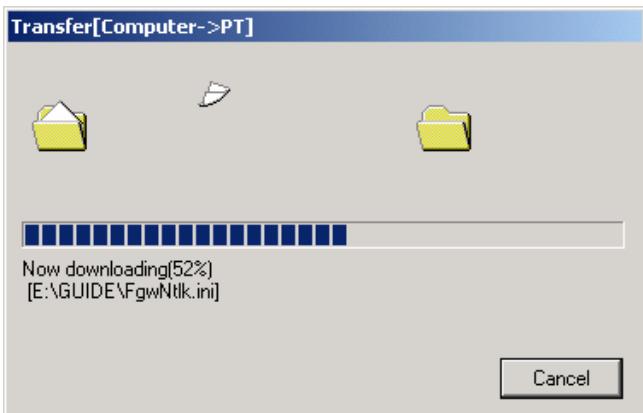
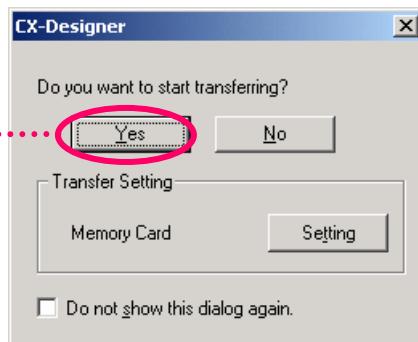
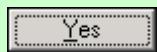


Click





Click Yes



The transfer processing dialog appears.

Click



Start up
CX-D

Creating a
new project

Project
property

System
setting

Creating
a screen

Validation

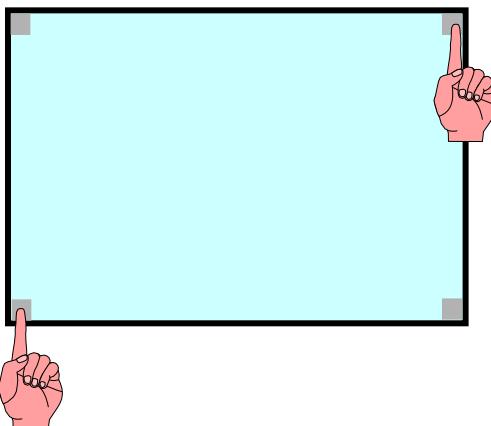
Transferring
a project

-Transfer data from a Memory Card to a personal computer-

Before you start...

Install the memory card to the memory card slot.

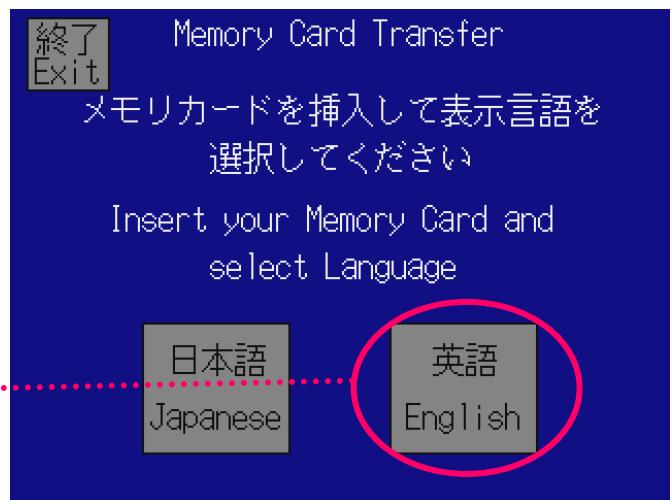
Press two any corners on the NS hardware simultaneously to display the system menu.



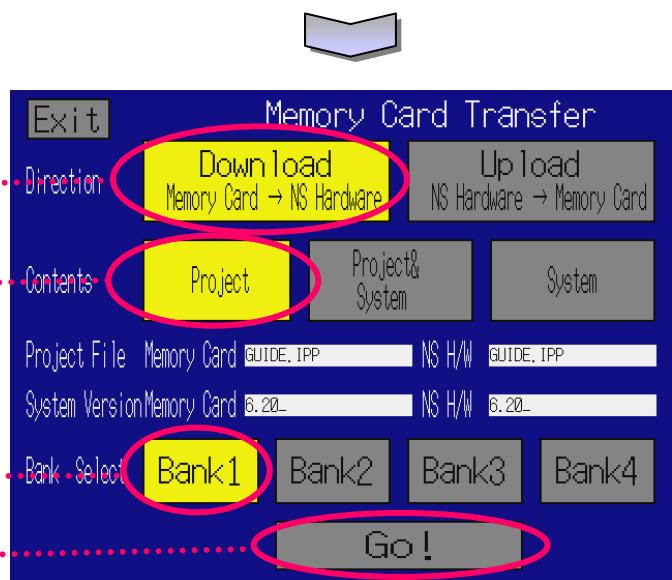
Press the “Special Screen” tab.

Press “Memory Card Transfer”.

Press the “START” button.



Press "English".

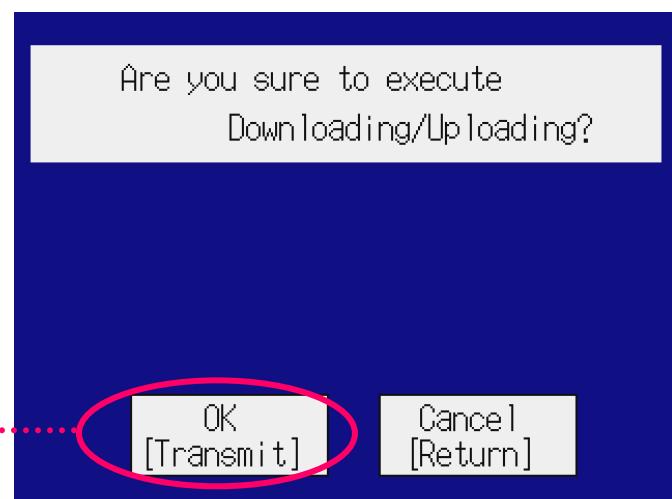


Press "Download Memory Card → NS".

Press "Project".

Press "Bank 1".

Press "Go".



Press "OK [Transmit]".

Start up
CX-D

Creating a
new project

Project
property

System
setting

Creating
a screen

Validation

Transferring
a project

Now Downloading...

Memory Card → NS Hardware

File Name: HLKNetTbl.ini



Transmission Complete

Memory Card → NS Hardware

You may safely remove the Memory Card. Press the reset button to restart the NS after removing the Memory Card.

Reset

Press "Reset" to restart
the NS hardware.

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Note: Specifications subject to change without notice.
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