

GT Designer2

Grafic Software
for GOT1000 Series

Beginner's Manual

About this Manual

The texts, illustrations, diagrams and examples in this manual are only intended as aids to help explain the functioning, operation, use and programming of the configuration system for the GOT1000 serie

MELSOFT GT Designer2 Version2.

Separate manuals are available for the programmable logic controllers (PLCs) and HMI devices of the different MELSEC series of MITSUBISHI ELECTRIC.

This manual focuses on users with experience in dealing with automation and communication networks.

For using and usage of this software only the user his own is responsible.

If you have any questions regarding the installation and operation of the software described in this manual, please do not hesitate to contact your sales office or one of your Mitsubishi distribution partners. You can also obtain information and answers to frequently asked questions from our Mitsubishi website under www.mitsubishi-automation.com.

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**Beginner's Manual
GT Designer2 Version2
Art. No.: 194213**

Version	Changes / Additions / Corrections
A 01/2007 pdp-ow	First issue as extractions of the following manual: GT Designer2 Version2 Basic Operation/Data Transfer Manual, Art.-No. 166738

Typographic Conventions

Use of notes

Notes containing important information are clearly identified as follows:

NOTE

| Note text

Use of examples

Examples containing important information are clearly identified as follows:

Example ▾

Example text



Numbering in figures and illustrations

Reference numbers in figures and illustrations are shown with white numbers in a black circle and the corresponding explanations shown beneath the illustrations are identified with the same numbers, like this:

1 2 3 4

Procedures

In some cases the setup, operation, maintenance and other instructions are explained with numbered procedures. The individual steps of these procedures are numbered in ascending order with black numbers in a white circle, and they must be performed in the exact order shown:

① Text

② Text

③ Text

Footnotes in tables

Footnote characters in tables are printed in superscript and the corresponding footnotes shown beneath the table are identified by the same characters, also in superscript.

If a table contains more than one footnote, they are all listed below the table and numbered in ascending order with black numbers in a white circle, like this:

Text

Text

Text

Character formatting and orientation aids

Menu names, menu commands, submenu commands, and dialogue box options are printed in **boldface** type. Examples: The menu item **New** in the menu **Project** or the options **PLC interface** and **Computer Link** in the dialogue box **Transfer-Setup**.

Please keep this manual in a place where it is always available for the users.

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1 Introduction

About the GOT

The GOT (Graphic Operation Terminal) can be used as an electronic operation panel on which functions such as switch operation, lamp display, data display, message display can be operated on the monitor screen, which had been conventionally implemented with a control box.

About Project Data to be Displayed on GOT

The screen (project data) displayed on the GOT is created on the PC using the dedicated software (GT Designer2).

On GT Designer2, paste display frame figures called objects, such as switch figures, lamp figures and numerical display, to create a screen, and set operation functions to the pasted objects with the device memory (bit, word) of the PLC CPU to execute the functions of the GOT.

Transfer the created project data to the GOT using the USB cable, RS-232 cable, Ethernet (only GT15□□) or memory card.

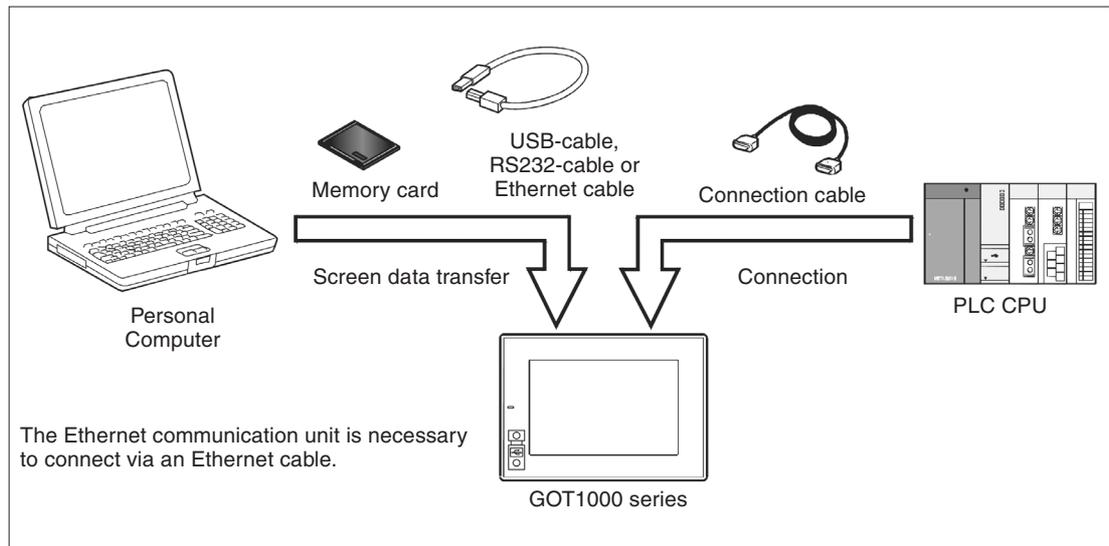


Fig. 1-1: Scheme of data transfer to GOT

1.1 Overview Software Package

GT Works2 contains the following programs on the attached CD. These programs can be installed and used by using the selection menu on the CD. Please note the descriptions in chapter 2.

Software		Description
GOT-1000 series, GOT-900 series software	 GT Designer2	Creates screens for the GOT1000 series and GOT900 series.
	 GT SoftGOT1000	Enables a PC to operate as the GOT1000 series. The license key is required to use this software.
	 GT SoftGOT2	Enables a PC to operate as the GOT-A900 series. The license key is required to use this software. (Operates for about 10 minutes without license key.) For the license key, please contact your local Mitsubishi service center or representative.
	 GT Simulator2	Connects to the GX Simulator or PLC CPU and enables the operation of GOT-A900 series or GOT1000 series to simulate in PC.
	 GT Converter2	Converts the project data for GOT800 series or Digital's package data into a GT Designer2 format file.
Software for viewing PDF	 Adobe® Acrobat® Reader®	Adobe® Acrobat® Reader® is the product of Adobe Systems Incorporated and the software necessary to view PDF data. The online manual is in PDF format data and requires this software to view.

Tab. 1-1: Overview of software package included in the provided CD-ROM

1.1.1 Copyright

NOTE

This software is protected by copyright. By opening the distribution CD-ROM package you automatically accept the terms and conditions of the License Agreement. You are only permitted to make one single copy of the original distribution disk for your own backup and archiving purposes.

1.2 Related Manuals

Manual Name	Art. No.
Manuals for GOT1000 Series	
GT15 User's Manual	169273
GT Designer2 Version2 Basic Operation/Data Transfer Manual	166738
GT Designer2 Version2 Screen Design Manual (For GOT1000 Series)	169246
GOT1000 Series Connection Manual	169247
GOT1000 Series Extended/Option Functions Manual	169248
GOT1000 Series Gateway Functions Manual	169249
GT Simulator2 Version2 Operating Manual	169250
GT SoftGOT1000 Version2 Operating Manual	—
GT Converter2 Version2 Operating Manual	169251
Manuals for GOT-A900 / GOT-F900 Series	
GT Works2 Version2/GT Designer2 Version2 Operating Manual (Startup - Introductory Manual)	169377
GT Designer2 Version2 Operating Manual	169378
GT Designer2 Version2 Reference Manual	169379
Manuals for GOT-A900 Series	
GOT-A900 Series Operating Manual (GT Works2 Version2/GT Designer2 Version2 compatible Extended - Option Functions Manual)	169380
GOT-A900 Series User's Manual (GT Works2 Version2/GT Designer2 Version2 compatible Connection System Manual)	169381
GOT-A900 Series User's Manual (GT Works2 Version2/GT Designer2 Version2 compatible Gateway Functions Manual)	169382
GT Simulator2 Version2 Operating Manual	169250
GT SoftGOT2 Version1 Operating Manual	160460
GT Converter2 Version2 Operating Manual	169251
Manuals for GOT-F900 Series	
GOT-F900 Series HARDWARE Manual [CONNECTION]	144038

Tab. 1-2: Overview of manuals available

2 Installation

2.1 System Requirements

The following hardware and system requirements for your computer should be fulfilled to be able to install and use the software GT Designer2:

2.1.1 Minimum Hardware Requirements

- Pentium®-Processor 300 MHz or higher
- 64 MB RAM for Microsoft® Windows 98/Windows Me/Windows NT 4.0/Windows 2000
- 128 MB RAM for Microsoft® Windows XP
- VGA compatible graphics card (resolution min. 800 x 600 dots, High Color (16 bits))
- 17"/43 cm diag. VGA monitor
- For installation: min. 300 MB available hard disc space
- For execution: min. 100 MB available hard disc space
- CD-ROM disc drive

2.1.2 Software Requirements

The GT Designer2 is a 32-Bit-Software, requiring the following Operating Systems:

- Microsoft® Windows 98/Windows Me (min. the Internet Explorer 5.0 must be installed)
- Microsoft® Windows NT 4.0
(min. Service Pack 6 and min. the Internet Explorer 5.0 must be installed) ②
- Microsoft® Windows 2000 (min. Service Pack 2) ②
- Microsoft® Windows XP Home or Professional Edition ① ②

① The functions „Compatibility mode“, „Fast user switching“, „Changing desktop themes (font)“ and „Remote desktop“ are not supported.

② The administrator authority is required to install GT Designer2 into Windows NT® Workstation 4.0, Windows® 2000 Professional, Windows® XP.
Also, the administrator authority is required to use GT Designer2 on Windows® XP.

NOTES

It is recommended to use the Operating Systems Microsoft® Windows 2000 or Microsoft® Windows XP.

With all Operating Systems except Microsoft® Windows XP you have to install Microsoft® Internet Explorer 5.0.

2.2 System Configuration

2.2.1 Overview

The following shows a system configuration that includes GOT-1000 series.

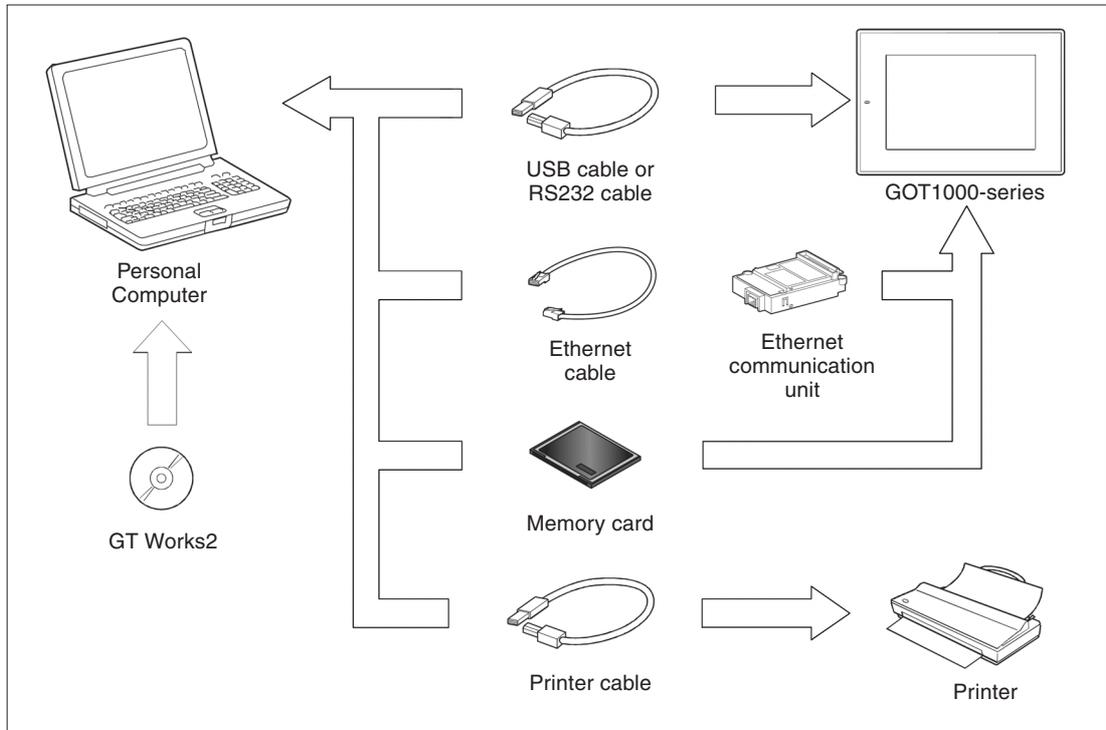


Fig. 2-1: System configuration

2.2.2 Permissible Cables

Communication via	Required accessories	Type	Manufacturer
USB port	USB cable	GT09-C20USB-5P (A ↔ Mini-B type)	Mitsubishi Electric
RS232 port	RS232 cable	GT01-C30R2-9S or FX-232-CAB-1 (9-Pin female ↔ 9-Pin female)	Mitsubishi Electric
Ethernet	Ethernet communication unit	GT15-J7E71-100	Mitsubishi Electric
	Ethernet cable	100BASE-TX	—

Tab. 2-1: Overview of permissible cables

2.3 Software Installation

2.3.1 Starting the Menu Screen

Proceed as follows:

- ① Start Windows®.
- ② Insert the CD-ROM into the CD-ROM drive.

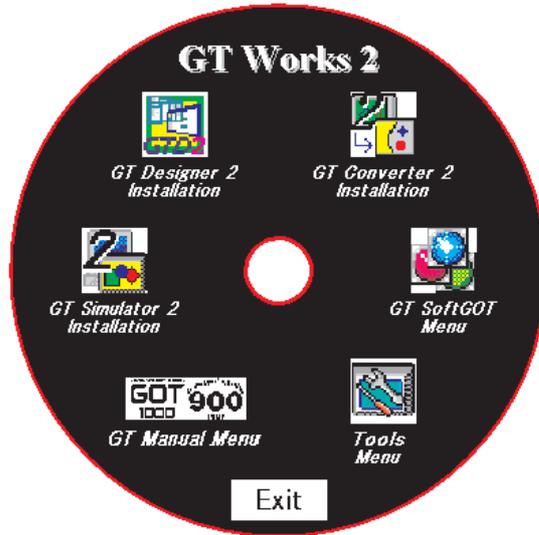


Fig. 2-2:
Menu Screen
GT Works2

- ③ As the menu screen of *GT Works2* starts, install the corresponding software or view the PDF manual.
- ④ As this menu screen is displayed after completion of one process, another process can be executed without a break.
When it is desired to end the menu screen, click the **Exit** button.

Start the menu screen in the following procedure if it does not start automatically when the CD-ROM of *GT Works2* is inserted into the CD-ROM drive.

- ① Using Device Manager of Windows®, make setting to start the CD-ROM drive automatically.
- ② Start Explorer and double-click GTWK2-E.exe. or GTD2-E.exe. of the CD-ROM drive.

2.3.2 Installing the Software Programs

NOTES

- | Before installation, close all other applications running on Windows®.
- | Before installing GT Designer2, do not connect the GOT to the PC.
- | The administrator authority is required to install GT Designer2 into Windows® NT Workstation 4.0, Windows® 2000 Professional, Windows® XP.
- | During installation, do not install any other software programs.
- | During installation, do not remove the CD-ROM from the CD-ROM drive.

Installing GT Designer2, GT Simulator2, GT SoftGOT2, and GT Converter2

NOTE

To prepare for installation, any of the following messages may be displayed midway during installation. (The display changes depending on the Windows®.)
 If any of the following messages is displayed, reinstall the product after execution of the specified exe file according to the instruction of the screen. When the product has not been installed correctly, restart the computer once.

Message	Measure
This package is not in the proper operating environment. Please install this package after executing \Update\Axdist.Exe from CD-ROM.	If this message is displayed, execute \Update\Axdist.exe of the CD-ROM.
This package is not in the proper operating environment. Please install this package after executing \Update\50COMUPD.Exe from CD-ROM.	If this message is displayed, execute \Update\50COMUPD.exe of the CDROM.
This package is not in the proper operating environment. Please install this package after executing \EnvMEL\Setup.Exe from CD-ROM.	If this message is displayed, execute \EnvMEL\Setup.exe of the CD-ROM.

Tab. 2-2: Warnings due to wrong operating environment

- ① Click the software to be installed (Fig. 2-2).
- ② Follow the instructions on the screen. These instructions will lead you through the installation. To continue the installation procedure click on **NEXT**.
 The product ID is indicated in the software registration form packed with the product.
- ③ Depending on the version of Windows you will be asked to restart Windows after the installation has finished, to complete the installation.

Installing the Manual Data

The online manual data is viewed from Help of GT Designer2.

- ① Select the option **GT Manual Menu** on the menu screen (Fig. 2-2).

The following menu screen is displayed:



Fig. 2-3:
 Menu screen
 GT Manual

- ② Click **GT Manual 1000 Installation**.
- ③ Follow the instructions on the screen. These instructions will lead you through the installation. To continue the installation procedure click on **NEXT**.

NOTE

Adobe® Acrobat® Reader® must be installed separately to view the online manuals. This software can be installed by the option **Acrobat Reader Installation** in the selection menu **GT Manual** (Fig. 2-3).

Uninstalling the Software Programs

To uninstall the programs use the Windows Control Panel. Follow the instructions given by Windows.

NOTES

Before uninstallation, make sure to close all software packages.

When using Windows NT® Workstation 4.0, Windows® 2000 Professional, or Windows® XP Professional/Home Edition, log on as a user with administrative privileges (for computer management).

2.4 Installing the USB Driver

To make the USB communication with the GOT in the following OS environment, Windows® X P HomeEdition, Windows® XP Professional, Windows® 2000 Professional, Windows® Millennium Edition (Me) or Windows® 98 Second Edition, the USB driver must be installed. The following describes a USB driver installation procedure.

NOTE

When the USB driver cannot be installed, check the following settings:

When Windows® 2000 Professional is used:

If "Block - Prevent installation of unsigned files" has been selected in [Control Panel] - [System] - [Hardware] - [Driver Signing...], the USB driver may not be installed. Choose "Ignore - Install all files, regardless of file signature" or "Warn - Display a message before installing an unsigned file " in [Driver Signing...], and install the USB driver by the administrator authority.

When Windows® XP Professional or Windows® XP Home Edition is used:

If "Block - Never install unsigned driver software" has been selected in [Control Panel] - [System] - [Hardware] - [Driver Signing...], the USB driver may not be installed. Choose "Ignore - Install the software anyway and don't ask for my approval" or "Warn - Prompt me each time to choose an action" in [Driver Signing...], and install the USB driver.

2.4.1 On Windows® 2000 Professional

The following describes a USB driver installation procedure when Windows® 2000 Professional is used.

- ① When the PC and GOT are connected with the USB cable, the following screen appears. Click the **Next** button.



Fig. 2-4:
Welcome to the Found New Hardware Wizard

- ② Select „Search for a suitable driver for my device (recommended)“ and click the **Next** button.

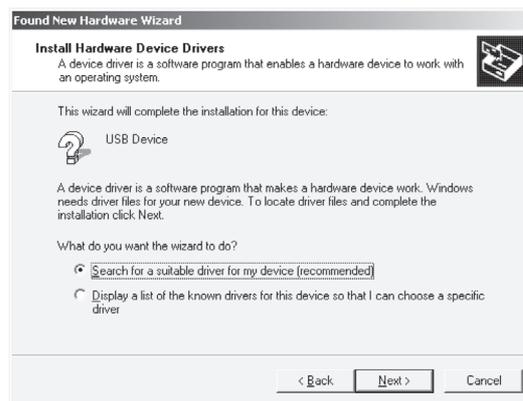


Fig. 2-5:
Install Hardware Device Drivers

- ③ Select **Specify a location** and click the **Next** button.



Fig. 2-6:
Locate Driver Files

- ④ As the screen below appears, set the product installation destination "Easysocket\USBdrivers" and click the button **Next**.

The screen shown below shows the example of setting C:\MELSEC\EasySocket\USBdrivers.

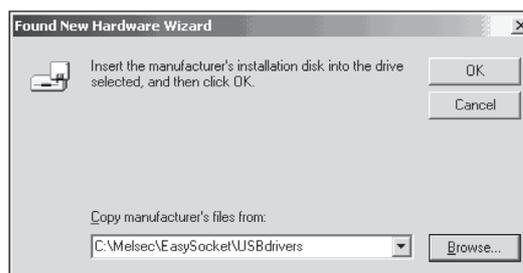


Fig. 2-7:
Copy manufacturer's data

- ⑤ When the following screen appears, this indicates that the installation is completed. Click the **Finish** button to terminate the installation.



Fig. 2-8:
Completing the Found New Hardware Wizard

2.4.2 On Windows® XP Professional or Windows® XP Home Edition

The following describes a USB driver installation procedure, when Windows® XP Professional or Windows® XP Home Edition is used.

- ① When the PC and GOT are connected with the USB cable, the following screen appears.
Select „Install from a list or specific location [Advanced]“ and click the **Next** button.



Fig. 2-9:
Welcome to the Found New Hardware Wizard

- ② As the screen below appears, choose "Include this location in the search". Check "Include this location in the search" and set "Easysocket\USBDrivers" of the folder where GT Designer was installed.

After setting, click the button **Next**. The screen shown below shows the example of setting C: \MELSEC\Easysocket\USBDrivers.

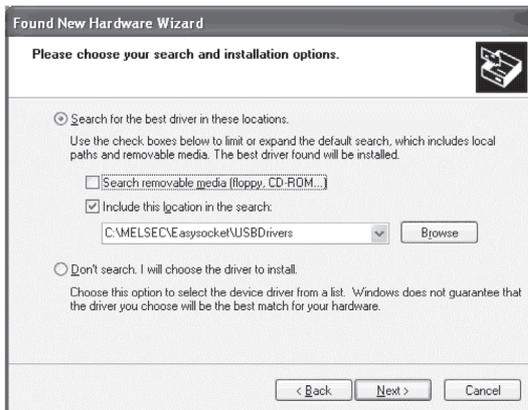


Fig. 2-10:
Search and installation options

NOTE

If you use Windows® XP Professional and Windows® XP Home Edition with ServicePack 2, please select the option “Don’t search. I will choose the driver to install.” in the dialogue window shown above. The automatic search does not work with ServicePack 2. Then select the USB driver from your installation root. If this is i.e. drive C, please select: “C: \MELSEC\Easysocket\USBDrivers\ECUsbd.inf”

- ③ The following warning screen appears, but click the **Continue Anyway** button to continue installation.

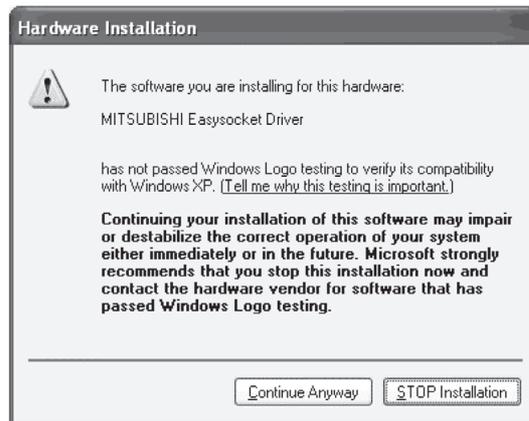


Fig. 2-11:
*Hardware Installation warning
(Please see the following note.)*

NOTE

Though the screen above appears during installation of the USB driver, we have confirmed that the USB driver operates properly using Windows® XP Professional or Windows® XP Home Edition. (No problem will occur after installation of the USB driver.) Click the **Continue Anyway** button to continue installation of the USB driver.

- ④ When the following screen appears, this indicates that the installation is completed. Click the **Finish** button to end the installation.



Fig. 2-12:
*Completing the Found New Hardware
Wizard*

3 Creating the Project Data

3.1 Setting before Screen Creation

Before screen creation, specify the relevant GOT and PLC type, and set the screen name.

- ① Start the GT Designer2. As a new screen will be created this time, click the option **New** in the **Project** menu.

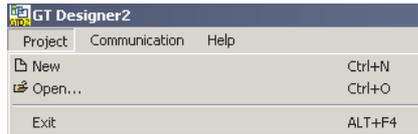


Fig. 3-1:
Project menu

- ② As the following screen (System Environment screen) is displayed, select the type of the GOT to be used and the type of the PLC (PLC Type). After making selection, click the **OK** button.

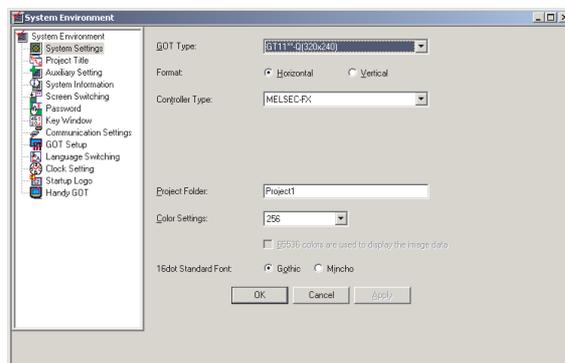


Fig. 3-2:
System Environment
dialog box
System Settings

Example ▾

Settings:

- GOT Type: GT11□□-Q (320 x 240)
- Controller Type: MAULSTICK-FX
- 16dot Standard Font: Gothic



- ③ A Communication Settings message will be displayed. Click the **Yes** button.



Fig. 3-3:
Message

- ④ Click the **OK** button to accept the Communication Settings.

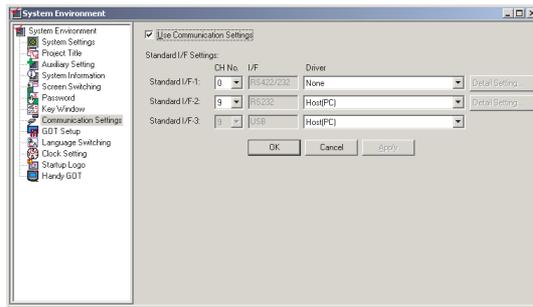


Fig. 3-4:
System Environment
dialog box
Communication Settings

- ⑤ As the **Screen Property** dialog box is displayed, input the Screen Name. Click the **OK** button to create Base Screen 1. The screen will be created specifically hereafter.

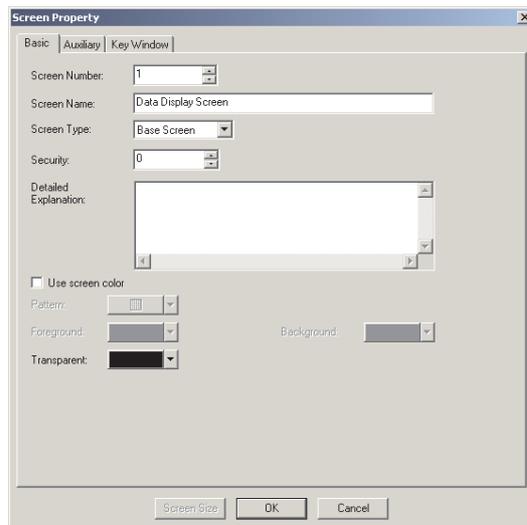


Fig. 3-5:
Screen Property dialog box

NOTES

Using the Project Wizard:

To start a new project you can use the Project Wizard. The wizard will lead you through the basic settings of the project step by step.

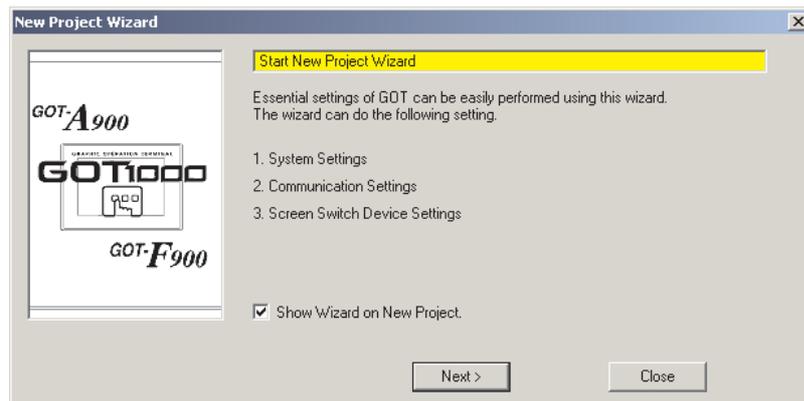


Fig. 3-6:
New Project
Wizard
dialog box

The Project Wizard can be started by selecting the menu **Project - Preferences**. Check the option **Show Wizard on New Project** on the tab **Operation** of the dialogue box **Preferences**.

By unchecking the option **Show Wizard on New Project** in the dialogue box **New Project Wizard** you can deactivate the use of the Project Wizard.

- ⑥ In GT Designer2 now the first screen will be displayed.
 In the following figure the basic screen configuration of GT Designer2 will be explained.

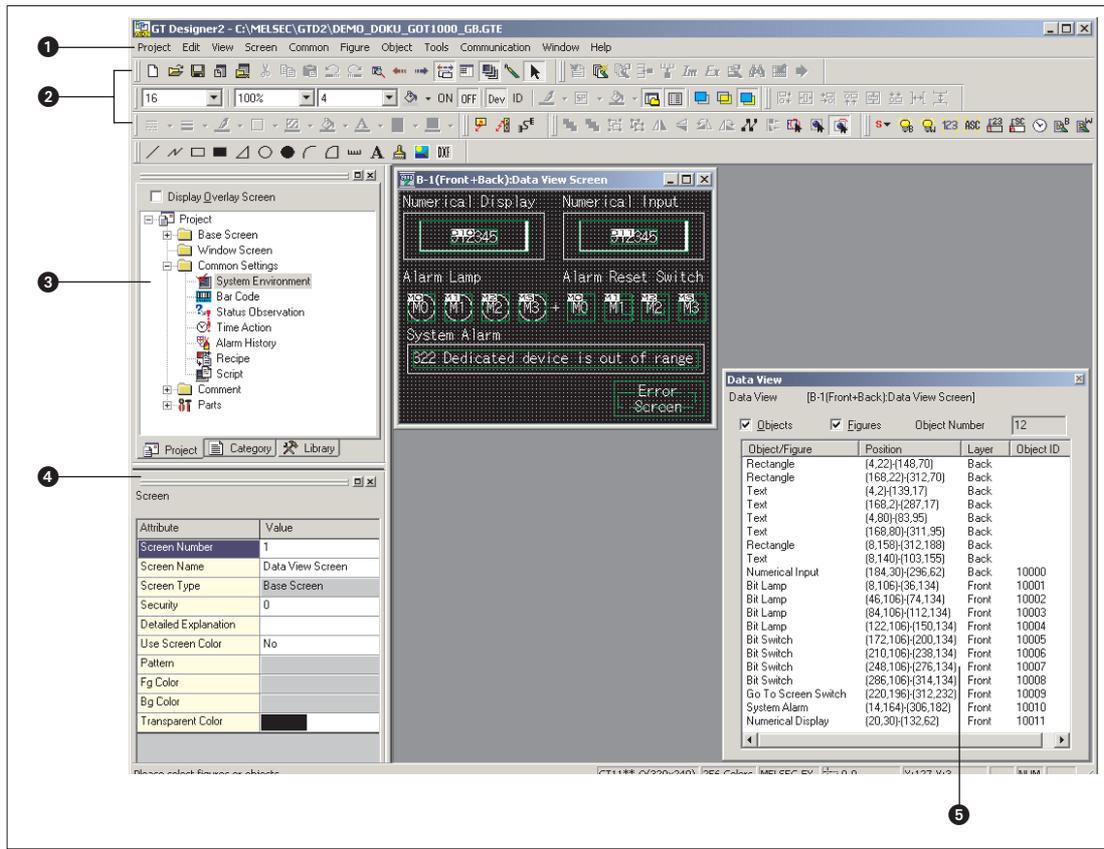


Fig. 3-7: Basic screen of GT Designer2

No.	Description
①	Menu bar
②	Toolbars
③	<p>Workspace</p> <p>The settings of the whole project, such as the created screens and common settings, are displayed in a tree form. Setting, copy, etc. can be performed by double-click and right-click.</p> <p>The workspace is divided into the three tabs Project, Category and Library.</p>
④	<p>Property Sheet</p> <p>The selected screen/object/figure attributes are displayed. Setting can be also made here.</p>
⑤	<p>Data View</p> <p>Lists all objects and figures set on a drawing.</p>

Tab. 3-1: Description to Fig. 3-7

3.2 Creating Screens

After making preparations for screen creation, actually create screens for the desired GOT type. In this manual, the following two screens will be created.

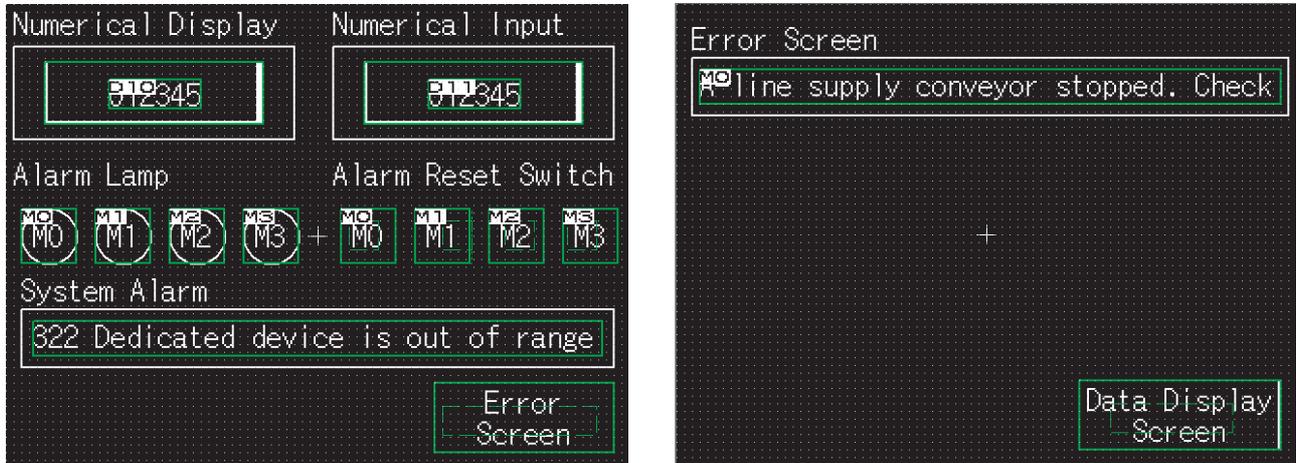


Fig. 3-8: Basic screen samples

3.2.1 Creating the Second Screen

One screen has already been created in the previous section (Section 3.1 Setting before Screen Creation). Since two screens will be created in this manual, create the second screen first.

- ① Right-click on the **Base Screen** on the tree in the project workspace and select the option **New**.

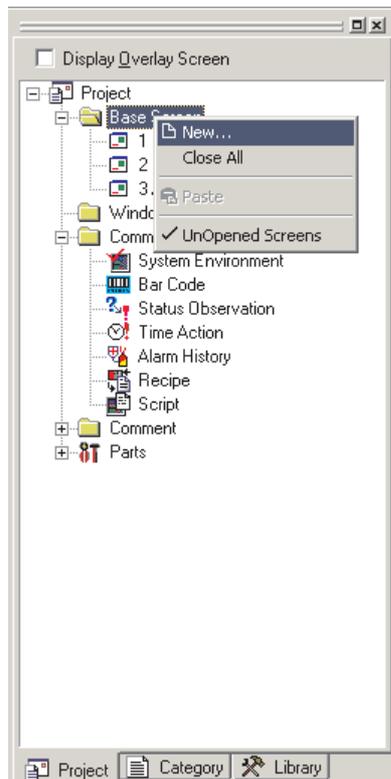


Fig. 3-9: Workspace

- ② As the **Screen Property** dialog box is displayed, input the Screen Name. Click the **OK** button.

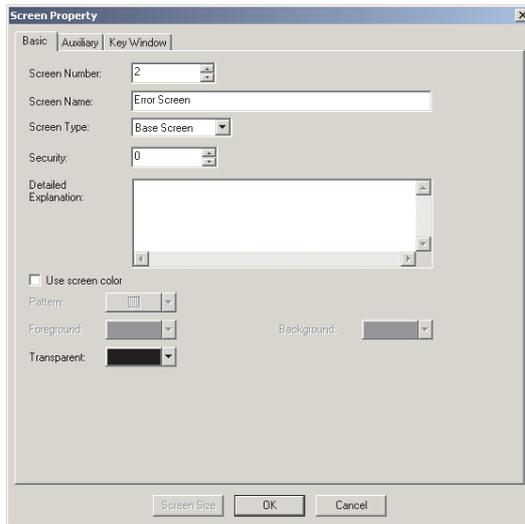


Fig. 3-10:
Screen Property dialog box

Example ▾

Set data:

- Screen Name: Error Screen



3.2.2 Setting the Screen Switching Device

A screen switching device is a word device used to switch the screen on the GOT. The GOT switches to the screen of the numeric value stored in the screen switching device.

Use the screen switching device for screen switching only.

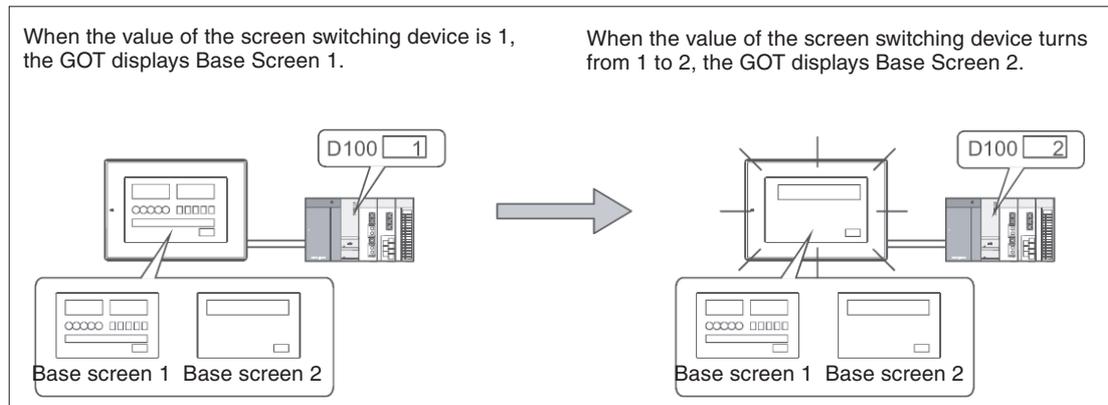


Fig. 3-11: *Screen switching*

Screen Switching Device Setting Method

- ① Double-click **Common Settings - System Environment** in the project workspace.

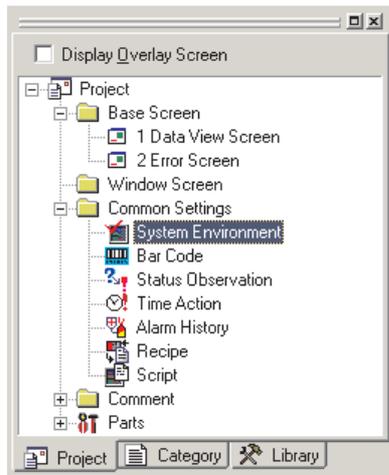


Fig. 3-12:
Workspace

- ② As the **System Environment** dialog box is displayed, double-click **Screen Switching**.

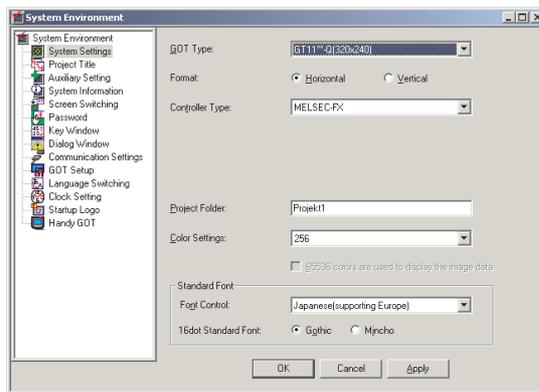


Fig. 3-13:
System Environment dialog box Screen Switching

- ③ As the **screen switching device setting** dialog box appears, set the switching device for the base screen. Clicking the **OK** button completes the setting of the screen switching device.

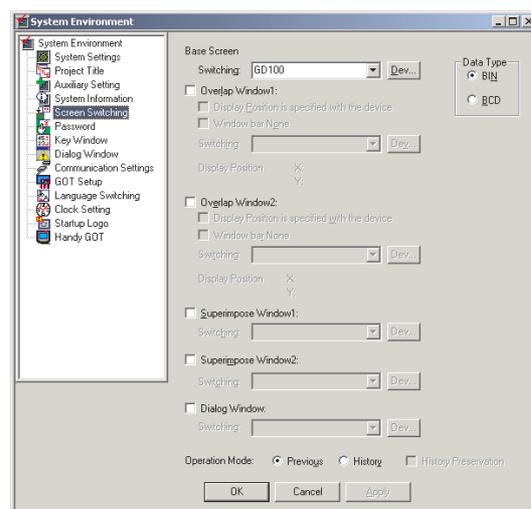


Fig. 3-14:
System Environment dialog box Screen Switching Device Setting

Example ▾

Settings:

- Base Screen Switching: D100

3.2.3 How to Switch Between the Created Screens

One created screen can be switched to the other by double-clicking either of the base screens on the tree in the project workspace.

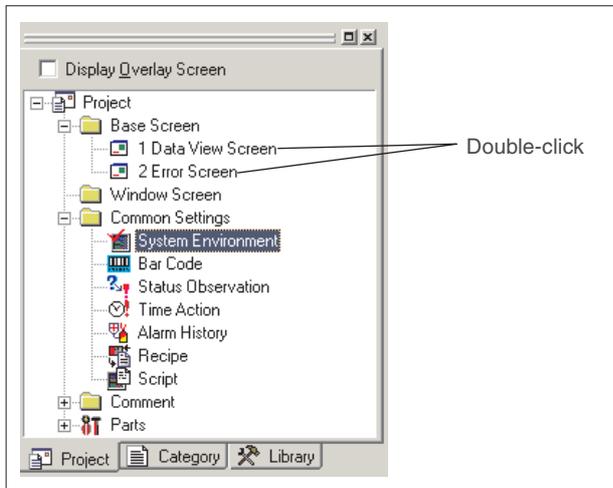


Fig. 3-15:
Workspace

3.3 Figure Drawing and Text Input

In the GOT-1000 series, a single screen can consist of two layers, i.e., front layer and back layer.

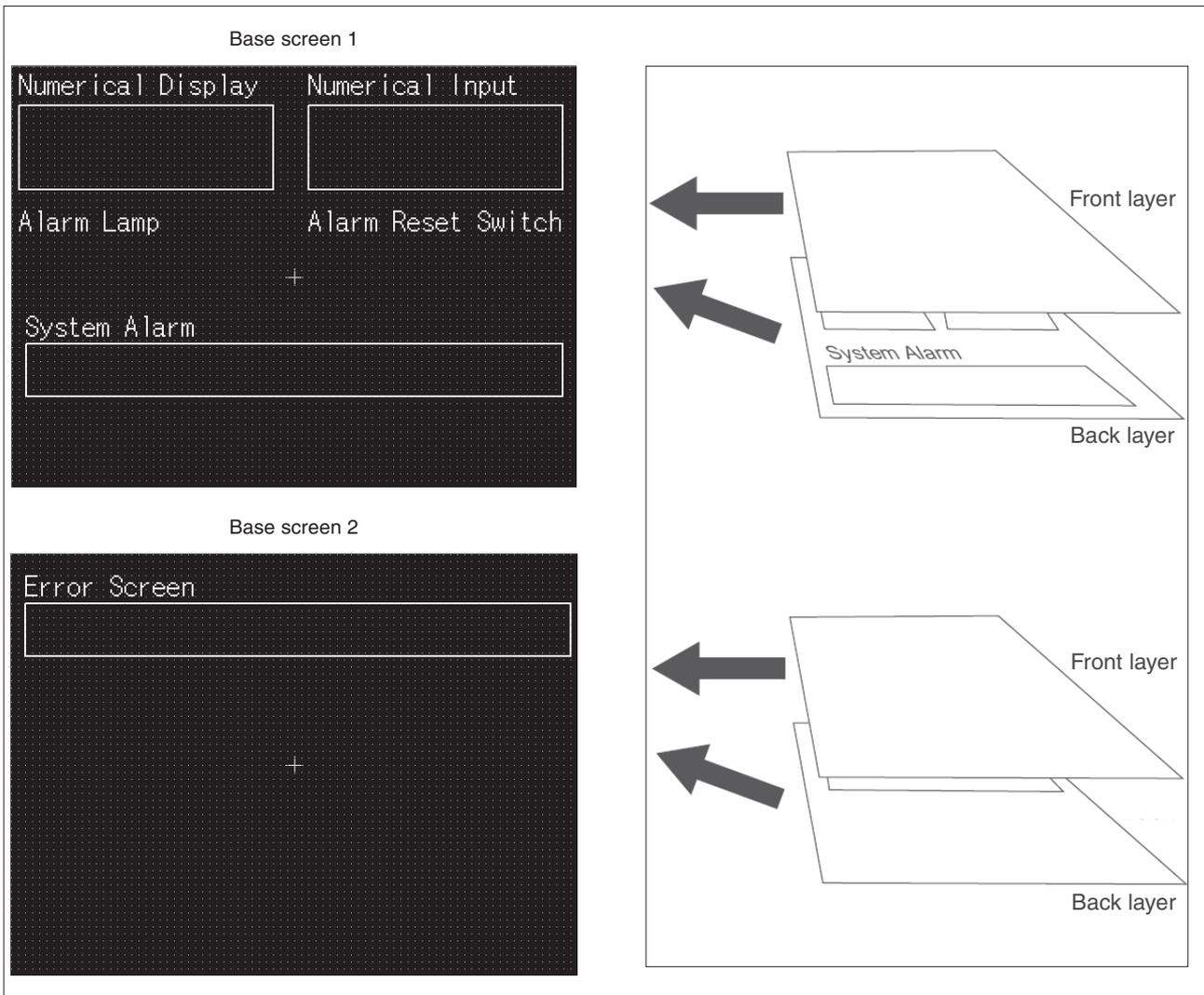


Fig. 3-16: Base Screen Setup

3.3.1 Frame Line Drawing Method

- ① Click tool **Rectangle** on the **Figure** toolbar.



Fig. 3-19:
Figure toolbar

- ② As the mouse cursor turns into +, press the left mouse button at the starting point for drawing a rectangular.
- ③ Drag and move the cursor to the end point.
- ④ Release the left mouse button to draw a rectangular. (After arrangement, right-click the mouse to cancel the arrangement mode.)

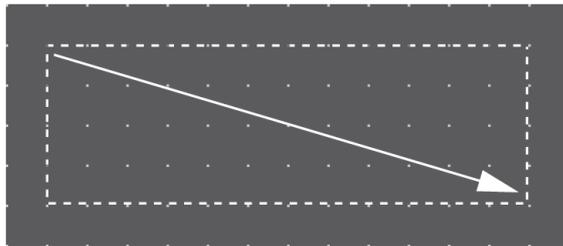


Fig. 3-17:
Drawing a rectangular

- ⑤ As double-clicking the created rectangle displays the **Rectangle** dialog box, where attributes such as color and thickness of the line can be changed. Click the **OK** button to close the dialog box.

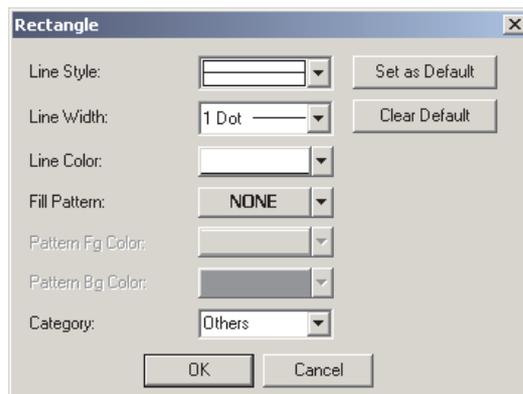


Fig. 3-18:
Rectangle dialog box

- ⑥ Repeat steps ① to ⑤ to draw frame lines. After selecting the drawn figure, holding down the key **Ctrl** and dragging the figure allows it to be copied easily.

3.3.2 Text Input Method

- ① Click tool **Text** on the **Figure** toolbar.



Fig. 3-20:
Figure toolbar

- ② Clicking the mouse displays the **Text** dialog box. Input text.
The font can also be set. The default settings are as follows: 16-dot Standard.
The input is immediately reflected on the screen.
Click the **OK** button to close the dialog box.

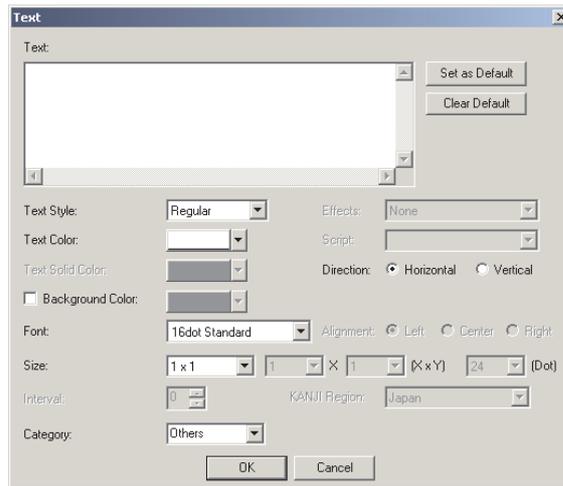


Fig. 3-21:
Text dialog box

NOTE

After selecting the figure or text to be resized, drag the handle  to change the size.

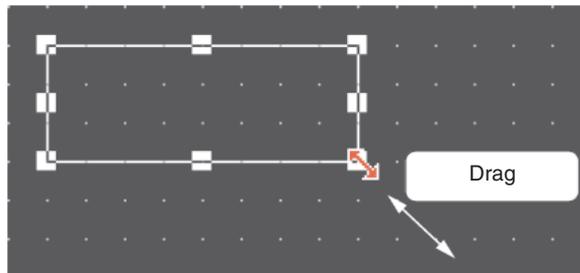


Fig. 3-22:
Resizing a rectangular with mouse

3.4 Setting the Object Function

After drawing figures and texts, set each object function.

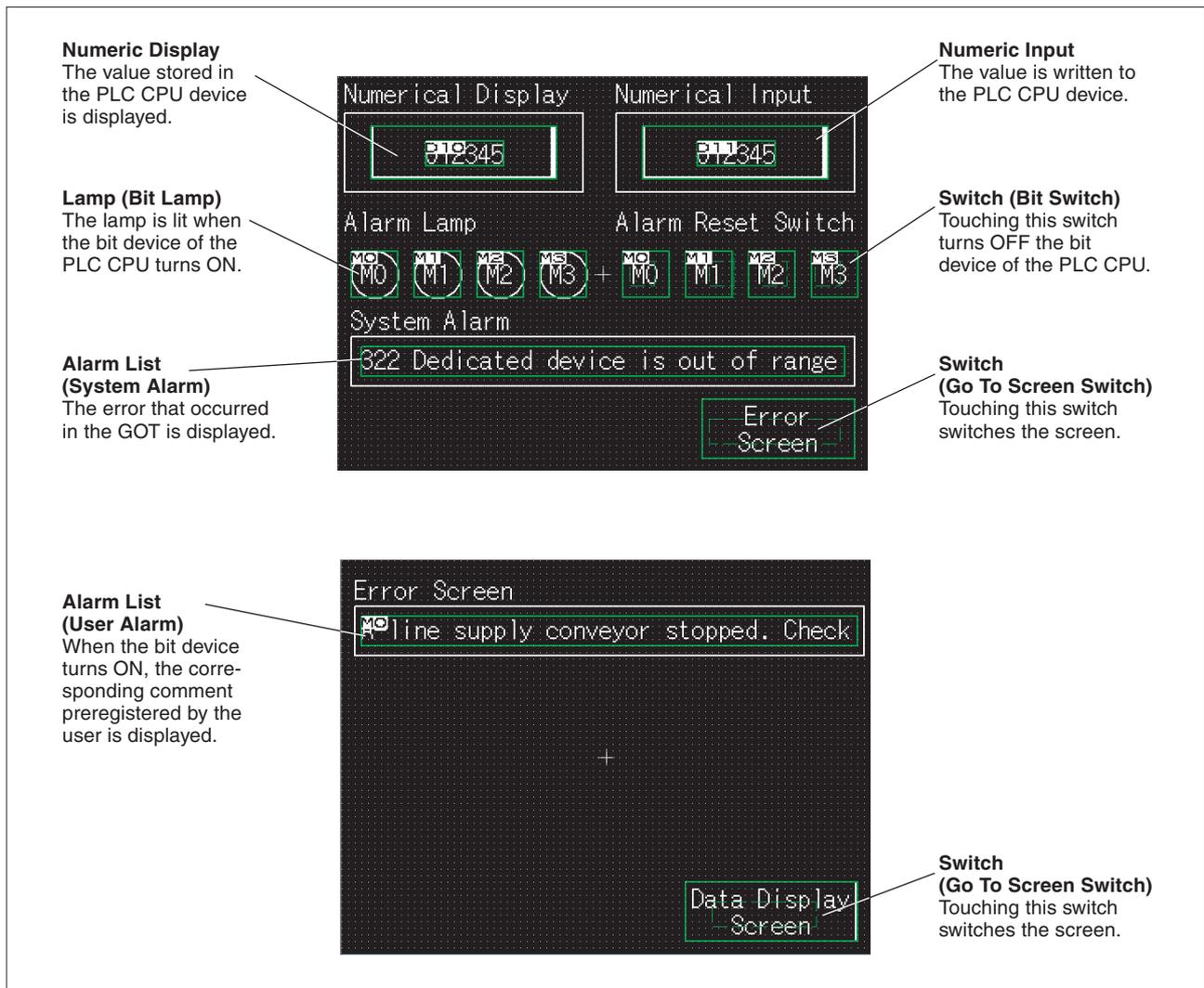


Fig. 3-23: Setting the object function

3.4.1 Numerical Display/Numerical Input Setting Method

- ① Click **Numerical Display** or **Numerical Input** on the **Object** toolbar.



Fig. 3-24:
Object toolbar

- ② As the mouse cursor turns into +, click the mouse in the desired position to arrange the display or input.
(After arrangement, right-click the mouse to cancel the arrangement mode.)

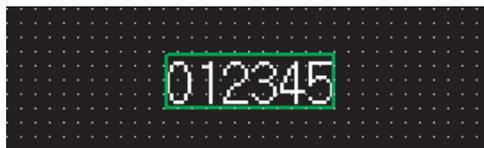


Fig. 3-25:
Numerical Display/Numerical Input after insertion

- ③ As double-clicking the arranged Numerical Display or Numerical Input, or the respective entry in the dialog box **Data View**, displays the respective dialog box, make settings. Confirm settings by clicking **OK**.

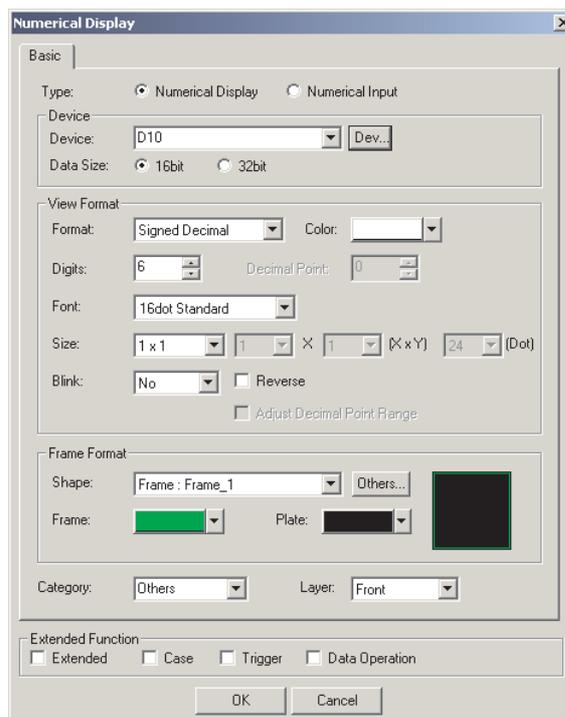


Fig. 3-26:
Numerical Display dialog box

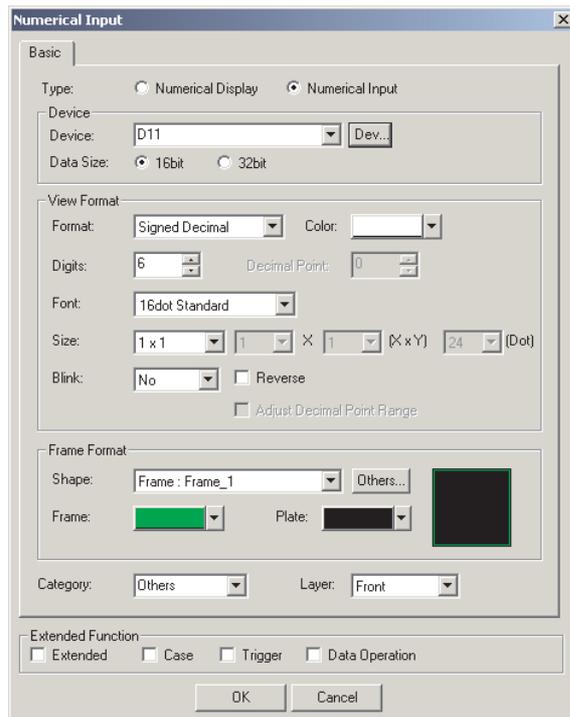


Fig. 3-27:
Numerical Input dialog box

Example ▾

Settings (for Numerical Display):

- Type: Numerical Display
- Device: D10
- Shape: Frame; Frame_1
- Font: 16dot Standard
- Layer: Front

Settings (for Numerical Input):

- Type: Numerical Input
- Device: D11
- Shape: Frame; Frame_1
- Font: 16dot Standard
- Layer: Front



- ④ Change the size.

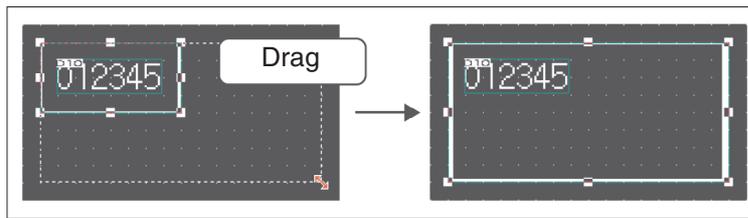


Fig. 3-28:
Resizing with mouse

- ⑤ When the object is resized, the figure frame and object may be displaced. If the figure frame and object are displaced, select the object, then right-click the mouse, and select **Centering**. The displacement is automatically corrected. When **Enable Two Tracker Mode** is selected, the figure frame and object can be moved or resized individually by the user.

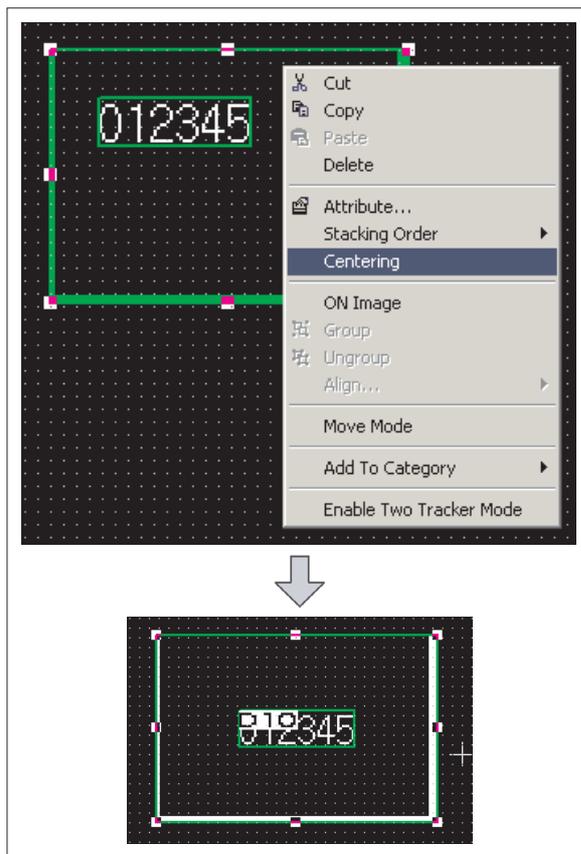


Fig. 3-29:
Centering figure frame and object

- ⑥ This completes the Numerical Display/Numerical Input setting.

3.4.2 Lamp Setting Method (Bit Lamp)

- 1 Click **Bit Lamp** on the **Object** toolbar.



Fig. 3-30:
Object toolbar

- 2 When the mouse cursor turns to +, click the mouse in the desired position to place the Lamp.
(After placing it, right-click the mouse to release the placement mode.)

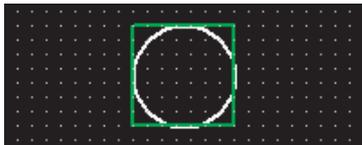


Fig. 3-31:
Bit Lamp after insertion

- 3 Double-clicking the placed Lamp or the respective entry in the dialog box **Data View** displays the respective dialog box. Make settings. Confirm settings by clicking **OK**.

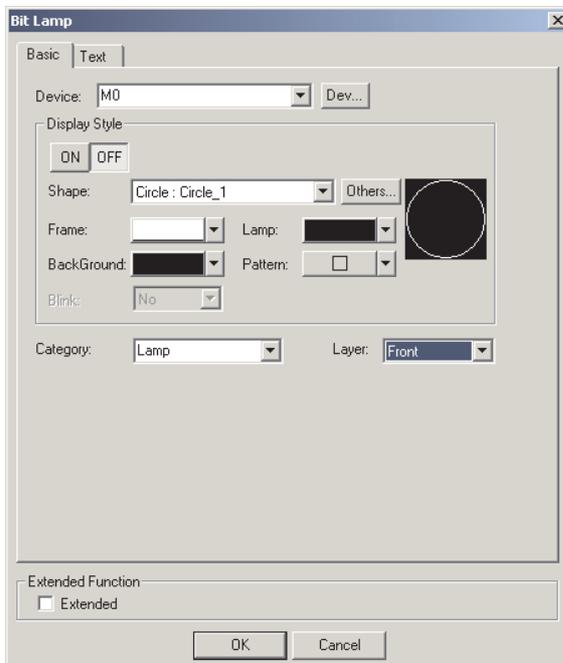


Fig. 3-32:
*Bit Lamp dialog box,
Basic tab*

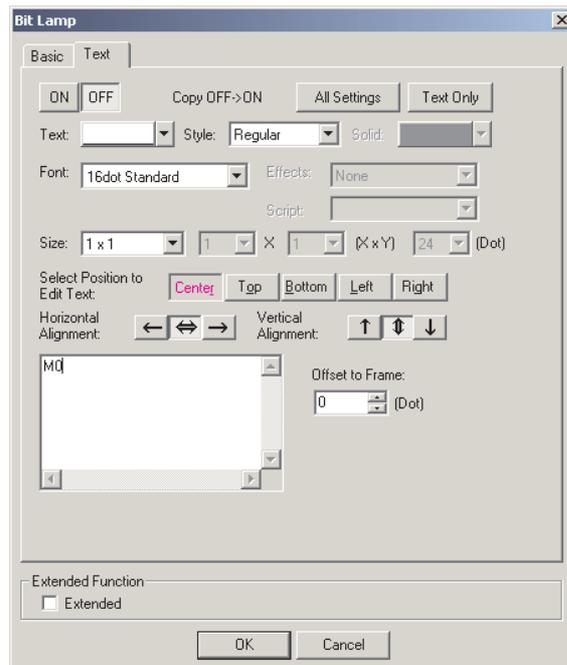


Fig. 3-33:
Bit Lamp dialog box,
Text tab

Example ▾ Settings (**Basic** tab):

- Device: M0
- Layer: Front

Settings (**Text** tab):

- Device: M0
- Font: 16dot Standard

- ④ After setting the **Text** tab, click the **All Settings** button.
(The **Text** tab settings made for OFF time are reflected when the Lamp is turned ON.)

Click the **ON** button to check the attributes of **ON** time.

A text can be registered in each display position (Center, Top, Bottom, Left, Right). The text-registered display position button is displayed in purple characters.

- ⑤ When the settings are completed, click the **OK** button.

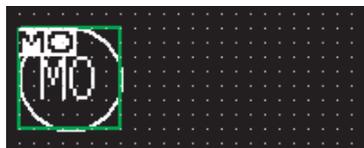


Fig. 3-34:
Bit Lamp after making settings

- ⑥ This completes the setting of the first Lamp.

- ⑦ When creating the second Lamp or later, select the set Lamp and then select the **Edit** → **Consecutive Copy** menu to display the **Consecutive Copy** dialog box.

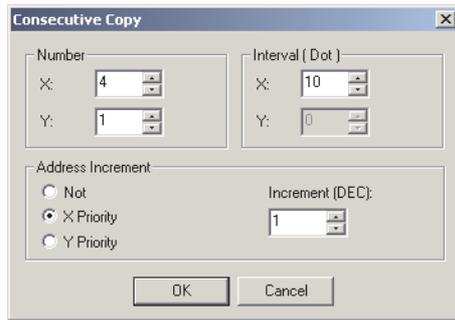


Fig. 3-35:
Consecutive Copy dialog box

Example ▾

Set data:

- Number: X: 4
- Interval (Dot): X: 10



- ⑧ Click the **OK** button to copy the Lamp.

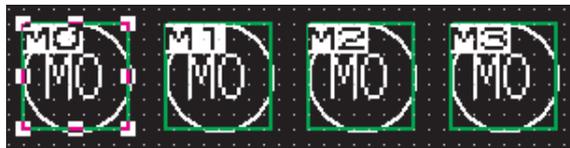


Fig. 3-36:
Bit Lamp after copying

- ⑨ Change the text of each Lamp in the **Property Sheet**. In this case, change the texts of ON and OFF times to the same one.

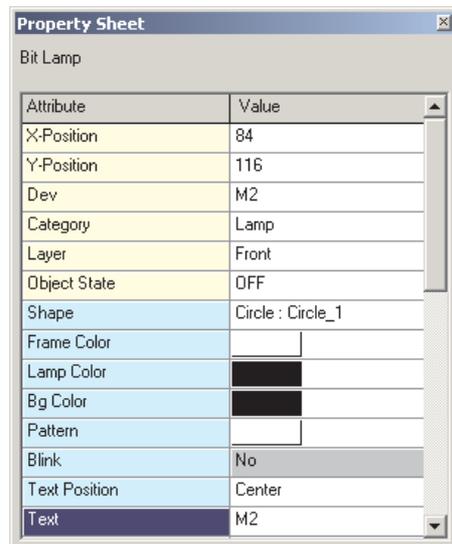


Fig. 3-37:
Property Sheet dialog box

- ⑩ This completes the Lamp setting.



Fig. 3-38:
Bit Lamp after adaptation

3.4.3 Switch (Bit Switch) Setting Method

- ① Click **S** on the **Object** toolbar, and select **Bit Switch** in the displayed submenu.

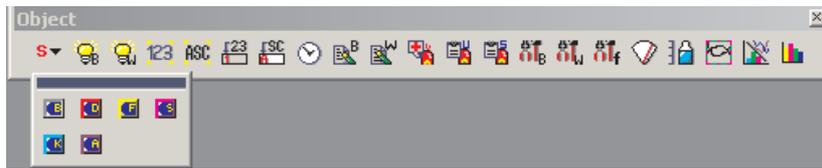


Fig. 3-39:
Object toolbar

- ② When the mouse cursor turns to +, click the mouse in the desired position to place the Switch.
(After placing it, right-click the mouse to release the placement mode.)

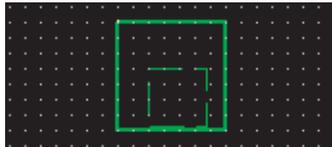


Fig. 3-40:
Bit Switch after insertion

- ③ Double-clicking the placed Switch or the respective entry in the dialog box **Data View** displays the dialog box. Make settings. (See below.)
Confirm settings by clicking **OK**.

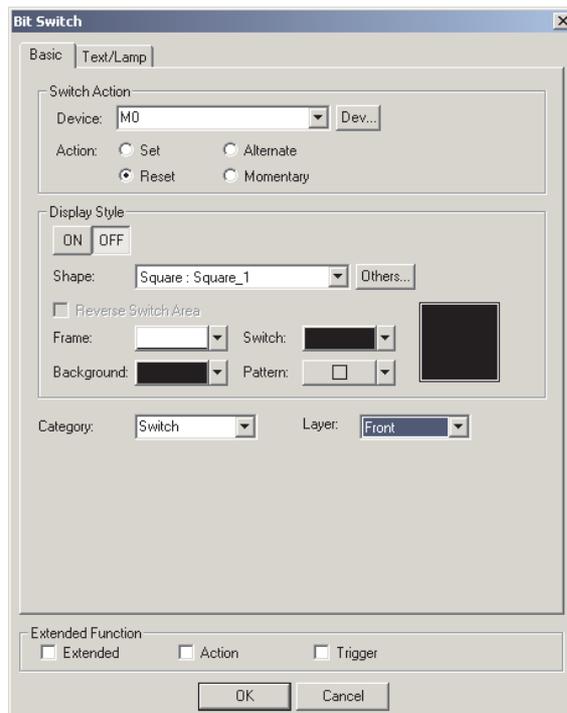


Fig. 3-41:
Bit Switch dialog box,
Basic tab

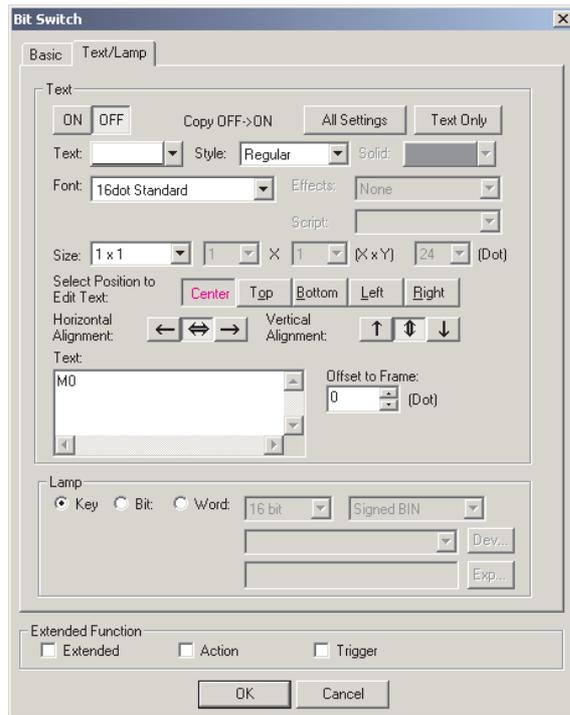


Fig. 3-42:
*Bit Switch dialog box,
Text/Lamp tab*

Example ▾

Settings (**Basic** tab):

- Device: M0
- Action: Reset
- Shape: Square: Square_1
- Layer: Front

Settings (**Text/Lamp** tab):

- Device: M0
- Font: 16dot Standard

- ④ After setting the **Text/Lamp** tab, click the **All Settings** button. (The Text tab settings made for OFF time are reflected when the Switch is turned ON.)

Click the **ON** button to check the attributes of **ON** time. A text can be registered in each display position (Center, Top, Bottom, Left, Right). The text-registered display position button is displayed in purple characters.

- ⑤ When the settings are completed, click the **OK** button.

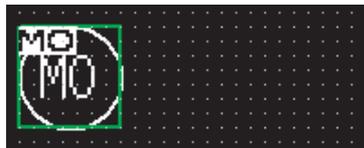


Fig. 3-43:
Bit Switch after setting

- ⑥ This completes the setting of the first Switch.

- ⑦ When creating the second Switch or later, select the Switch and then select the **Edit** → **Consecutive Copy** menu to display the **Consecutive Copy** dialog box.

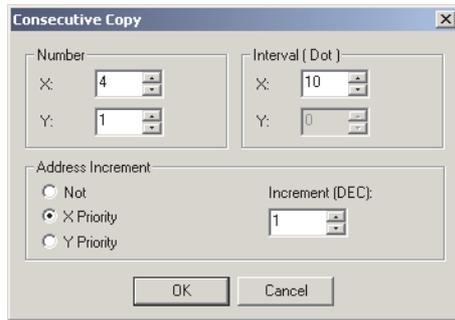


Fig. 3-46:
Consecutive Copy dialog box

Example ▾

Set data:

- Number: X: 4
- Interval (Dot): X: 10



- ⑧ Click the **OK** button to copy the Lamp.

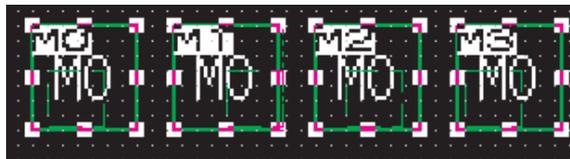


Fig. 3-44:
Bit Switch after copying

- ⑨ Change the text of each Lamp in the Property sheet. In this case, change the texts of ON and OFF times to the same one.
- ⑩ This completes the Lamp setting.



Fig. 3-45:
Bit Switch after adaptation

3.4.4 Switch (Go To Screen Switch) Setting Method

- Click **S** on the **Object** toolbar, and select **Go To Screen Switch** in the displayed sub-menu.



Fig. 3-47:
Object toolbar

- When the mouse cursor turns to +, click the mouse in the desired position to place the Switch. (After placing it, right-click the mouse to release the placement mode.)

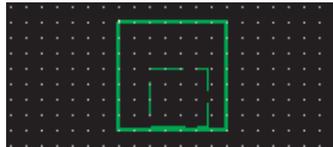


Fig. 3-48:
Switch after insertion

- Double-clicking the placed Switch or the respective entry in the dialog box **Data View** displays the dialog box. Make settings. (See below.)
Confirm settings by clicking **OK**

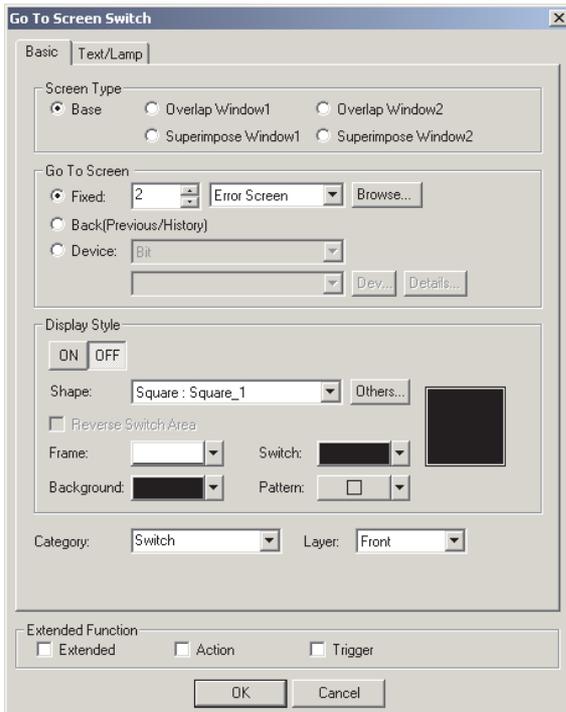


Fig. 3-49:
Go To Screen Switch dialog box,
Basic tab

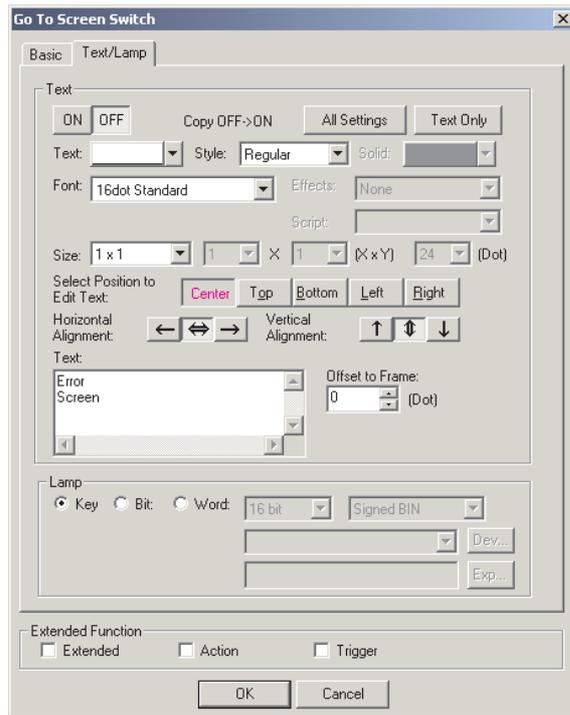


Fig. 3-50:
Go To Screen Switch dialog box,
Text/Lamp tab

Example ▾

Settings (**Basic** tab):

- Go To Screen: Fixed – 2 – Error Screen
- Shape: Square: Square_1
- Layer: Front

Settings (**Text/Lamp** tab):

- Text: Error Screen
- Font: 16dot Standard

④ After setting the **Text/Lamp** tab, click the **All Settings** button.
(The Text tab settings made for OFF time are reflected when the Switch is turned ON.)

Click the **ON** button to check the attributes of **ON** time. A text can be registered in each display position (Center, Top, Bottom, Left, Right). The text registered display position button is displayed in purple characters.

⑤ When the settings are completed, click the **OK** button.



Fig. 3-51:
Switch after Setting

- ⑥ Adjust the size.



Fig. 3-53:
Switch after adjustment the size

NOTE

Make a right click on the object and select the option **Enable Two Tracker Mode** in the displayed menu. By this the object and the object's frame separately can be adjusted in their positions or shapes.

In case of a touch sensitive switch by this you can adjust the touch sensitive area.

- ⑦ This completes the setting of the Switch on Base Screen 1.

After setting, press the [Ctrl] key + [C] key with the Switch selected. (Shortcut: Copy)

- ⑧ Double-click Base Screen 2 (Error screen) on the tree in the Project workspace (Dialog box **Workspace**) to display Base Screen 2.

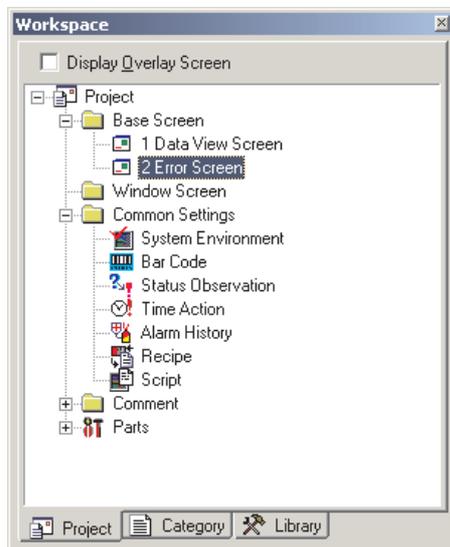


Fig. 3-52:
Workspace dialog box

- ⑨ Press the [Ctrl] key + [V] key on Base Screen 2 to paste the copied Switch. (Shortcut: Paste) Click the mouse to paste the Switch.

- ⑩ Select the pasted switch, and change the set data in the Property sheet.

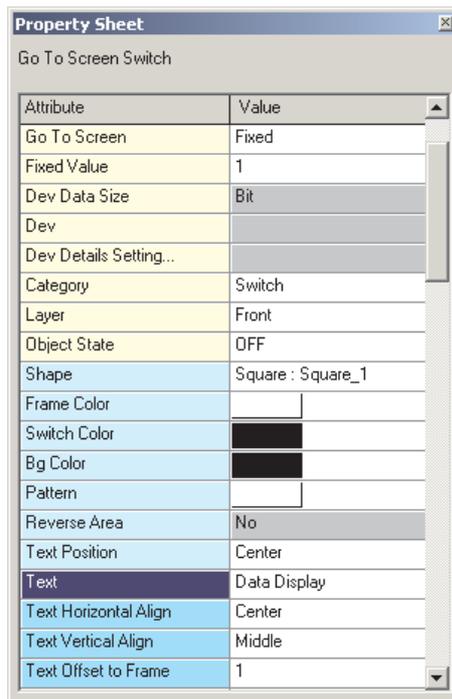


Fig. 3-54:
Property Sheet dialog box

Example ▾

Set data:

- Go To Screen: Fixed – 1 – Data Display Screen
- Text: Data Display Screen



NOTE

If a character string of multiple lines is input in the property sheet text, only the text on the first line is displayed.

- ⑩ This completes the Go To Screen Switch setting.



Fig. 3-55:
Switch after adjusting the size

3.4.6 Alarm List (User Alarm) Setting Method

When using the Alarm List (User Alarm), it is necessary to register the comments to be displayed as alarms in advance.

Basic Comment Registration Method

The following explains how to register the Basic Comments with an example.

Comment-No.	Comment
1	A-Line supply conveyor stopped. Check the power source.
2	Emergency stop limit switch operated. Check the product.
3	Product limit switch dose not operate. Check for presence/absence of the product.
4	Hydraulic pressure of finishing machine 1 is low. Supply hydraulic oil.

Tab. 3-2: Sample comments

- ① Double-click **Basic Comment** on the tree in the Project workspace.

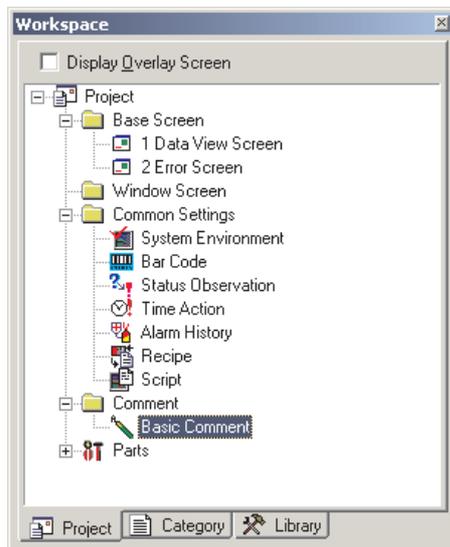


Fig. 3-59: Workspace dialog box

- ② When the **Basic Comment** box appears, register a comment.



Fig. 3-60: Type the first comment

- ③ After registering the comment, click **New Comment** on the **Comment** toolbar.



Fig. 3-61: Comment toolbar

NOTE

Comment toolbar displaying method:
Choose View → Toolbars → Comment to display the toolbar.

- ④ Register the second comment. After that, register the third and fourth comments in the same procedure.

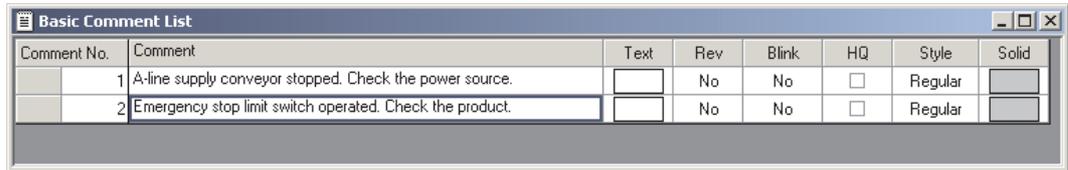


Fig. 3-62: Type a further comment

- ⑤ When comment creation is completed, close the **Basic Comment List** dialog box.

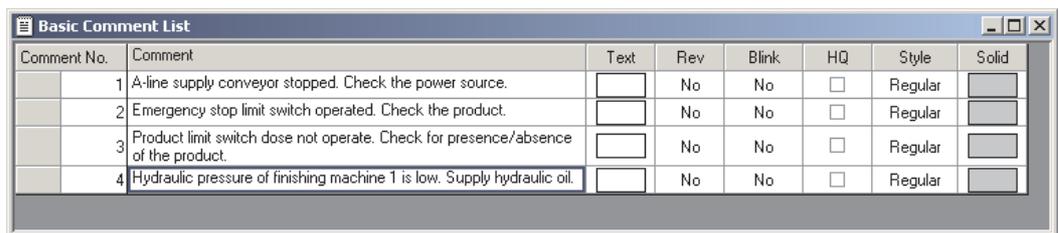


Fig. 3-63: Comment creation completed

Alarm List (User Alarm) Setting Method

- ⑥ Click **User Alarm** on the **Object** toolbar.



Fig. 3-64: Object toolbar

- ⑦ As the mouse cursor turns into +, click the mouse in the desired position to arrange the Alarm List.
(After arrangement, right-click the mouse to cancel the arrangement mode.)

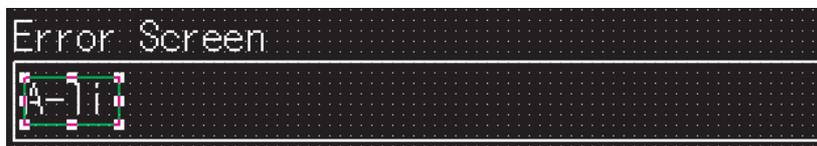


Fig. 3-65: Alarm List (User Alarm) after inserting

- ⑧ Double-clicking the arranged Alarm List or the respective entry in the dialog box **Data View** displays the respective dialog box. Make settings. (See below.) Confirm settings by clicking **OK**.

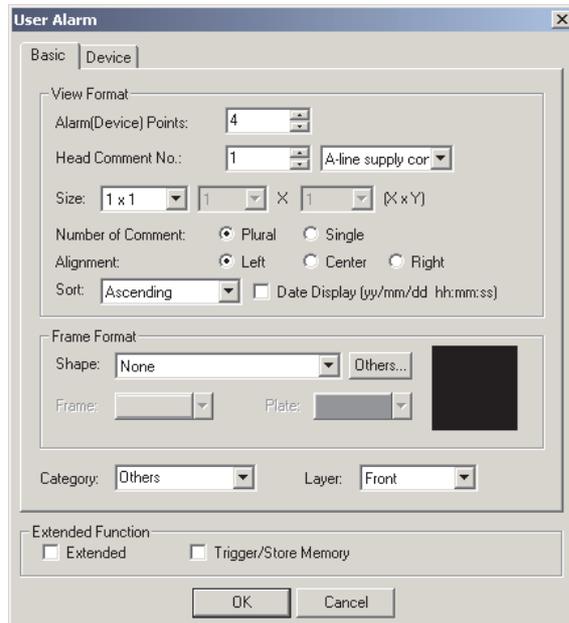


Fig. 3-66:
User Alarm dialog box
Basic tab

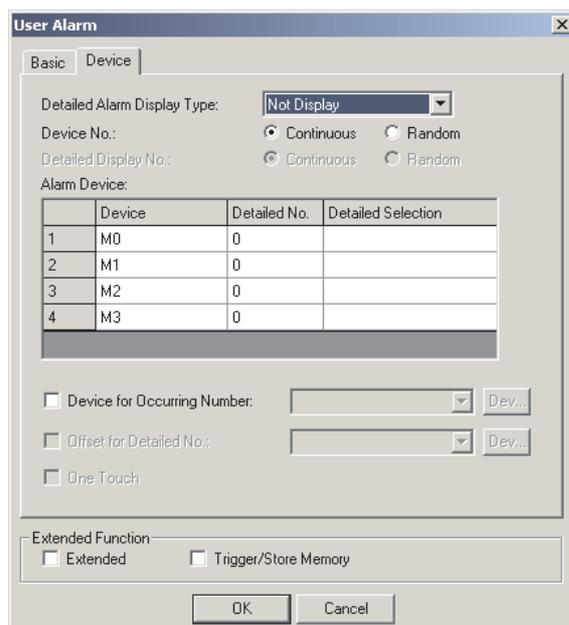


Fig. 3-67:
User Alarm dialog box
Device tab

Example ▾

Set data (**Basic** tab):

- Alarm (Device) Points: 4
- Layer: Front

Set data (**Device** tab):

- Device No.: Continuous
- Alarm Device: M0



- ⑨ Adjust the size.



Fig. 3-68: Alarm List (User Alarm) after adjusting the size

- ⑩ This completes the setting of the Alarm List (User Alarm).

3.5 Saving the Created Project Data

- ① Choose the **Project** → **Save As** menu.
- ② When the **Save As** dialog box appears, select the storage place and set the file name.

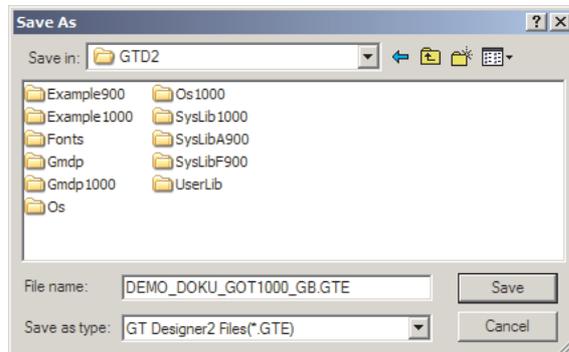


Fig. 3-69:
Save As dialog box

- ③ Click the **Save** button to save the project data.

3.6 Previewing the Created Project Data

- ① Choose the **View** → **Preview** menu.
- ② The screen to be displayed on the GOT appears in the **Screen Preview** window.

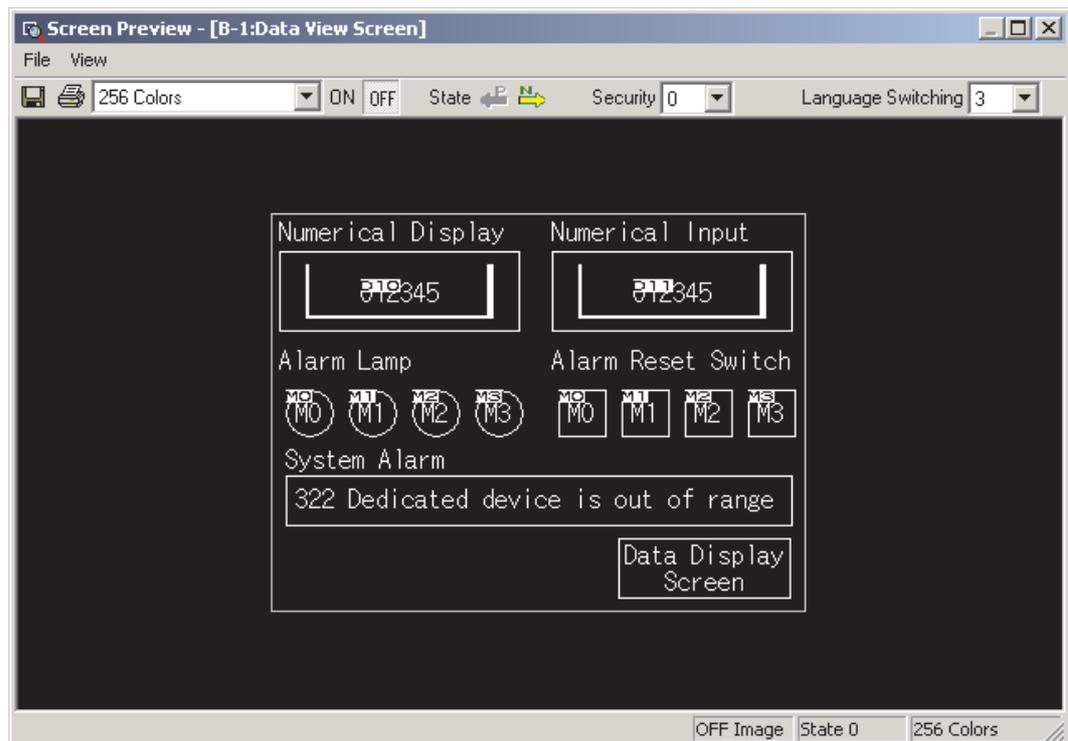


Fig. 3-70: *Screen Preview window*

3.7 Transferring Project Data from PC to GOT

3.7.1 Connecting the PC and GOT

Connect your PC to the USB interface on the front of the GOTs by using a USB cable GT09-C20USB-5P.

Alternatively you can use the RS232 interface of your PC and the GOT to establish the connection. In this case use a RS232 cable GT01-C30R2-9S or FX-232-CAB-1.

When connecting to an ETHERNET you can also transfer project data from your PC to several GOTs via ETHERNET.

The following table lists the different data transfer speeds.

Project data size	Data transfer time of the particular connection method		
	ETHERNET (100 Mbps)	USB (12 Mbps)	RS232 (115 kbps)
1 MB	20 sec	20 sec	2 min 30 sec

Tab. 3-3: Data transfer speed

3.7.2 Installing the Standard monitor OS and Communication driver

The GOT does not include the Standard monitor OS for monitoring and the Communication driver for communication with the PLC CPU. Therefore, it is necessary to perform this operation only once before monitoring.

This operation is required again when the Standard monitor OS is updated or the communication method with the PLC is changed.

NOTE

Precautions for OS installation:
 Installing the OS into the GOT clears the project data within the GOT.
 Upload the data within the GOT as necessary.

- ① Choose the **Communication** → **To/From GOT** menu.
- ② When the **Communicate with GOT** dialog box appears, select the **Communication configuration** tab.

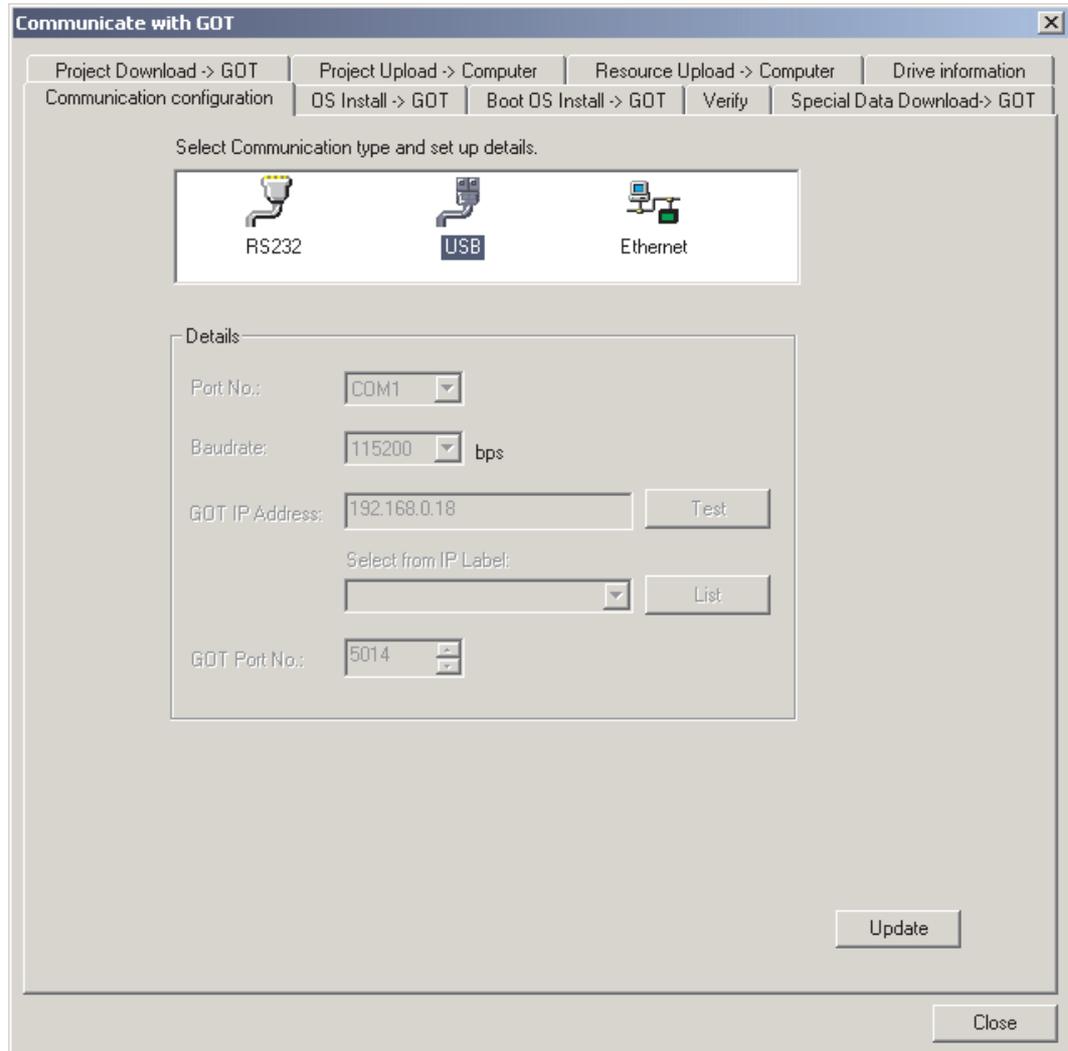


Fig. 3-71: Communicate with GOT dialog box

- ③ On the Communication configuration tab, confirm and set the communication settings to be used.
When any setting has been changed, click the **Update** button.
- ④ After then, choose the **OS Install** → **GOT** tab.
- ⑤ On the **OS Install** → **GOT** tab, select the **Standard monitor OS**, **Communication driver**, **Extended function OS** and **Option OS** to be installed into the GOT.
- ⑥ After making the selection, click the **Install** button. This starts the installation of the OS and communication driver.
- ⑦ After OS installation is completed, the GOT restarts.

3.7.3 Downloading the Project Data

After OS installation, download the created project data to the GOT.

- ① Select **Project Download** → **GOT** tab in the **Communicate with GOT** dialog box.
- ② On the **Project Download** → **GOT** tab, select the data (Base Screen, Window Screen, Common settings) to be downloaded to the GOT.

Project configuration tree: Check all. (Click the **Select All** button.)

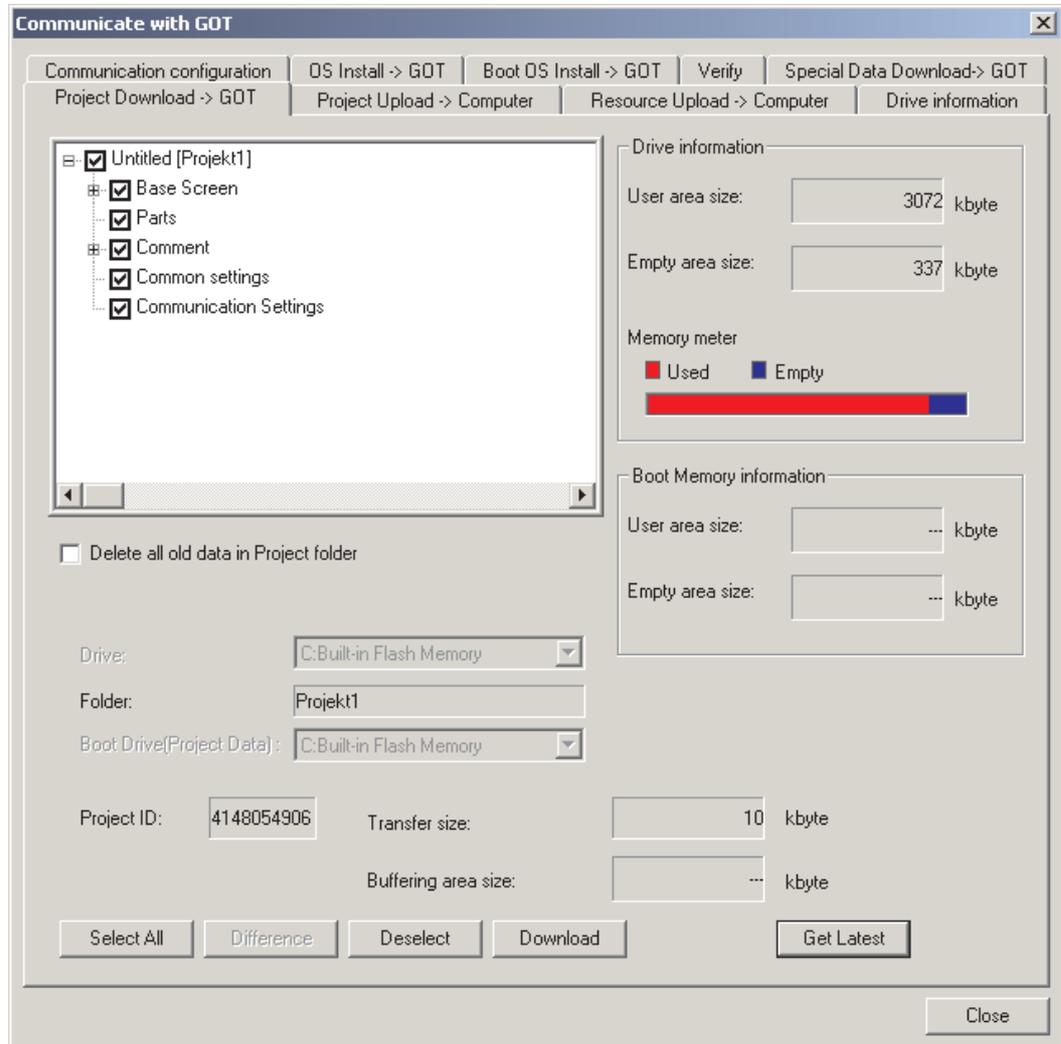


Fig. 3-72: Communicate with GOT dialog box

- ③ After making the selection, click the **Download** button. This starts project data downloading.

3.8 Connecting with the PLC CPU

After transferring the Standard monitor OS, Communication driver and project data to the GOT, connect the GOT and PLC CPU.

The RS422 connection between the GT11□□ and PLC is taken as a connection example in this section.

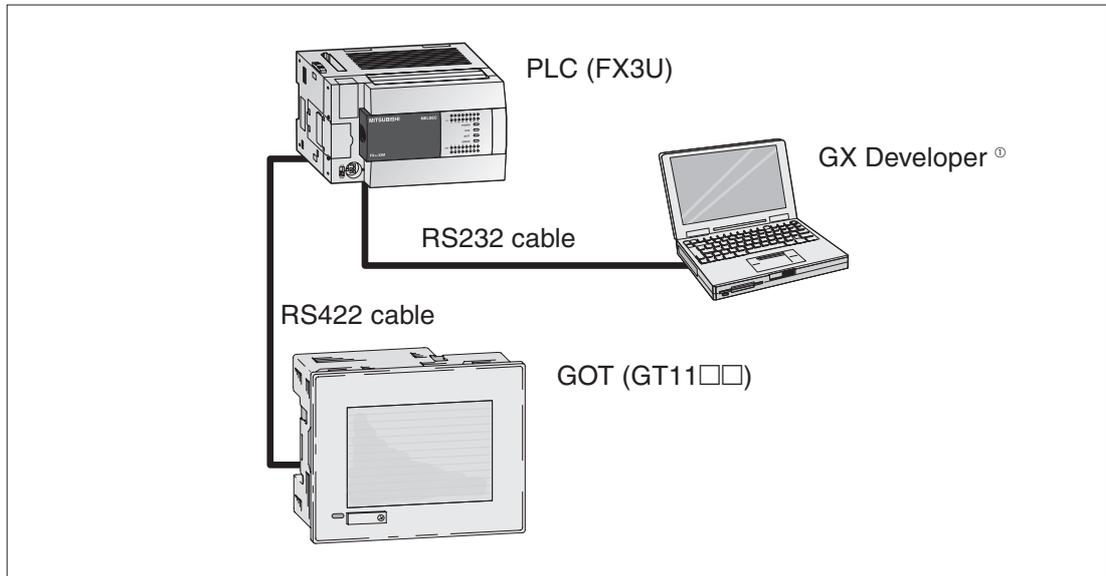


Fig. 3-73: System configuration example

① For details of GX Developer including the system configuration and operation, refer to the GX Developer 8.0 Operating Manual (Part-No. 144011).

NOTE

Before mounting the communication unit or connecting the cable, completely power OFF the GOT. Refer to the following manual for details.
→ GOT1000 Series Connection Manual

3.8.1 Connecting to the PLC CPU

Connect the GOT and PLC CPU.

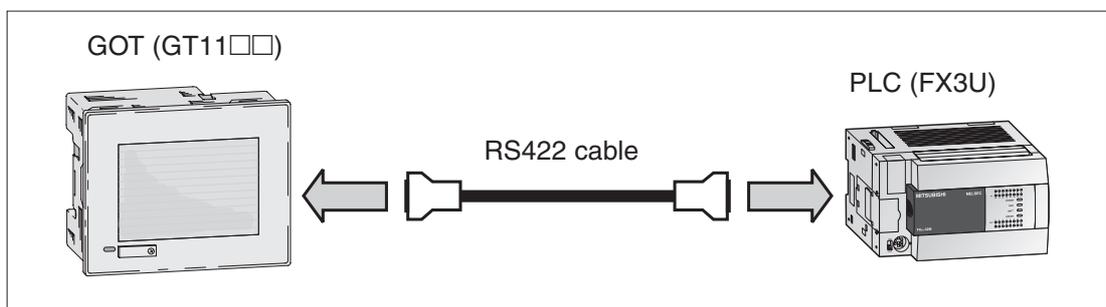


Fig. 3-74: connection between GOT and FX-CPU

NOTE

Refer to the following manual for details of the system configuration for connection.
→ GOT1000 Series Connection Manual

3.8.2 Operation Image on GOT

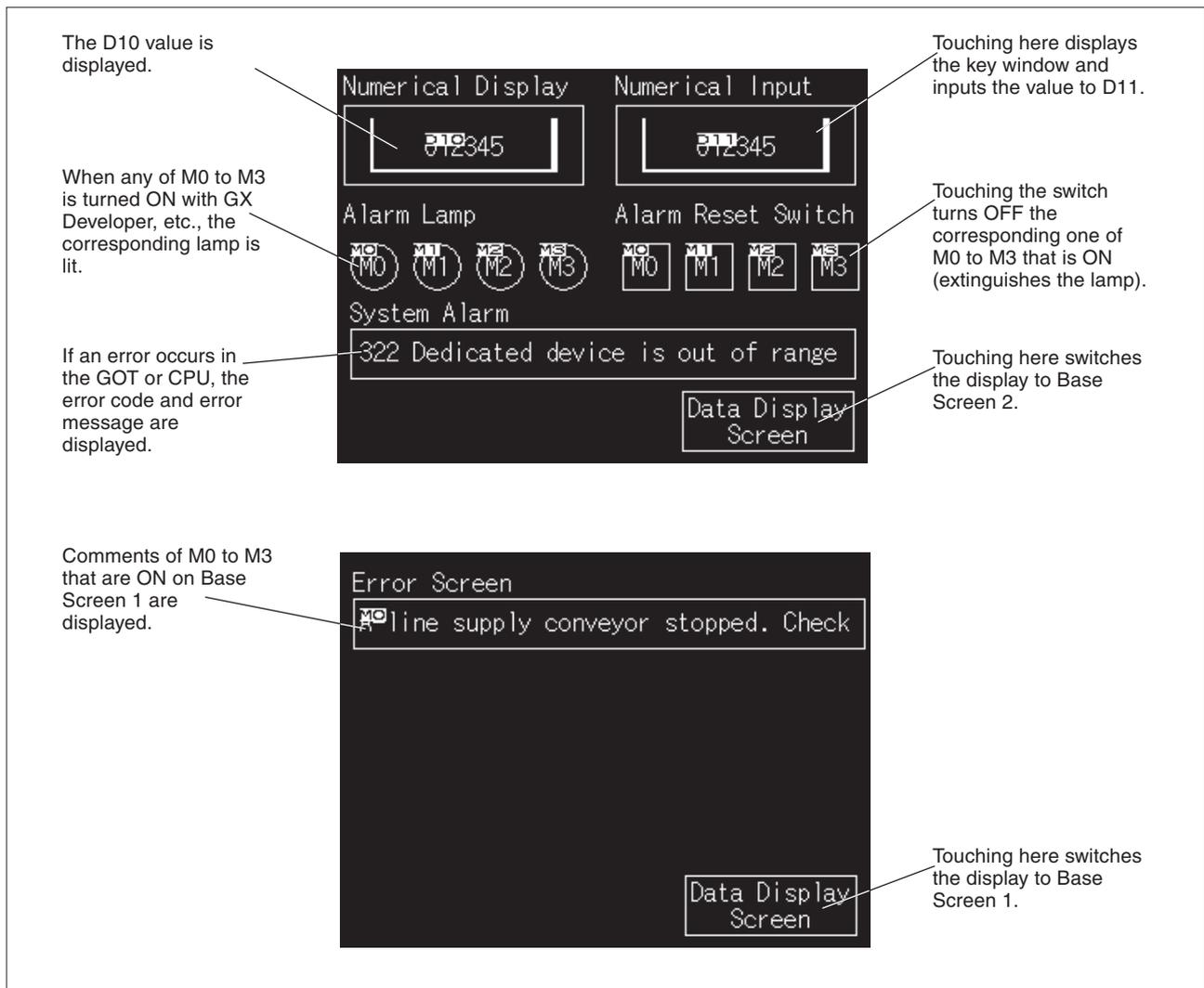


Fig. 3-75: Functions of Base Screen 1 and 2

3.8.3 Uploading the Project Data

To back up or correct the project data downloaded to the GOT, upload the project data to the PC.

- ① Select the **Communication** → **To/From GOT**.
- ② When the **Communicate with GOT** dialog box appears, select the **Project Upload** → **Computer** tab.

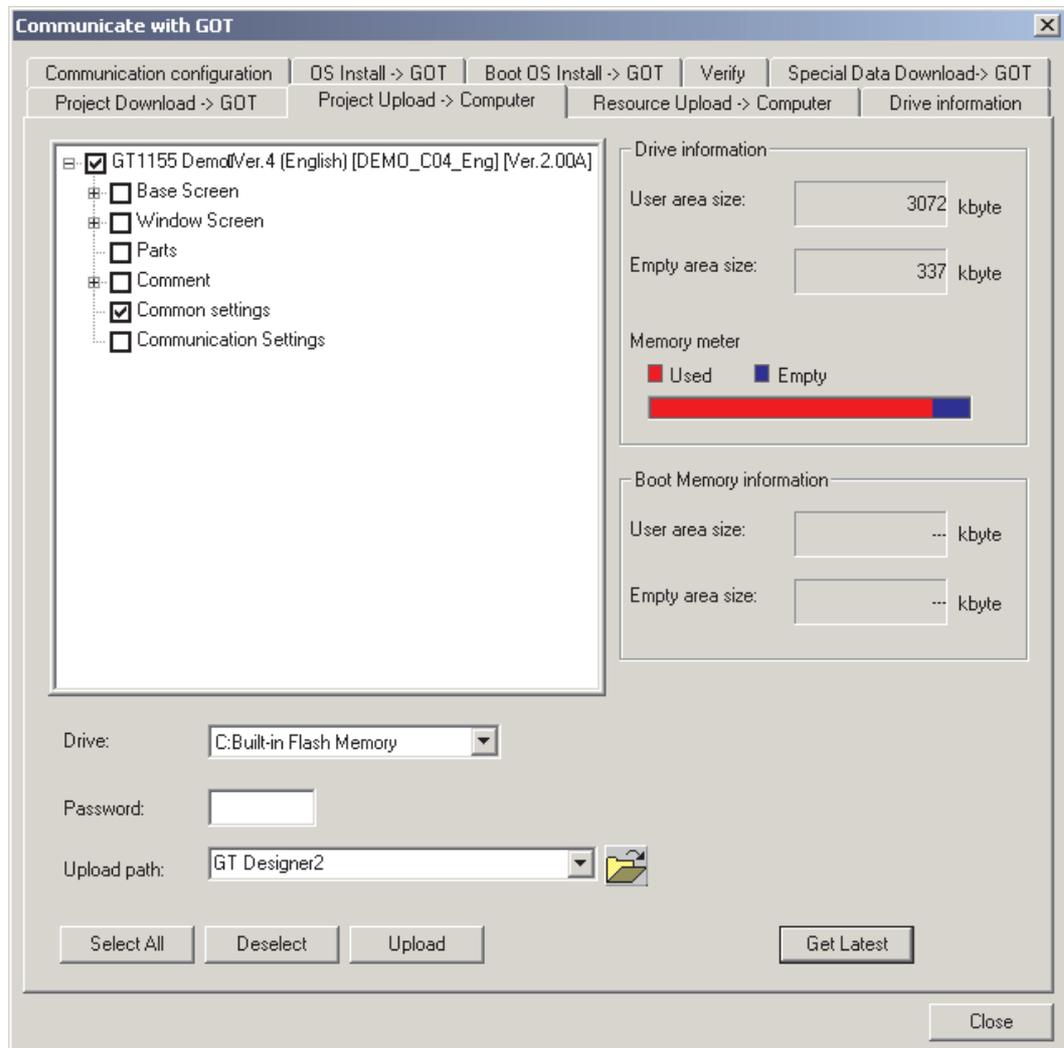


Fig. 3-76: Communicate with GOT dialog box

- ③ Set **Upload path**: GT Designer2

NOTE

When the project data are not displayed in a tree structure, click the **Get Latest** button.

- ④ Click the **Upload** button to execute uploading.

4 Configuration of Working Areas

4.1 Screen Configuration and Various Tools

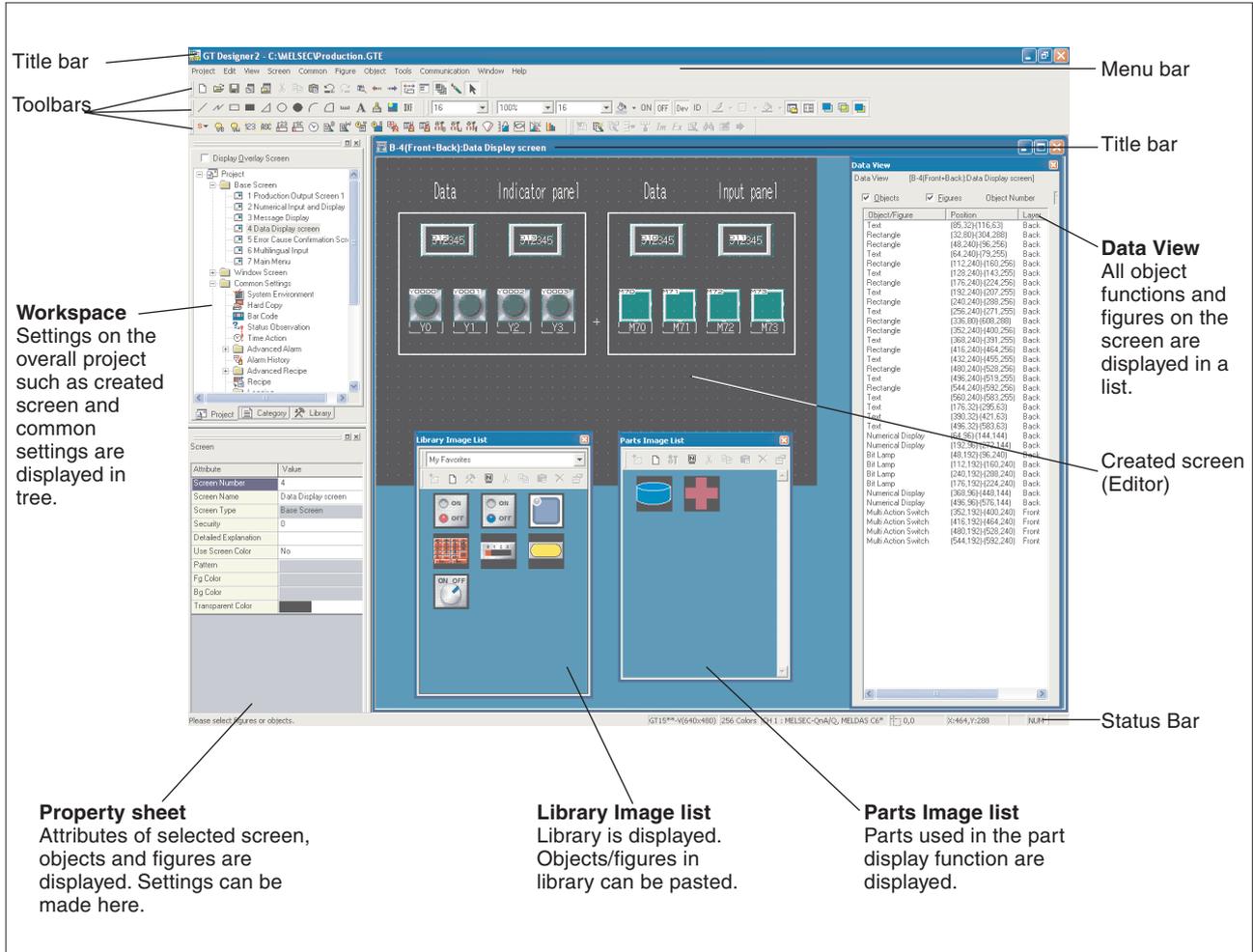


Fig. 4-1: Screen configuration and various tools

4.2 Workspace Type

4.2.1 Project Tab

Overall project settings such as created screens and common settings are displayed in a tree. It is convenient to see the project details, to check the work progress and to copy a screen.

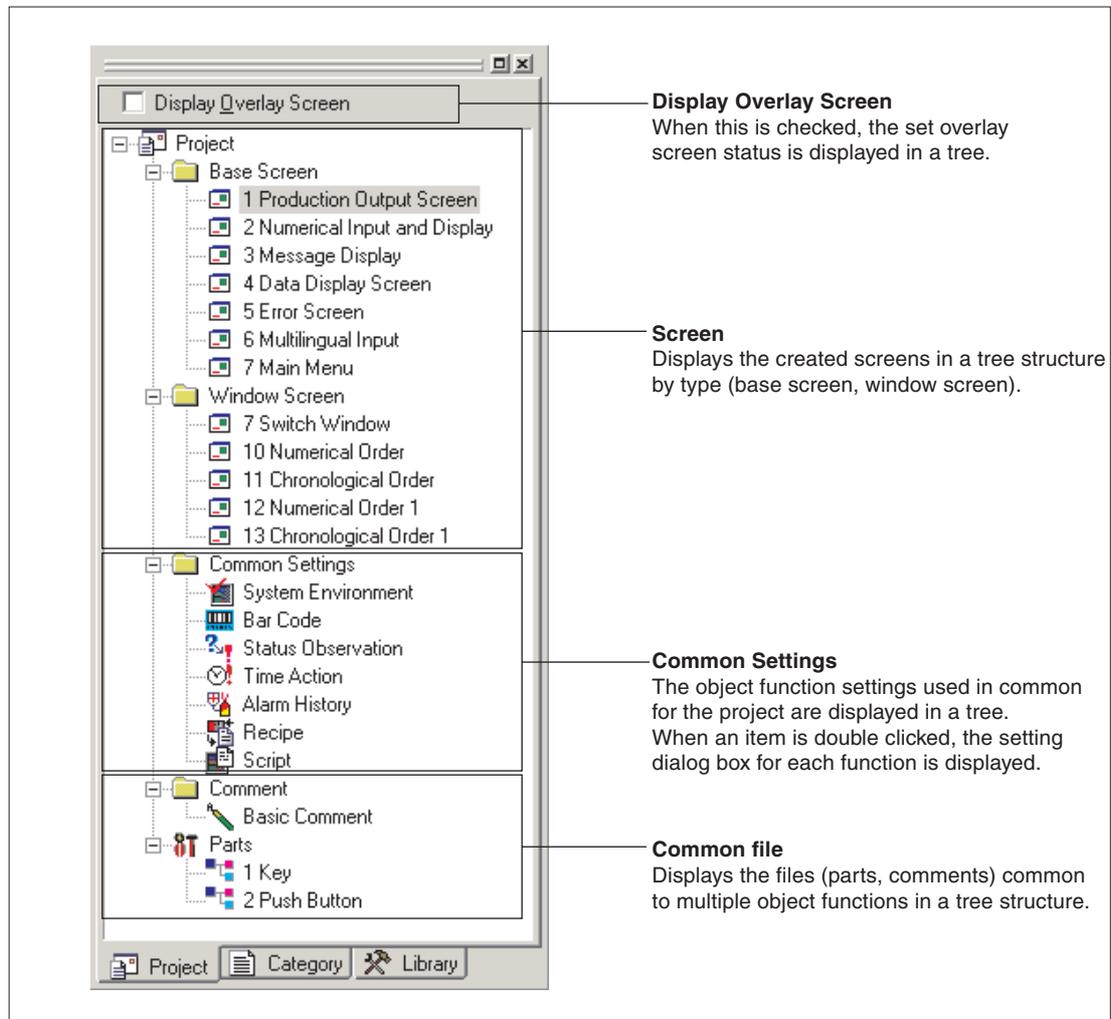


Fig. 4-2: Project tab

NOTE

Available functions:

- Right click the mouse to select basic commands such as **New Screen**, **Open** or **Copy**.
- Dragging a figure to the **Project workspace** allows registration of Parts.

4.2.2 Category Tab

The overall project setting is displayed in a tree by Category (type). Classification for each application simplifies management and editing of objects.

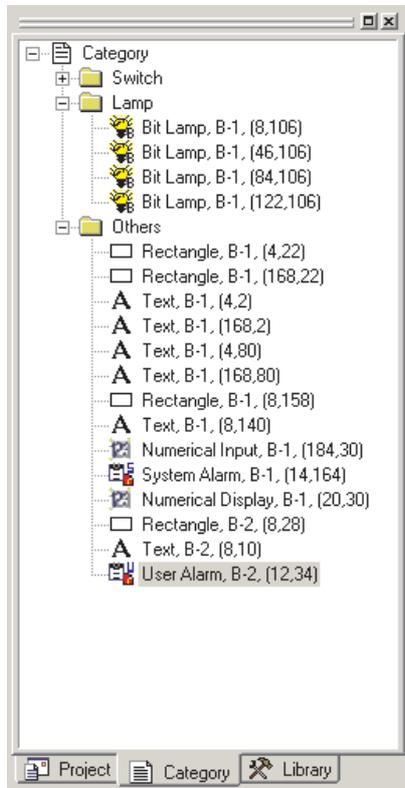


Fig. 4-3:
Category tab

4.2.3 Library Tab

Here you find a library of predefined objects, which you can use in your project. The further more you can save user defined objects in the user library, which then also can be used in other projects.

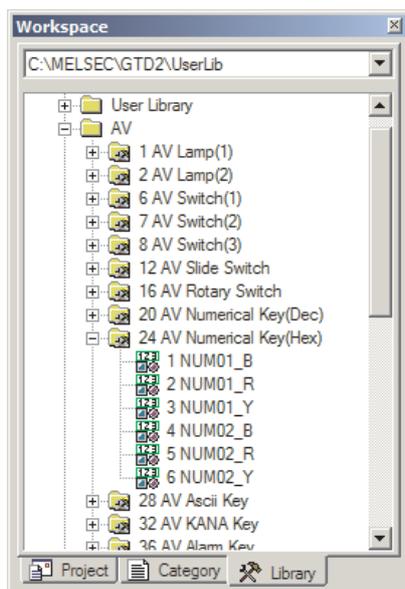


Fig. 4-4:
Library tab

4.3 Settings for Working with GT Designer2

4.3.1 Menu Configuration

In the appendix of this manual you will find an overview of the menu configuration:

→ Please see Appendix, section A.1

4.3.2 Types of Toolbars

In the appendix of this manual you will find an overview of the toolbars:

→ Please see Appendix, section A.2

4.3.3 Adding or Deleting Toolbars/Icons

Toolbars

- ① Select **Project** → **Preferences**.
- ② Select **Toolbars** tab in the **Preferences** dialog box.

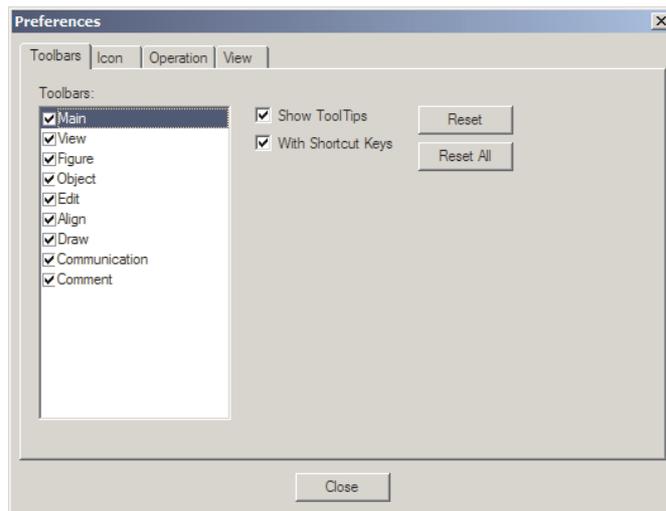


Fig. 4-5:
Preferences dialog box

Tab	Description
Toolbars	Check the desired toolbars for addition. To delete it, remove the check.
Show ToolTips	When the cursor is placed on the icon, check this to display the icon name.
With Shortcut Keys	When the cursor is placed on the icon, check this to display the shortcut key. (It is effective only when the "Show Tool Tips" is displayed.)
Reset	Only the selected toolbars are set to default status.
Reset All	All toolbars are set to default status.

Tab. 4-1: *Description to Fig. 4-5*

- ③ In the selection field **Toolbars** you can select and deselect toolbars for displaying by checking or unchecking the desired toolbar.

Icons

- ① Select **Project** → **Preferences**.
- ② Select **Icon** tab in the **Preferences** dialog box.

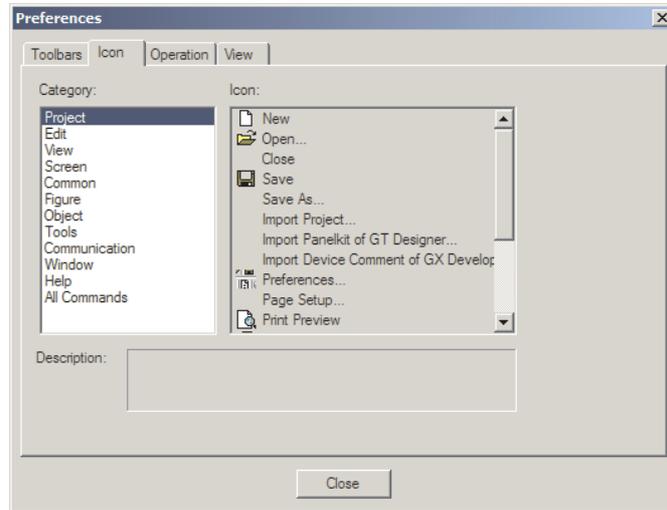


Fig. 4-6:
Preferences dialog box

- ③ Select the desired icon in the selection field **Icon** for movement and drag it to the desired position in a toolbar. When you select an icon and drag it to the outside of the toolbar, the icon will be deleted from that toolbox.

4.3.4 Settings for Drawing Screens

Operation

- ① Select **Project** → **Preferences**.
- ② Select **Operation** tab in the **Preferences** dialog box.

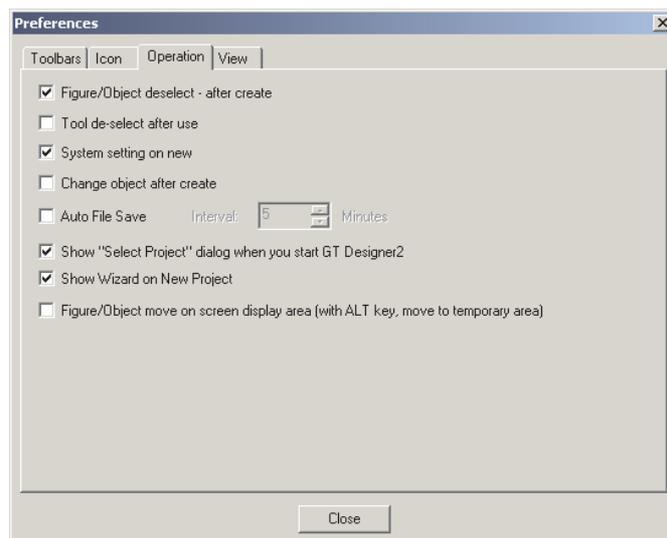


Fig. 4-7:
Operation dialog box

Element	Status	Description
Figure/Object deselect - after create	Checked	After arranging objects, the selected status (status with handle) is reset.
	Not checked	With the selected status (status with handle), figures/objects are arranged on the drawing screen.
Tool de-select after use	Checked	After setting figures/objects, the tool selected status is reset. It is convenient to arrange different figures/objects.
	Not checked	After setting figures/objects, the selected status remains active. It is convenient to arrange the same figures/objects continuously.
System setting on new	Checked	The system settings dialog box (GOT type, PLC type, etc.) appears in creation of a new project.
	Not checked	The system settings dialog box (GOT type, PLC type, etc.) does not appear in creation of a new project.
Change object after create	Checked	After arranging objects on the drawing screen, the settings dialog box automatically appears.
	Not checked	After arranging objects on the drawing screen, the settings dialog box does not automatically appear.
Auto File Save	Checked	File is automatically saved. Saving interval (5 to 720) is set.
	Not checked	File is not automatically saved.
Show "Select Project" dialog when ...	Checked	When the GT Designer2 is started, the project selection dialog box (New, Open, etc.) appears.
	Not checked	When the GT Designer2 is started, the project selection dialog box (New, Open, etc.) does not appear.
Show Wizard on New Project	Checked	When creating a new project, the wizard screen appears.
	Not checked	When creating a new project, the wizard screen does not appear.
Figure/Object move on screen display area (with ALT key, move to temporary area)	Checked	A figure or object can be moved on the screen display area by dragging. When dragged pressing the ALT key, it can be moved to the temporary area.
	Not checked	A figure or object can be moved to the temporary area by dragging. When dragged pressing the ALT key, it can be moved on the screen display area.

Tab. 4-2: Description to Fig. 4-7

- ③ On the tab **Operation** you can activate and deactivate different options for working with the GT Designer2.

View

- ① Select **Project** → **Preferences**.
- ② Select **View** tab in the **Preferences** dialog box.

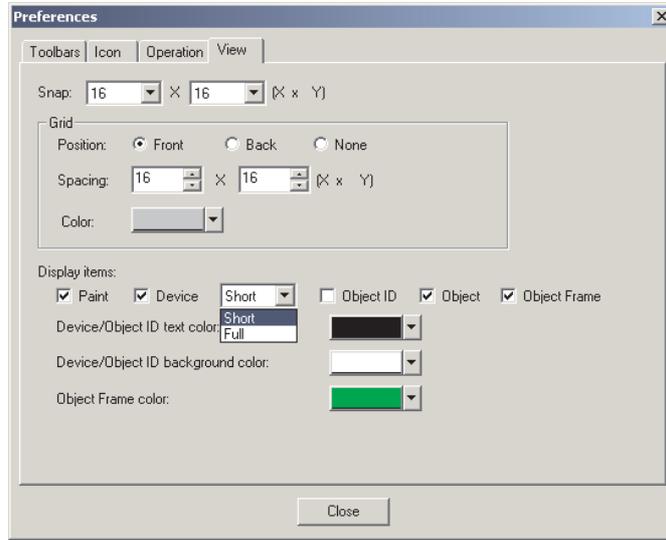


Fig. 4-8:
Preferences dialog box

Element		Description
Snap		Dot value (1, 2, 4, 8 or 16) is selected for automatic arrangement of figures or objects on the screen.
Grid	Position	Position of grid display is selected: <ul style="list-style-type: none"> • Front: Grid is displayed at the front of the screen. • Back: Grid is displayed at the back of the screen. • None: Grid is not displayed.
	Spacing	Grid spacing (2 to 64 dots) is set.
	Color	Grid display color is selected.
Display items	Paint	When a closed figure is filled with "Paint," this item is selected to display the filled status.
	Device	This item is selected to display the device name set in the object.
	Object ID	This item is selected to display the object ID of each object. The object ID is automatically put on each object. It is convenient to display the object ID in setting the system information.
	Object	This item is selected to display the set object.
	Object Frame	Select this item to display the boundary of the object.
	Device/ Object ID text color	Specify the text color of the object or object ID. Text color: Black
	Device/ Object ID background color	Specify the text background color of the object or object ID. Background color: White
Object Frame color	Specify the color of the object boundary. Frame color: Green	

Tab. 4-3: *Description to Fig. 4-8*

- ③ On the tab **View** you can activate and deactivate different options for displaying in the GT Designer2.

NOTES

The function **Snap** is used to aline figures and objects with the grid. The alinement is done with a multiple of the snap value. For example, if the value is set to 16 points the cursor can only moved to the coordinates of multiples of 16. A position in between is not possible. The cursor or the object are so to say snapped every 16 points.

The items set on the display tab **View** can also be changed from the toolbar **View** and the menu **View**.

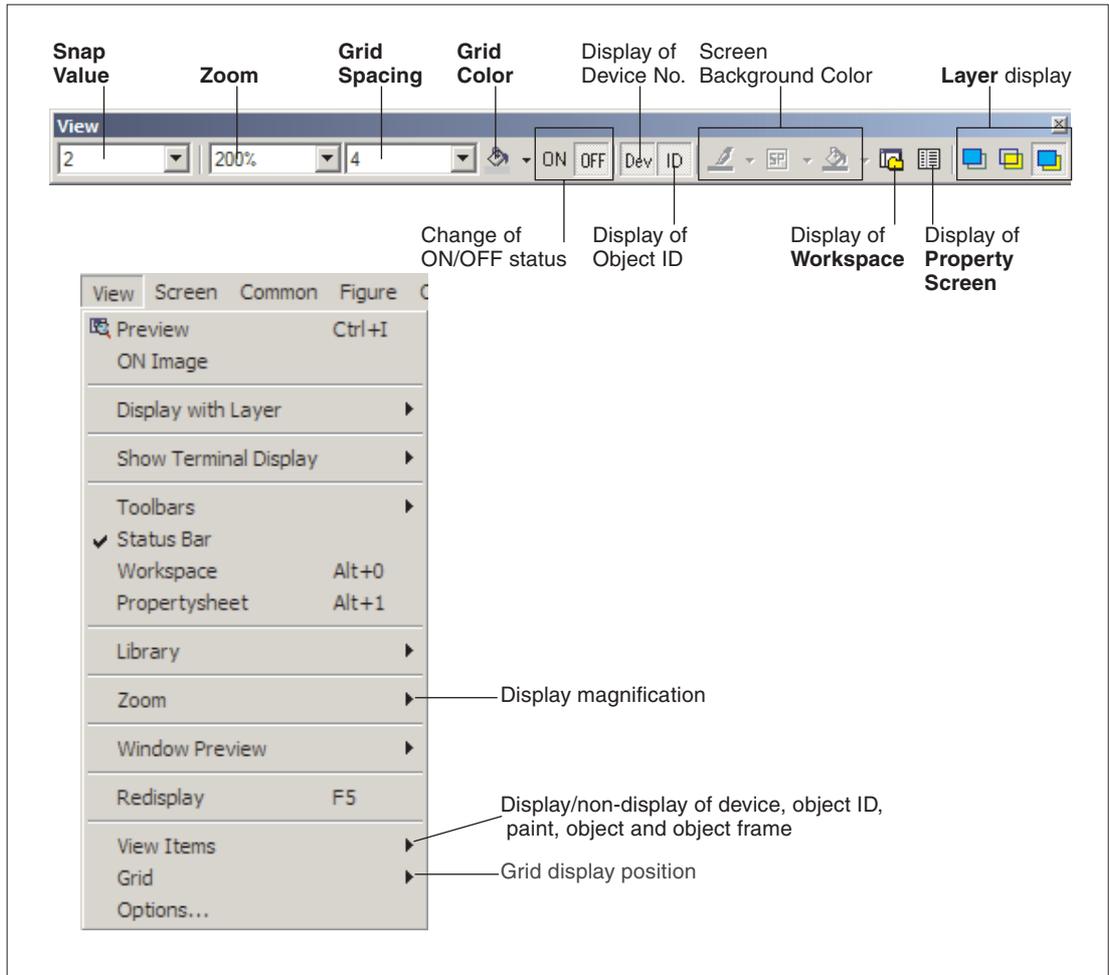


Fig. 4-9: View toolbar and View menu

5 Screen Configuration

5.1 Base Screen and Window Screen Types

The user-created screen displayed on the GOT consists of the base screens and window screens that are drawn by GT Designer2. These screens can be overlapped or switched on the GOT. Objects, such as Switch, Lamp, Comment Display and Numerical Display, can be placed on the screens.

The following shows screens that can be created by the GT Designer2. These screens can be overlapped or switched.

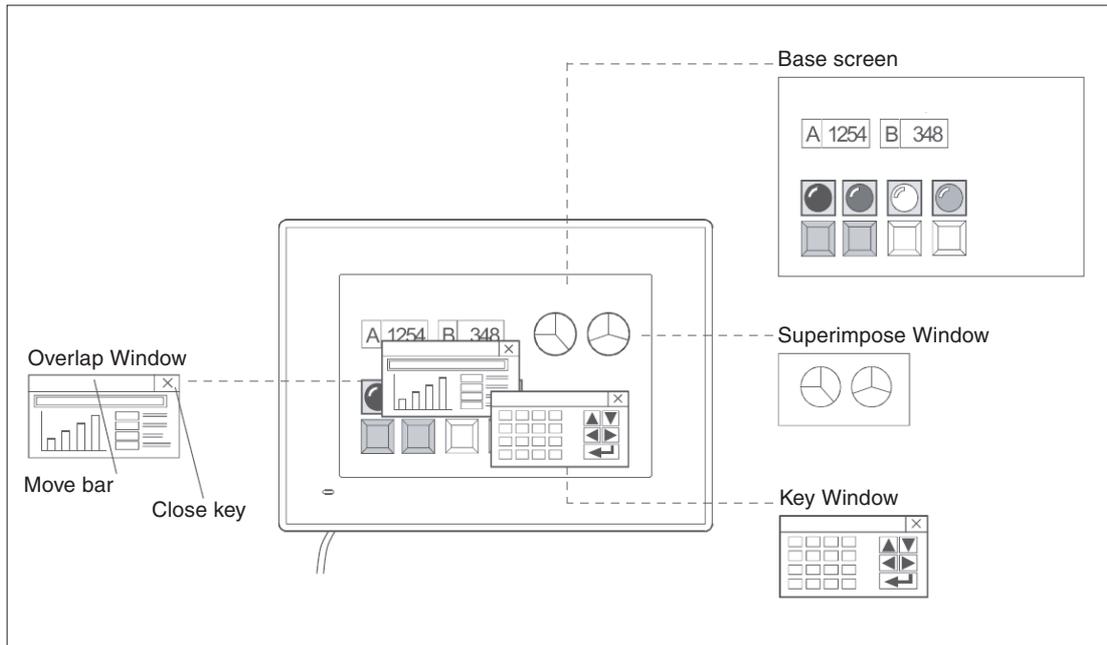


Fig. 5-1: Screens overview

Screen	Description
Base Screen	The basic screen for user-created screen display on GOT.
Window Screen	Overlap Window A pop-up window that appears over the base screen. Up to two windows can be displayed simultaneously. (Overlap Window 1, Overlap Window 2) The Overlap Window can be moved or closed manually.
	Superimpose Window A composite window placed on the base Screen. Up to two windows can be displayed simultaneously. (Superimpose 1, Superimpose 2) If super impose window is switched, the corresponding parts of the base screen will be changed.
	Key Window A pop-up window for inputting numerical values and ASCII codes to be displayed on the base Screen. There are two types of key window: default key window and user created key window.

Tab. 5-1: Description to Fig. 5-1

5.2 Screen Laying

The base screens and various windows are layered by type and displayed as shown below.

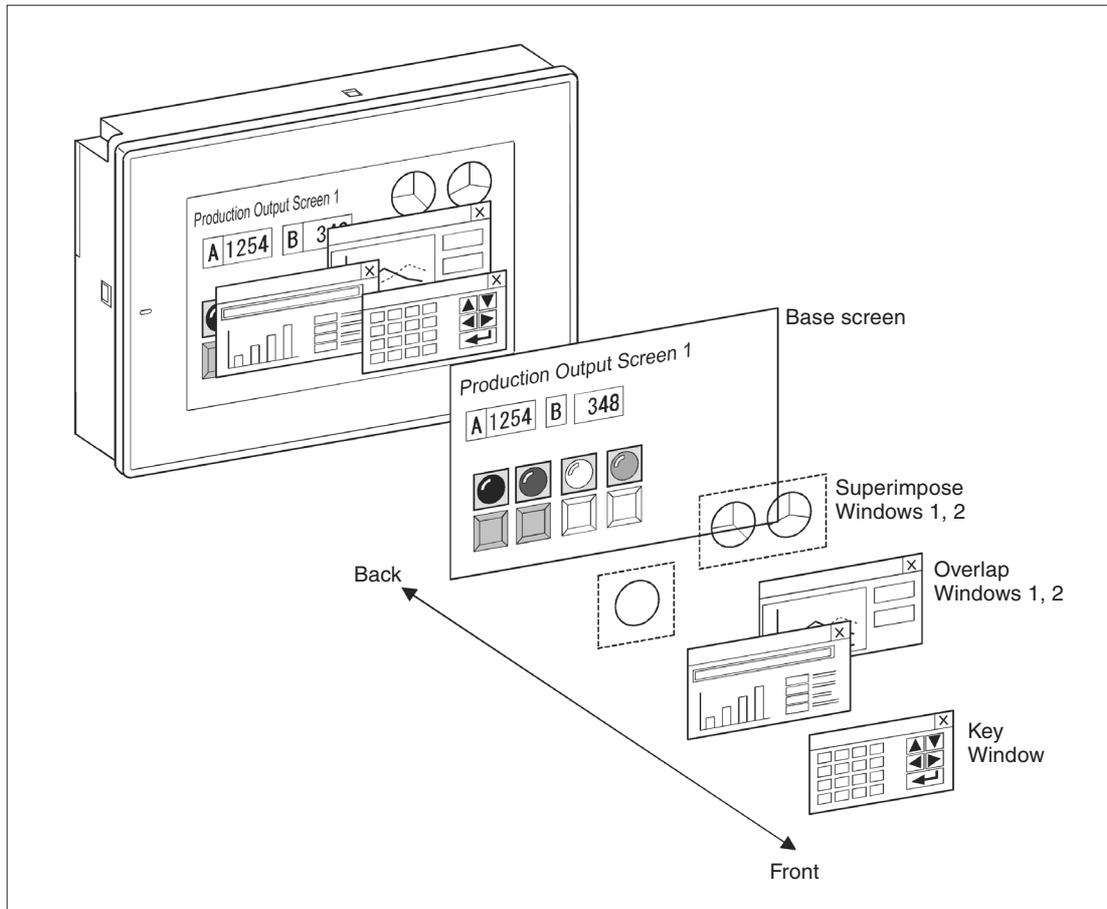


Fig. 5-2: Screen laying

NOTES

To display the screens

Draw objects (text, graphics, etc.) on each screen.

To switch the screen

When switching the screen on the GOT, be sure to make the settings for screen switching. The GOT switches the base screen according to the touch switch operation or the current value of the screen switching device. (Specify the screen switching device for each project using GT Designer2.) Refer to Section 7.14 of the Screen Design Manual for details of the touch switches for screen switching and the screen switching device setting

Screen No. setting

The base screens and window screens need not be numbered in serial order from No. 1, 2, 3..... Some screen No. can be skipped for the future use, if there is a possibility that screens may be increased. At power-on, the GOT displays the lowest No. of the registered base screens.

5.3 Object Placement Area and Display Area

The drawing screen editor for Base Screen and Window Screen provides two areas: screen display area and temporary area.

The temporary area is the area for temporary placement of objects and figures during screen layout change. This feature enables the screen layout to be smoothly changed.

Objects placed on the temporary area will not be displayed on the GOT, they are positioned outside the area of screen display.

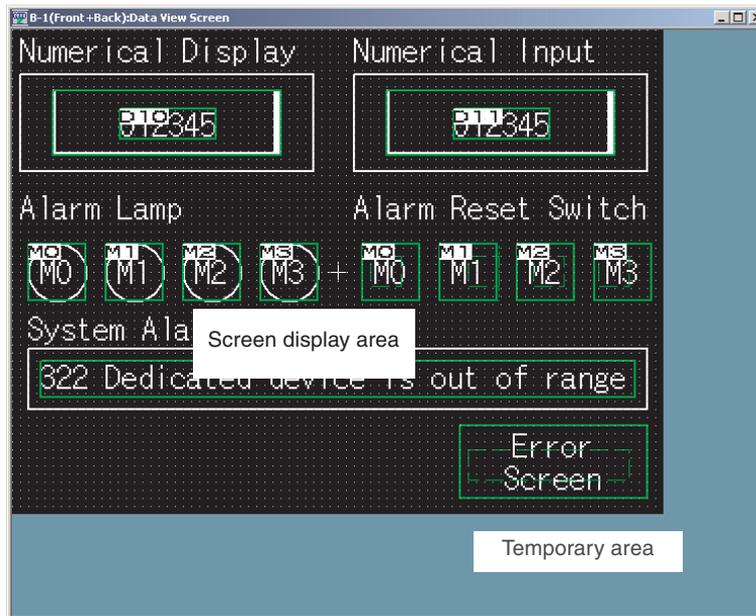


Fig. 5-3: Screen areas

Nr.	Bereich	Beschreibung
①	Screen display area	Area displayed on the GOT.
②	Temporary area	Not displayed on the GOT. In this area, however, figures and objects can be placed during screen creation.

Tab. 5-2: Description to Fig. 5-3

NOTES

The figures and objects temporarily saved in the temporary area are included in the transfer size of the base screen. After saving the project, delete figures and objects from the temporary area before downloading to the GOT.

Please check not to place text, figures or graphics on the border to the display area. These would only be partly displayed on the GOT after transferring the project data to the GOT.

NOTES**When using Superimpose Window**

If a character (nameplate) or frame figure object arranged in the window screen protrudes to the temporary area, the protruding part is left on the base screen after the superimpose window is displayed then hidden. Switching the base screen erases the remaining character (nameplate) or frame figure (see following figure),

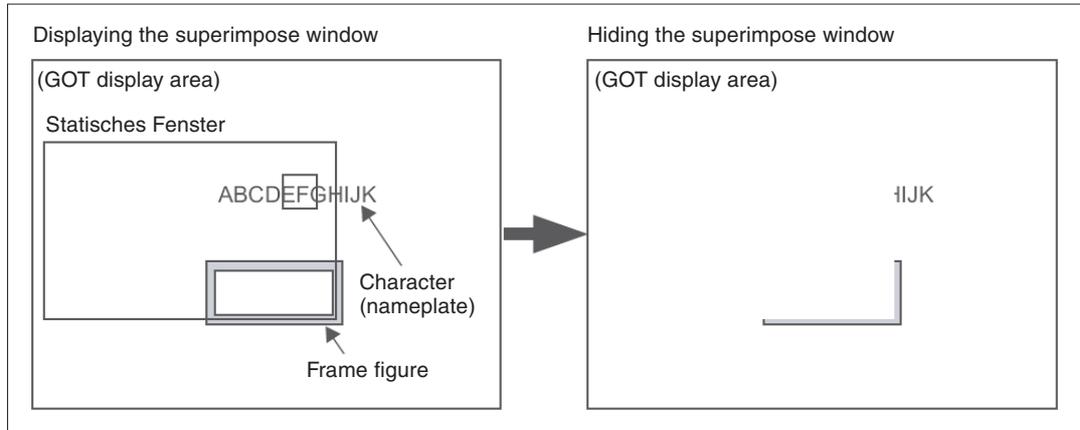


Fig. 5-4: Indication error due to protruding parts

To check the later display on the GOT of the created screens you can use the function Preview in the menu View of the GT Designer2. This function enables you to check all of the display configurations.

5.4 Basic Operations for Object Placement

5.4.1 Placing Figures and Objects

- ① Perform either of the following operations.
 - From the **Object** menu, select the object to be placed.
 Example) Bit switch object
 Choose **Object** → **Switch** → **Bit Switch**.
 The cursor changes to + (placement mode).
 - On the **Object** toolbar, click the object to be placed.
 Example) Bit switch object
 Click on the **Object** toolbar, and click **Bit Switch** from among the submenu items.
 The mouse cursor changes to + (placement mode).



Fig. 5-5:
Object toolbar

- ② Move the cursor to the desired position, and click the mouse to place the object. Objects of the same type can be placed consecutively by clicking the mouse repeatedly. When stopping this operation, right-click the mouse after placing the object to release the cursor from the placement mode.

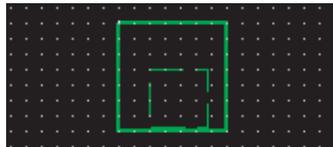


Fig. 5-6:
Bit switch after placement

NOTE

Placing and moving a figure or object:
 Performing the operation with the "Alt" key held down places the figure or object inside the screen display area. Even if an attempt is made to place in the temporary area, the target will be placed at the right or bottom end of the screen display area.

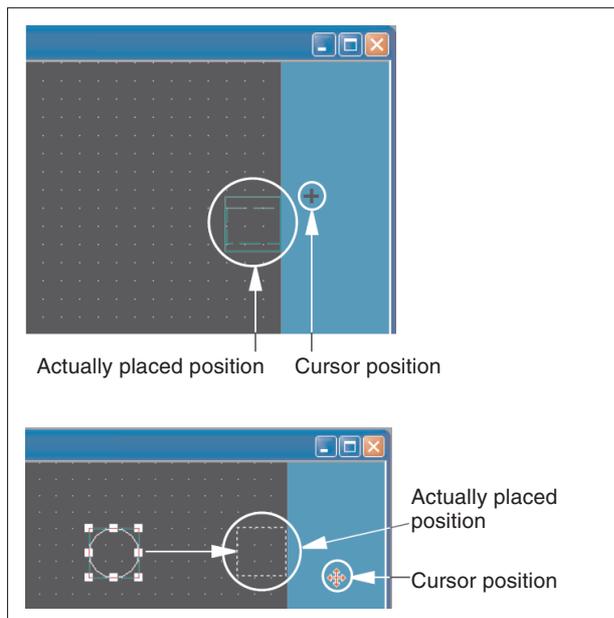


Fig. 5-7:
Placing or moving with the ALT key held down

5.4.2 Figure Drawing/Text Input

How to Draw a Frame Line

- ① Click **Rectangle** on the **Figure** toolbar. The mouse cursor changes to +.
- ② Draw a rectangle:
Left-click at the starting point. Drag the mouse to move the cursor to the end point. Releasing the left button of the mouse draws a rectangle. Then, right-click the mouse to exit from the placement mode.

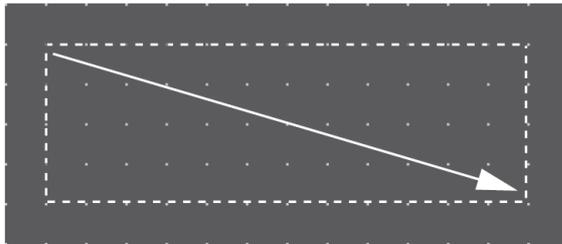


Fig. 5-8:
Drawing a rectangle

- ③ Set the frame line and paint of the rectangle:
Double-click the created rectangle. The **Rectangle** dialog box appears. Change the color and thickness of the line.

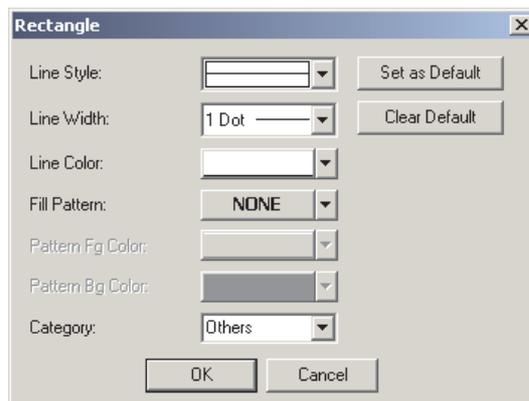


Fig. 5-9:
Rectangle dialog box

Clicking the **OK** button determines the settings and closes the dialog box.
Click the **Cancel** button to cancel the settings and close the dialog box.

NOTE

Changing the figure size:
Select the figure to be resized and then drag the handle  to change its size.

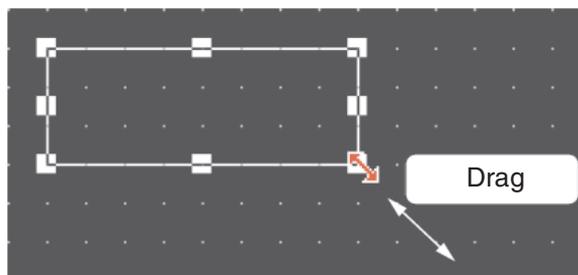


Fig. 5-10:
Resizing with mouse

How to Draw a Text

- ① Click **Text** on the **Figure** toolbar. The mouse cursor changes to +.
- ② Enter a text:
When the mouse cursor changes to +, click the mouse on the text drawing position.
When the **Text** dialog box appears, input a text and set attributes.

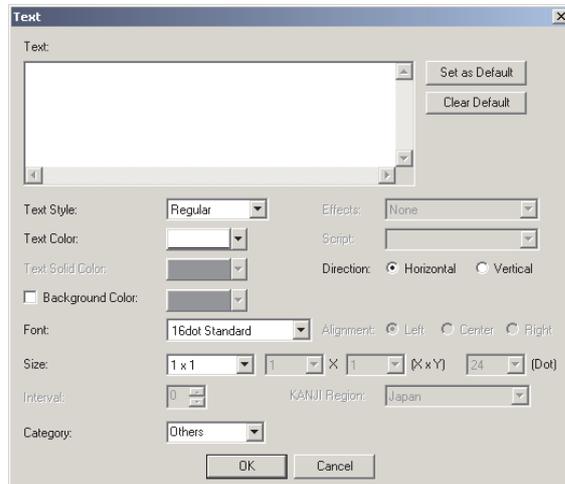


Fig. 5-11:
Text dialog box

The input will be immediately reflected on the screen.

- ③ Click the **OK** button to close the dialog box. Click the **Cancel** button to cancel the settings and close the dialog box.

NOTE

Changing the text size:
Select the text to be resized and then drag the handle  to change its size.

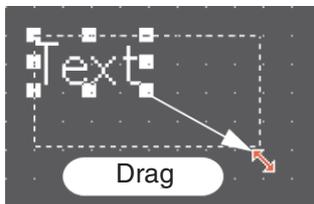


Fig. 5-12:
Resizing with mouse

5.4.3 Object Function Setting

Setting the "Numerical Display" Object

- ① Click **Numerical Display** on the **Object** toolbar. The mouse cursor changes to +.
- ② Click the mouse on the desired position to place the object.

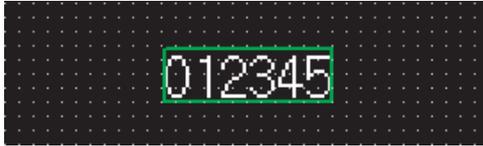


Fig. 5-13:
Numerical Display after inserting

- ③ The **Numerical Display** dialog box appears. Set the **Type**, **View Format**, **Frame Format**, etc.

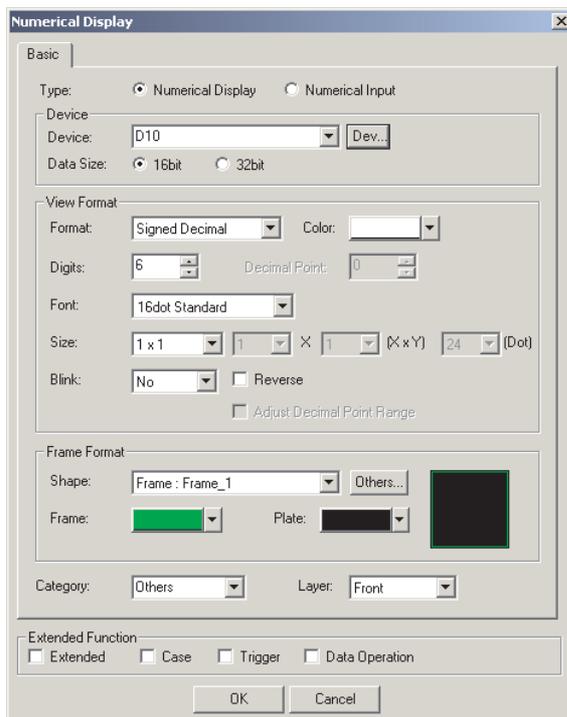


Fig. 5-14:
Numerical Display dialog box

- ④ Click the **OK** button to close the dialog box. Click the **Cancel** button to cancel the settings and close the dialog box.
- ⑤ Right-click the mouse to exit from the placement mode.

NOTES

When the object size is changed, this may result in misalignment between the figure frame and the object as shown below. In this case, perform the following operation: Select the object. Right-click the mouse and select **Centering**. This will automatically correct the misalignment.

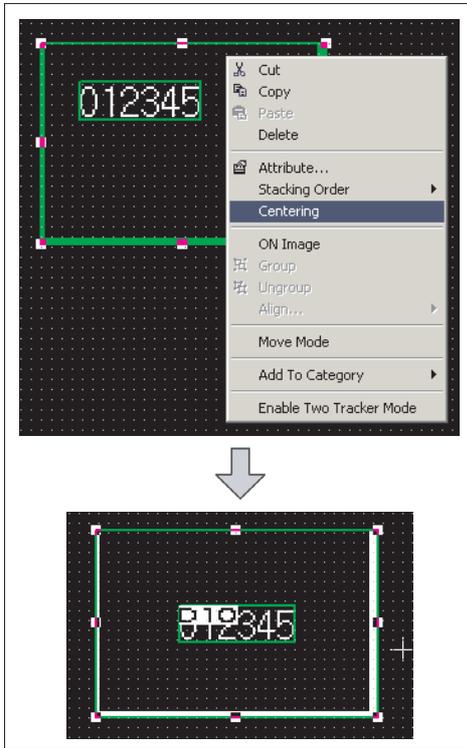


Fig. 5-15: Centering

By selecting **Enable Two Tracker Mode**, the figure frame and object can be moved or resized separately.

Screen Re-displaying Procedure

When the object placed on the figure marked with Paint is moved, some area may remain unpainted in the figure.

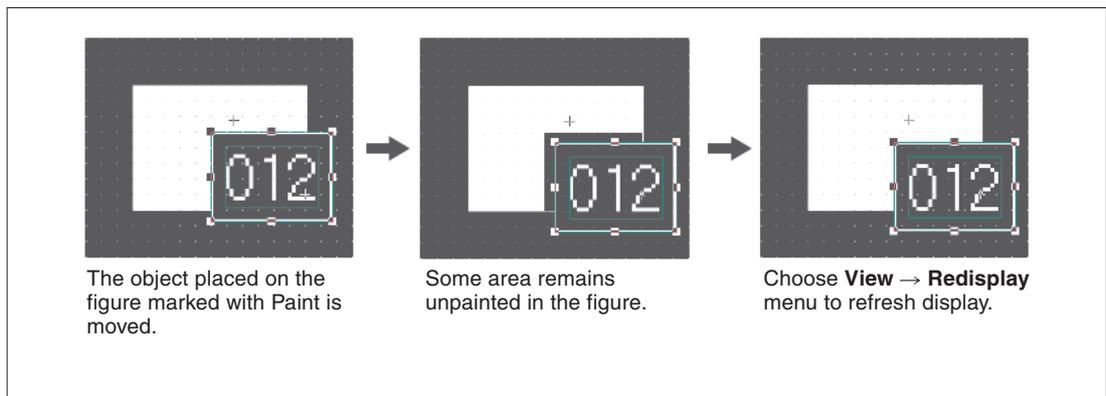


Fig. 5-16: Screen re-displaying

- ① Choose the **View** → **Redisplay** menu.
- ② The display of the drawing screen will be corrected.

Setting the "Lamp [Bit Lamp]" Object

- ① Click **Bit Lamp** on the **Object** toolbar. The mouse cursor changes to +.
- ② Click the mouse on the desired position to place the object.
The **Bit Lamp** dialog box appears.
Set the **Device**, **Display Style**, etc. in the **Basic** tab.

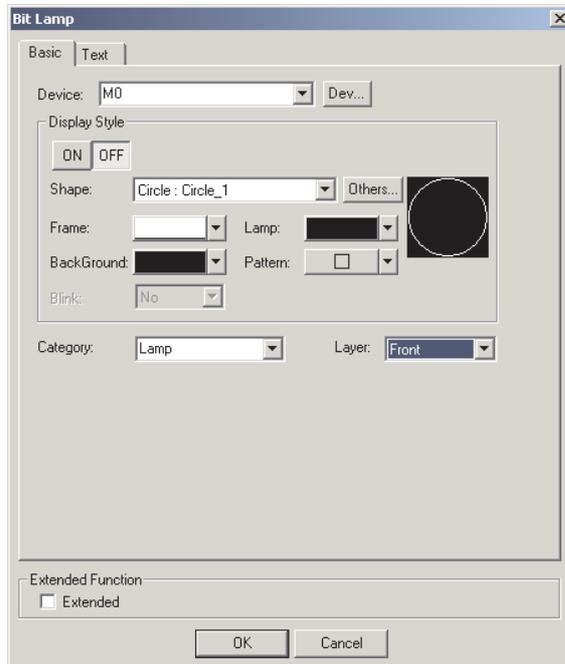


Fig. 5-17:
Bit Lamp dialog box,
Basic tab

- ③ Set the text color, text size, etc. in the **Text** tab.
The settings of "ON Display" and "OFF Display" can be made in the Text tab, and both settings are required. Click the **ON** button to set the ON status display, and the **OFF** button to set the OFF status display.
A text can be registered in each display position (Center, Top, Bottom, Left, Right). The text-registered display position button is displayed in purple characters.

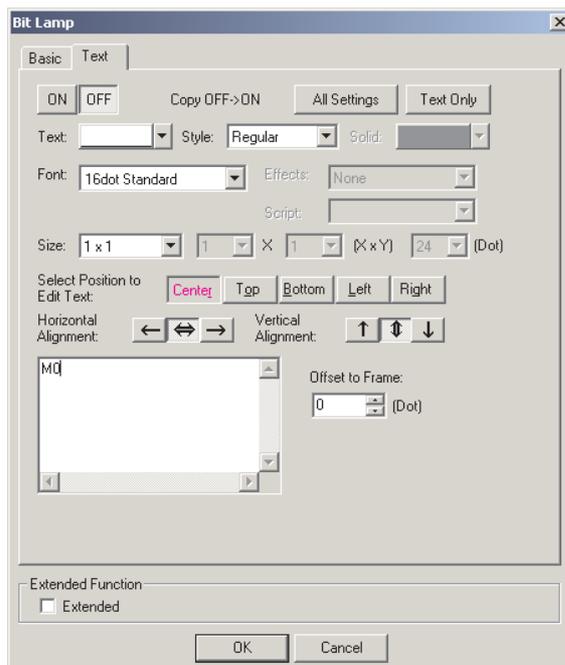


Fig. 5-18:
Bit Lamp dialog box,
Text tab

- ④ Click the **OK** button to close the dialog box. Click the **Cancel** button to cancel the settings and close the dialog box.

- ⑤ Right-click the mouse to exit from the placement mode.

NOTE

Making the ON Display and OFF Display the same
 To make the ON Display and OFF Display settings the same, set either ON or OFF status in the **Text** tab, and then click the **Copy ON → OFF** or **Copy OFF → ON** button.
 For example, when reflecting the settings of the OFF Display on the ON Display, click the **Copy OFF → ON** button with the OFF Display selected.

Placing the "Lamp" or "Switch" Objects with Figures from the Library

- ① Click the **Library** tab in the workspace.

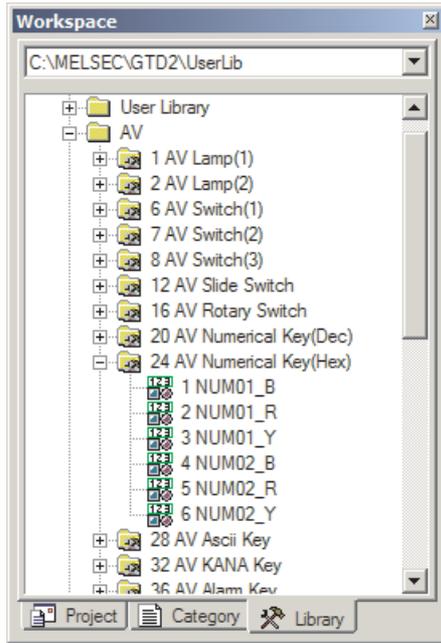


Fig. 5-19:
Workspace dialog box,
Library tab

- ② For example select the subfolder **AV Lamp(1)** in the path **Library** and open it by double clicking. A list of the available objects in this subfolder will be displayed. With a right click on the subfolder **AV** the option **Open Image View** is displayed. Using this option you can open a dialog box showing the predefined object figures in this subfolder.

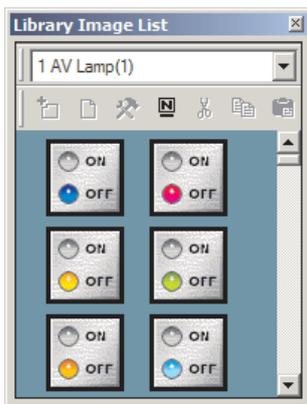


Fig. 5-20:
Library Image List dialog box

- ③ Click the target Lamp or Switch object in the "Library Image List" window, and drag and drop it on the desired position.

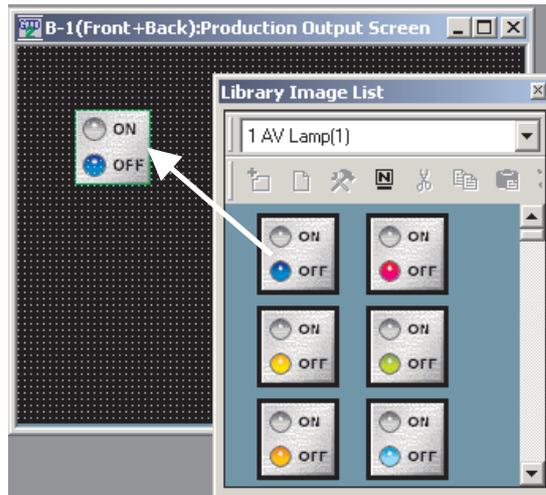


Fig. 5-21:
Placing objects from the library

Setting the Touch Switch [Bit Switch] Object

- ① Click on the **Object** toolbar, and click **Bit Switch** from among the submenu items. The mouse cursor changes to +.
- ② Click the mouse on the desired position to place the object. The **Bit Switch** dialog box appears. Set the Switch Action, Display Style, etc. in the **Basic** tab.

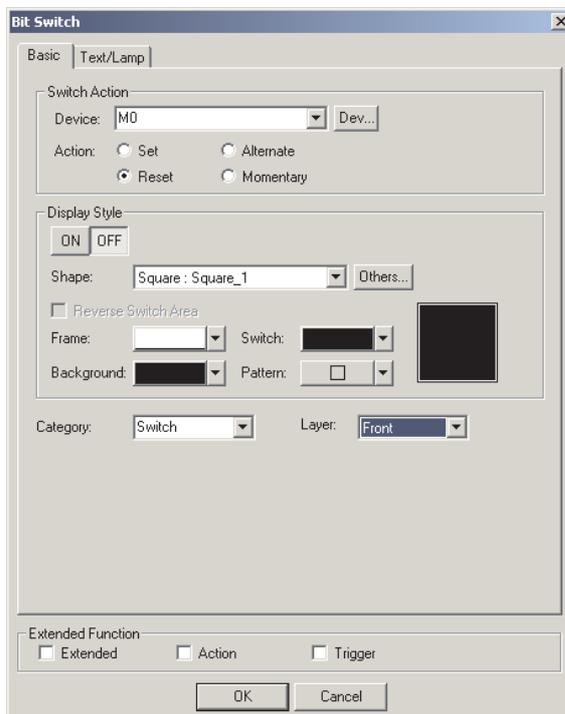


Fig. 5-22:
Bit Switch dialog box,
Basic tab

- ③ Set the Text/Lamp function, etc. in the **Text/Lamp** tab. The settings of "ON Display" and "OFF Display" can be made in the Text tab, and both settings are required. Click the **ON** button to set the ON status display, and click the **OFF** button to set the OFF status display. A text can be registered in each display position (Center, Top, Bottom, Left, Right). The text-registered display position button is displayed in purple characters.

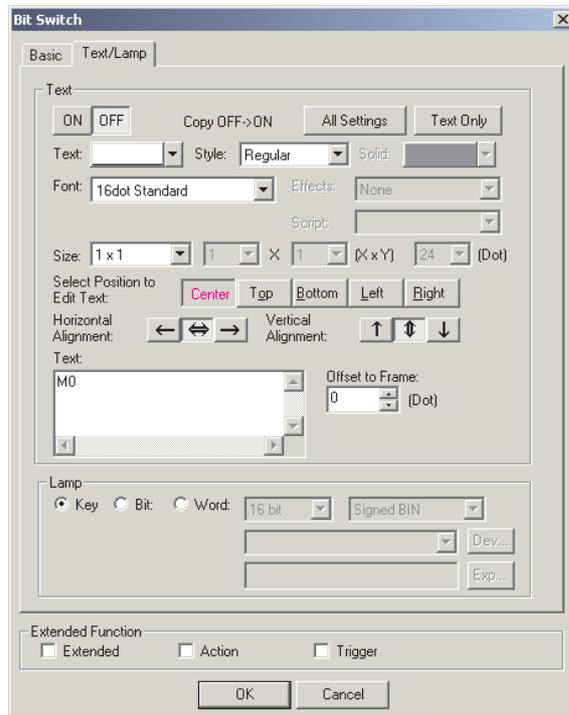


Fig. 5-23:
Bit Switch dialog box,
Text/Lamp tab

- ④ Click the **OK** button to close the dialog box. Click the **Cancel** button to cancel the settings and close the dialog box.
- ⑤ Right-click the mouse to exit from the placement mode.

NOTE

Making the ON Display and OFF Display the same

To make the ON Display and OFF Display settings the same, set either ON or OFF status in the **Text** tab, and then click the **Copy ON → OFF** or **Copy OFF → ON** button.

For example, when reflecting the settings of the OFF Display on the ON Display, click the **Copy OFF → ON** button with the OFF Display selected.

5.4.4 Workspace Operations

The workspace displays the whole project settings by data type in the tree structure. The data of the whole project can be managed/edited easily.

Example ▾

Screen copy:

The existing screen can be copied in the workspace.

- ① In the Project workspace, select and right-click the screen, and select the **Copy** menu.

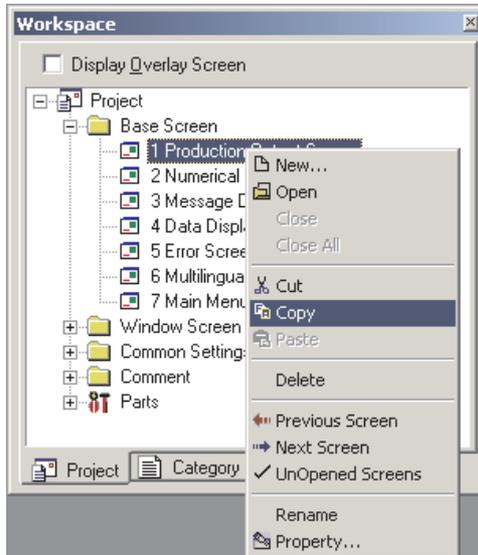


Fig. 5-24:
Copy menu

- ② Right-click the mouse again and select the **Paste** menu.

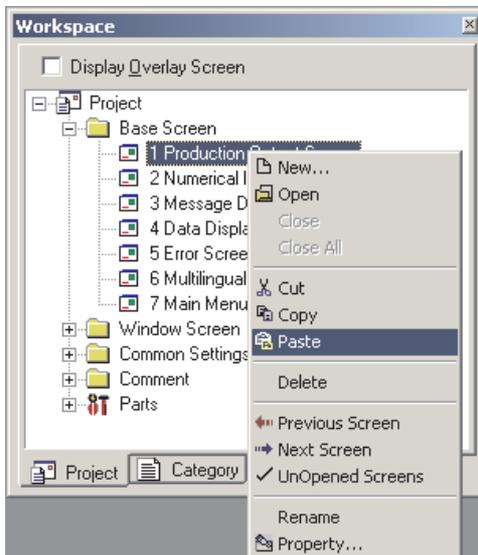


Fig. 5-25:
Paste menu

- ③ When the **Screen Property** dialog box appears, set the screen number, etc. of the screen to be copied.

- ④ Then, click the **OK** button to display the copied screen.

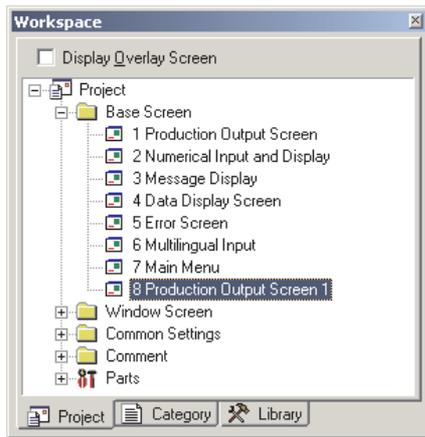


Fig. 5-26:
Screen after inserting



Example ▾

Parts registration:
A figure can be registered as a part in the workspace.

- ① Select the figure to be registered, and drag it to the **Parts** folder in the workspace.

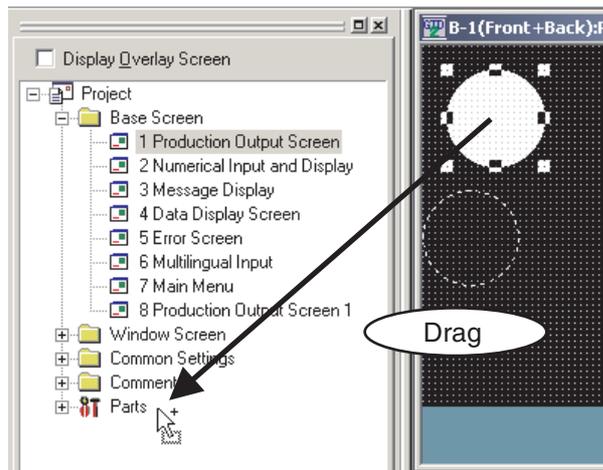


Fig. 5-27:
Drag selected figure to Parts

- ② The **Parts Property** dialog box appears. Set the number and name of the part.



Fig. 5-28:
Parts Property dialog box

- ③ Click the **OK** button to register the figure as the part.

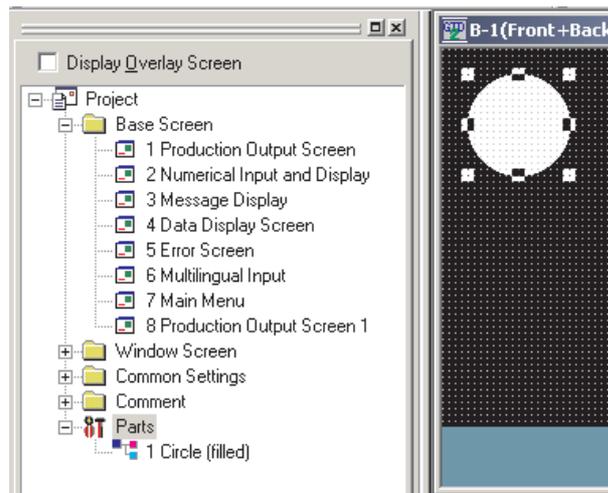


Fig. 5-29:
Parts after
registering



5.5 Viewing Created Screen Image

By using the preview function you can precheck the display of the created screen pages. In the preview screen the screen images are displayed in the same configuration as later in a project on the GOT and so can be checked.

- ① Click **Screen Preview** on the **Main** toolbar, or select **View** → **Preview**.
- ② The image displayed on the GOT is displayed on the preview screen.

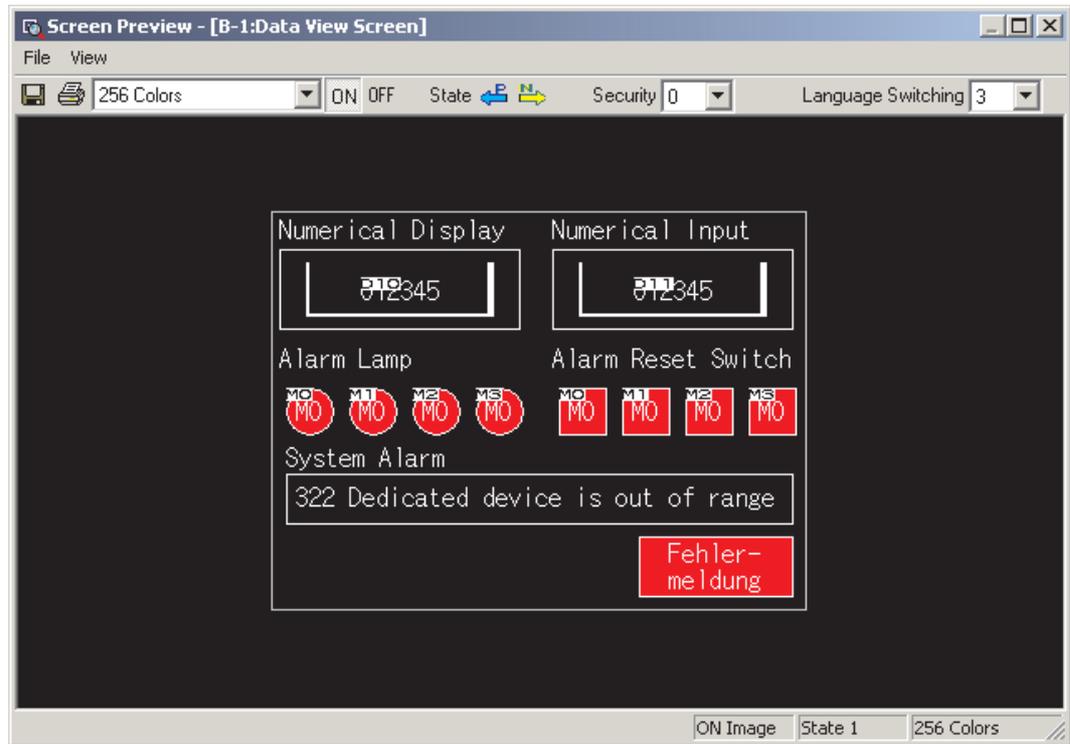


Fig. 5-30: *Screen Preview dialog box*

The preview display can be changed/output from each (**File** and **View**) menu.

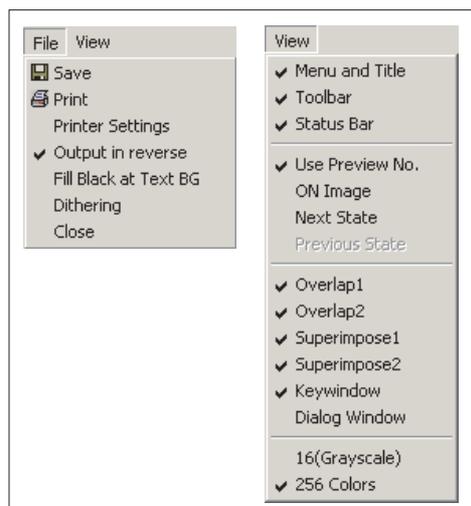


Fig. 5-31: *Screen Preview dialog box menus*

Item	Description
File menu	
Save	Preview display is saved in a file (BMP format file).
Print	Preview display is printed.
Printer Settings	Printer settings, paper and paper orientation are set.
Output in reverse	Black and white is reversed when printing based on the printer/file setting.
Fill Black at Text BG	Letters are filled in white and letter background is filled in black to make clearly visible reversed when printing based on the printer/file setting.
Dithering	Intermediate color tone is provided on the two tone monochrome screen when printing based on the printer/file setting.
Close	Preview screen is closed.
View menu	
Menu and Title	Display/non-display of the title bar is selected.
Toolbar	Display/non-display of the toolbars is selected.
Statu Bar	Display/non-display of the status bar is selected.
Use Preview No.	Checked: • Display Word Comment and Word parts Display of the set Preview No. Not checked: • Display Word Comment and word parts Display according to the settings of each state.
ON Image	Every time the menu item is selected, the preview screen display status switches between ON and OFF. The display contents are the same as those of the ON/OFF display on the drawing screen. When ON is selected: • Object of bit device: Figure/text set to ON is displayed. • Object of word device: Status set to State 1 is displayed. When OFF is selected: • Object of bit device: Figure/text set to OFF is displayed. • Object of word device: Status set to State 0 (normal) is displayed.
Next State	Switches the screen display, which has been set in Object "State", in ascending order.
Previous State	Switches the screen display, which has been set in Object "State", in descending order.
Overlap 1	Select whether Overlap Window 1 will be displayed or hidden. ①
Overlap 2	Select whether Overlap Window 2 will be displayed or hidden. ①
Superimpose 1	Select whether Superimpose 1 will be displayed or hidden. ①
Superimpose 2	Select whether Superimpose 2 will be displayed or hidden. ①
Key Window	Select whether Key Window will be displayed or hidden. ①
Dialog Window	Select whether Dialog Window will be displayed or hidden. ①
16 (Gray Scale)	Set the colors of the displayed screen (GT11□□ only).
256 colors	Set the colors of the displayed screen.
65536 colors	Set the colors of the displayed screen(GT15□□ only).

Tab. 5-3: Description Fig. 5-31

- ① To display a window in the preview window, the window must have been displayed in the Editor window of the Base Screen.

5.6 Data Check

Whether the project data created with the GT Designer2 has an error or not is checked.

- ① Open all screens for data check. Unopened screens are not data checked.
- ② Select **Tools** → **Data Check** menu.
- ③ The **Data Check** dialog box is displayed.
Set the check items for data check and click the **Check** button.

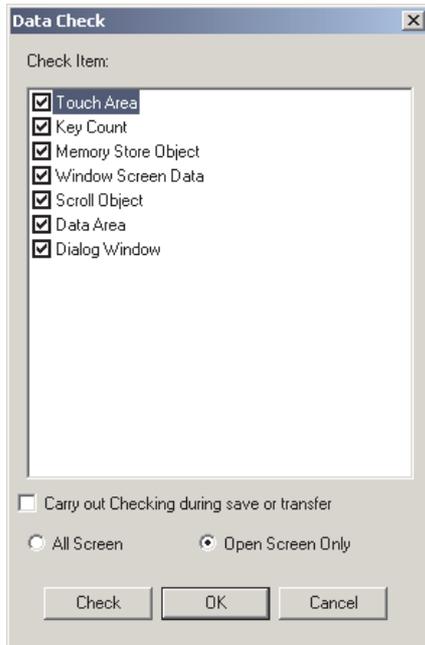


Fig. 5-32:
Data Check
dialog box

Item	Description
Touch Area	Checks whether the settings of the touch switch functions are overlapped as described below. In addition, checks whether the switch operates as the touch key or not. <ul style="list-style-type: none"> • The touch switches are overlaid each other.. • Numerical input/ASCII input is overlapped with touch switches.
Key Count	Checks whether more than 1000 touch switch functions (all touch switch objects) are placed in the GOT display area for each screen (Front and Back).
Memory Store Object	Checks whether the objects exceeding the following numbers are set to be stored into memory: <ul style="list-style-type: none"> • Line graph (path display): 2 or more/project • Trend graph (memory store): 17 or more/project • Scatter graph (memory store): 17 or more/project • User alarm (memory store): 17 or more/project
Window Screen Data	Checks whether the data list display and alarm history display are set on the window screen. (The data list display and alarm history display are inapplicable to the window screen.)
Scroll Object	Checks whether multiple objects (Data List Display, Alarm History Display, User Alarm) that need to be scrolled are set on a single screen.
Data Area	Checks whether any of the objects is set outside the screen range.
Carry out Checking during save or transfer	Check this item to automatically carry out the data check when saving the project or downloading the project data to the GOT.
All Screen	A data check is made on all screens.
Open Screen Only	A data check is made on open screens only.
Dialog Window	Checks whether there is a window screen set as a replacement for the system dialog.

Tab. 5-4: Description to Fig. 5-32

NOTES

A data check is made on open screens only in standard setting. Unopened screens are not checked, if the option **Open Screen Only** is checked in the dialouge window **Data Check**. To check all screens, start a check after opening all screens.

Objects in the temporary area are not checked.

④ To close the dialog box after checking the data, click the **OK** button.

⑤ If an error is detected after checking, the following dialog box is displayed. (Example).

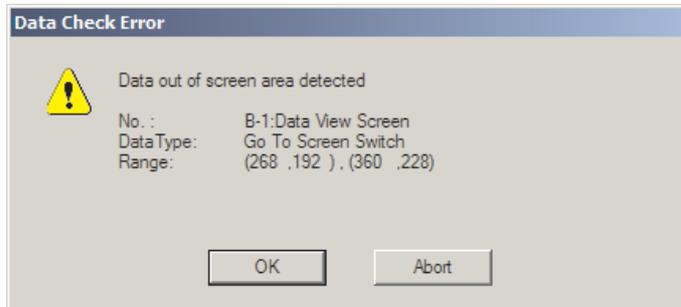


Fig. 5-33:
Data Check Error
dialog box

When **OK** is clicked, data check is continued for any other error.

When **Abort** is clicked, data check is cancelled.

6 Transferring Data

6.1 Data Types

The GOT uses the following data. As the Boot OS, Standard monitor OS and Communication driver are required to operate the GOT, make sure to install them before the created project data.

Data type	Description	Storage destination
Boot-OS	The OS required to control the GOT hardware and make a communication between the PC and GOT. Factory-installed.	C: Built-in Flash Memory
OS	The monitoring function, OS and screen data installation, OS and screen data deletion, touch key control, system screen and guidance display function and other features for controlling the GOT are installed. <ul style="list-style-type: none"> Standard monitor OS Communication driver Extended function OS Option OS, etc. 	C: Built-in Flash Memory
Project data	<ul style="list-style-type: none"> User screen data Parts Common settings Comment HQ-Font True-Type-Font, etc. 	A: Standard CF Card (GT15□□ only)
		C: Built-in Flash Memory
Resource data	<ul style="list-style-type: none"> Alarm log file (Alarm History, Advanced alarms) ① Recipe data ① Advanced recipe data file ① Screen transition information file ① Image file (Hard-Copy) ① 	A: Standard CF Card (GT15□□ only)
		D: Built-in SRAM

Tab. 6-1: Overview of data types

① The GT11□□ supports only the alarm log file (alarm history) and recipe data. However, the recipe data cannot be used by the user if uploaded.

NOTES

Basically, it is not necessary to install the Boot OS as it has been factory-installed in the GOT. To return the GOT to the factory-settings, install the Boot OS. This will initialize the GOT.

When downloading project data

When the OS (Standard monitor OS, Communication driver, Extended function OS, Option OS) of GT Designer2 used to create the project data are newer than the OS installed in the GOT, new functions may be invalid. When downloading the project data to the GOT, it is recommended to reinstall the OS.

When installing the OS

Make sure that OSs (Standard monitor OS, Communication driver, Extended function OS, Option OS) are of the same major version and minor version. If their version numbers are different, the GOT will not operate.

NOTES**Standard monitor OS**

The Standard monitor OS includes the Standard monitor OS, Standard Font, System Screen Data, etc. They are programs that operate the GOT, e.g. interface control, OS/screen data installation, OS/project data deletion, touch key control, and screen/guidance display functions.

Communication driver

The Communication driver is used to make a communication between the GOT and PLC CPU. Make sure to select and install the Communication driver according to the connection method used. Refer to the GOT1000 Series Connection Manual for details of the connection methods and communication settings.

The communication driver is automatically configured when using the Project Wizard to create a new project.

Extended function OS

The Extended function OS is needed for using extended functions, such as system monitor or the use of a bar code reader. Please also see the descriptions in the following manuals: GOT1000 Series Extended Function Manual and GOT1000 Series Connection Manual.

Option OS

The Option OS contains functions and fonts also needed for the use of optional function devices. These are not installed in the shipping state of the GOT. It has to be installed by the user before a project can be transferred. Please also see the descriptions in the following manual: GT Designer2 Screen Design Manual.

6.2 Communication with the GOT

For the communication of your PC with the GOT some settings have to be done first. The first step for communication was done when creating the new project by the configuration of communication (see section 3.1).

The configuration of communication can be checked and edited by the menu **Communication** → **Communication Configuration**.

The communication with the GOT is controlled by the menu **Communication** → **To/From GOT**.

- ① Select the menu **Communication** → **To/From GOT**.
- ② The following dialog box with several tabs will be displayed.

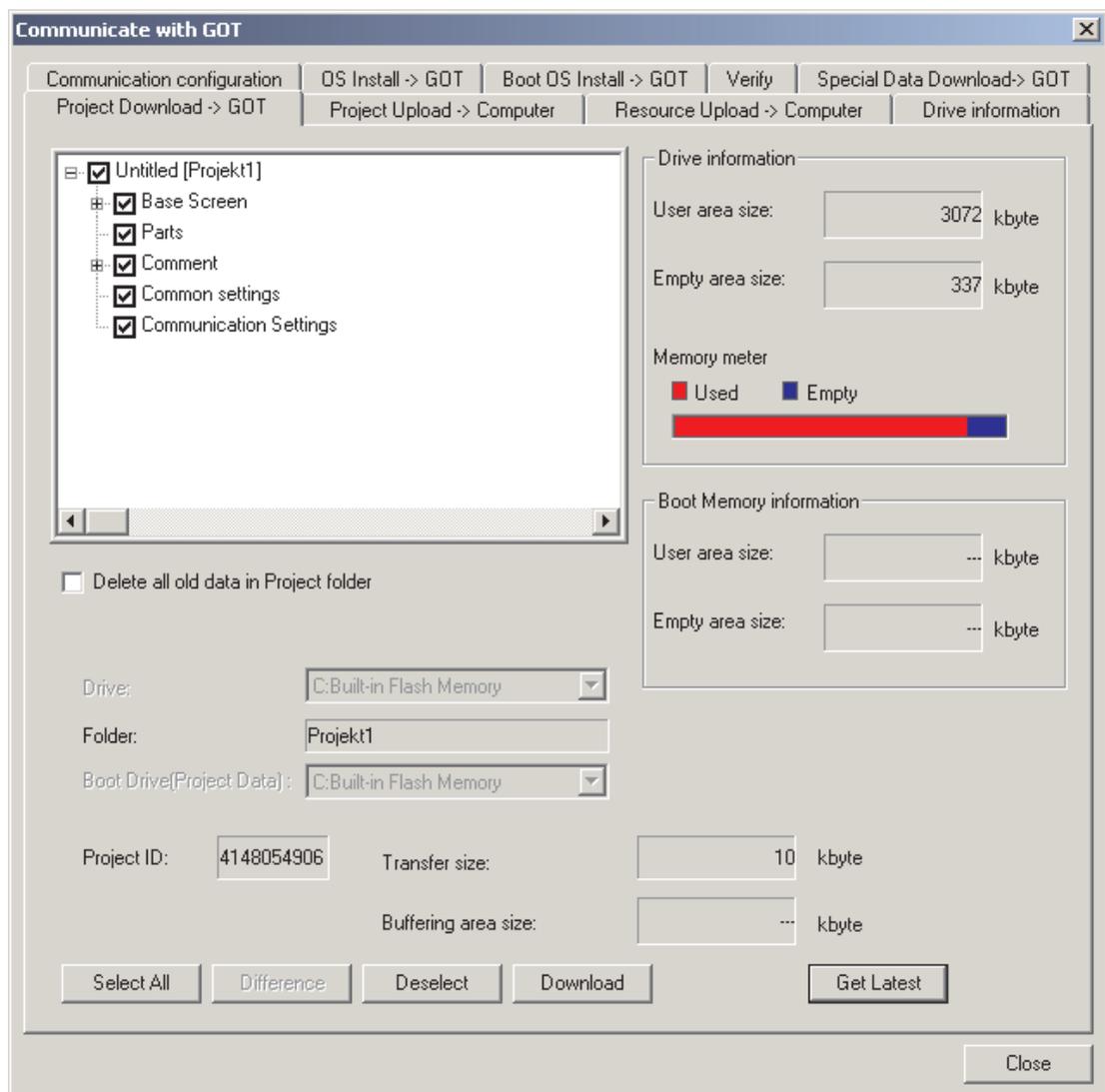


Fig. 6-1: Dialog box *Communicate with GOT*

Tab	Description
Project Download -> GOT	Transferring the project data to the GOT Further information on this tab you will find in section 6.3.
Project Upload -> Computer	Transferring the project data from the GOT into the GT Designer2 This function is used to transfer an already existing project and its project data from the GOT into the GT Designer2 on your PC.
Resource Upload -> Computer	Transferring the resource data onto your PC Use this function to transfer e.g. alarm history data of the GOT or other operation related data from the GOT onto your PC.
Drive information	Use this function to read information about different memory areas (drives) of the GOT.
Communication configuration	Setting of the communication configuration This tab is equal to the menu Communication → Communication Configuration .
OS Install -> GOT	Use this tab to install the OS on the GOT. Further information on this tab you will find in section 6.1.
Boot OS Install -> GOT	Using this tab you can install the boot OS on the GOT. Further information on this tab you will find in section 6.1.
Verify	This option lets you compare the on the GOT saved project data with the actually opened project in the Designer2. The verification result is displayed.
Special Data Download -> GOT	Transferring of special data for monitoring of intelligent moduls, the System Q Motion, and servo amplifier For using the special data you have to install the extended function OS.

Tab. 6-2: Description of the tabs in Fig. 6-1

6.3 Transferring the Project Data to the GOT

NOTE

For the communication with the GOT you have to transfer the communication driver and the communication settings to the GOT.
Further information on this tab you will find in section 3.7 and in the following manuals:
GOT1000 Series Connection Manual (Installation of Communication Driver) and
GT Designer2 Screen Design Manual (Download of Communication Driver).

- ① Select the menu **Communication** → **To/From GOT**.
- ② The in Fig. 6-1 shown dialog box is as a standard displayed with the tab **Project Download** -> **GOT** opened.
- ③ Set the for transferring data required settings.

Option	Description
Tree diagram of the project configuration	Select and mark the to be transferred project data from the displayed project configuration.
Delete all old data in Project folder	Check this option, if you want all old project data to be deleted before the new project data are uploaded.
Not self reset after downloaded	Select this option to deactivate the restart of the GOT after completion of the data transfer. After changing the communication settings the GOT has to be restarted. (This option is only displayed when using an ETHERNET connection.)
Drive	Select the GOT's drive to be the destination for data download.
Folder	Display of the in the menu Common → System Environment set file name of the destination for project data download
Boot Drive	Select the drive for starting the project data
Project ID	Display of the project ID
Transfer size	Display of the data size of the data selected for download
Buffering area size	Display of the buffer memory used for functions like extended alarms
Drive information	Display area of drive information
User area size	Display of the usable memory size
Empty area size	Display of the remaining free memory size
Memory meter	Display of a bar diagram showing the used memory after reading the drive information from the GOT
Boot Memory Information	Display area for user memory information (only GT15□□)
Select All	Use this button to automatically select and mark all items of the project configuration for the project download.
Difference	If the project data where already transferred to the GOT during creating the project you can compare the data on the GOT with the changed data of the project in the GT Designer2 by pressing this button. In the project configuration all different data are displayed with a mark. Select this button and then select the button Download to only download the changed data with differences to the GOT.
Deselect	Select this button to reset all marks in the project configuration. (The standardly marked items will not be changed.)
Download	Select this button to start the data download.
Get latest	Reading the drive information from the selected drive

Tab. 6-3: Description of the tab **Project Download** -> **GOT** in Fig. 6-1

7 Printing Project/File Output

Project settings or screen image created on the GT Designer2 can be output to a file or printer. The data output to a file can be used for various documents after editing with a commercially available word processor software.

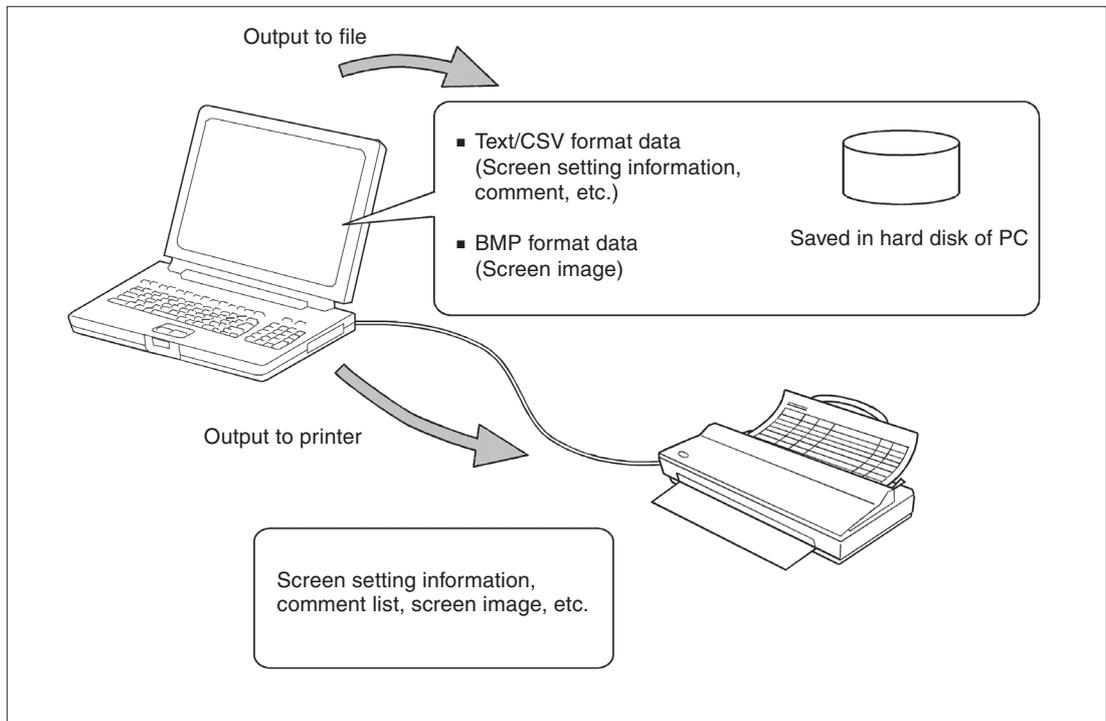


Fig. 7-1: Data output via PC

NOTE

Print setting:

- Papers are printed in the portrait mode.
- Font and font size for printing cannot be changed.
- The header information (date, file name) are automatically printed when output to a printer.

7.1 Printer Setting

- ① Select **Project** → **Print**.
- ② The **Print** dialog box appears.
Set items for printing and click the **OK** button

7.1.1 Setting items

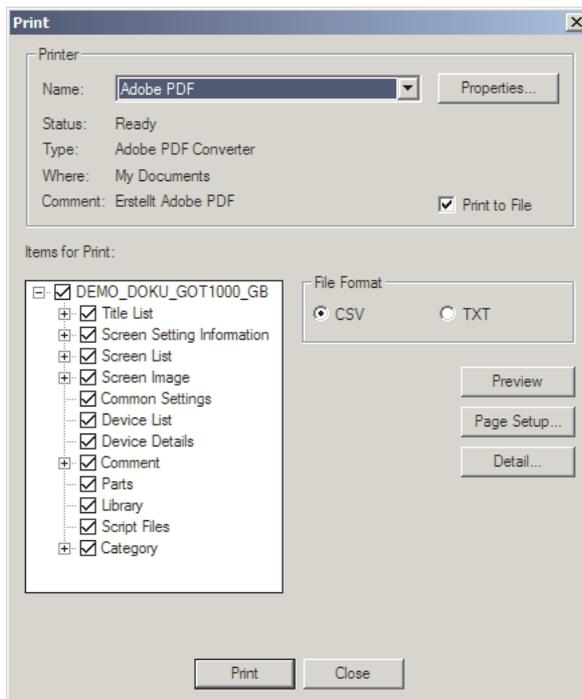


Fig. 7-2:
Print dialog box

Item		Description
Printer	Name	Select the printer for printing.
	Properties	The dialog box Printer setup is opened, displaying the actually selected printer with the actual parameters listed. The further settings or changes depend on the printer connected with the PC.
	Print to File	Save the data in a file without printing from the printer. Check Print to File and click the Print button. The Save as dialog box is displayed. Set the file target.
Items for Print		Select the items to be printed. In the tree diagram mark the to be printed items.
File Format		When data are written to files, select the file format (CSV/TXT).

Tab. 7-1: Description to Fig. 7-2 (1)

Item	Description
Preview	Using this button you can open a preview screen. The display in this screen shows you what the printed projects will look like. If there are several pages to be printed, use the cursor keys to change to the next or previous page. Zoom the display by entering the desired percentage. The button One Page changes the zoom factor to display a complete page. For printing click on the printer icon. By selecting Close you can cancel this function.
Page Setup	Using this button you can open a dialogue box to set the attributes for printing the data (tab Page Setup) or the screen image (tab Screen Image).
Detail	Using this button you can open a dialogue box for extended settings for printing of the screen base, window pages and operands on paper or into a file.
Print	Outputs the data to the printer or file based on the settings.
Close	Closes the dialog box without printing.

Tab. 7-1: Description to Fig. 7-2 (2)

NOTE

Further information on printing and the above mentioned dialogue box you will find in the following manual: GT Designer2 Basic Operation/Data Transfer Manual.

8 Library

Figures and objects created by the user can be registered as a library. Registered figures and objects can be easily pasted on the screen.

8.1 Using Library

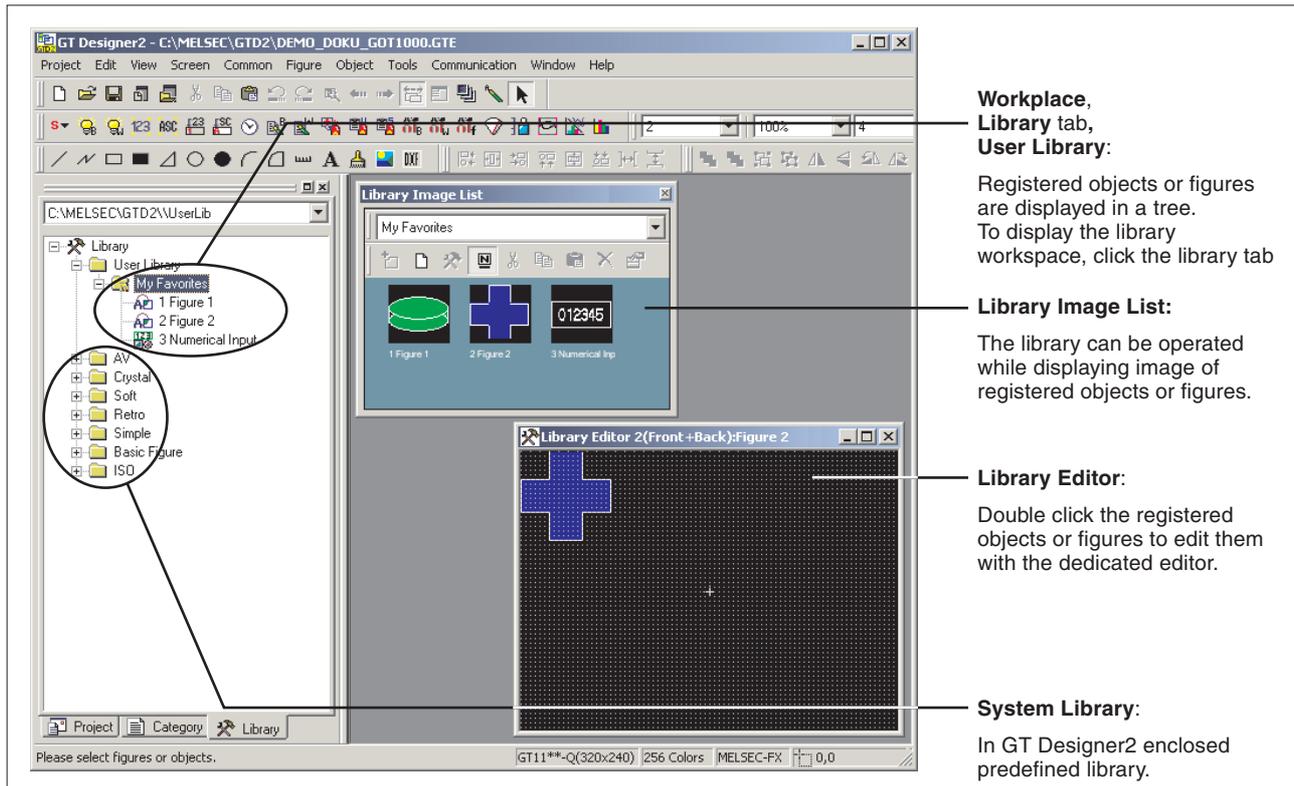


Fig. 8-1: User created favorites and predefined objects and figures in the library

8.1.1 User Library

Objects and figures (templates) created by the user can be registered in the user library.

My Favorites

Objects or figures registered as **My favourites** are re-registered on the **My Favourites** toolbars. When frequently used objects/figures are registered on **My Favourites** toolbars, it is convenient to use them.



Fig. 8-2:
My Favorites toolbar

Further subfolders

In the user library you can create further subfolders whose contents will not be displayed in a toolbar. By entering a folder's name you can save your user defined and registered objects and figures.

Right click on the user library to open a drop down menu. Select **New User Library**. You are now asked to enter a name for the new subfolder.

Example ▾

In the user library the subfolder **1 Switches** was created.

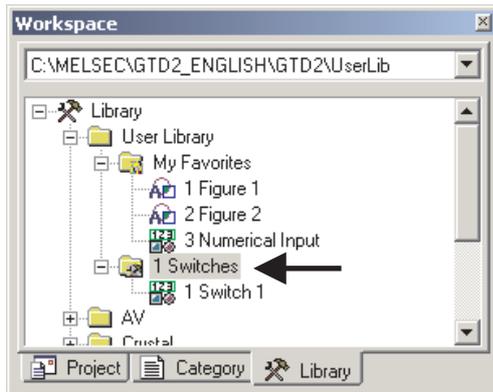


Fig. 8-3:
New subdirectory 1 Switches

△

NOTE

The maximum number of user created libraries is 50. For one library, the maximum 200 templates can be registered.

8.1.2 Basic Operation of Library

Select the item for operation and right click the mouse to select the setting item. As shown below, the display varies depending on the selected items.

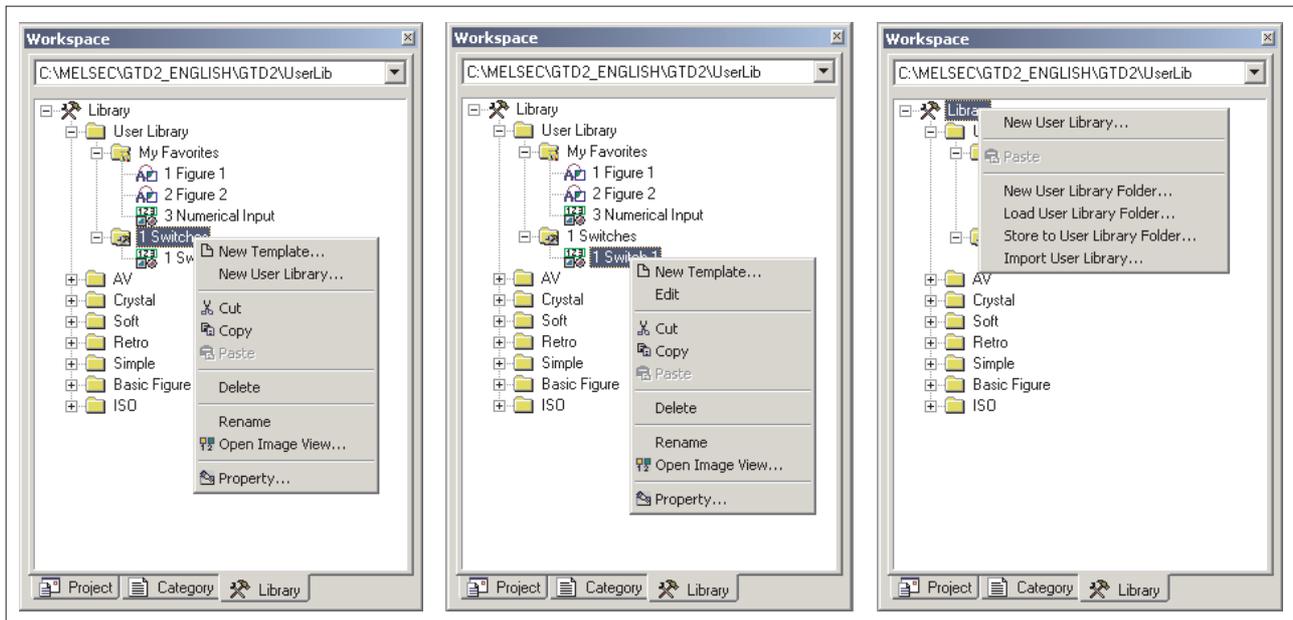


Fig. 8-4: Display depending on the selected items

Item	Description
New Template	New template is added to My Favourites or the user created library.
New User Library	A new library is added to the user created library.
Edit	Registered template is edited/modified with the library editor.
Cut	Registered library/template is cut.
Copy	Registered library/template is copied.
Paste	Cut and registered library/template is pasted to the new library/template.
Delete	Registered library/template is deleted.
Rename	The name of the registered library/template is changed.
Open Image View	Template image is displayed on the Library Image List screen(see Fig. 8-).
Property	The No. and Name of the registered library/template is changed.
New User Library Folder	A new user library folder is created in the specified path.
Load User Library Folder	A desired user library file is searched for in the specified path folder and, if one is found, the user library is opened.
Store to User Library Folder	The user library folder displayed in the current library workspace and subordinate files are saved in the specified user library folder. Each subdirectory is stored in a separate file with the extension "*.lbe".
Import User Library	Another library file from the currently edited library data (My Favourites, user created library) is imported.

Tab. 8-1: Description to Fig. 8-4

8.1.3 System Library

The system library provides predefined objects and figures delivered with the GT Designer2. These can be used freely, but cannot be registered, deleted or changed for their attributes.

By double clicking on a subdirectory the dialogue window **Library Image List** for the subdirectory will be displayed.

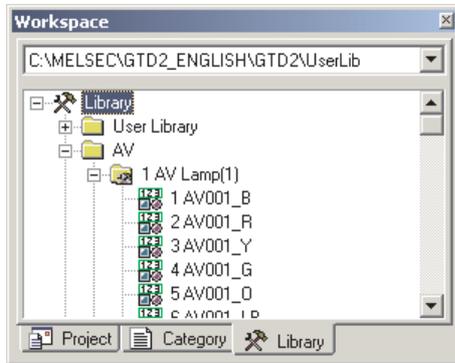


Fig. 8-5:
System-Library

8.1.4 Registering Templates on Library

- ① Select the object/figure for registration.
- ② Drag the object or figure into the workspace or click the  **Register** button to add the object or figure to the **Library Image List**.

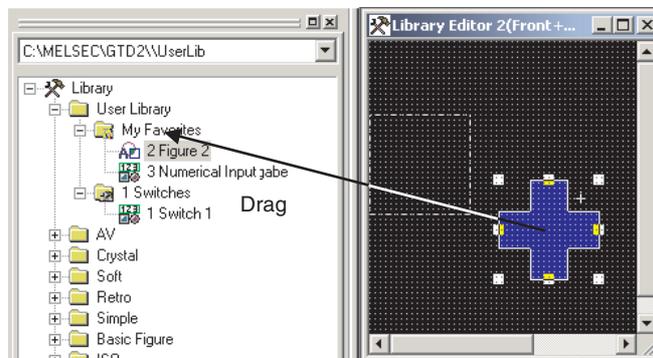


Fig. 8-7:
Registering a template

- ② The **Template Property** dialog box appears. Input the template number and name and click the **OK** button.

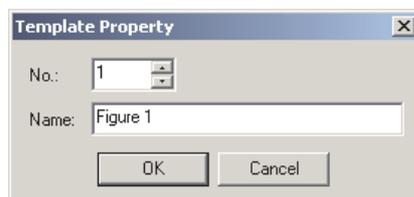


Fig. 8-6:
Template Property dialog box

③ Registration is completed.

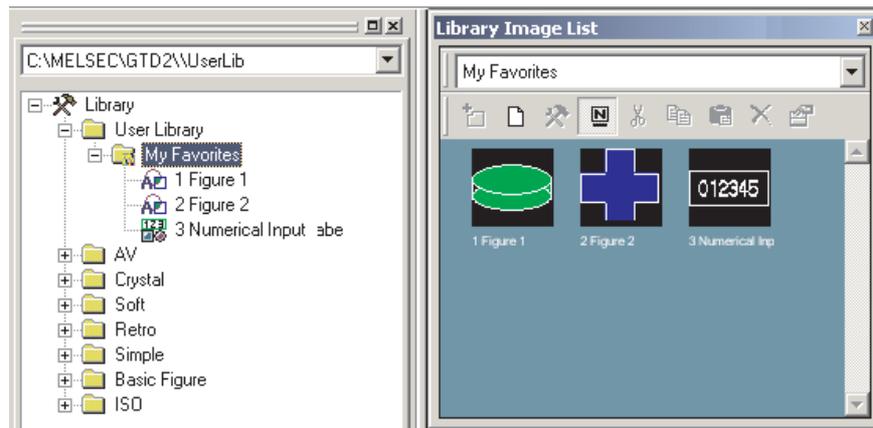


Fig. 8-8: Template Figure 1 after registering

8.1.5 Pasting Templates from Library

- ① Select the template for pasting and paste it on the drawing screen.

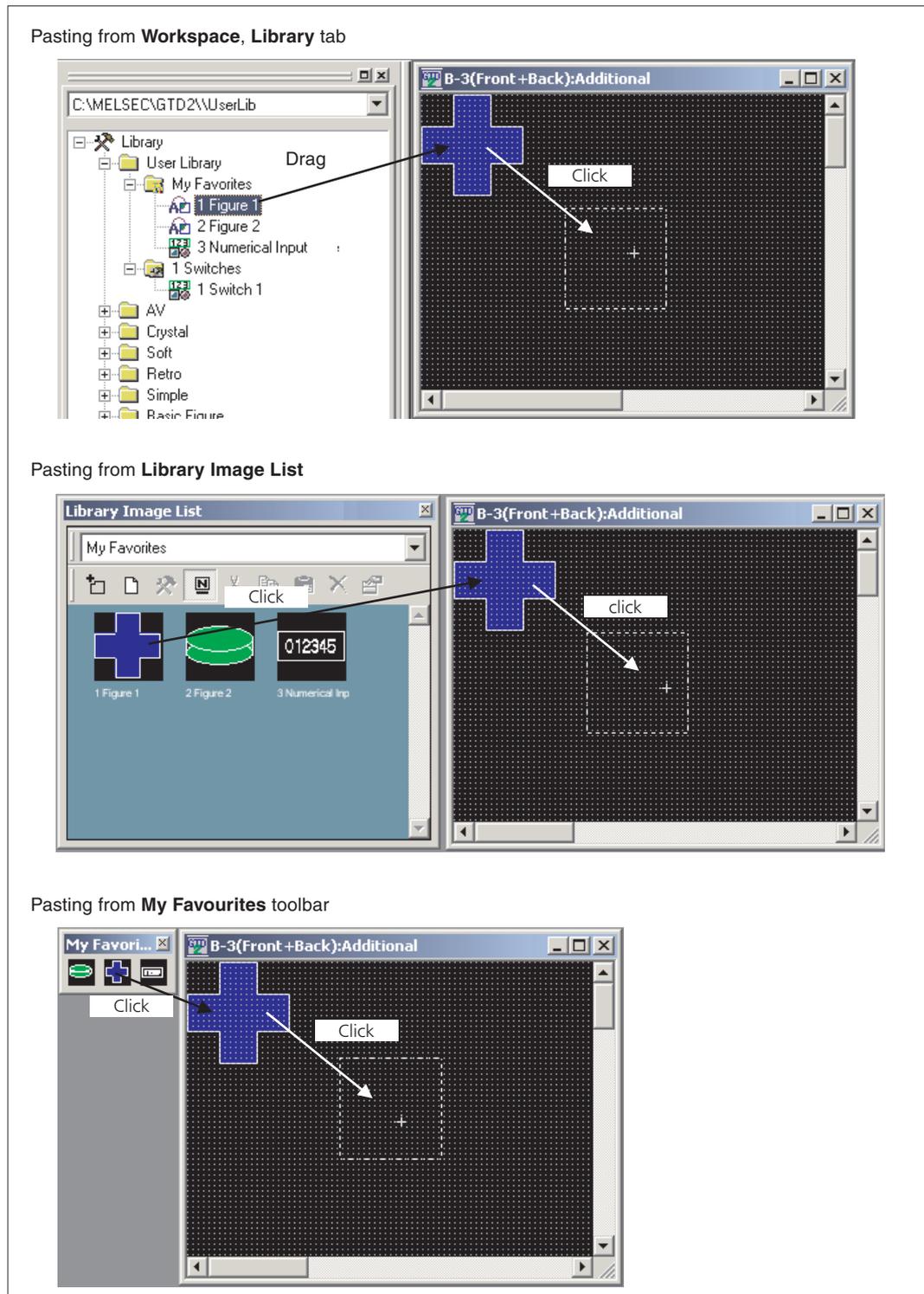


Fig. 8-9: Pasting a template on a screen

9 Draw and Edit

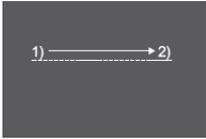
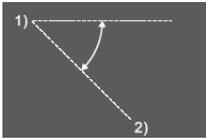
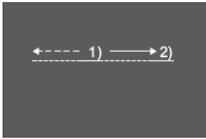
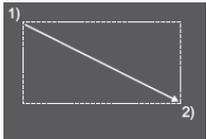
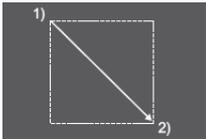
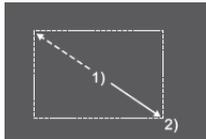
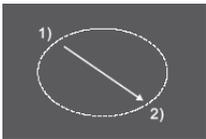
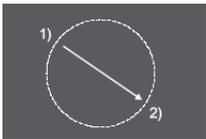
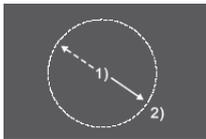
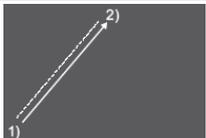
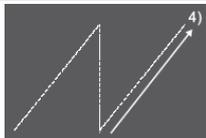
9.1 Drawing Figures

9.1.1 Drawing Tools

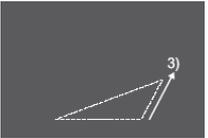
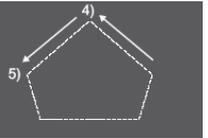
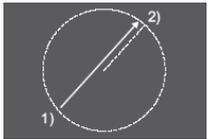
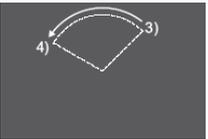
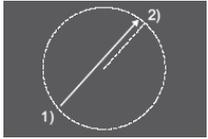
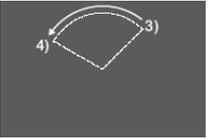
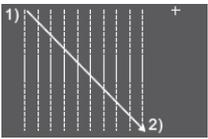
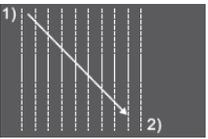
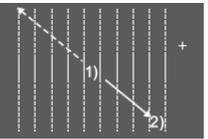
Figure	Drawing example	Tool icon and menu command
Line		<ul style="list-style-type: none">  Line Figure → Line
Line FreeForm		<ul style="list-style-type: none">  Line FreeForm Figure → Line FreeForm
Rectangle	 	<ul style="list-style-type: none">  Rectangle Form → Rectangle  Rectangle (filled) Figure → Rectangle (filled)
Polygon		<ul style="list-style-type: none">  Polygon Figure → Polygon
Circle (including ellipse)	 	<ul style="list-style-type: none">  Circle Figure → Circle  Circle (filled) Figure → Circle (filled)
Arc (including elliptic arc)		<ul style="list-style-type: none">  Arc Figure → Arc
Sector		<ul style="list-style-type: none">  Sector Figure → Sector
Scale		<ul style="list-style-type: none">  Scale Figure → Scale

Tab. 9-1: Drawing tools overview

9.1.2 Use of Tools

Drawing figures using the tools		
Line: Drag from start point 1) to end point 2), and release the left button of the mouse.		
		
	Draw while pressing the Shift key: Lines can be drawn at the angle of 45 degrees.	Draw while pressing the Ctrl key: A line can be drawn from the start point 1) as a center.
Rectangle: Drag from start point 1) to end point 2), and release the left button of the mouse.		
		
	Draw while pressing the Shift key: A square can be drawn.	Draw while pressing the Ctrl key: A rectangle can be drawn from the start point 1) as a center.
Circle/Ellipse: Drag from start point 1) to end point 2), and release the left button of the mouse.		
		
	Draw while pressing the Shift key: A complete round circle can be drawn.	Draw while pressing the Ctrl key: A circle can be drawn from the start point 1) as a center.
Line Free Form: Drag from start point 1) to end point 2), and release the left button of the mouse.		
		
Drag from start point 1) to end point 2), and release the left button of the mouse.	Click at the end point of next line 3).	Repeat the operation in 3) until a figure is drawn. Double click end point 4) to complete drawing.

Tab. 9-2: Drawing figures using tools (1)

Drawing figures using the tools		
Polygon:		
		
Drag from start point 1) to end point 2) of the first side, and release the left button of the mouse.	A dashed line is displayed. Click at the end point of next side 3) .	Repeat the operation in 3) until the desired figure is drawn. Double click 4) to complete drawing.
Arc:		
		
Drag from start point 1) to end point 2) to determine the radius of arc. A dashed line is displayed inside the circle.	Click the left mouse button at the start point of arc 3) , and move the cursor to end point 4) .	Click end point 4) to complete drawing.
Sector:		
		
Drag from start point 1) to end point 2) to determine the radius of arc. A dashed line is displayed inside the circle.	Click the left mouse button at the start point of arc 3) , and move the cursor to end point 4) .	Click end point 4) to complete drawing.
Scale: Drag from start point 1) to end point 2), and release the left button of the mouse.		
		
	Draw while pressing the Shift key: A scale with the same vertical and horizontal sizes can be drawn.	Draw while pressing the Ctrl key: A scale can be drawn from the start point as a center.

Tab. 9-2: Drawing figures using tools (2)

9.2 Editing Text

- ① Click  (Text) on the **Figure** toolbar or choose the **Figure** → **Text** menu.
- ② Clicking on the screen displays the **Text** dialog box.

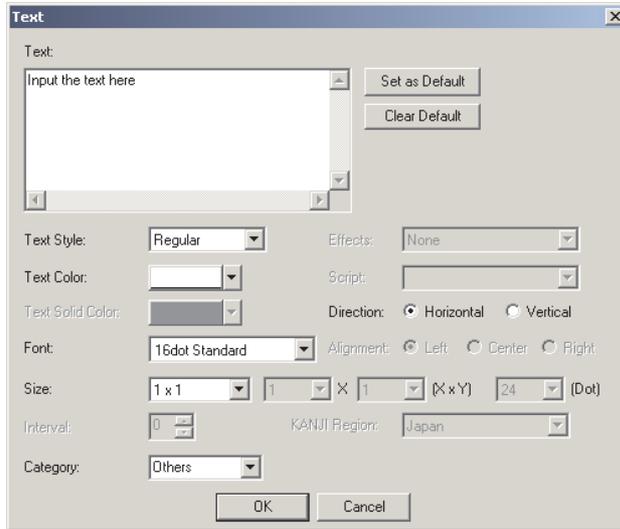


Fig. 9-1:
Text dialog box

- ③ Enter the texts to be displayed, set their attributes and click the **OK** button. Then, the entered texts will be displayed.

Option	Beschreibung
Text	Enter the text to be displayed. Up to 512 characters can be entered as texts. A text can be entered on multiple lines. To start a new line (line feed), press the Enter key at the end of the current line. (A line feed occupies one character.)
Text Style	Select the text display format.  Regular Bold Solid ① Raised ②
Text Color	Select the text display color.
Effects	Select the effect of the character. (The option becomes valid if a Windows® font is selected.)
Skript	The scripts that can be selected with the selected Windows® font are displayed. (The option becomes valid if a Windows® font is selected.)
Direction	Select the text orientation (horizontal, vertical).
Alignment	Select the position by which character strings on multiple lines will be aligned.
TextSolid Color	Select the solid color when the "Text Style" item is set to "Solid" or "Raised".
Font	Select the font for the text. ③
Size	Select the text size (width height magnification). ③
Interval	Set the interval, i.e., space between lines of character strings.
Category	Select the category assigned to a figure. ④
Set as Default	Click this item to set the current attributes as the user defaults. At the next attribute setting, the attributes set as the defaults will be displayed.

Tab. 9-3: *Erläuterungen zu Fig. 9-1*

- ① Text style *Solid* = *Regular* with shadow behind
- ② Text style *Raised* = *Bold* with shadow behind
- ③ Setting of font type and size:

Font	Size	
	Width x Length	Dots
6 x 8dot	—	—
12dot Standard	1 x 1 to 8 x 8	
16dot Standard	0,5 x 0,5 to 8 x 8	
12dot HQ Mincho	2 x 2 to 8 x 8	
12dot HQ Gothic	2 x 2 to 8 x 8	
16dot HQ Mincho	2 x 2 to 8 x 8	
16dot HQ Gothic	2 x 2 to 8 x 8	
TrueType Mincho	—	24 to 128 dots (4-dot Unit)
TrueType Gothic		24 to 128 dots (4-dot Unit)
Windows-Fonts		8 to 128 dots (1-dot-increment)

Tab. 9-4:
Fonts and Sizes overview

- ④ Refer to GT Designer2 Basic Operation/Data Transfer Manual for further information.

9.3 Pasting Figure Data

This function imports figure data (BMP/JPEG/DXF (AutoCAD drawing file) format) to GT Designer2 and pastes the figure on the screen.

① Perform either of the following operations:

file format	Description	Icon and Menu Command
BMP	BMP format file is imported as an image.	<ul style="list-style-type: none">  Import Image Figure → Import Image
JPEG	JPEG format file is imported as an image. (GT15□□ only)	<ul style="list-style-type: none">  Import Image Figure → Import Image
DXF	<p>DXF format file is imported as an image. You can import in AutoCAD created files of the versions 12, 13, and 14.</p> <p>Notes:</p> <ul style="list-style-type: none"> Data with the status "Layer OFF" cannot be imported. Only text with the code Shift-JIS is compatible. The coordinate unit "1" becomes 1 dot in GT Designer2. The import can take up to 10 min. An image with more than 2048 x 1536 dots cannot be imported. 	<ul style="list-style-type: none">  Import DXF Figure → Import DXF

Tab. 9-5: Importing figure data

② The **Open a File** dialog box appears. Select the file of the figure data to be imported and click the **Open** button.

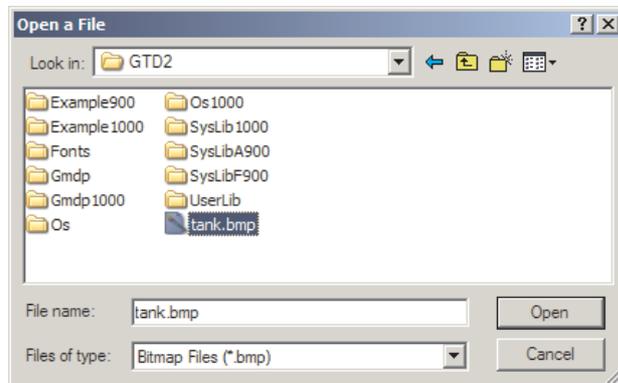


Fig. 9-2: Open a File dialog box

③ When the specified figure data is displayed on the upper left of screen, move the cursor to the area to place and click.

NOTE

The BMP/JPEG/DXF format file can be pasted onto the GT Designer2 screen by drag-and-drop operation.

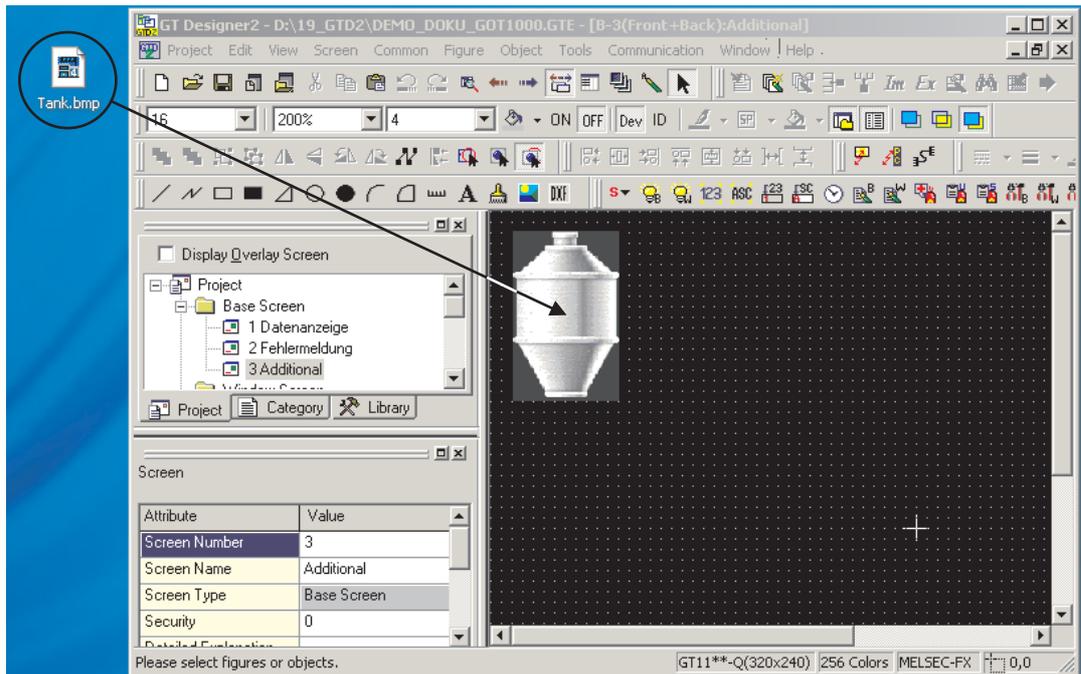
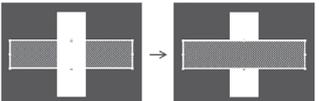
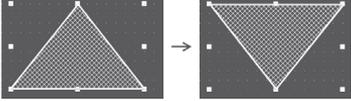
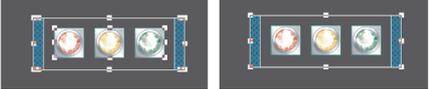


Fig. 9-3: Pasting file by Drag-and-drop operation

9.4 Editing Figures and Objects

9.4.1 Arranging Figures and Objects

- ① Select the desired figure/object for editing.
- ② Perform the following operations according to the editing details.

Function	Description	Icon and Menu Command
Bring to Front or Front Layer/ Send to Back or Back Layer	<p>The front-to-back sequence of objects is changed within the screen.</p> <p>Example: The selected objects are changed in front-to-back sequence.</p> 	<ul style="list-style-type: none"> •  Bring to Front • Edit → Stacking order → Bring to Front on Front Layer <hr/> <ul style="list-style-type: none"> •  Send to Back • Edit → Stacking order → Send to Back on Back Layer
Bring to Front of Layer/ Sent to Back of Layer	<p>The front-to-back sequence of figures/objects is changed within the same layer.</p> <p>Example: The selected figure is moved to the front.</p> 	<ul style="list-style-type: none"> •  Bring to Front of Layer • Edit → Stacking order → Bring to Front of Layer <hr/> <ul style="list-style-type: none"> •  Send to Back of Layer • Edit → Stacking order → Send to Back of Layer
Flip Vertical/ Flip Horizontal	<p>The selected figure is flipped. (Not available for objects)</p> <p>Example: Flipping selected figure vertically</p> 	<ul style="list-style-type: none"> •  Flip Vertical • Edit → Rotate/Flip → Flip Vertical •  Flip Horizontal • Edit → Rotate/Flip → Flip Horizontal
Rotate Left/ Rotate Right	<p>Figure is rotated 90 degrees to right/left. (Not available for objects)</p> <p>Example: Rotating selected figure 90 degrees to left</p> 	<ul style="list-style-type: none"> •  Rotate Left • Edit → Rotate/Flip → Rotate Left •  Rotate Right • Edit → Rotate/Flip → Rotate Right
Group/ Ungroup	<p>Multiple figures and objects are grouped or ungrouped.</p> <p>Example: Multiple selected figures and objects are grouped</p> 	<ul style="list-style-type: none"> •  Group • Edit → Group •  Ungroup • Edit → Ungroup

Tab. 9-6: Arranging figures and objects

9.4.2 Aligning Figures and Objects

- ① Select the desired figure/object for editing.
- ② Perform the following operations according to the editing details.

Function	Description	Icon und Menu Command
Align Left	Figures and objects are aligned with the leftmost figure.	<ul style="list-style-type: none"> •  Align Left • Edit → Align → Left
Align Center (Horizontal)	Figures and objects are aligned at the center in the horizontal direction.	<ul style="list-style-type: none"> •  Align Center (Horizontal) • Edit → Align → Center (Horizontal)
Align Right	Figures and objects are aligned with the rightmost figure.	<ul style="list-style-type: none"> •  Align Right • Edit → Align → Right
Align Top	Figures and objects are aligned with the uppermost figure.	<ul style="list-style-type: none"> •  Align Top • Edit → Align → Top
Align Center (Vertical)	Figures and objects are aligned at the center in the vertical direction.	<ul style="list-style-type: none"> •  Align Center (Vertical) • Edit → Align → Center (Vertical)
Align Bottom	Figures and objects are aligned with the lowermost figure.	<ul style="list-style-type: none"> •  Align Bottom • Edit → Align → Bottom
Align Across	Selected figures are equally aligned in the horizontal direction. Aligns the figures/objects equally based on the top-left coordinates of the leftmost and rightmost figures/objects.	<ul style="list-style-type: none"> •  Align Across • Edit → Align → Across
Align Down	Selected figures are equally aligned in the vertical direction. Aligns the figures/objects equally based on the top-left coordinates of the uppermost and lowermost figures/objects.	<ul style="list-style-type: none"> •  Align Down • Edit → Align → Down

Tab. 9-7: Aligning figures and objects

Example ▾

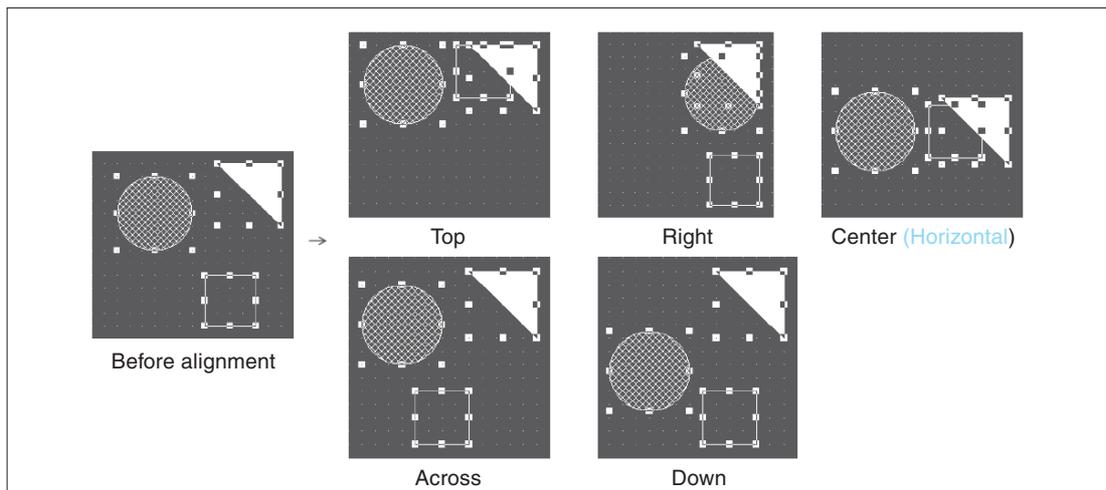


Fig. 9-4: Examples of alignment



NOTE

If figures are overlapped by alignment or similar operation, click **Edit** → **Undo** menu to reverse the last action.

9.4.3 Changing Attributes of Figures and Objects

- ① Select the desired figure/object.
- ② Change the attribute of the selected figure/object on the property sheet.

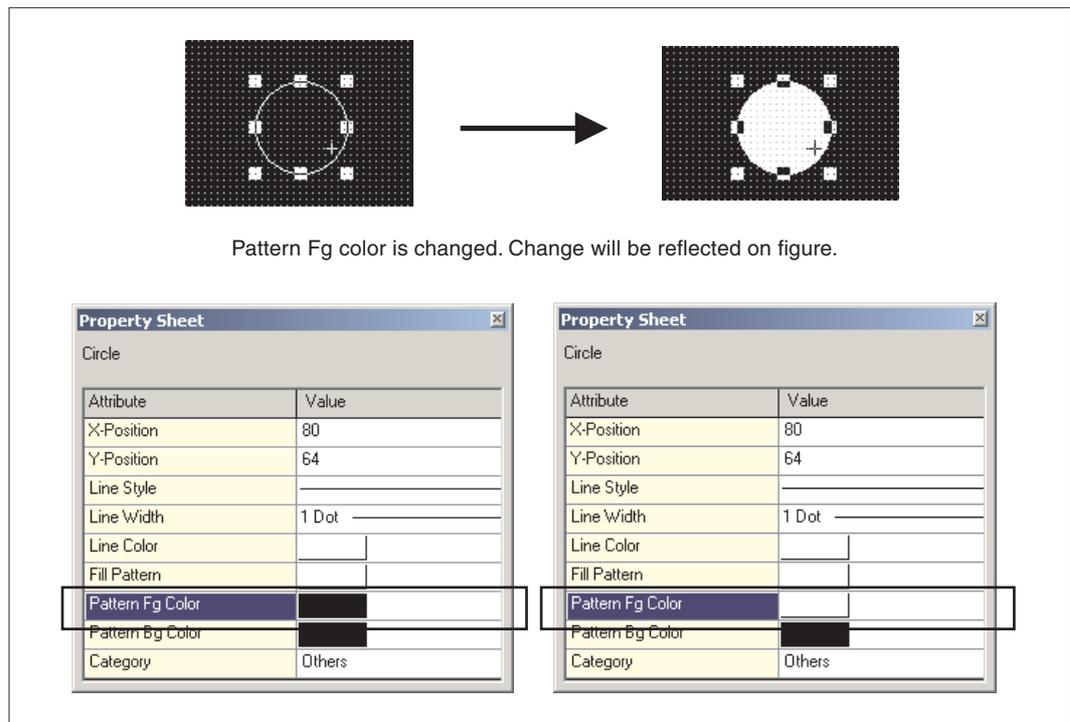


Fig. 9-5: Changing Pattern Foreground Color

NOTE

Attributes of different types of objects/figures cannot be changed at a time.
 Attributes of grouped objects/figures of different types cannot be changed at a time, either.

9.4.4 Changing Size of Figures/Objects

- ① Select the desired figure or object.
- ② Move the cursor to a handle of figure or object. Drag it to change the size of figure or object.

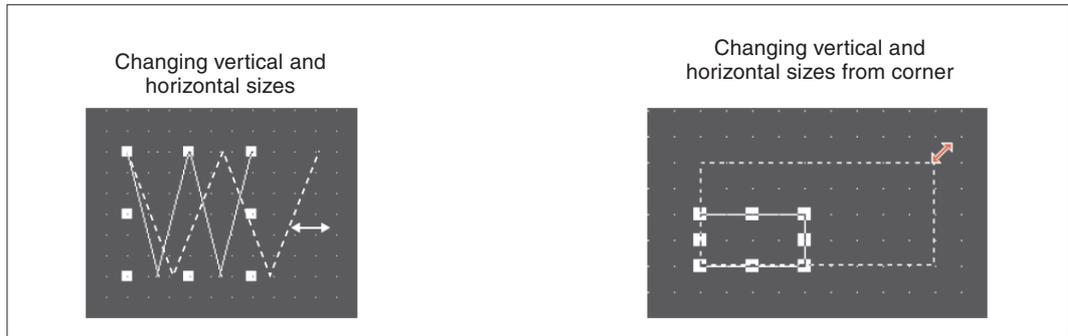


Fig. 9-6: Changing sizes

NOTES

Operation in combination with the **Shift** and **Ctrl** keys allows the following changes of size:

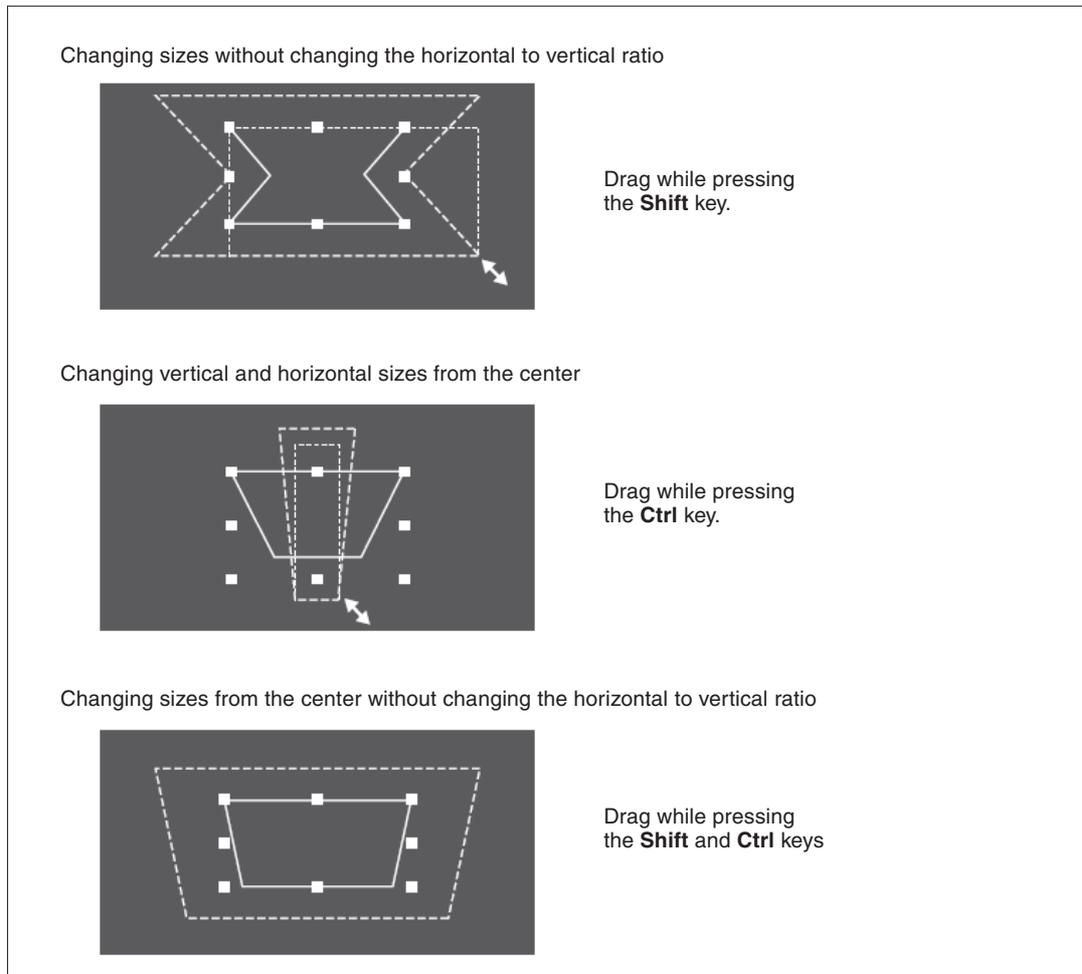


Fig. 9-7: Changing sizes while pressing additional key

Text can be resized by performing the operation in above. When high-quality or True Type font is used, the text may not be resized as intended, since they are restricted in the applicable size.

9.4.5 Copying Figures and Objects Consecutively

- ① Select the desired figure or object for consecutive copies. (For consecutive copy of multiple figures or objects, select multiple figures/objects at a time.)
- ② Select the **Edit** → **Consecutive Copy** from the menu.
The **Consecutive Copy** dialog box appears.
After setting the copy details, click the **OK** button to make copies.

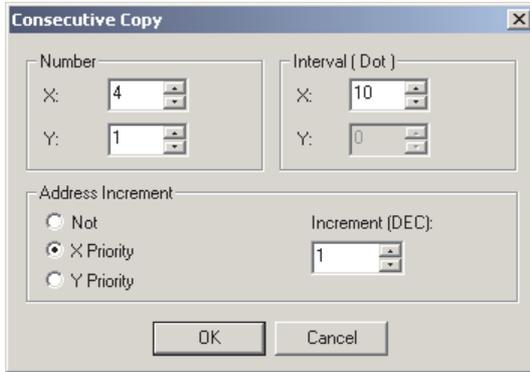
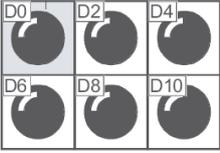
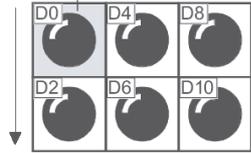


Fig. 9-8:
Consecutive Copy dialog box

Option	Description				
Number	Set the number of figures (copy source + its copies) that will appear on the screen. For example, when Number is set to "2", two figures, i.e., the copy source and its one copy will appear on the screen. Example) Number is set to X: 3 and Y: 2.				
	<p style="text-align: center;">Before setting After setting</p>				
	<table border="0" style="width: 100%;"> <tr> <td style="text-align: center; width: 30px;">X</td> <td>Set the number of figures (copy source + its copies) in the X direction (rightward from the copy source). (1 to 100)</td> </tr> <tr> <td style="text-align: center;">Y</td> <td>Set the number of figures (copy source + its copies) in the Y direction (downward from the copy source). (1 to 100)</td> </tr> </table>	X	Set the number of figures (copy source + its copies) in the X direction (rightward from the copy source). (1 to 100)	Y	Set the number of figures (copy source + its copies) in the Y direction (downward from the copy source). (1 to 100)
X	Set the number of figures (copy source + its copies) in the X direction (rightward from the copy source). (1 to 100)				
Y	Set the number of figures (copy source + its copies) in the Y direction (downward from the copy source). (1 to 100)				
Interval (Dot) ①	Set the interval (dots) between copy source and its copies. Example) Interval is set to X: 5 dots.				
	<table border="0" style="width: 100%;"> <tr> <td style="text-align: center; width: 50%;">When one figure is selected</td> <td style="text-align: center; width: 50%;">When multiple figures are selected</td> </tr> <tr> <td></td> <td></td> </tr> </table>	When one figure is selected	When multiple figures are selected		
	When one figure is selected	When multiple figures are selected			
<table border="0" style="width: 100%;"> <tr> <td style="text-align: center; width: 30px;">X</td> <td>Set the interval (dots) between figures in the X direction (rightward from the copy source). (0 to 100)</td> </tr> <tr> <td style="text-align: center;">Y</td> <td>Set the interval (dots) between figures in the Y direction (downward from the copy source). (0 to 100)</td> </tr> </table>	X	Set the interval (dots) between figures in the X direction (rightward from the copy source). (0 to 100)	Y	Set the interval (dots) between figures in the Y direction (downward from the copy source). (0 to 100)	
X	Set the interval (dots) between figures in the X direction (rightward from the copy source). (0 to 100)				
Y	Set the interval (dots) between figures in the Y direction (downward from the copy source). (0 to 100)				

Tab. 9-8: Description to Fig. 9-8 (1)

Option	Description
Address Increment	<p>It is set to offset the device of the object to the device number for the increments when copying an object. For a touch switch, the write device only for the bit/word operation is applicable.</p> <p>Not : Increment is not performed. X Priority : Incremented in the X direction (right) Y Priority : Incremented in the Y direction (down)</p> <p>After selecting the priority direction, set the device No. increment. Increment (Dec) : -10000 to 10000</p> <p>Example 1: Priority in the X direction Number of increments: 2</p> <p>Copy source</p>  <p>The increment is added in X direction (right).</p> <p>Example 2: Priority in the Y direction Number of increments: 2</p> <p>Copy source</p>  <p>The increment is added in Y direction (down).</p>

Tab. 9-8: Description to Fig. 9-8 (2)

① See the following hint!

NOTE

Copying with 0 interval:

If a figure/object is copied with 0 interval, the pasted figure/object is overlapped with the source by 1 dot. Set the interval to 1 or more to avoid overlapping of figures or objects.

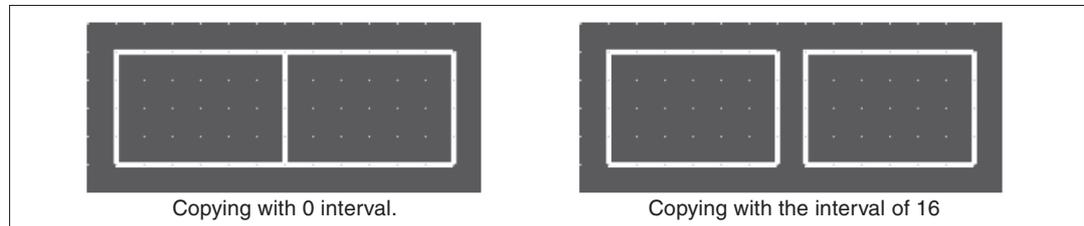


Fig. 9-9: Copying with interval

9.5 Entering Multiple Languages

The GOT1000 series can display Unicode 2.1 characters. Using the Windows® multi-language function or language input software enables the various languages to be entered on GT Designer2, and their characters can be displayed as they are on the GOT.

Characters or comments can also be entered in the various languages and the corresponding screens can be displayed on a single GOT.

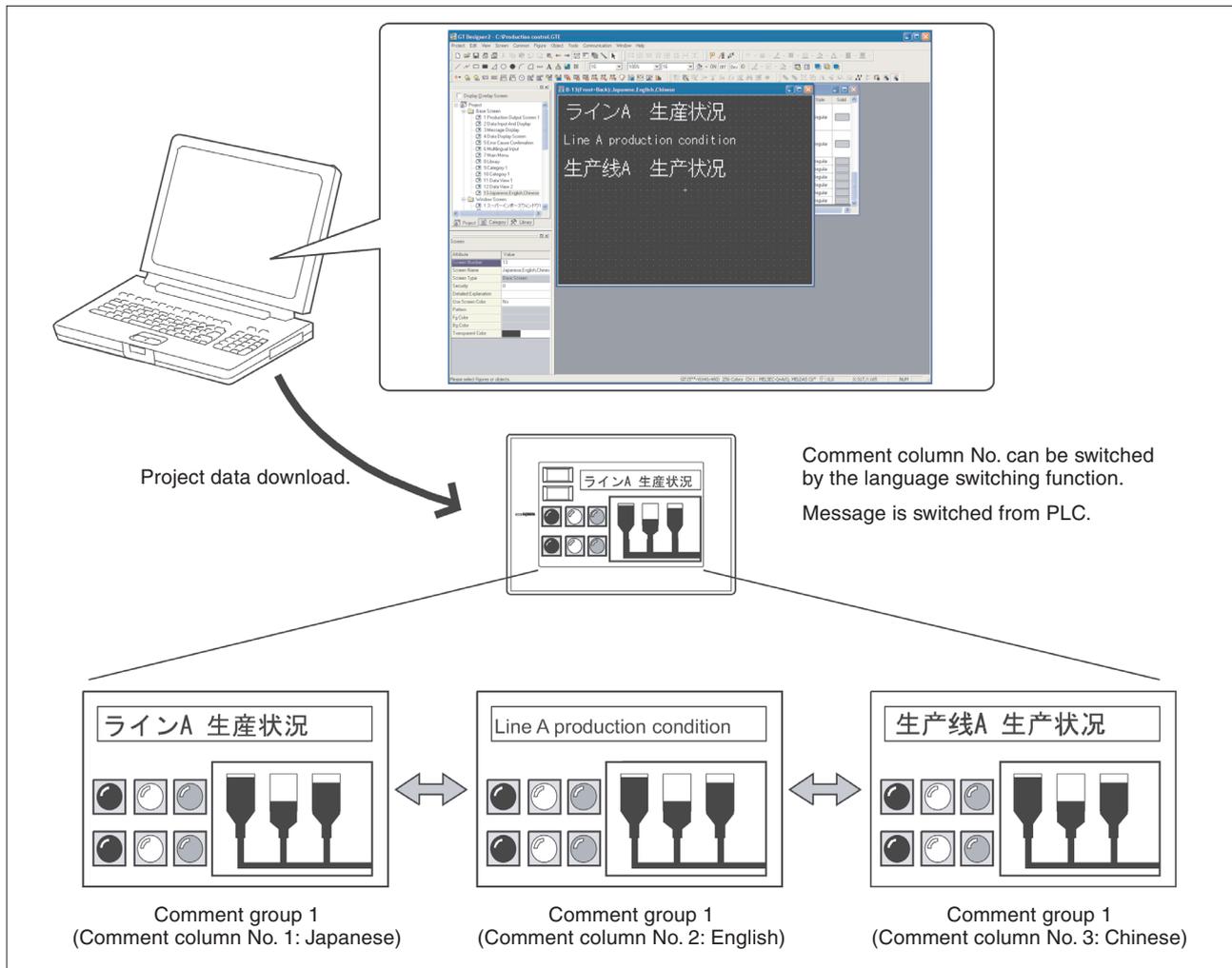


Fig. 9-10: Use of various languages

NOTES

Multiple language input is available for the OS (Windows®) below:

- Windows®2000 Professional
- Windows®XP Professional
- Windows®XP Home Edition

Multiple languages can be entered in either of the following methods:

- Use the multi-language function of Windows® to enter.
 - Multiple languages can be entered on GT Designer2 by using the Windows® multi-language function.
- (Windows®-incompatible languages cannot be entered.)

For further information refer to GT Designer2 Basic Operation/Data Transfer Manual.

9.5.1 Setting Language Switching Device

The comment displayed on the objects can be switched by writing a column No. of comment group in the language switching device set up by GT Designer2. If registering messages of Japanese, English, Chinese and other language in each column of comment group, the language of the comment displayed can be switched.

Example ▾ When switching language by Comment display (Word)

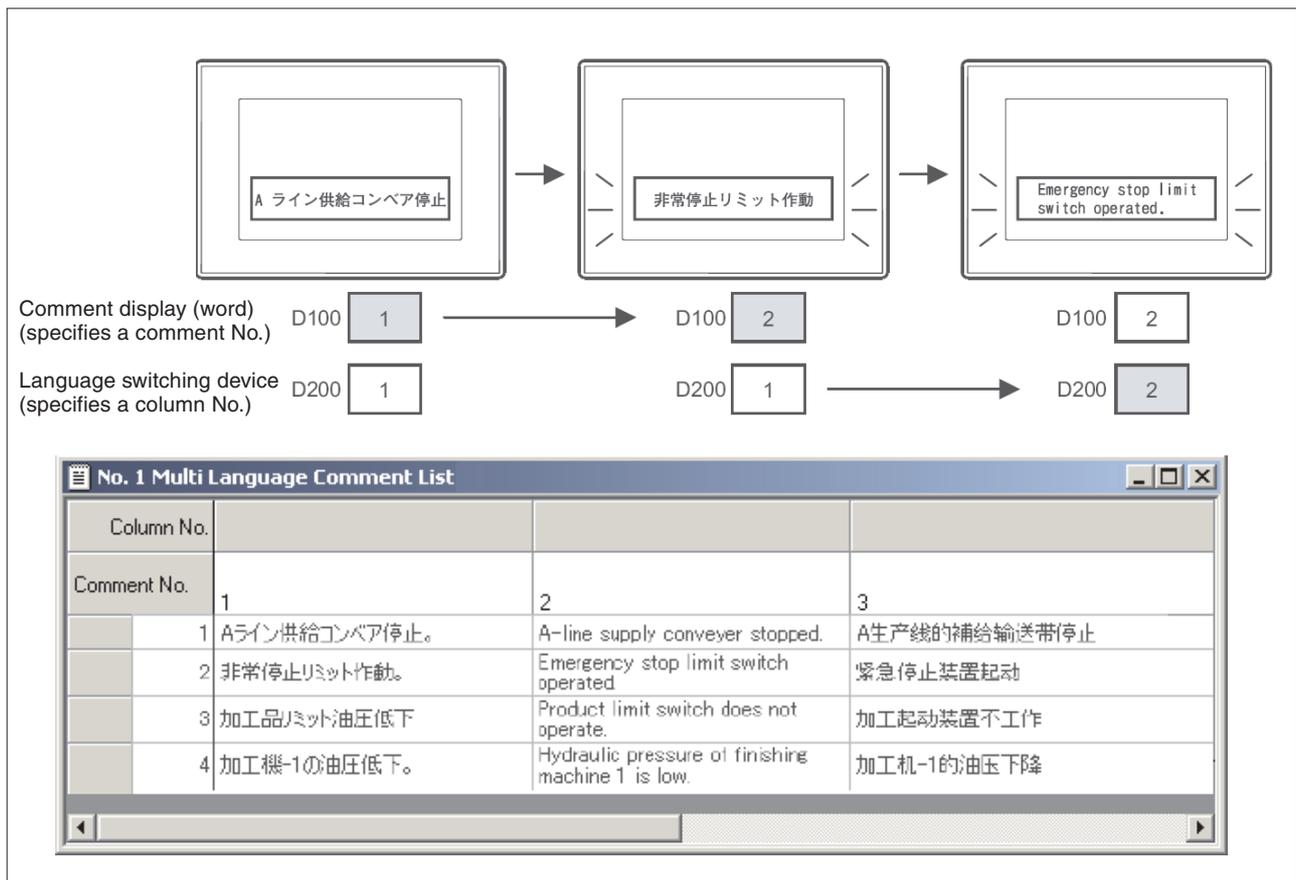


Fig. 9-11: Switching the comment display



NOTE

By registering comments of the same language in several columns of a comment group, the comment group can be used as not language switching but comment switching.

Creating a new comment group

- ① Select **Common** → **Comment**.
- ② Select the submenu **Comment** → **New Comment Group**.
- ③ The comment group property dialog box is displayed.

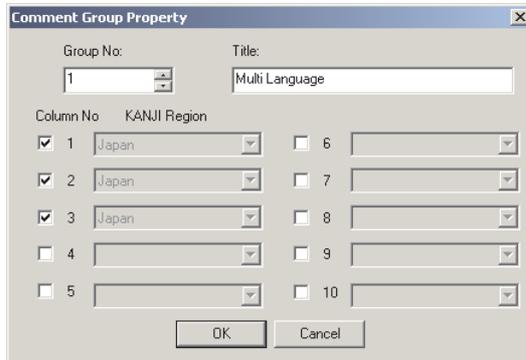


Fig. 9-12:
Comment Group Property dialogue box

- ④ Input a group No. and a name.
In the column **Column No.** check the desired number of columns used in the comment group.
- ⑤ Confirm your input with **OK**.
The following dialogue box is displayed.

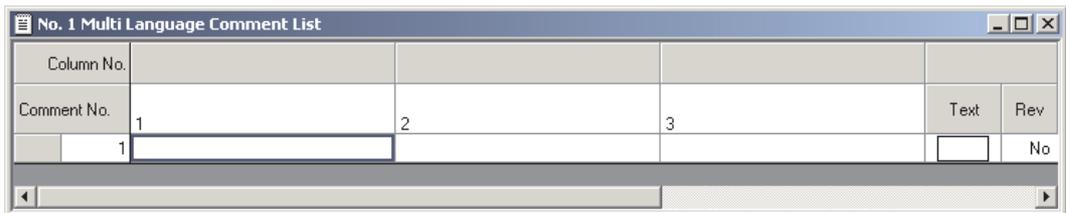


Fig. 9-13: *Comment List* dialogue box

- ⑤ With a right click on one line and selecting the option **New** you can insert further lines.

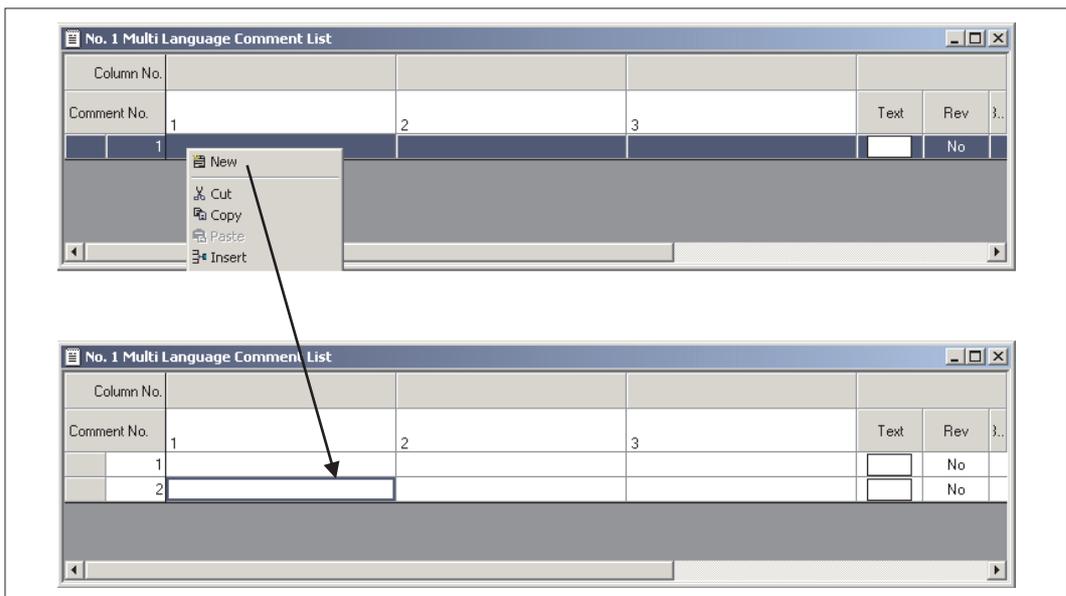


Fig. 9-14: *Comment List* dialogue box

- ⑥ Insert the desired text in the columns, here columns No. 1, 2 and 3.

Registering the language switching

- ① Select the menu **Common** → **System Environment**.
- ② Double click on the option **Language Switching**.
- ③ The following dialogue box will be displayed.

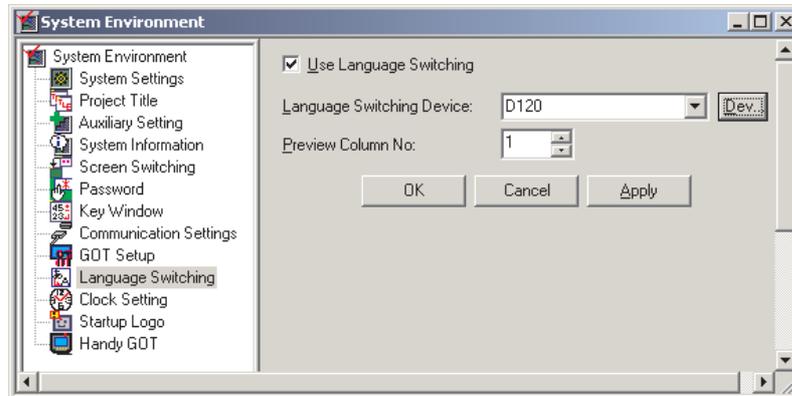


Fig. 9-15:
System Environment
dialog box

- ④ Check the option **Use Language Switching**, set the **Language Switching Device** and input a preview column No. The text of this column will be displayed during the creation of the screen in GT Designer2.

NOTES

The language switching device is relevant for the complete project. It cannot only be set for one screen.

If no language switching device is set, the text of the column No. 1 of the comment group will be displayed.

The language switching function is only available for objects being supported by the comment group.

If the value of the language switching device is 0 or not defined when the power is switched on, the comment "No comment" will be displayed.

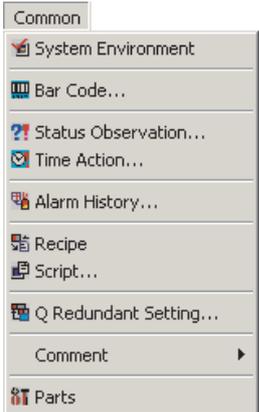
For further information refer to the following manual:
GT Designer2 Screen Design Manual.

A Appendix

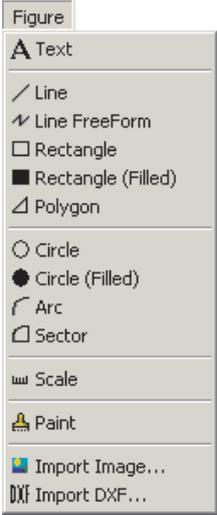
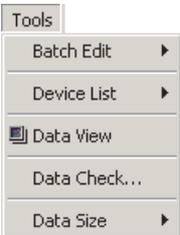
A.1 Menu Configuration

Menu	Description
<p>Project</p> <ul style="list-style-type: none"> New Ctrl+N Open... Ctrl+O Close Save Ctrl+S Save As... Import Project... Import Panelkit of GT Designer... Import Device Comment of GX Developer... Preferences... Page Setup... Print Preview Print... Ctrl+P 1 C:\MELSEC\GTD2\DEMO_DOKU_GOT1000.GTE Exit Alt+F4 	<p>The Project menu contains functions of file management, preference settings and printing.</p> <p>New creation of project, reading existing files, preference settings and printing of data being edited are available.</p> <p>The recent file record can also be displayed.</p>
<p>Edit</p> <ul style="list-style-type: none"> Undo Ctrl+Z Redo Ctrl+Y Cut Ctrl+X Copy Ctrl+C Paste Ctrl+V Consecutive Copy... Delete DEL Edit Vertex Object of Selection ▶ Select All Ctrl+A Group Ctrl+G Ungroup Ctrl+U Add to Category ▶ Rotate / Flip ▶ Align ▶ Stacking order ▶ Attribute... Alt+Enter 	<p>The Edit menu contains edit functions for created figures/objects.</p> <p>If incorrect operation is done during edit, the screen can be returned to the previous status. Copy, paste and grouping of objects and figures are also allowed.</p>

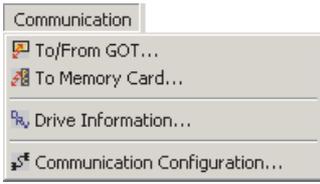
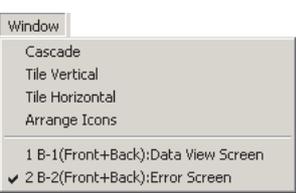
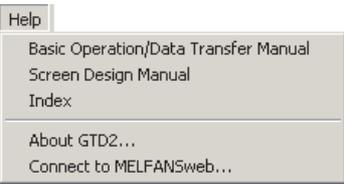
Tab. A-1: Overview of menus (1)

Menu	Description
	<p>The View menu contains functions of display on the GT Designer2.</p> <p>Toolbars, status bar, workspace or property sheet can be displayed or not displayed.</p>
	<p>The Screen menu contains functions of screen management and settings in a project.</p> <p>New screen creation, opening/closing screen and change of window size are available.</p>
	<p>The Common menu contains functions of common settings.</p> <p>The object functions used for the overall project can be set. Also, comments, parts, etc. can be registered.</p>

Tab. A-1: Overview of menus (2)

Menu	Description
 <p>The Figure menu contains functions of drawing figures. Various figures can be drawn or figures can be filled. Image data can also be imported.</p>	
 <p>The Object menu contains functions of objects such as lamps or switches which are arranged on the screen.</p>	
 <p>The Tools menu contains functions of list display of set devices and error check of setting items. The data view can be displayed or not displayed.</p>	

Tab. A-1: Overview of menus (3)

Menu	Description
 <p>The screenshot shows the 'Communication' menu with the following items: 'To/From GOT...', 'To Memory Card...', 'Drive Information...', and 'Communication Configuration...'.</p>	<p>The Communication menu includes the functions that download and upload data, display GOT drive information and make the communication settings.</p>
 <p>The screenshot shows the 'Window' menu with the following items: 'Cascade', 'Tile Vertical', 'Tile Horizontal', 'Arrange Icons', '1 B-1(Front+Back):Data View Screen', and '2 B-2(Front+Back):Error Screen' (which is selected with a checkmark).</p>	<p>The Window menu contains functions of tiling multiple screens.</p>
 <p>The screenshot shows the 'Help' menu with the following items: 'Basic Operation/Data Transfer Manual', 'Screen Design Manual', 'Index', 'About GTD2...', and 'Connect to MELFANSweb...'.</p>	<p>The Help menu contains functions of viewing the PDF manual related to the GT Designer2 and checking the software version.</p>

Tab. A-1: Overview of menus (4)

A.2 Types of Toolbars

The following types of toolbars are available. When desired toolbars are checked for display/non-display, the toolbars can be displayed/non-displayed accordingly.

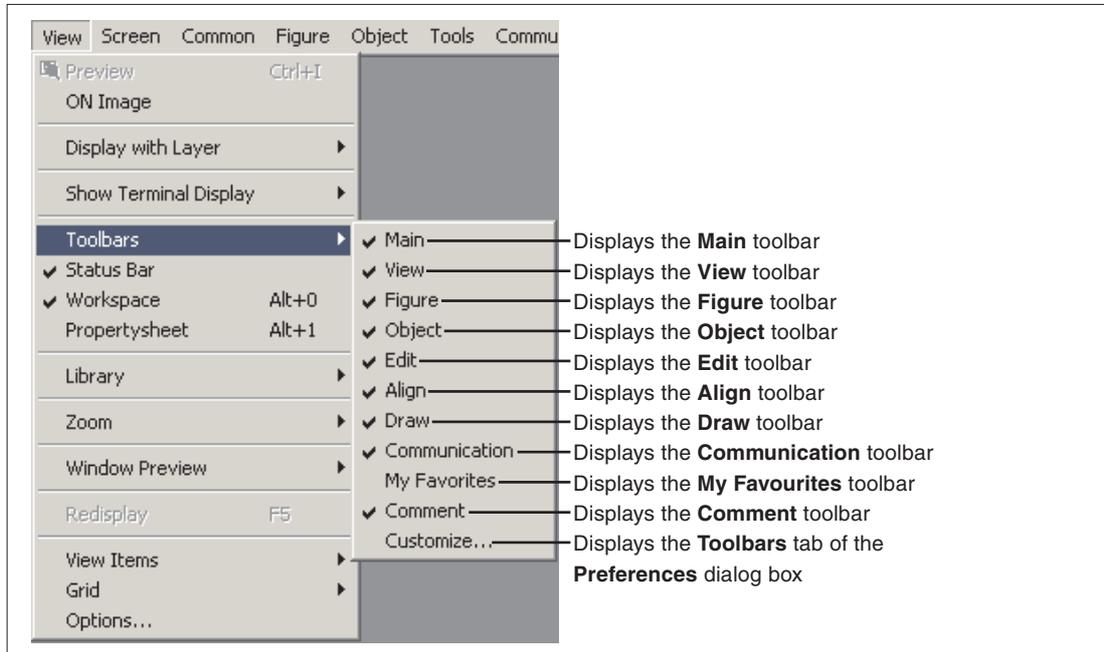


Fig. A-1: *View* → *Toolbars* menu

If you drag a displayed toolbar, it may be arranged as a window on the screen.

If you drag the toolbar back to the tool bar displaying area it will be integrated here again.

The following pages also describe details of each toolbar.

A.2.1 Main Toolbar

		
Icon and Name		Description
 New		New project file is created.
 Open		Existing project file is opened.
 Save Project		Editing project is overwritten and saved on the existing file.
 New Base Screen		New screen is created.
 Open Screen		Specified screen is opened.
 Cut		Selected figures and objects are cut.
 Copy		Selected figures and objects are copied.
 Paste		Figures and objects are pasted.
 Undo		The last operation is cancelled to recover the status before change.
 Redo		The last operation is repeated.
 Screen Preview		Settings are displayed with the display image on the GOT.
 Previous Screen		Screen with the number before the current screen number is opened.
 Next Screen		Screen with the number next to the current screen number is opened.
 Unopened Screens		Unopened screen is opened with Previous/Next Screen in the ascending/descending order.
 Screen Device List		List of devices used is displayed.
 Data View		All figures and objects arranged on the screen are displayed in a list.
 Comment		Comment to be displayed with the object function is registered.
 Figure And Object		Objection of selection is switched to Figure and Object .

Tab. A-2: Description of **Main** toolbar

A.2.2 View Toolbar



Icon and Name	Description
2	Snap Snap movement of the cursor is set
100%	Zoom Screen display magnification rate/shrinkage rate is set.
4	Grid Spacing Grid Spacing is set.
	Grid Color Grid color is set.
ON OFF	ON Image/OFF Image Screen is switched to the display of device ON Image/device OFF Image.
Dev ID	Device, Object ID Device (Dev.) and object ID (ID) are displayed for each object.
	Screen Color Screen background color is set.
SP	Screen Pattern Screen background pattern is set.
	Screen Background Color Screen background color is set.
	Workspace Workspace is displayed.
	Property Sheet Property Sheet is displayed.
	Layer: Front Displays the front layer only.
	Layer: Back Displays the back layer only.
	Layer: Front and Back Displays the overlaid front and back layers.

Tab. A-3: Description of **View** toolbar

A.2.3 Figure Toolbar

	
Icon and Name	Description
 Line	Line is drawn.
 Line FreeForm	Continuous line is drawn.
 Rectangle	Rectangle is drawn.
 Rectangle (Filled)	Filled rectangle is drawn.
 Polygon	Polygon is drawn.
 Circle	Circle is drawn.
 Circle (Filled)	Filled circle is drawn.
 Arc	Arc is drawn.
 Sector	Sector is drawn.
 Scale	Scale is drawn.
 Text	Text is input.
 Paint	Polygon and closed area are painted with the selected pattern.
 Import Image	BMP, JPEG format file is imported on the editing screen.
 Import DXF	DXF format file is imported on the editing screen

Tab. A-4: Description of **Figure** toolbar

A.2.4 Object Toolbar



Icon and Name	Description
 Switch toolbar	Switch function is set.
 Bit Lamp	Bit Lamp function is set.
 Word Lamp	Word Lamp function is set.
 Numerical Display	Numerical Display function is set.
 ASCII Display	ASCII Display function is set.
 Numerical Input	Numerical Input function is set.
 ASCII Input	ASCII Input function is set.
 Time Display	Time Display function is set.
 Bit Comment	Bit Comment function is set.
 Word Comment	Word Comment function is set.
 Alarm History	Alarm History function is set.
 User Alarm	Alarm List function (User Alarm) is set.
 System Alarm	Alarm List function (System Alarm) is set.
 Bit Parts Display	Bit Parts Display function is set.
 Word Parts Display	Word Parts Display function is set.
 Fixed Parts Display	Fixed Parts Display function is set.
 Panel meter	Panel meter function is set.
 Level	Level function is set.
 Trend Graph	Trend Graph function is set.
 Line Graph	Line Graph function is set.
 Bar Graph	Bar Graph function is set.

Tab. A-5: Description of **Object** toolbar

A.2.5 Edit Toolbar

	
Icon and Name	Description
 Bring to Front	Places the selected object on the front of the front layer.
 Send to Back	Places the selected figure or object on the back of the back layer.
 Group	Selected figures and objects are grouped.
 Ungroup	Grouping is canceled.
 Flip Horizontal	Selected figure is flipped horizontally.
 Flip Vertical	Selected figure is flipped vertically.
 Rotate Left	Selected figure is rotated 90 degrees to the left.
 Rotate Right	Selected figure is rotated 90 degrees to the right.
 Edit Vertex	Length of freeform line or polygon line is changed.
 Align	Selected figures and objects are aligned.
 Selection: Figure	Only figures are selected.
 Selection: Object	Only objects are selected.
 Selection: Figure and Object	Figures and objects are selected.

Tab. A-6: Description of **Edit** toolbar

A.2.6 Align Toolbar

	
Icon and Name	Description
 Align Left	Aligned with the selected leftmost figure or object.
 Align Center (Horizontally)	Aligned at the center horizontally.
 Align Right	Aligned with the selected rightmost figure or object.
 Align Top	Aligned with the selected uppermost figure or object.
 Align Center (Vertically)	Aligned at the center vertically.
 Align Bottom	Aligned with the selected lowermost figure or object.
 Align Across	Selected figures and objects are evenly aligned in the horizontal direction.
 Align Down	Selected figures and objects are evenly aligned in the vertical direction.

Tab. A-7: Description of **Align** toolbar

A.2.7 Draw Toolbar

	
Icon and Name	Description
 Line Style	Line style is set or changed.
 Line Width	Line width is set or changed.
 Line Color	Line color is set or changed.
 Fill Pattern	Fill pattern is set or changed.
 Pattern Fg Color	Fill color is set or changed.
 Pattern Bg Color	Fill background color is set or changed.
 Text Color	Text color is set or changed.
 Text Style	Text style is set or changed.
 Text Solid Color	Text solid color is set or changed.

Tab. A-8: Description of **Draw** toolbar

A.2.8 Communication Toolbar

		
Icon and Name	Description	
 To/From GOT	Data is transferred to GOT.	
 To Memory Card	Transfers data to the memory card.	
 Communication Configuration	Communication setting is made.	

Tab. A-9: Description of **Communication** toolbar

A.2.9 Favorites Toolbar

User defined objects and figures registered in the subdirectory **Favorites** of the user library are displayed in the toolbar **Favorites**.

Also see section 8.1.1.

A.2.10 Comment Toolbar

		
Icon and Name	Description	
 New Comment	Adds a new comment line.	
 New Comment Group	Creates a new comment group.	
 Comment Group Property	Selects the selected comment group property.	
 Insert Row	Inserts a row in the specified position.	
 Insert Column	Inserts a column in the specified position.	
 Import	Imports the existing CSV, text or Unicode text file.	
 Export	Exports a comment list to a CSV, text or Unicode text file.	
 Attribute	Opens the comment attribute setting dialog.	
 Search	Opens the character string search dialog.	
 Jump	Opens the jump dialog.	
 Attribute Display/Non-Display	Displays/Hides the attribute information.	

Tab. A-10: Description of **Comment** toolbar

A.3 PLC CPU Connected to GOT

Function		GOT-F900 series	GOT-A900 series	GOT1000 series		Remarks
				GT11	GT15	
Bus connection	System Q	○	●	○	●	—
	A/QnA	○	●	○	●	—
CPU direct connection	A/QnA/System Q	●	●	●	●	—
	FX	●	●	●	●	—
Computer link connection	A/QnA/System Q	●	●	●	●	—
MELSECNET/10 connection (PLC to PLC network)		○	●	○	●	—
CC-LINK(ID) connection (Intelligent device station)		○	●	○	●	—
CC-LINK(G4) connection (Via G4)		○	●	●	●	—
Ethernet connection		○	●	○	●	—
FX(2N)-10GM/20GM		●	○	○	○	—
FREQROL series		●	○	●	●	—
Computer connection		●	●	●	●	—
OMRON PLC connection		●	●	●	●	—
KEYENCE PLC connection		○	○	●	●	—
SHARP PLC connection		○	●	●	●	—
TOSHIBA PLC connection		○	●	●	●	—
HITACHI PLC connection		○	●	●	●	—
Fuji Electric FA Components & Systems PLC connection		●	○	○	○	—
MATSUSHITA PLC connection		●	●	●	●	—
YASKAWA Electric PLC connection		●	●	●	●	The GOT-F900 series does not support connection to the GL, PROGIC8, CP9200H and CP9300MS (MS compatibility) series.
YOKOGAWA PLC connection		○	○	●	●	—
Allen-Bradley PLC connection		●	●	●	●	—
SIEMENS PLC connection		●	●	●	●	The GOT-A900 and GOT1000 series do not support connection to the S7-200 series.

Tab. A-11: Overview of connection combinations between GOT series and PLC series (1)

- : Supported function
- : Function deleted/no corresponding function
- ◆: Function partly deleted when utilized for GOT1000 series

Function	GOT-F900 series	GOT-A900 series	GOT1000 series		Remarks
			GT11	GT15	
OMRON temperature controller	○	○	●	●	—
YAMATAKE temperature controller	○	○	●	●	—
RKC temperature controller	○	○	●	●	—
MELSERVO-J2S/M connection	○	○	●	●	—
Multiple-GOT connection function	●	○	◆	○	Using the series GOT-F900 you can connect up to four devices with each other, using the series GT11 only two.

Tab. A-11: Overview of connection combinations between GOT series and PLC series (2)

- : Supported function
- : Function deleted/no corresponding function
- ◆: Function partly deleted when utilized for GOT1000 series

A.4 FAQs

A.4.1 The Workspace/Property sheet/Data view has disappeared from the screen. How can it be displayed?

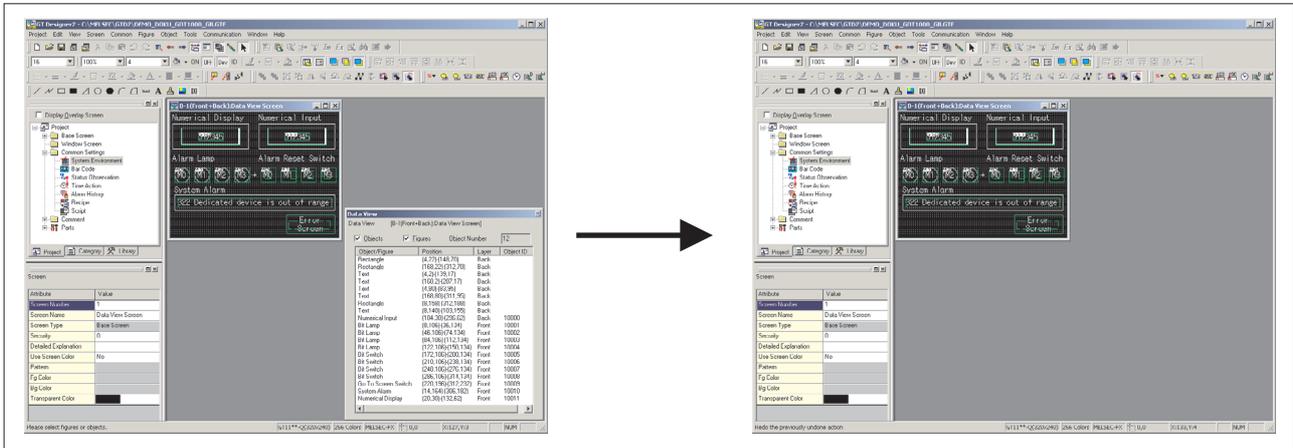


Fig. A-2: Data view has disappeared

Solution

Select **View** → **Workspace** or **View** → **Property sheet** to display the Workspace and the Property sheet.

Select **Tools** → **Data View** to display the Data view.

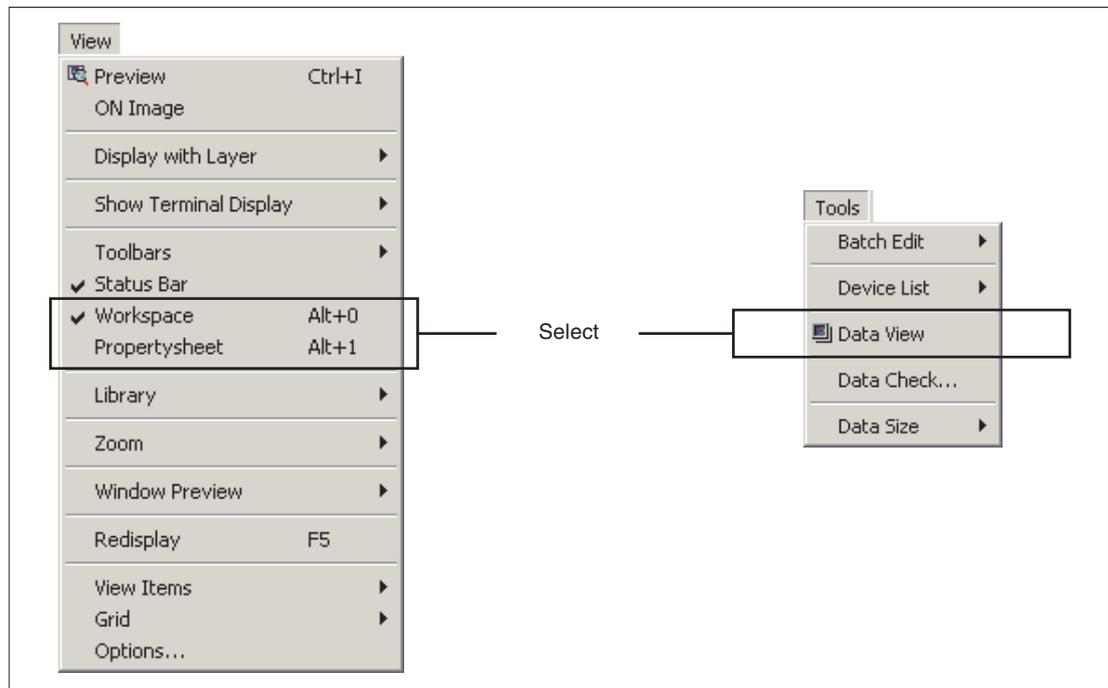


Fig. A-3: Select the respective menu command

A.4.2 I don't know how to pop up the Workspace, property sheet or the data view.

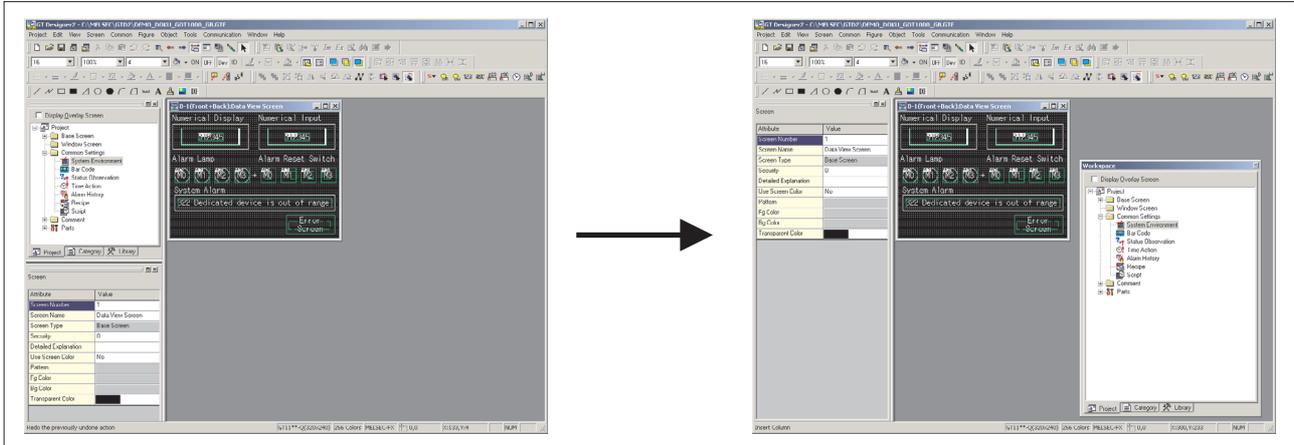


Fig. A-4: Workspace popped up

Solution

The Workspace, Property sheet and Data View can be easily popped up by clicking  located at top right.

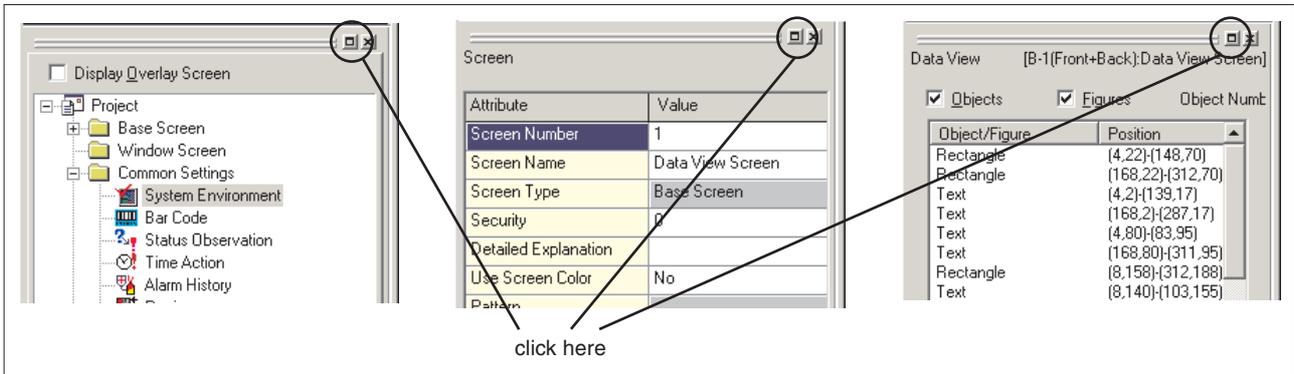


Fig. A-5: Click here to pop up

A.4.3 The cursor remains to be + mark. Objects are continuously arranged. How can the cursor be recovered?

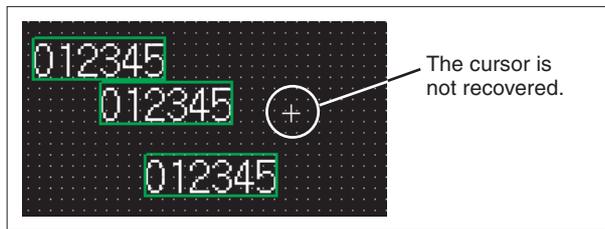


Fig. A-6:
Objects are continuously arranged

Solution

After arrangement of an object, right click the mouse or press the Esc key on the keyboard to recover the cursor to .

To maintain the cursor to an arrow mark, select **Project** → **Preferences** and check **Tool de-select after use** on the **Operation** tab.

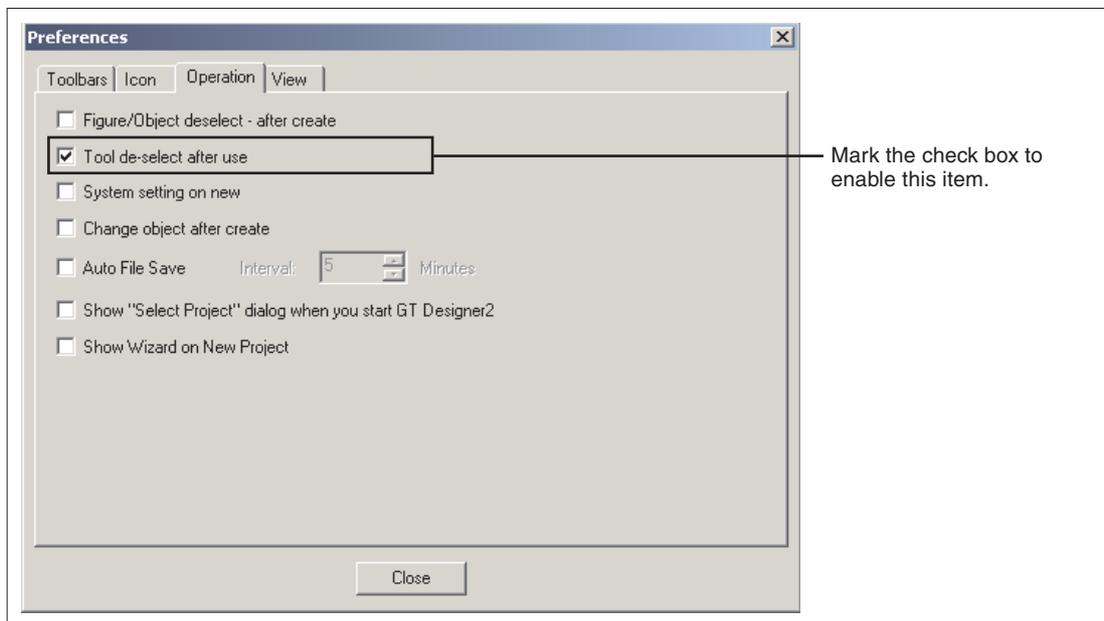


Fig. A-7: Preferences dialog box, Operation tab

A.4.4 Object figure is not accurately arranged. How can I arrange it?

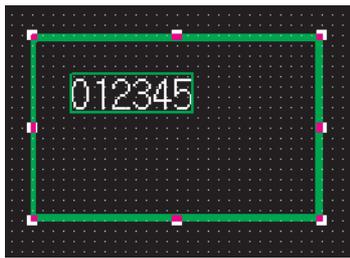


Fig. A-8:
Object and figure not centered

Solution

Right click the mouse on the object and select **Enable Two Tracker Mode** and **Centering**. The object is then accurately arranged.

When Centering is selected, the object is automatically moved to the center of the figure. When Enable Two Tracker Mode is selected, the object and the figure are independently moved, enlarged or reduced. The arrangement position of the object and the figure can be finely adjusted. (When the touch switch is set, the valid area of the touch switch can be set.)

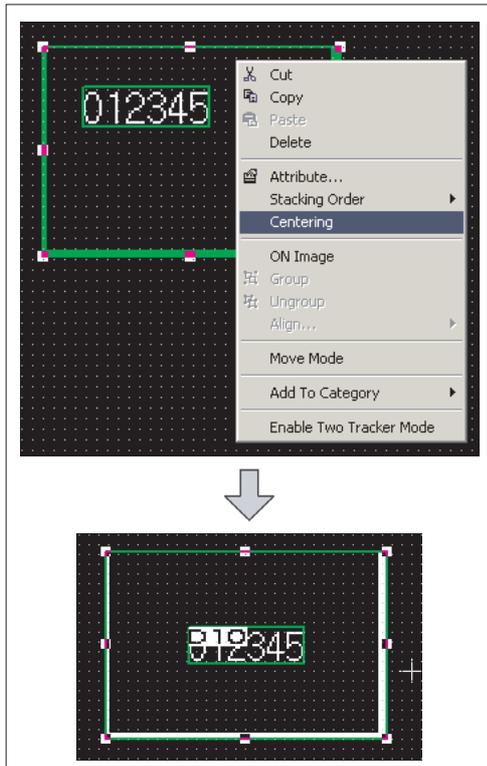


Fig. A-9:
Centering object and figure

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