MITSUBISHI ELECTRIC

Mitsubishi iQ Platform-compatible Screen Design Software
For Graphic Operation Terminal GOT1000
MELSOFT GT Works3

MITSUBISHI

MELSOFT GT Works3
Version 1

MELSOFT

Integrated FA Software

CD-ROM
COMPACT
disc

DATE

MODEL SW1DNC-GTWK3-E

**Experience the dawn of new era
in visualization design!**

MELSOFT GT Works3

iQ Platform

Advanced design environment software – Experience the dawn of a new era in visualization design

To quickly transform the front end of your machine into a more user friendly and sophisticated interface you need a design environment that is both intuitive and efficient. MELSOFT GT Works3 is the quintessential environment for visual design and configuration.
User-oriented functions are integrated based on three main concepts - simplicity, clarity and ease-of-use.

MELSOFT GT Works3

Realistic High-Definition Graphics
Fine

Simple Setting
Simple

Intuitive Operation – as YOU Imagine It
Easy

The Ultimate in Visualization Design

MELSOFT

GOT1000 Screen Design Software

GT Works3

Screen development is reduced up to 70% compared to other conventional HMI environments.*

Screen data is portable and forward compatible.

Visualization has evolved to offer more than what you see is what you get.

* Compared to GT Designer 2 (based on our measurements)

7 points to easily create new screens and transfer them to the GOT

Point 7 | Simulator (P.13)

Preview operation without connecting to a GOT.

Point 6 | Communication with the GOT (P.12)

Communication settings and drivers are automatically selected and downloaded to the GOT with the project data.

Point 2 | Tool bar (P.8)

Vividly colored icons make distinguishing active functions from inactive ones easy.

Point 1 | Work tree (P.8)

View the whole project, create a new screen, and add and delete screens with ease.

Point 3 | Library (P.9)

Parts are easy to select. High resolution graphics and parts are easy create and incorporate into projects.

Point 4 | Dialog box (P.9)

User-friendly dialog boxes and object settings.

Property sheet

A selected object or graphic's settings are displayed as a tree view. Set colors, devices, etc., on the property sheet without opening a dialog box. When selecting the same objects or graphics, change color, character size, etc., all at the same time.

Point 5 | Editor "screen design area" (P.10)

Navigate through multiple screens easily with a simple click of a tab. This is one of many convenient and efficient development functions that designers can take advantage of.

Temporary area

Reduce workspace clutter by moving objects off of the display area.

For more on GT Works3 features, see the following pages:
• Fine images: Pages 6 to 7
• Simple operations: Pages 8 to 13
• Easy operations: Pages 14 to 18

MELSOFT iQ Works improves design efficiency (P.17)

Batch parameter check and system labels of MELSOFT Navigator are supported.

Related tools (P.17 and 18)

GT Works3 comes with the Data Transfer Tool, GT Converter2, and other tools.

Fine

Your mind's the limit – choose among a wide variety of libraries, decorative characters,   and fonts – you'll be pleased with the results
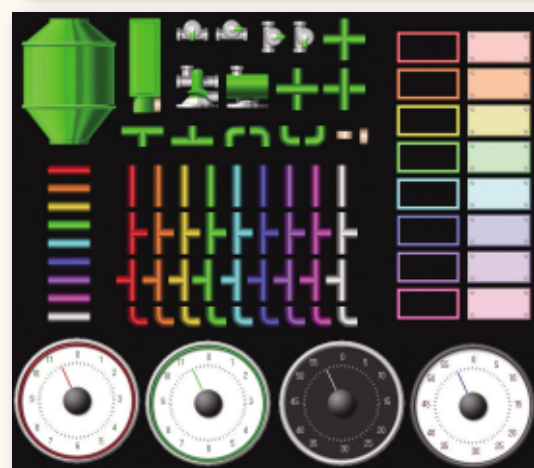
MELSOFT
GT Works3

To create sophisticated screens quickly

Library

Many high-resolution parts are available

Import new parts and libraries as they become available

GT Works3 offers one of the most comprehensive graphical libraries on the market today.

Hundreds of popular graphical objects are available including a wide assortment of meters and piping.

High-resolution graphics can enhance other display objects including comment messages, numerical and ASCII input displays, and alarms.

To make screen titles attractive

Logo characters

Decoration!

New logo characters and new decorations. Outlines and neon make your characters more expressive.
Characters up to 800 dots in size can be used.

Choose a font freely

Font variations

A wide variety of fonts!

The GOT1000 displays a stunning range of fonts.

• Standard fonts
→Small characters are displayed clearly.
• Stroke fonts
→The font size is specified in dots.
• Windows® fonts
→Your favorite fonts can be used.

All fonts conform to Unicode 2.1, and about 40 languages can be displayed clearly. Thai characters are clearly displayed using stroke fonts.

Easily create stunning graphics and effortlessly perform operations and settings
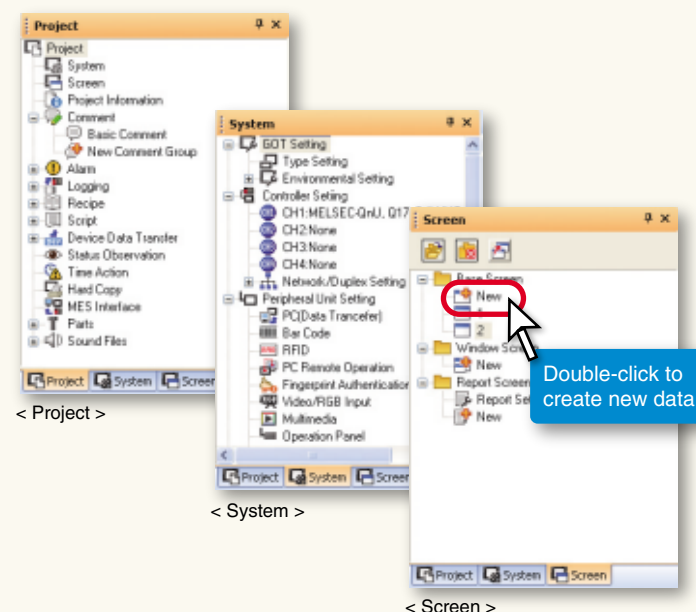
MELSOFT GT Works3

With all these settings – which should I choose?

Point 1 — Work tree

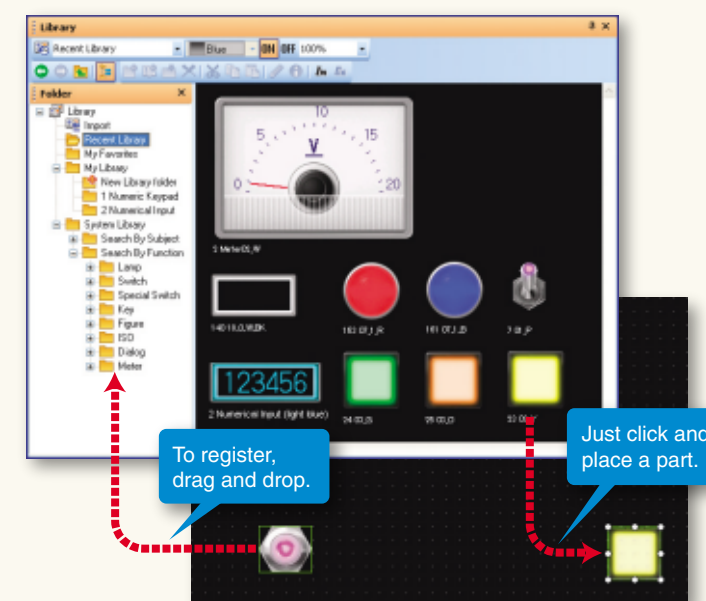### Setting items are classified so you can choose what you want more quickly

< Project >

Double-click to create new data.

< System >

< Screen >

Setting items in a project are classified clearly into projects, systems, and screens. Everything is displayed so you can find what you want quickly. Create new screens or comments just by double-clicking on "New".

What function best fits my application?

Point 2 — Tool bar

New icons simplify function selection and improve efficiency

Bit Switch | Bit Lamp | Numerical Display | Numerical Input | ASCII Display | Word Comment

Alarm History | Bit Parts | Historical Trend Graph | Text | Text Color | Import DXF Data

Align | Rotate | New Screen | Write to GOT | Activate Simulator | Controller Setting

Point to the icon with the mouse to display an explanation of functions and operations.

Switch
Bit Switch
Word Switch

Zoom in (Ctrl+Num +)
Increase the display magnification by 10%

Simply designed full-color icons and easy explanations let anyone design screens easily. Previous selections are stored to increase design work efficiency.
Say you select the bit switch from the menu to create a switch object -- the bit switch icon is immediately displayed so you can just click the icon to create another bit switch – no need to choose from a function menu.

Lots of libraries -- but what are they for?

Point 3 — Library

Cut library retrieval time!

To register, drag and drop.
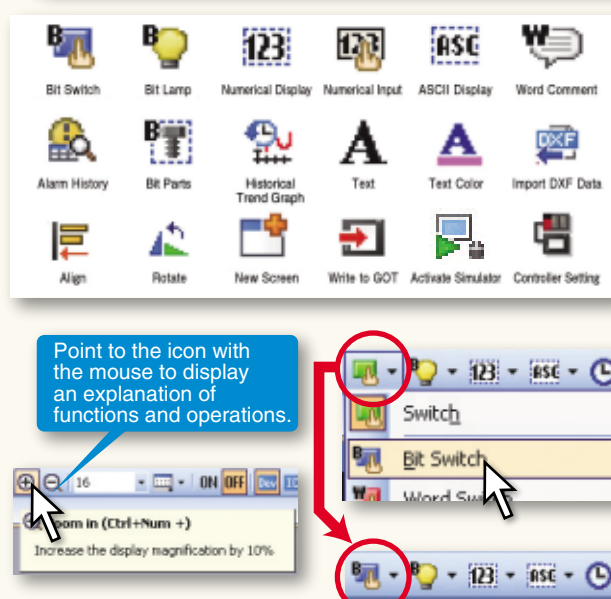
Just click and place a part.

Finding objects in the parts library has never been easier. Simply choose a library by object type, function or recently used library list.
To create a visual masterpiece - just choose parts from the library and place the objects on screen - what could be easier?
To register a part, just select it, drag and drop it into the library.

But what items do I set?

Point 4 — Dialog box

Terms and display items are improved to make settings easier!

Compare and check images of ON/OFF state or each set range.
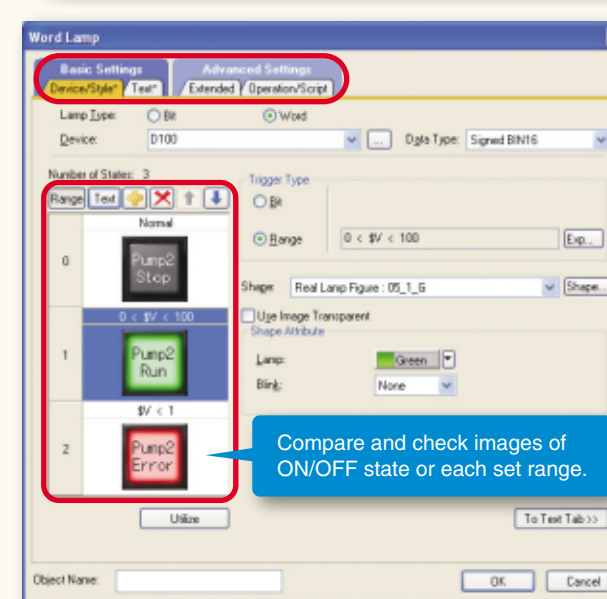
Choose settings and operations using simple terms and display items.
Object settings, ON/OFF conditions and other states can be modified and displayed directly from the configuration dialog box - saving valuable time and effort.
Dialog tabs with stars "*" quickly show designers that object settings have been modified.

Simple

Various helpful and convenient functions. Use your imagination   and creativity freely and quickly

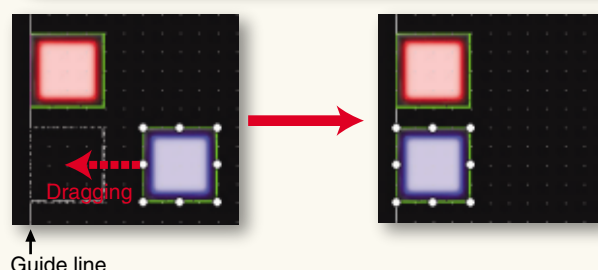**MELSOFT**
GT Works3

To design screens simply and efficiently!

Point 5 Editor

Lots of helpful and convenient functions
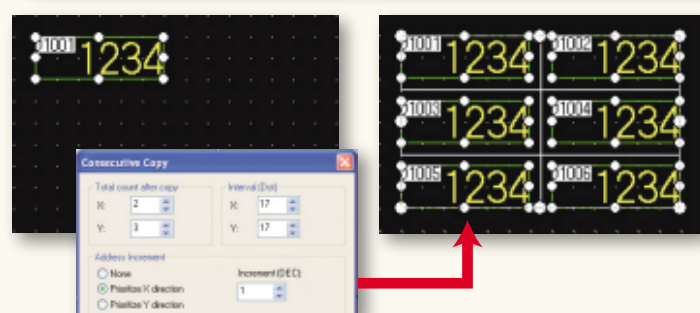
To place an object using only the mouse

Correct positioning along a guide line

Guide line

Dragging

Drag the object to display the guide line -- Place the object using the mouse.

To lay out multiple figures and objects

Use the continuous copy function to lay things out!

Copy the specified number of figures or objects all at once. When copying objects containing devices, assign device numbers by setting the increment.

### To change settings for multiple figures or objects at the same time

Easy correction with batch change and width/height/coordinate input functions!
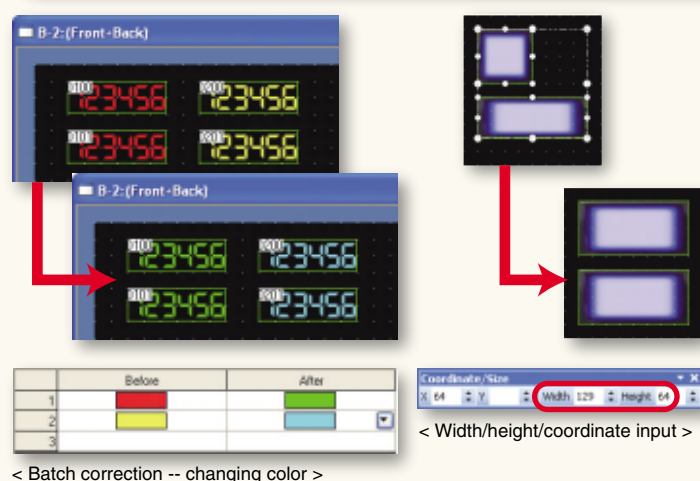
Batch correction changes devices, colors, figures, and channel numbers all at once. With the width/height/coordinate input function, change the size of selected objects and rearrange them all at the same time by inputting width, height, and coordinates.

< Width/height/coordinate input >

< Batch correction -- changing color >

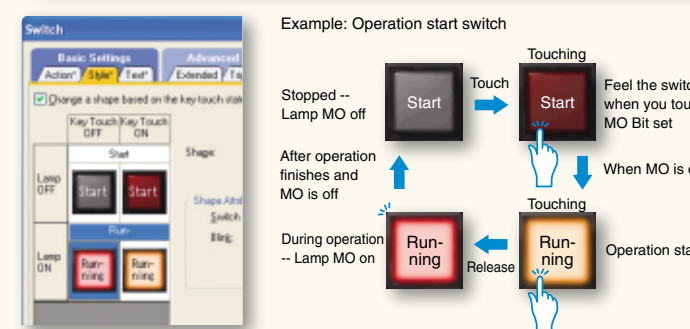### To effortlessly change figures

Change figures by just right-clicking

Right-click
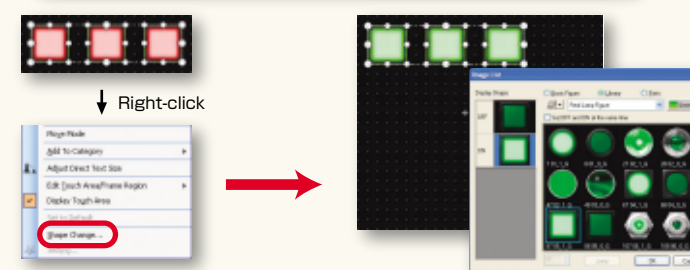
Change multiple figures easily with one operation while checking images of switches and lamps.

To see operating conditions better

4-state switch gives a more sensitive operation feel NEW

Example: Operation start switch

Stopped -- Lamp MO off

Touch
Start

Touching
Feel the switch when you touch it -- MO Bit set

After operation finishes and MO is off

When MO is on

During operation -- Lamp MO on

Running

Touching
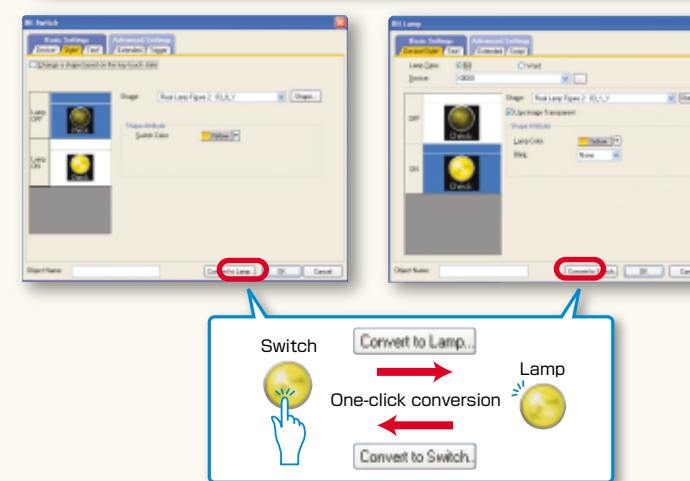Running

Release

Operation start

Display 4 states combining the touched state of touch switches and the device range of bit or word devices.

To efficiently change objects

A single click toggles a switch and lamp! Available soon

Convert switch and lamp objects easily with just one click.

Switch   Convert to Lamp.

Lamp

One-click conversion

Convert to Switch.

Check and transfer data efficiently - work more freely and smoothly

MELSOFT
GT Works3

To draw graphics simply and efficiently!

Point 5 Editor

Many simple and convenient functions

To view several object settings at a glance

The data browser function makes settings easy to check and correct! **NEW**

Double-click

Edit settings directly on the list or in the setting dialog
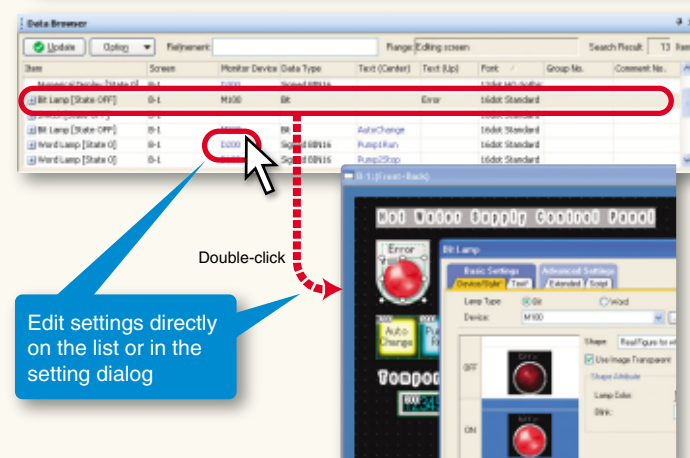
Object and figure settings used in a project are listed.
- Sort and search the list by device or keyword
- Change devices and character strings directly in the list
- Select or batch change multiple devices and character strings

Improve work efficiency when editing data on multiple screens or reusing existing data.

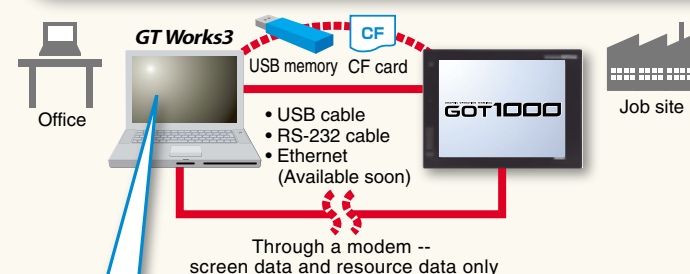#### Which OS do I choose?

Point 6 Communication with the GOT

OS files are selected and automatically loaded along with projects!

GT Works3
CF
USB memory CF card
Office
- USB cable
- RS-232 cable
- Ethernet (Available soon)
GOT1000
Job site

Through a modem -- screen data and resource data only

Write modes

- **"Project data OS batch write"** Required data is chosen automatically from screen data -- convenient when first transferring data to a GOT.
- **"Difference in verification with GOT", "Difference after the previous write"** Only different data is chosen, cutting down communication time. This is convenient during debugging and correction.
- **"Select write data"** Choose data manually.

OS and screen data for write mode are chosen automatically

The GOT automatically chooses the OS[*1] based on screen data. OS and screen data are sent to the GOT simultaneously in one of four ways for transferring data to the GOT.

1) By cable[*2]
   - USB cable
   - RS-232 cable
   - Ethernet **Available soon**
2) By USB memory -- GT16 only
3) By CF card -- except GT10[*3]
4) Through a modem -- screen data and resource data only

*1: System files for the GOT are required to use the GOT.
*2: Data transfer by Ethernet cable is supported on GT16 and GT15 only.
   GOT can be searched for on the Ethernet network if the IP address is unknown -- GT16 only.
*3: For GT10 data can be transferred using the GT10-50FMB memory board for the GT105x and GT104x or the GT10-LDR for the GT1030 and GT1020.

To check created data without the actual machine!

Point 7 Simulator

Simulation at a click!

The simulator starts

Just click the mouse

Device values and ON/OFF statuses can be changed

GT Works3 simulation function

Communication/monitor

To correct screen data, just click Update!

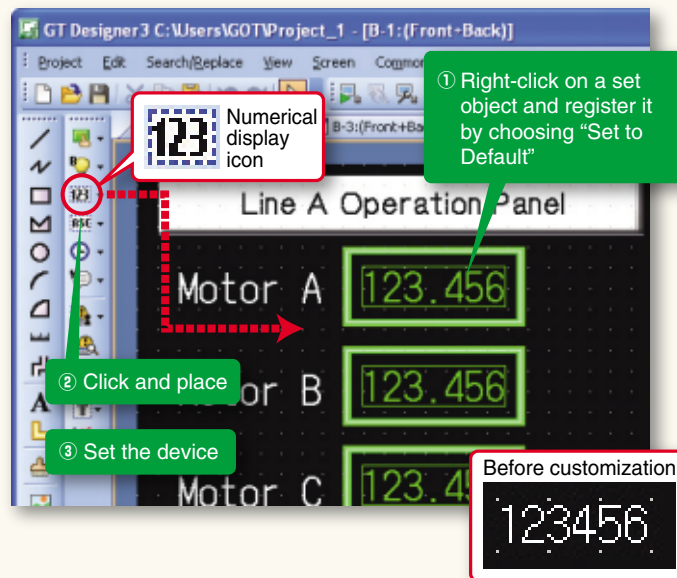GX Works2 simulator -- virtual PLC

Program loading
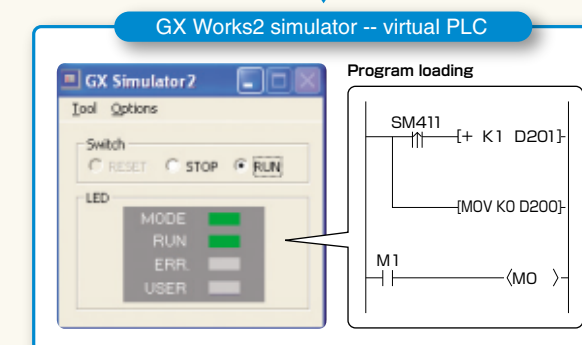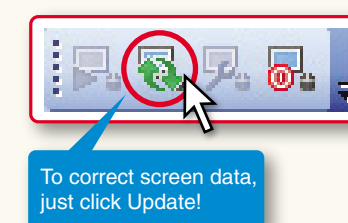
Use your PC to check screen data operation -- check alarms and monitor screen changes and devices. Debug data while correcting the screen.
Start and update the simulator with one click and test devices easily. The simulator stores screen images in BMP and JPEG formats -- convenient for preparing operating manuals.(Except GT10)

* GX Works2 or GX Simulator is required separately.

Easy *Customization – it's simple. Enlarge your screen   design environment*

MELSOFT
GT Works3

Instantly suit your preferences

Change initial settings as you like

① Right-click on a set object and register it by choosing "Set to Default"

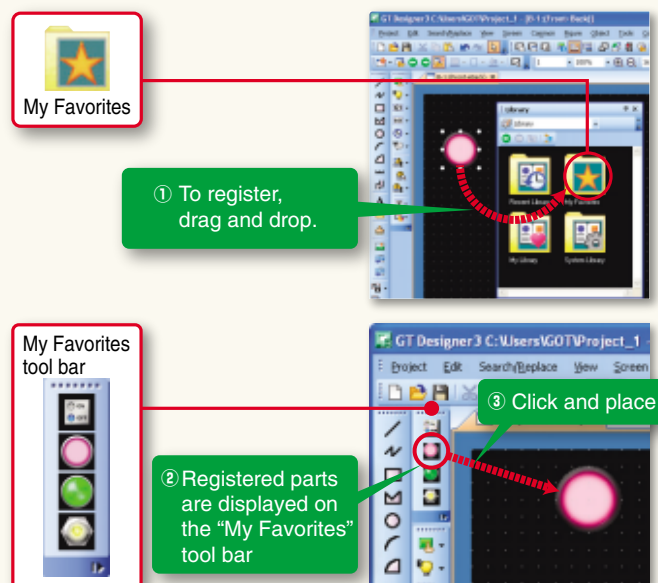Numerical display icon

② Click and place

③ Set the device

Before customization

Initial settings for objects and figures can be tailored to suit the individual programmer or designer. Frequently-used objects can be pre-loaded and pre-configured to reduce the time to configure object settings.

Registered data is sharable with other projects and personal computers to design screens efficiently.

To reuse the same parts often

Select your favorite parts directly from the tool bar!

My Favorites

① To register, drag and drop.

My Favorites tool bar

② Registered parts are displayed on the "My Favorites" tool bar

③ Click and place

Objects on the "My Favorites" tool folder in the library are displayed on the "My Favorites" tool bar.
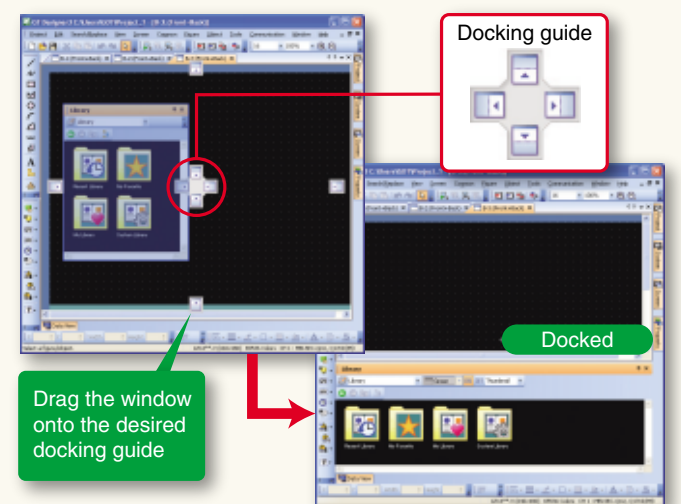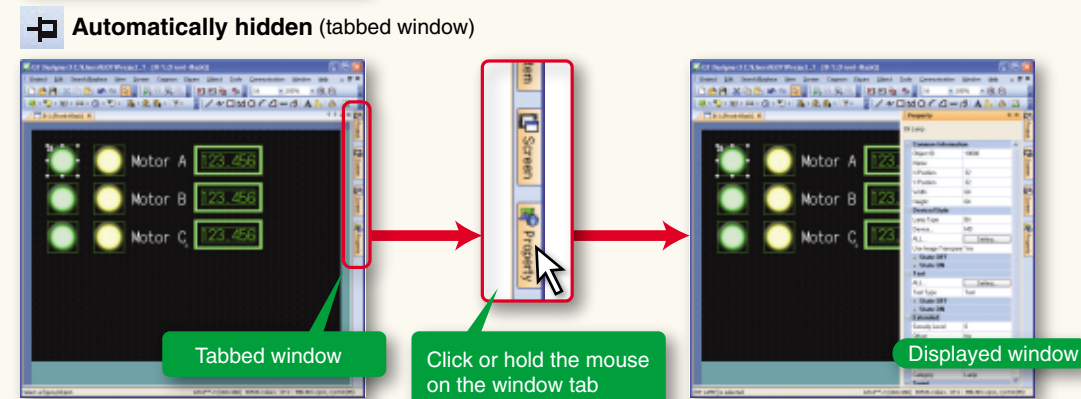To add an object to "My Favorites", just drag-and-drop it into the folder. Place it by clicking on the tool bar.

To customize your screen design environment

Customize windows, icons, and tool bars

Displayed (Always displayed window)

Window display mode is set by just clicking on the push pin.

Displayed   or   Automatically hidden

Always displayed window
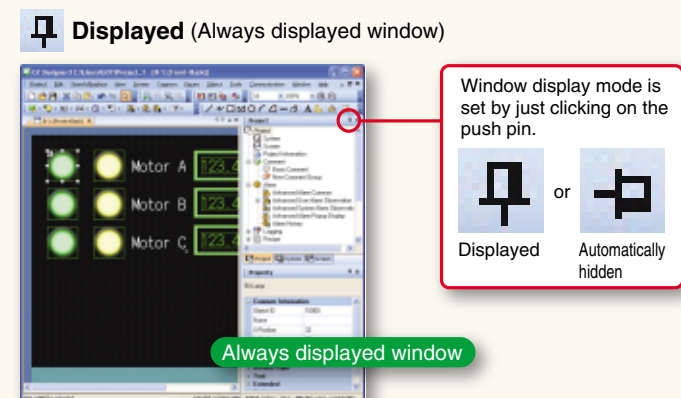
The window is automatically hidden using the push pin. When you need the window, put the mouse on the tab and the window is displayed. Make more room in the work area for smaller size PC screens.

Automatically hidden (tabbed window)

Tabbed window

Click or hold the mouse on the window tab

Displayed window

Docking guide

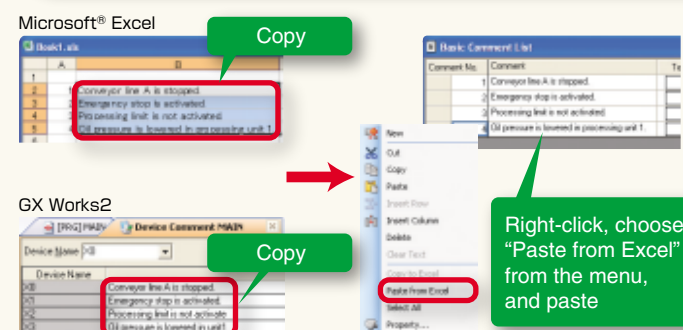Drag the window onto the desired docking guide

Docked

The window can be located anywhere above, below, to the left, or right based on the docking guide arrow.

Icons can be added or deleted; tool bars can be moved.

To enter comments and create recipe data quickly

Improve work efficiency working with other applications

Microsoft® Excel

Copy

GX Works2

Copy

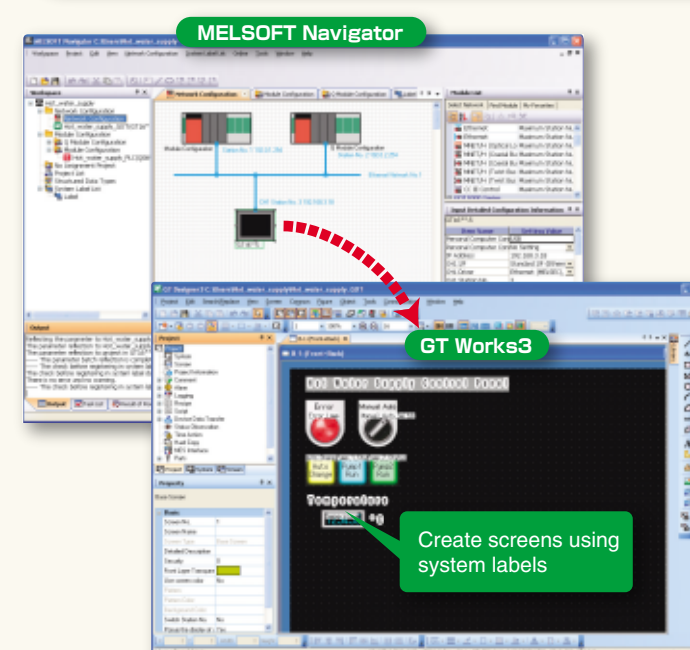Right-click, choose "Paste from Excel" from the menu, and paste

Select comments in Microsoft® Excel or GX Works2 and paste them into a comment list.
Import and export are also available for the data created in CSV/Unicode text file format.

How do these two pieces of data differ?

### Verifying project data

Different data is in different colors
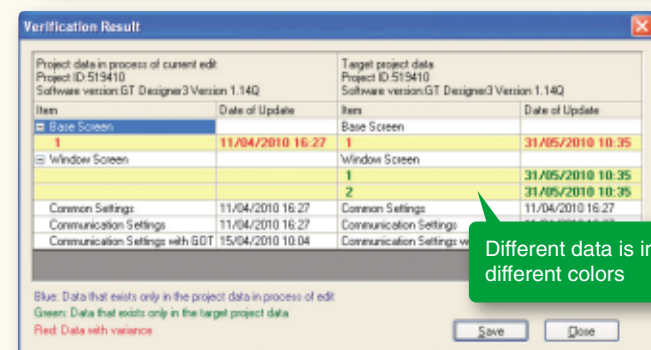
Verify project data.
(1) Verifying project data between data on GOT and data on a personal computer.
(2) Verifying project data being edited on a personal computer with other project data.

Preparing specifications

Printing to prepare specifications easily

Hot Water Supply Control Panel GOT Screen Specifications
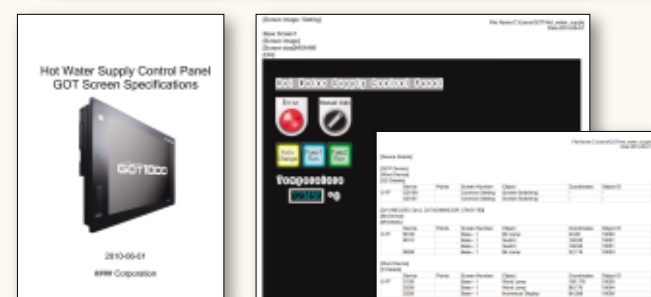
The cover, screen images, and the list of set devices can be printed or output to a file. Prepare specifications and operation manuals easily.

What can I do with MELSOFT iQ Works?

MELSOFT iQ Works

MELSOFT iQ Works lets you design systems more efficiently

MELSOFT Navigator

GT Works3

Create screens using system labels

Configure a system combining GOT and PLCs and set up GOT I/F and communication drivers using MELSOFT Navigator, the system management software for the FA integrated engineering software package MELSOFT iQ Works.

System labels set by MELSOFT Navigator can be used in GT Works3.

What is MELSOFT Navigator?

MELSOFT Navigator is a MELSOFT iQ Works software application enabling you to create system configurations, set up GOT I/F and communication drivers, check power supply capacity and the number of input/output points, as well as set parameters including I/O assignment.

What is a system label?

A system label makes names of devices in connected equipment easy to understand. System labels can be shared with PLC/motion controller programs of MELSOFT iQ Works. For details, see the MELSOFT iQ Works catalog <L(NA)08171E>.

Do I need to install screen design software on my PC?

Data transfer tool

Data transfer does not require screen design software!

A PC without GT Works3

GOT1000

USB/RS-232/Ethernet

Transferring screen data using the Data Transfer Tool
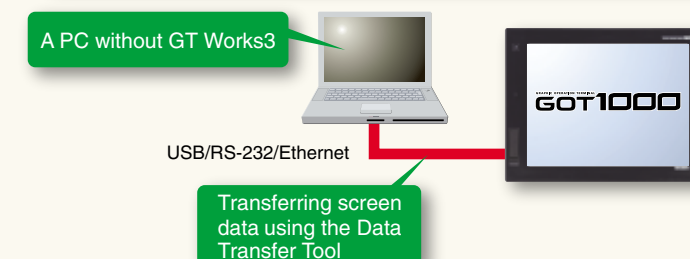
Use the Data Transfer Tool to transfer screen data from a PC without GT Works3.

• Applicable GOTs
  GOT800, GOT900 and GOT1000

• Transferable data
  Project data
  Resource data (GOT1000 only)

Easy — Using existing data to maintain usability with a reliable screen design environment

MELSOFT GT Works3

How do I edit GOT900 Series screen data?

**GT Designer2 Classic**

Data is edited using GT Designer2 Classic!

MITSUBISHI
Integrated FA Software
GT Designer 2 Classic Version 1
GOT Drawing Software for GOT-900 series
MELSOFT
Graphic Operation Terminal
900 series

GOT900 Series screen data is edited using GT Designer2 Classic provided with GT Works3!

Can I use screen data for the GOT800 Series?

GT Converter2

Data can be converted into the GOT1000 format with GT Converter2

GOT800 → GT Converter2 → GT Works3(GOT1000)
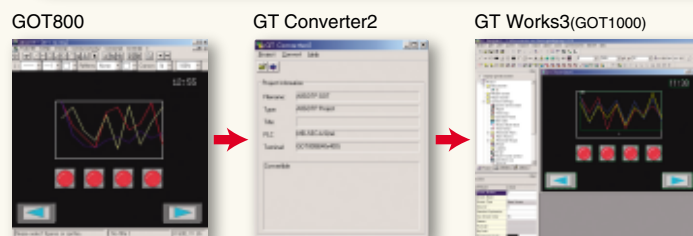
GT Converter2 converts project data created by previous screen design software applications to GT Works3-compatible data.

Supported screen design software

GOT800 Series screen design software (SW3NIW-A8GOTP)
Digital Electronics Corporation (Pro-face) screen design software (GP-PRO/PB Ⅲ Series)

＊：Some data and functions may not be usable.

■MELSOFT GT Works3 (English version) operating environment

Item	Details		
PC	PC/AT compatible machine on which the following OS operates		
OS	• Microsoft® Windows® 2000 Professional Service Pack 4 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*1 • Microsoft® Windows® XP Professional Service Pack 2 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*1*3*4 • Microsoft® Windows® XP Home Edition Service Pack 2 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*1*3*4	• Microsoft® Windows Vista® Ultimate (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2*3*4 • Microsoft® Windows Vista® Enterprise (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2*3*4 • Microsoft® Windows Vista® Business (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2*3*4 • Microsoft® Windows Vista® Home Premium (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2*3*4 • Microsoft® Windows Vista® Home Basic (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2*3*4 • Microsoft® Windows® 7 Ultimate (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2*3*4*5*10 NEW • Microsoft® Windows® 7 Enterprise (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2*3*4*5*10 NEW • Microsoft® Windows® 7 Professional (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2*3*4*5*10 NEW • Microsoft® Windows® 7 Home Premium (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2*3*4*10 NEW • Microsoft® Windows® 7 Starter (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2*3*4 NEW	
CPU	1 GHz or more recommended		
Required memory	512 MB or more recommended	1 GB or more recommended	
Display	Resolution XGA (1024 × 768 dots) or more		
Available hard disk space	To install GT Designer3: 1.6 GB or more recommended To run GT Designer3: 512 MB or more recommended		
Display colors	High Color (16 bits) or more		
Software	Simulation on a PC requires the following software: • GX Works2 version 1.12N or later*6 or GX Simulator version 5.00A or later*6. *The applicable software version of GX Works2 or GX Simulator varies depending on the PLC CPU to be simulated.		

PLC CPU to be simulated	GX Simulator	GX Works2
QCPU (A mode), ACPU, motion controller CPU (A series)	Version 5.00A or later	—
QnACPU	Version 5.40E or later	Version 1.24A or later
FX0 series, FX0N series, FX0S series, FX1 series, FX1N series, FX1NC series, FX1S series, FX2 series, FX2C series, FX2N series, FX2NC series	Version 5.40E or later	Version 1.24A or later
QCPU (Q mode) (excluding Q00J, Q00, and Q01 CPUs)	Version 6.00A or later	Version 1.12N or later
Q00JCPU, Q00CPU, Q01CPU	Version 6.00A or later	Version 1.12N or later
Q02PHCPU, Q06PHCPU	Version 7.20W or later	Version 1.12N or later
Q12PHCPU, Q25PHCPU	Version 6.10L or later	Version 1.12N or later
Q12PRHCPU, Q25PRHCPU	Version 6.20W or later	Version 1.12N or later
FX3UC Series	Version 7.08J or later	Version 1.24A or later
FX3U Series*7	Version 7.08J or later	Version 1.24A or later
FX3G Series*7	Version 7.22Y or later	Version 1.24A or later
Q00UJCPU, Q00UCPU, Q01UCPU, Q02UCPU, Q03UDCPU, Q04UDHCPU, Q06UDHCPU, Q10UDHCPU, Q13UDHCPU, Q20UDHCPU, Q26UDHCPU, Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU, Q20UDEHCPU, Q26UDEHCPU	Version 7.23Z or later	Version 1.12N or later
LCPU	—	Version 1.24A or later
Q50UDEHCPU, Q100UDEHCPU	—	Version 1.30G or later

Others	Mouse, keyboard, printer, CD-ROM drive, sound function (sound card)*8 and loudspeakers*8 used with the above OS	
Applicable GOT	GOT1000 Series*9	

*1: Installation requires administrator authority. Simulating the GOT-A900 requires administrator authority.
*2: Installation requires administrator authority. Using GT Works3 requires an account higher than the standard user.
　　To use GT Works3 with another application, if an administrator account is used to run the application then use an administrator account to run GT Works3.
　　Simulating the GOT-A900 requires administrator authority.
*3: The following functions are not supported:
　　Compatible Mode, Fast User Switching, Desktop Theme (Font) Change, Remote Desktop
*4: Only the 32-bit OS is applicable.
*5: Windows XP Mode is not supported.
*6: Use GT Simulator3, GX Developer, GX Simulator, and GX Works2 for the same language.
*7: The GOT-A900 cannot be simulated.
*8: May be required when the simulation function is used.
*9: The GT10 cannot use the simulation function.
*10: Windows Touch features are not supported.

■Product configuration

Product	Model	Description
GT Works3 Version1	SW1DNC-GTWK3-E	Unbundled (English version)
	SW1DNC-GTWK3-EA	Product with licensing (English version)

■Related major manuals

* Manuals are supplied as PDFs with the software package in the CD-ROM. Printed manuals are also available.

Manual title	Manual No.
GT Designer3 Version1 Screen Design Manual (Fundamentals)	080866ENG
GT Designer3 Version1 Screen Design Manual (Functions) 1/2, 2/2	080867ENG
GOT1000 Series Connection Manual (Mitsubishi Products) for GT Works3	080868ENG
GOT1000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3	080869ENG
GOT1000 Series Connection Manual (Non-Mitsubishi Products 2) for GT Works3	080870ENG
GOT1000 Series Connection Manual (Microcomputer, MODBUS Products, Peripherals) for GT Works3	080871ENG
GT Simulator3 Version1 Operating Manual for GT Works3	080861ENG
GT Converter2 Version3 Operating Manual for GT Works3	080862ENG

Empowering Industries　**CC-Link IE**　MELSOFT

ISO 14001　ISO 14001　ISO 9001 BUREAU VERITAS Certification

Mitsubishi iQ Platform-compatible Screen Design Software
For Graphic Operation Terminal GOT1000
MELSOFT GT Works3

⬛ Precautions for Choosing the Products

This catalog explains the typical features and functions of the GOT1000 series HMI and does not provide restrictions and other information on usage and module combinations. When using the products, always read the user's manuals of the products.

Mitsubishi will not be held liable for damage caused by factors found not to be the cause of Mitsubishi; machine damage or lost profits caused by faults in the Mitsubishi products; damage, secondary damage, accident compensation caused by special factors unpredictable by Mitsubishi; damages to products other than Mitsubishi products; and to other duties.

⚠ For safe use

- To use the products given in this catalog properly, always read the related manuals before starting to use them.
- The products within this catalog have been manufactured as general-purpose parts for general industries and have not been designed or manufactured to be incorporated into any devices or systems used in purpose related to human life.
- Before using any product for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi.
- The products within this catalog have been manufactured under strict quality control. However, when installing the product where major accidents or losses could occur if the product fails, install appropriate backup or failsafe functions in the system.

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