FUJI Temperature Controller
Micro Controller X
PXR5TAY1-GYM00

Sample Screen Manual

Mitsubishi Electric Corporation

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CONTENTS

REVISIONS

Sample Screen Manual

Date	Control No.*	Description
2013/10	BCN-P5999-0110	First edition

* The Control No. is noted at the lower right of each page.

Project data

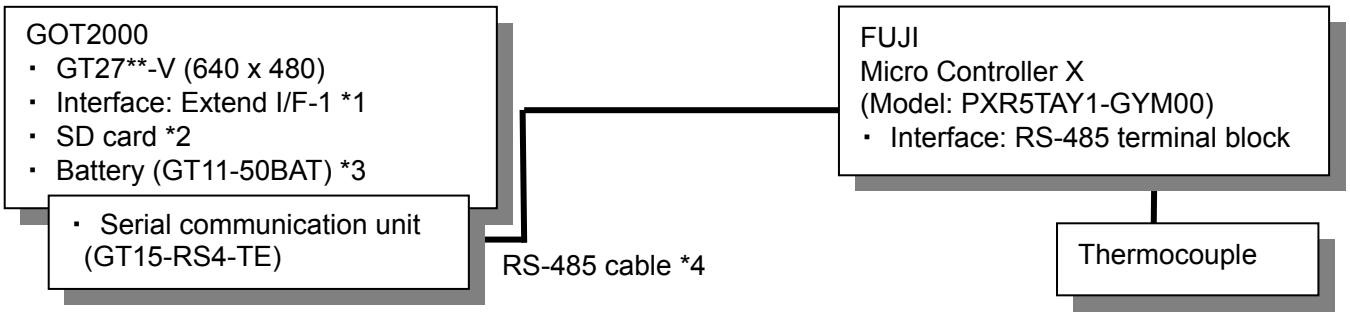
Date	Project data	GT Designer3*	Description
2013/10	Fuji_PXR_V_Ver1_E.GTX	1.100E	First edition

* The version number of the screen design software used to create the project data is listed. Please use the screen design software with the listed version or later.

1. OUTLINE

This manual explains the sample screens of GOT2000 connected to a FUJI Micro Controller X (PXR5TAY1-GYM00) via serial connection (RS-485). The sample screens can be used for changing the SV or monitoring the PV and MV.

2. SYSTEM CONFIGURATION



*1: Connection via standard I/F RS-422 or RS-485 is also possible.
*2: The SD card is used for the logging and document display functions.
*3: The battery is used for the backup of the clock data and the logging, user alarm data in the SRAM user area. (The battery is provided with the GOT as standard.)
*4: For more details about the cable, please refer to "GOT2000 Series Connection Manual (Non-Mitsubishi Products 2)".

3. GOT

3.1 System Applications That Are Automatically Selected

Type	System application name		
Standard Function	Standard System Application		
	Standard Font		Japanese
Communication Driver	FUJI PXR/PXG/PXH		
Extended Function	Standard Font		Chinese (Simplified)
	Outline Font	Gothic	Alphanumeric/Kana
			Japanese (Kanji)
			Chinese (Simplified)
	Document Display		

3.2 Controller Setting of Screen Design Software

Item	Set value	Remarks
Transmission Speed (BPS)	9600 bps	
Data Bit	8 bit	
Stop Bit	1 bit	
Parity	Odd	
Retry (Times)	0	
Timeout Time (Sec)	3	
Host Address	1	Station No. of micro controller X
Delay Time (ms)	5	
Format	1	For connection with PXR/PXG/PXH

4. MICRO CONTROLLER X

4.1 Micro Controller X Communication Setting

Item	Set value	Remarks
Communication speed	9600 bps	Fixed and not changeable.
Data length	8 bit	Fixed and not changeable.
Stop bit	1 bit	Fixed and not changeable.
Parity setting	0	0: Odd parity
		1: Even parity
		2: No parity
Station No.	1	
Communication protocol	1	MODBUS(R) connection setting

4.2 Micro Controller X Parameter Setting

The following set values were used to check operation at Mitsubishi.

Item	Set value	Remarks
Remote/local setting	LoCL	Fixed to local.
Proportional band (P)	5.0	Initial value
Integral time (I)	240	Initial value
Derivative time (d)	60.0	Initial value
Control algorithm	PID	Initial value
SV lower limiter	0	Initial value
SV upper limiter	100	Initial value
Delay time 1	10	Set to 10 in this sample.
Delay time 2	10	Set to 10 in this sample.
Cycle time of control output 1	30	Contact output
Input signal code	3	Type K thermocouple
Lower limit of measuring range	0	Initial value
Upper limit of measuring range	400	Set to 400 in this sample.
Setting the decimal point position	0	Set to 0 in this sample.
Alarm type 1	1	Set to alarm type: upper-limit absolute value in this sample.
Alarm type 2	2	Set to alarm type: lower-limit absolute value in this sample.
Set value of alarm 1	30	Set to 30 in this sample.
Set value of alarm 2	25	Set to 25 in this sample.
Control action	0	Output type: single
		Control action output 1: reverse; output 2: none
		Output at input burn-out output 1: lower limit; output 2: none
Alarm 1 options	001	Alarm latch: ON
		Alarm of error status: OFF
		De-energized output: OFF
Alarm 2 options	001	Alarm latch: ON
		Alarm of error status: OFF
		De-energized output: OFF
Lower limit for output 1	-3.0	Initial value
Upper limit for output 2	103.0	Initial value

5. SCREEN SPECIFICATIONS

5.1 Display Language

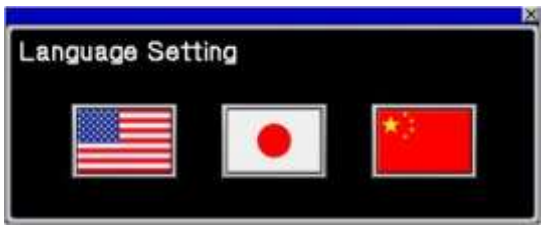
The language of the text displayed on the screen can be switched between Japanese, English, and Chinese (Simplified). The text strings in each language are registered in the columns No. 1 to No. 3 in the comment groups No. 254 and No. 255 as shown below. When the column No. is set in the language switching device, the language corresponding to the column No. will appear.

Column No.	Language
1	English
2	Japanese
3	Chinese (Simplified)

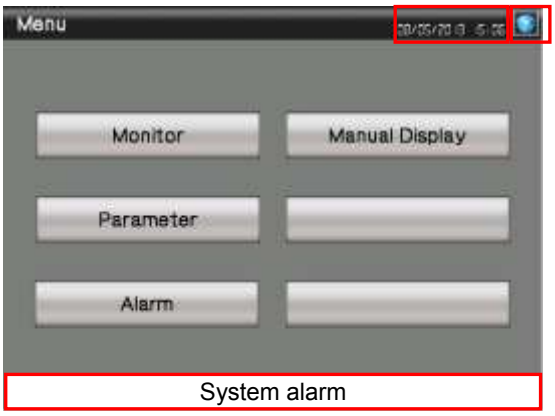
5.2 Screen Transition

5.2.1 Screen transition (common)

Window screen W-30003:
Clock Setting



Window screen W-30002:
Language Setting



Base screen
(B-30001 Menu and other base screens)

Window screen W-30001: Alarm Reset

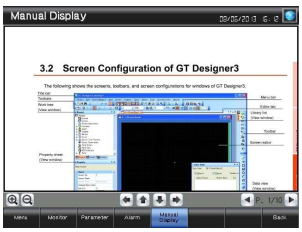
5.2.2 Screen transition (individual)

Base screen B-30001: Menu

Base screen B-30002: Monitor

Base screen B-30003: Parameter

Base screen B-30004: Alarm



Base screen B-30500:
Manual Display-Language 1

Base screen B-30501:
Manual Display-Language 2

Base screen B-30502:
Manual Display-Language 3

5.3 Explanation of Screens

5.3.1 Menu (B-30001)

Outline

This is the Menu screen.

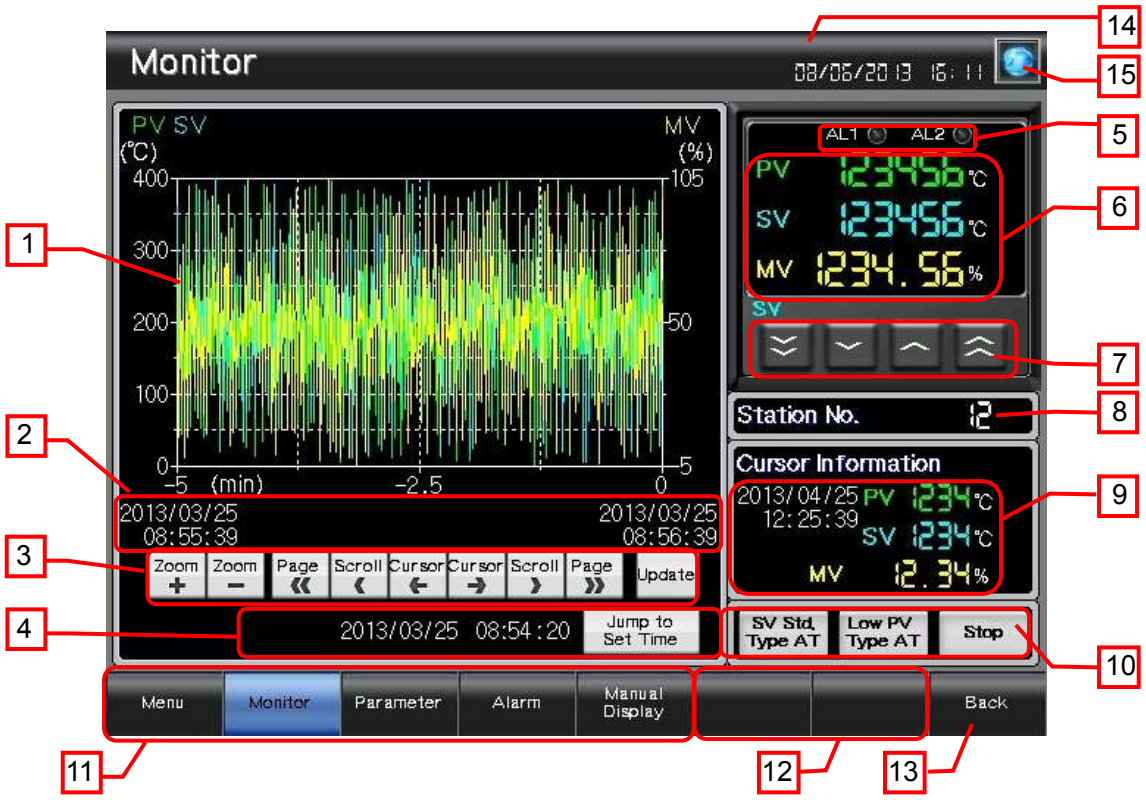
Description

1. Switches to the [Monitor] screen.
2. Switches to the [Parameter] screen.
3. Switches to the [Alarm] screen.
4. Switches to the [Manual Display] screen.
5. Displays the current date and time. Touch the area to open the [Clock Setting] window.
6. Opens the [Language Setting] window.

Remarks

- When the GOT is started, the station No. is set to "1" by the project script. For more details about scripts, please refer to "5.6 Script List".
- The [Manual Display] switch allows switching to the [Manual Display] screen of the currently displayed language.
- The currently open window closes when the screen is switched.
- If a system alarm occurs, the alarm message will appear at the bottom of the screen. Touch the alarm message to open the [Alarm Reset] window.

5.3.2 Monitor (B-30002)



Outline

This screen allows the PV, SV, and MV to be displayed in a graph and numerical values, and alarms to be displayed in lamps. The set values of SV, station No., and auto tuning can be changed.

Description

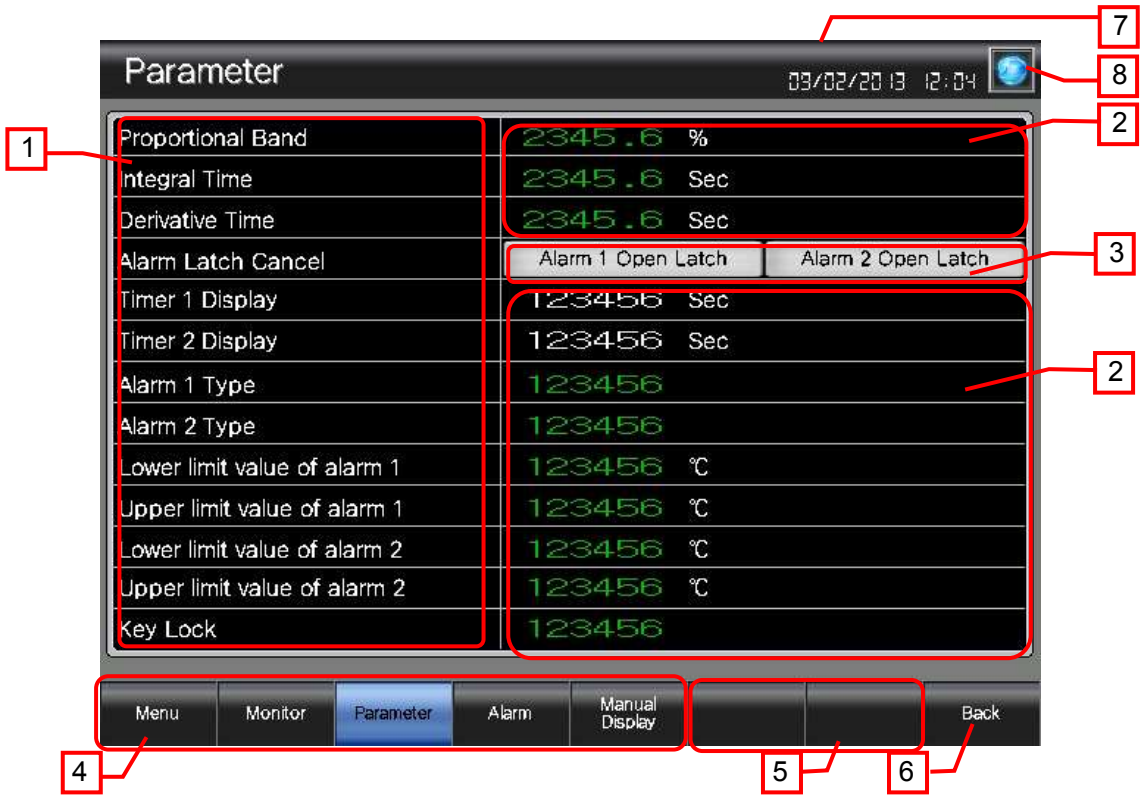
1. Displays a historical trend graph of the PV, SV, and MV. In the graph, the PV is shown in green, the SV in light blue, and the MV in yellow. Touch the graph to show the cursor. While touching the graph area, flicking the area will scroll the graph left and right. Pinching out and in will zoom in and out the graph based on the time axis.
2. Displays the historical trend graph's beginning position time and end position time.
3. These switches operate the historical trend graph.
   - Zoom In: Enlarges (2x) the graph's time axis based on the new data axis.
   - Zoom Out: Reduces (1/2x) the graph's time axis based on the new data axis.
   - Page <<: Scrolls the page to the left.
   - Scroll <: Scrolls the graph to the left.
   - Cursor ←: Displays a cursor, and scrolls the cursor in the direction of the older data.
   - Cursor →: Displays a cursor, and scrolls the cursor in the direction of the newer data.
   - Scroll >: Scrolls the graph to the right.
   - Page >>: Scrolls the page to the right.
   - Update: Clears the cursor, and displays the latest data.
4. Shows the specified date and time in the center of the graph when the date and time are entered and the [Jump to Set Time] switch is touched. The current date and time are stored when the screen is initially displayed.
5. Displays Alarm 1 and Alarm 2. The lamps blink when the alarms are in ON-delay operation.
6. Displays the current PV, SV, and MV.
7. Changes the SV in increments of -10, -1, +1, or +10°C from the left.
8. Shows the station No. Touch the value to change the station No.
9. Shows the date and time, PV, SV, and MV at the cursor position.
10. Switches auto tuning activation/deactivation.
11. Switches to each screen. The blue switch indicates the currently displayed screen, thus selecting this switch will not switch the screen.
12. Shows unused switches for base screen switching
13. Switches to the previously opened screen.

14. Displays the current date and time. Touch the area to open the [Clock Setting] window.
15. Opens the [Language Setting] window.

Remarks

- To monitor multiple micro controller x units, make sure to include the micro controller X with the station No. specified in the host address of the controller settings. In this sample, "1" is specified. For more details about station address settings, please refer to the "GOT2000 Series Connection Manual (Non-Mitsubishi Products 2)".
- An object script is set for the [Jump to Set Time] switch. For more details about scripts, please refer to "5.6 Script List".
- The [Manual Display] switch allows switching to the [Manual Display] screen of the currently displayed language.
- The currently open window closes when the screen is switched.
- If a system alarm occurs, the alarm message will appear at the bottom of the screen. Touch the alarm message to open the [Alarm Reset] window.

5.3.3 Parameter (B-30003)



Outline

This screen allows the parameters of the micro controller X to be set.

Description

1. Displays parameter data names.
2. Displays parameter setting values. The parameter setting values in green can be changed.
3. Shows parameter operation switches. Turns off after one second.
4. Switches to each screen. The blue switch indicates the currently displayed screen, thus selecting this switch will not switch the screen.
5. Shows unused switches for base screen switching.
6. Switches to the previously opened screen.
7. Displays the current date and time. Touch the area to open the [Clock Setting] window.
8. Opens the [Language Setting] window.

Remarks

- The [Manual Display] switch allows switching to the [Manual Display] screen of the currently displayed language.
- The currently open window closes when the screen is switched.
- If a system alarm occurs, the alarm message will appear at the bottom of the screen. Touch the alarm message to open the [Alarm Reset] window.

5.3.4 Alarm (B-30004)

Outline

This screen displays the alarms and the input/main unit error status of the micro controller X.

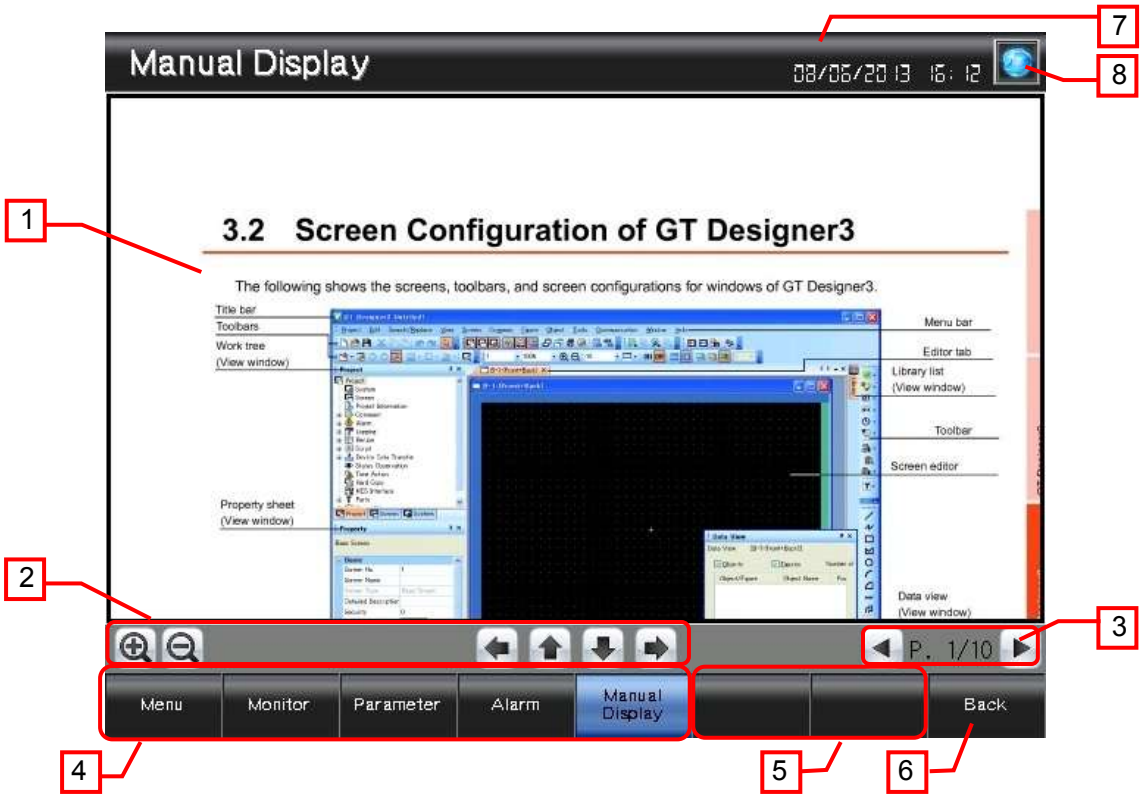
Description

1. Shows the alarms in a user alarm display. Touch an alarm to display/hide the cursor. While touching the alarm display area, flicking the area will scroll the alarms up and down.
2. These switches operate alarms.
   Delete: Deletes the restored and selected alarm.
   Delete All: Deletes all the restored alarms.
   Check: Displays the date and time of the selected alarm for checking.
   Check All: Displays the date and time of all the alarms for checking.
   : Scrolls the page up and down.
   : Scrolls alarms up and down line by line.
3. Switches to each screen. The blue switch indicates the currently displayed screen, thus selecting this switch will not switch the screen.
4. Shows unused switches for base screen switching.
5. Switches to the previously opened screen.
6. Displays the current date and time. Touch the area to open the [Clock Setting] window.
7. Opens the [Language Setting] window.

Remarks

- The [Manual Display] switch allows switching to the [Manual Display] screen of the currently displayed language.
- The currently open window closes when the screen is switched.
- If a system alarm occurs, the alarm message will appear at the bottom of the screen. Touch the alarm message to open the [Alarm Reset] window.

5.3.5 Manual Display-Language 1 (B-30500), Language 2 (B-30501), Language 3 (B-30502)



Outline

This screen displays the manual of the currently displayed language.

Description

1. The documents with Document IDs 201 to 203 are displayed in the [Manual Display - Language 1 (B-30500)] to [Manual Display - Language 3 (B-30502)] screens. The page 1 is displayed when the screen is initially displayed. While touching the document, flicking to 8 directions will scroll the document to 8 directions. While displaying the edge of the document, flicking the document will switch pages. Pinching out and in will zoom in and out the document in 3 steps (large, middle, and small).
2. These switches operate the displayed document.
   : Enlarges or reduces the displayed document.
   : Scrolls the displayed document to the left or right.
   : Scrolls the displayed document up and down.
3. These switches operate the displayed document page.
   P. 1 : Displays the page number of the displayed document. Touch the value to change the page number.
   : Switches to the previous or next page of the displayed document.
4. Switches to each screen. The blue switch indicates the currently displayed screen, thus selecting this switch will not switch the screen.
5. Shows unused switches for base screen switching.
6. Switches to the previously opened screen.
7. Displays the current date and time. Touch the area to open the [Clock Setting] window.
8. Opens the [Language Setting] window.

Remarks

- The language of the manual should be the same as the language of the document that will be prepared for the manual. The language of the title and the text on the switches (other than the manual display area) is the same as the language of the comments specified in the columns No. 1 to No. 3 in the comment group No. 255. The relation of the document (Document ID) and the column No. in the comment group No. 255 is shown below.

Base screen	Document ID	Column No.
Manual Display-Language 1 (B-30500)	201	1
Manual Display-Language 2 (B-30501)	202	2
Manual Display-Language 3 (B-30502)	203	3

- When the GOT is started, the document page No. is set to 1 by the project script. For more details about scripts, please refer to "5.6 Script List".
- The document data for the manual display should be prepared by the customers. For more details, please refer to "6. MANUAL DISPLAY".
- The currently open window closes when the screen is switched.
- If a system alarm occurs, the alarm message will appear at the bottom of the screen. Touch the alarm message to open the [Alarm Reset] window.

5.3.6 Alarm Reset (W-30001)

Outline

This window screen allows resetting the system alarm.

Description

1. Resets the system alarm, and closes the window screen after 1 second.
2. Closes the window screen.

Remarks

5.3.7 Language Setting (W-30002)

Outline

This window screen allows selecting the GOT language.

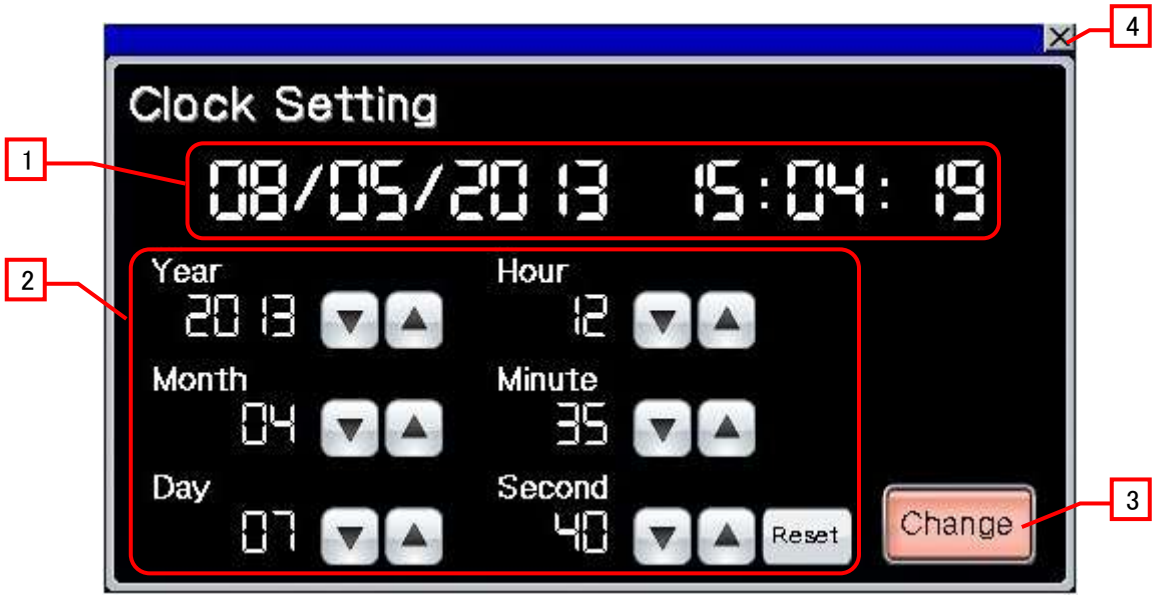
Description

1. Switches the language, and closes the window screen.
2. Closes the window screen.

Remarks

- The system language is also switched according to the display language.
- While the base screen is one of the screens of [Manual Display - Language 1] to [Manual Display - Language 3], if the language is switched in the [Language Setting] window, the screen script will change the manual display screen according to the language selected in this screen. For more details about scripts, please refer to "5.6 Script List".

5.3.8 Clock Setting (W-30003)



Outline

This window screen allows changing the GOT clock data.

Description

1. Displays the current date and time.
2. Use ▼ ▲ switches to change the date and time. Hold down the switches to increment or decrement the value continuously. The [Reset] switch resets the seconds.
3. Applies the set date and time to the GOT clock data, and closes the window screen after 1 second.
4. Closes the window screen.

Remarks

- The date and time at window opening are initially set as the clock data to be changed.
- Object scripts are set for the numerical display of the year, month, date, hour, minute, and second in the clock data to be newly set. For more details about scripts, please refer to "5.6 Script List".

5.4 Device List

Some of the devices specified for the on-screen switches, lamps, and others are also used for common settings of functions such as scripts. Using [Batch Edit] is recommended to change these devices in a batch. For details on using [Batch Edit], refer to the "GT Designer3 (GOT2000) Help".

5.4.1 Devices of the controller

Type	Device No.	Application	Coil No./Register No.	Bit
Bit	10001	Alarm 1	10001	
	10005	Alarm 2	10005	
	31008.b0	Input Lower Open-Circuit	31008	0
	31008.b1	Input Upper Open-Circuit	31008	1
	31008.b2	Input Under-Range	31008	2
	31008.b3	Input Over-Range	31008	3
	31008.b6	Setting Range Error	31008	6
	31008.b7	EEPROM Error	31008	7
	41087.b5	Alarm 1 Latch Cancel	41087	5
	41087.b6	Alarm 2 Latch Cancel	41087	6
Word	31001	PV	31001	
	31002	SV	31002	
	31004	MV (output 1)	31004	
	31011	Timer 1 Display	31011	
	31012	Timer 2 Display	31012	
	41005	Auto Tuning Command	41005	
	41006	Proportional band	41006	
	41007	Integral Time	41007	
	41008	Derivative Time	41008	
	41040	Key Lock	41040	
	41041	Alarm 1 Type	41041	
	41042	Alarm 2 Type	41042	
	41044	Lower Limit Value of Alarm 1	41044	
	41045	Lower Limit Value of Alarm 2	41045	
	41047	Upper Limit Value of Alarm 1	41047	
	41048	Upper Limit Value of Alarm 2	41048	

5.4.2 GOT internal devices

Type	Device No.	Application
Bit	GB40	Script Trigger (Always ON)
	GD60031.b13	GOT Error Reset Signal
	GS512.b0	Time Change Signal
Word	GD10	Station No.
	GD60000	Base Screen Switching
	GD60001	Overlap Window 1 Screen Switching
	GD60004	Overlap Window 2 Screen Switching
	GD60021	Language Switching
	GD60022	System Language Switching
	GD60031, GD60041	System Information
	GD60080 to GD60082	Document Display, Page No., Previous Page Switch, Next Page Switch
	GD61201 to GD61203	Graph Information in Historical Trend Graph
	GD61221 to GD61224	Cursor Position Time in Historical Trend Graph
	GD61225 to GD61228	Beginning Position Time in Historical Trend Graph
	GD61229 to GD61232	End Position Time in Historical Trend Graph
	GD61233 to GD61235	Display Position Time Specification in Historical Trend Graph
	GD63990 to GD63995	Clock Digital Switch
	GS513 to GS516	Changed Time
	GS650 to GS652	Current Time
	TMP950 to TMP996	For Script Operation

5.5 Comment List

Comment group No.	Comment No.	Where comments are used
254	No. 1 to No. 8	B-30004 (User Alarm Observation ID 30001)
255	No. 1 to No. 4	B-30001 to B-30502
	No. 4	W-30001
	No. 5, No. 6	B-30002 to B-30502
	No. 7	B-30001, B-30500 to B-30502
	No. 21 to No. 44	B-30002
	No. 61 to No. 77	B-30003
	No. 111 to No. 117	B-30004
	No. 131 to No. 136	B-30002 to B-30003
	No. 151	W-30001
	No. 152	W-30002
	No. 153 to No. 160	W-30003

5.6 Script List

Item	Setting
Project script	Specified
Screen script	Specified: W-30002
Object script	Specified: B-30002, W-30003

5.6.1 Project script

Script No.	30001	Script name	Script30001
Comment	Initial Setting		
Data type	Signed BIN16	Trigger type	Rise, GB40

```
[w:GD10]=1;     //Set 1 to Station No.
[w:GD60080]=1;    //Set 1 to Document Page No. of Base Screen 30500
[w:GD60081]=1;    //Set 1 to Document Page No. of Base Screen 30501
[w:GD60082]=1;    //Set 1 to Document Page No. of Base Screen 30502
```

5.6.2 Screen script

Window screen 30002

Script No.	30002	Script name	Script30002
Comment	Lang. Switching for Man. Display		
Data type	Signed BIN16	Trigger type	When closing a screen

```
if(([w:GD60000] >= 30500) && ([w:GD60000] <=30502)){ //Base Screen Switching Device Value 30500 to 30502
    if([w:GD60021] <= 1){        //In Case of Language 1
        [w:GD60000] = 30500;      //Manual Display - Move to Language 1 Screen
    }
    if([w:GD60021] == 2){        //In Case of Language 2
        [w:GD60000] = 30501;      //Manual Display - Move to Language 2 Screen
    }
    if([w:GD60021] == 3){        //In Case of Language 3
        [w:GD60000] = 30502;      //Manual Display - Move to Language 3 Screen
    }
}
```

5.6.3 Object script

Base screen 30002

Object (Name)	Switch (Jump)		
Script user ID	1		
Data type	Unsigned BIN16	Trigger type	Rise, GB40

```
//Store Year, Month, Day, Hour, Minute, Second When Screen Is Displayed
[w:GD61233]=[w:GS650];
[w:GD61234]=[w:GS651];
[w:GD61235]=[w:GS652];
```

Window screen 30003

Object (Name)	Numerical display (Change_Year)		
Script user ID	1		
Data type	Unsigned BIN16	Trigger type	Rise, GB40

```
//Obtain Today's Year & Month from Clock Data
[w:TMP950] = [w:GS650] & 0xF000;//Obtain Tenths Digit of "Last 2-Digits of Year" from Clock Data for Setting
[w:TMP960] = [w:TMP950] >> 12;//Decimal Alignment
[w:TMP968] = [w:TMP960] * 10;//BCD->BIN
[w:TMP951] = [w:GS650] & 0x0F00;//Obtain Ones Digit of "Last 2-Digits of Year" from Clock Data for Setting
[w:TMP961] = [w:TMP951] >> 8;//BCD->BIN
[w:TMP973] = 2000 + [w:TMP968] +    [w:TMP961];//Set Year to TMP973 as BIN
[w:GD63990] = [w:TMP973];//Set Year

[w:TMP952] = [w:GS650] & 0x00F0;//Obtain Tenths Digit of Month from Clock Data for Setting
[w:TMP962] = [w:TMP952] >> 4;//Decimal Alignment
[w:TMP969] = [w:TMP962] * 10;//BCD->BIN
[w:TMP953] = [w:GS650] & 0x000F;//Obtain Ones Digit of Month from Clock Data for Setting
[w:TMP974] = [w:TMP969] +    [w:TMP953];//Set Month to TMP974 as BIN
[w:GD63991] = [w:TMP974];//Set Month

[w:TMP954] = [w:GS651] & 0xF000;//Obtain Tenths Digit of "Last 2-Digits of Day" from Clock Data for Setting
[w:TMP963] = [w:TMP954] >> 12;//Decimal Alignment
[w:TMP970] = [w:TMP963] * 10;//BCD->BIN
[w:TMP955] = [w:GS651] & 0x0F00;//Obtain Ones Digit of "Last 2-Digits of Day" from Clock Data for Setting
[w:TMP964] = [w:TMP955] >> 8;//BCD->BIN
[w:TMP975] =[w:TMP970] +    [w:TMP964];//Set Day to TMP975 as BIN
```

```
[w:GD63992] = [w:TMP975];//Set Day

[w:TMP956] = [w:GS651] & 0x00F0;//Obtain Tenths Digit of Hour from Clock Data for Setting
[w:TMP965] = [w:TMP956] >> 4;//Decimal Alignment
[w:TMP971] = [w:TMP965] * 10;//BCD->BIN
[w:TMP957] = [w:GS651] & 0x000F;//Obtain Ones Digit of Hour from Clock Data for Setting
[w:TMP976] = [w:TMP971] +    [w:TMP957];//Set Hour to TMP976 as BIN
[w:GD63993] = [w:TMP976];//Set Hour

[w:TMP958] = [w:GS652] & 0xF000;//Obtain Tenths Digit of "Last 2-Digits of Minute" from Clock Data
for Setting
[w:TMP966] = [w:TMP958] >> 12;//Decimal Alignment
[w:TMP972] = [w:TMP966] * 10;//BCD->BIN
[w:TMP959] = [w:GS652] & 0x0F00;//Obtain Ones Digit of "Last 2-Digits of Minute" from Clock Data
for Setting
[w:TMP967] = [w:TMP959] >> 8;//BCD->BIN
[w:TMP977] =[w:TMP972] +    [w:TMP967];//Set Minute to TMP977 as BIN
[w:GD63994] = [w:TMP977];//Set Minute

[w:TMP993] = [w:GS652] & 0x00F0;//Obtain Tenths Digit of Second from Clock Data for Setting
[w:TMP995] = [w:TMP993] >> 4;//Decimal Alignment
[w:TMP996] = [w:TMP995] * 10;//BCD->BIN
[w:TMP994] = [w:GS652] & 0x000F;//Obtain Ones Digit of Second from Clock Data for Setting
[w:TMP978] = [w:TMP996] +    [w:TMP994];//Set Second to TMP978 as BIN
[w:GD63995] = [w:TMP978];//Set Second
```

Object (Name)	Numerical display (Change_Month)		
Script user ID	2		
Data type	Unsigned BIN16	Trigger type	Ordinary

```
//BIN -> BCD Conversion

[w:TMP979] = [w:GD63990] - 2000; //Last 2-Digits of Year

[w:TMP980] = (([w:TMP979] / 10) << 4) + ([w:TMP979] % 10); //Year BIN -> BCD
[w:TMP981] = (([w:GD63991] / 10) << 4) + ([w:GD63991] % 10); //Month BIN -> BCD
[w:TMP982] = (([w:GD63992] / 10) << 4) + ([w:GD63992] % 10); //Day BIN -> BCD
[w:TMP983] = (([w:GD63993] / 10) << 4) + ([w:GD63993] % 10); //Hour BIN -> BCD
[w:TMP984] = (([w:GD63994] / 10) << 4) + ([w:GD63994] % 10); //Minute BIN -> BCD
[w:TMP985] = (([w:GD63995] / 10) << 4) + ([w:GD63995] % 10); //Second BIN -> BCD
```

Object (Name)	Numerical display (Change_Day)		
Script user ID	3		
Data type	Unsigned BIN16	Trigger type	Ordinary

```
//Year & Month Setting

[w:GS513] = ([w:TMP980] << 8) + [w:TMP981]; //Set Year & Month to Change Time Device
```

Object (Name)	Numerical display (Change_Hour)		
Script user ID	4		
Data type	Unsigned BIN16	Trigger type	Ordinary

```
//Date & Time Setting

[w:GS514] = ([w:TMP982] << 8) + [w:TMP983]; //Set Date & Time to Change Time Device
```

Object (Name)	Numerical display (Change_Minute)		
Script user ID	5		
Data type	Unsigned BIN16	Trigger type	Ordinary

```
//Minute & Second Setting

[w:GS515] = ([w:TMP984] << 8) + [w:TMP985]; //Set Minute & Second to Change Time Device
```

Object (Name)	Numerical display (Change_Second)		
Script user ID	6		
Data type	Unsigned BIN16	Trigger type	Ordinary

```
//Day of Week Setting

[w:TMP986] = [w:GD63990]; //Year (BIN)
[w:TMP987] = [w:GD63991]; //Month (BIN)
[w:TMP988] = [w:GD63992]; //Day (BIN)

if(([w:TMP987] == 1) || ([w:TMP987] == 2)){//Correction Processing to Calculate January and February as 13th/14th Month
    [w:TMP986] =[w:TMP986] - 1; //Subtract 1 from Year
    [w:TMP987] =[w:TMP987] + 12;//Add 12 to Month
}

[w:TMP989] = [w:TMP986]/4;//Create Items Required for Zeller's Congruence
[w:TMP990] = [w:TMP986]/100;//Create Items Required for Zeller's Congruence
[w:TMP991] = [w:TMP986]/400;//Create Items Required for Zeller's Congruence
[w:TMP992] = (13*[w:TMP987]+8)/5;//Create Items Required for Zeller's Congruence

//Calculate Day of Week Using Zeller's Congruence and Set the Day to Change Time Device
[w:GS516] = ([w:TMP986]+[w:TMP989]-[w:TMP990]+[w:TMP991]+[w:TMP992]+[w:TMP988])%7;
```

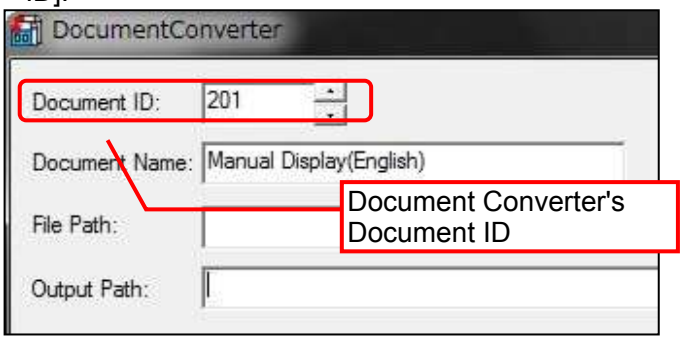
6. MANUAL DISPLAY

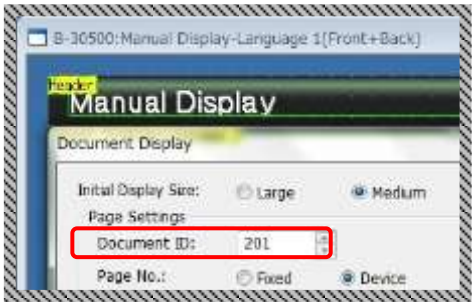
Manuals can be displayed using the document display function. For more details about the document display function, please refer to the "GT Designer3 (GOT2000) Help". Please note that the document display function does not support language switching. Therefore, in the sample screens, language switching is performed by switching the base screen of the specified document (Document ID) in the selected language.

6.1 Preparing Document Data for Manual Display

Example: Displaying a manual (document) on the base screen B-30500: Manual Display-Language 1

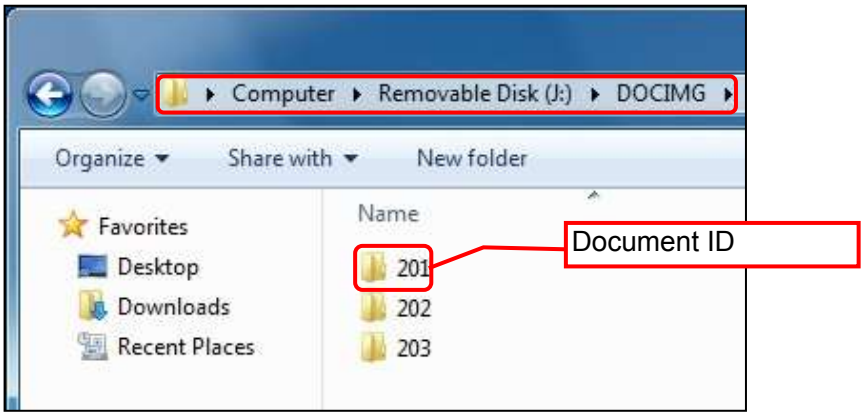
(1) Convert the manual (including Word and Excel) to be displayed into the document data (JPEG file) that can be used with the document display function by using Document Converter. Set the Document Converter's [Document ID] to the same value as the base screen B-30500 document display [Document ID].





Example: Document ID of the document display on the base screen B-30500: Manual Display - Language 1

(2) The document data is generated in the 201 folder in the DOCIMG. Save the entire DOCIMG folder into the SD card root directory without changing the folder configuration inside the DOCIMG folder.

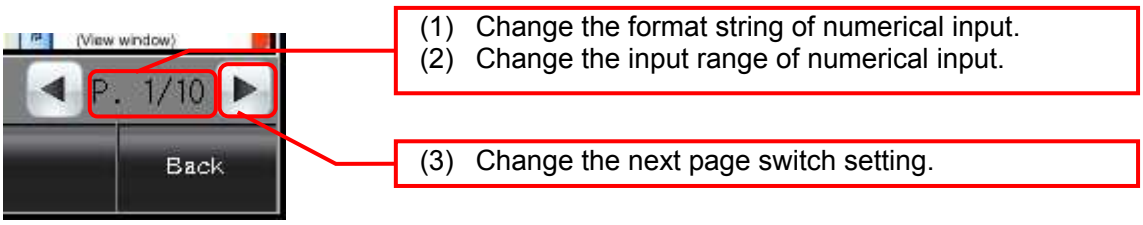


SD card folder configuration

6.2 Changing the Total Number of Document Pages

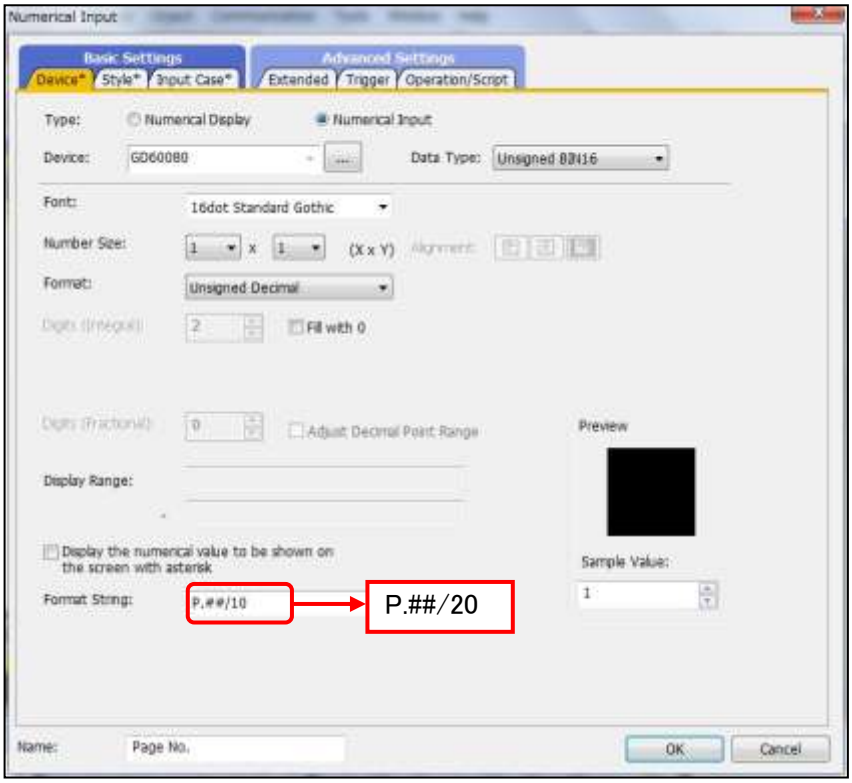
Change the total number of pages in the lower right of the screen according to the total page number. of the document to be displayed.

Example: To change the total number of document pages from 10 pages to 20 pages.



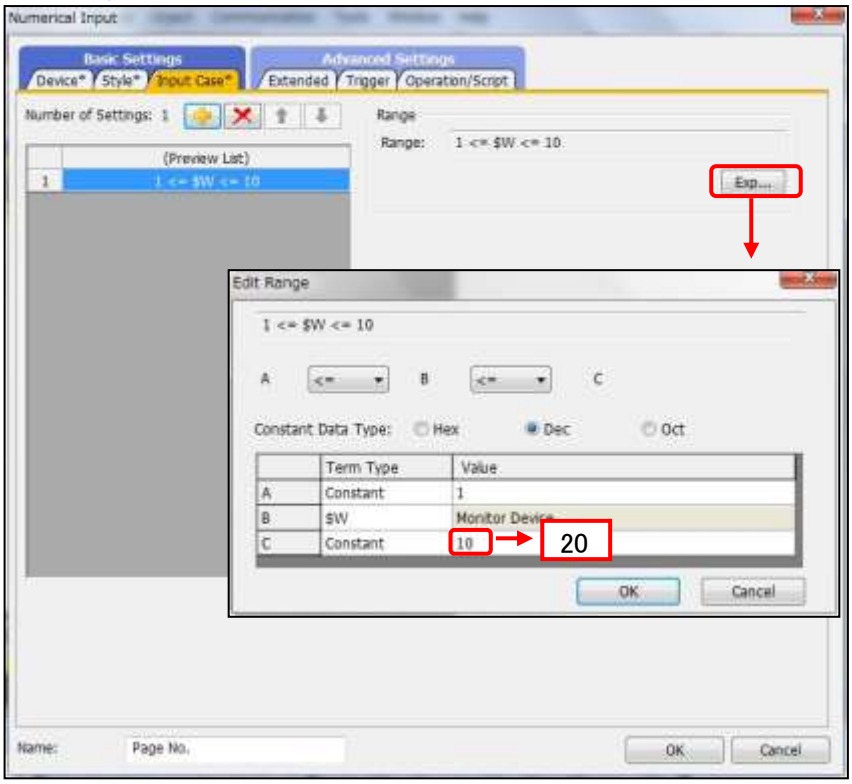
(1) Change the format of the numerical input.

1. Double-click the numerical input, and open the [Device] tab on the dialog box.
2. Change the [Format String] from "P.##/10" to "P.##/20".



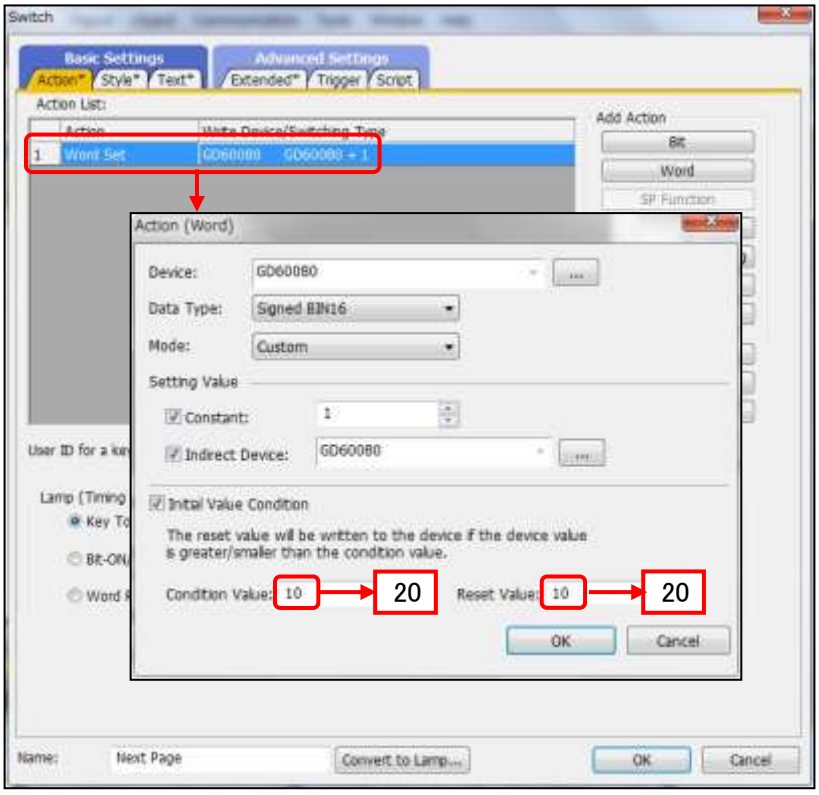
(2) Change the input range of the numerical input.

1. Open the [Input Range] tab in the dialog box.
2. Click [Exp...], and open the [Edit Range] dialog box.
3. Change the constant from 10 to 20.



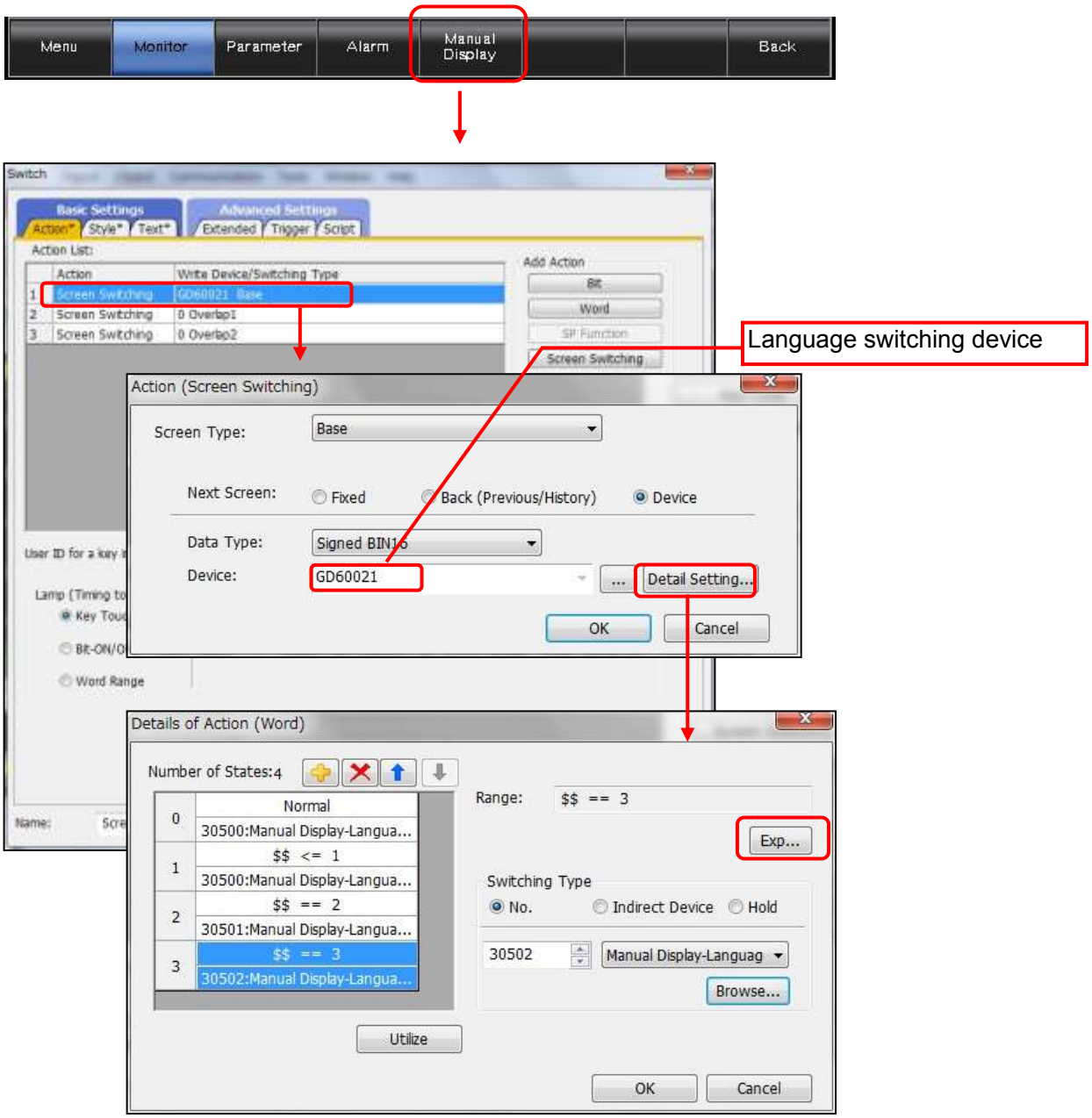
(3) Change the next page switch setting.

1. Open the [Action] tab on the dialog box.
2. Double-click [Action 1], and open the [Action (Word)] dialog box.
3. Change the [Condition Value] and [Reset Value] from 10 to 20.



6.3 Setting the [Manual Display] Switch

The [Manual Display] switch specifies the manual screen to be displayed according to the Column No. stored in the language switching device. For more details about the Column No., please refer to "5.1 Display Language".



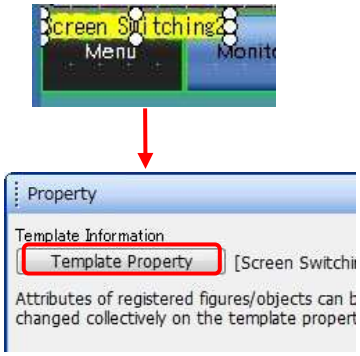
7. TEMPLATES

Templates are a group of figures and objects. Related settings are grouped into template attributes and registered, so the devices, colors, and other items can be easily changed in a batch. For more details about changing the attribute settings, please refer to the "GT Designer3 (GOT2000) Help".

The template information is only displayed on the screen design software's editing screen. It is not displayed on the GOT display screen.

Example: Changing a font

(1) Select [Template Information], and click [Template Property] (or double-click [Template Information]).



The figures and objects that are registered in the template are changed to the selected state.

(2) Click [Font], and select the new font.