

IAI Corporation Robot Controller
SCON Series
SCON-C-60IHA-CC-0-1

Sample Screen Manual

Mitsubishi Electric Corporation

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REVISIONS

Sample Screen Manual

Date	Control No.*	Description
2014/8	BCN-P5999-0197	First edition

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

Project Data

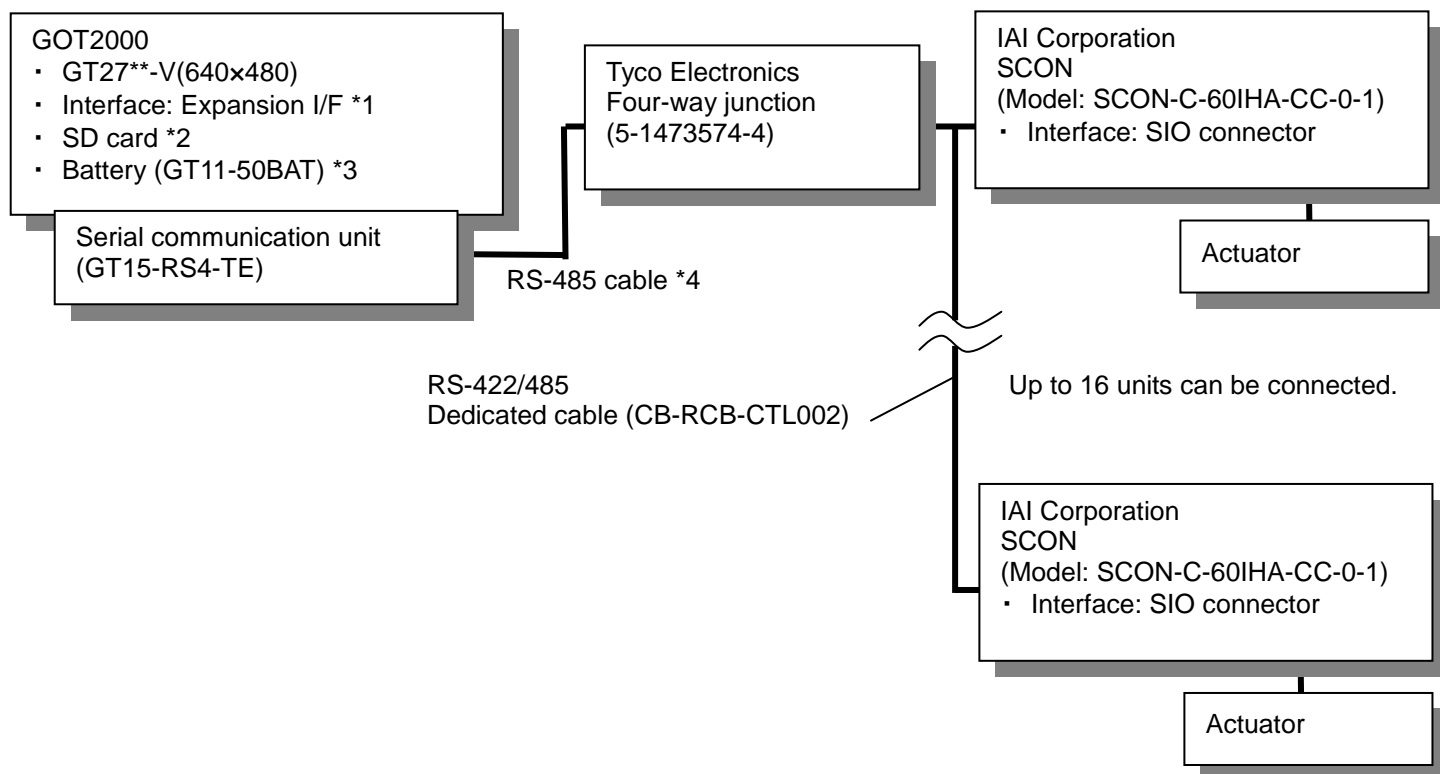
Date	Project data	GT Designer3*	Description
2014/8	IAI_SCON_V_Ver1_E.GTX	1.117X	First edition

* The version number of 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 SCON(SCON-C-60IHA-CC-0-1) manufactured by IAI Corporation in serial (RS-485) communication. The sample screens can be used to change or monitor the current value and setting value of the actuator.

2. SYSTEM CONFIGURATION



*1: Standard I/F RS-422/485 can also be used for connecting.

*2: The SD card is used for the document display and recipe functions.

*3: The battery is used for the backup of the clock data. (The battery is provided with the GOT as standard.)

*4: For more details about the cable, please refer to the "GOT2000 Series Connection Manual (Non Mitsubishi Product 1)".

3. GOT

3.1 System Applications That Are Automatically Selected

Type	System application name	
Standard Function	Standard System Application	
	Standard Font	Japanese
Communication Driver	IAI ROBO Cylinders	
Extended Function	Standard Font	Chinese (Simplified)
	Outline Font	Alphanumeric/Kana
		Japanese (Kanji)
		Chinese (Simplified)
	Device data transfer	
	Document Display	

3.2 Controller Setting of Screen Design Software

Item	Set value	Remarks
Transmission Speed (BPS)	115200 bps	
Data Bit	8 bit	
Stop Bit	1 bit	
Parity	None	
Retry (Times)	3	
Timeout Time (Sec)	3	
Host Address	0	Sets the axis number of the robot controller.
Delay Time (ms)	5	

3.3 Overlap Window Setting of Screen Design Software

[Close the window when switching base screens] of [Detail Setting] for overlap window in [Screen Switching/Window] is enabled to close the window when switching base screens.

4. Robot Controller

4.1 Communication Settings for the Robot Controller

Item	Set value	Remarks
Transmission speed (bps)	115200 bps	Can be changed by the parameter.
Bit length	8 bit	Cannot be changed because the value is fixed.
Stop bit	1 bit	Cannot be changed because the value is fixed.
Parity	None	Cannot be changed because the value is fixed.

4.2 Parameter Settings for the Robot Controller

The followings are the setting values at our operation check.

(1) Parameter setting

Item	Set value	Remarks
SIO transmission speed	115200 bps	Initial value: 38400 bps
PIO pattern	0	Initial value: 0 (Positioning mode)
PIO jog speed	100 mm/sec	Initial value: 100 mm/sec

(2) Switch setting for the robot controller

Item	Set value	Remarks
Controller address setting	0	Set with rotary switches. *1
Operation mode selector switch	OFF	Set with piano switches. *1
Operating mode	MANU	Set with AUTO/MANU selector switch. *1

*1: For more details, please refer to the Manual of the robot controller currently used.

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. 497 and No. 500 as shown below. When the column No. is set in the language switching device, the language corresponding to the column No. will appear.

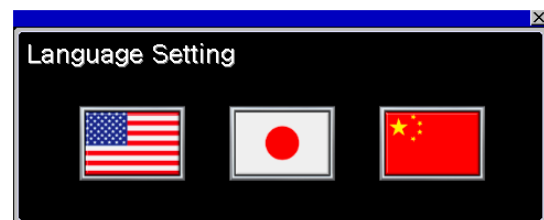
Column No.	Language
1	English
2	Japanese
3	Chinese (Simplified)

5.2 Screen List and Transition

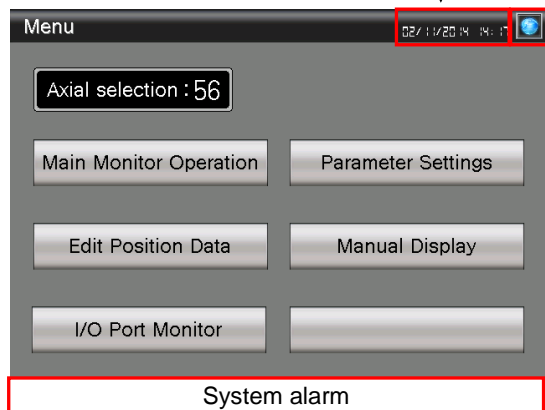
5.2.1 Screen list and transition (common)



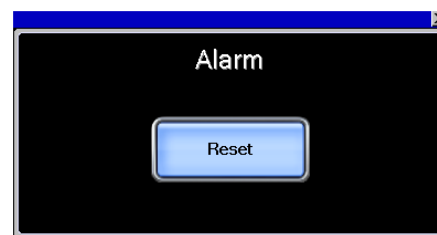
Window screen W-30003: Clock Setting



Window screen W-30002: Language Setting

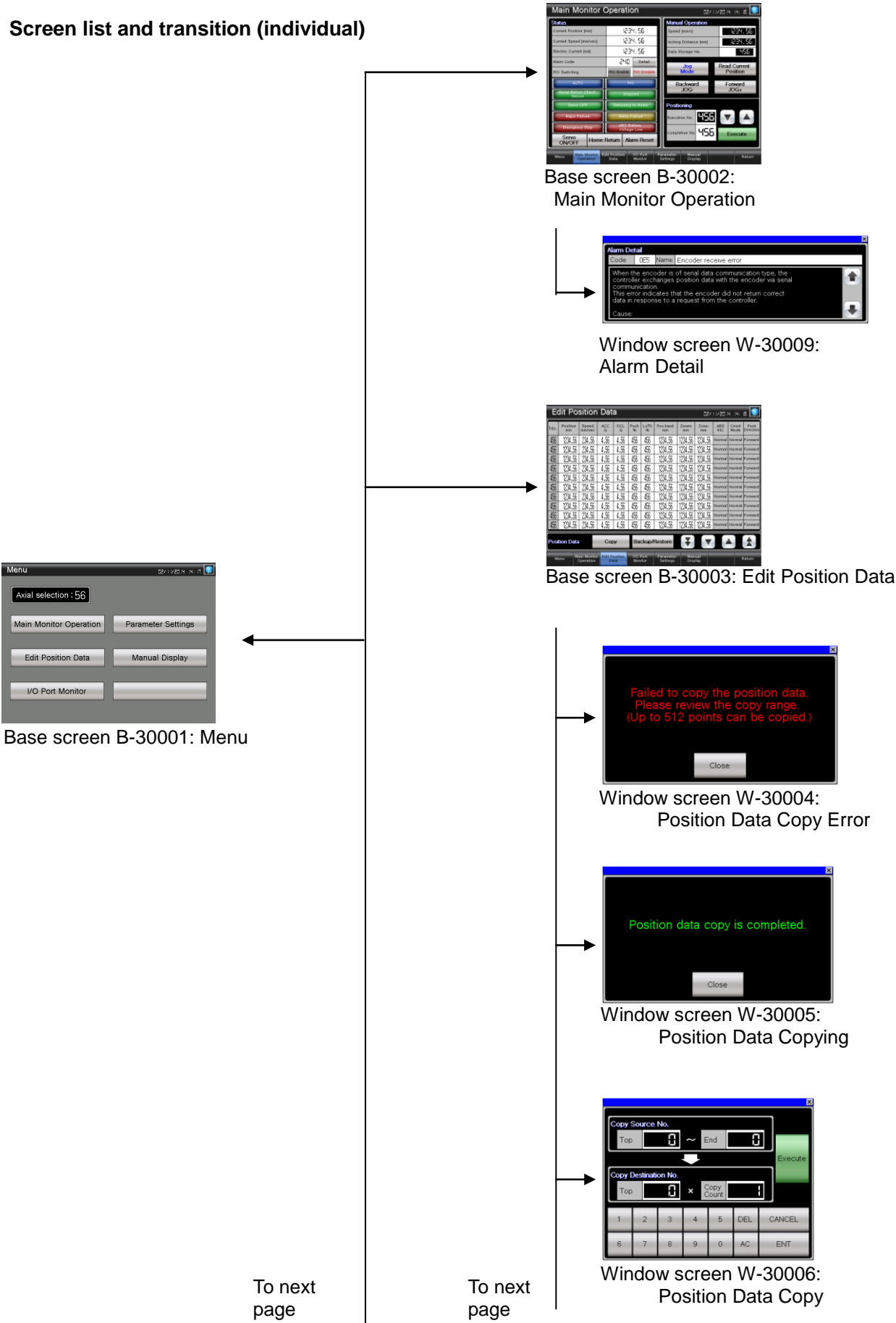


Base screen
(B-30001 Menu and other base screens)



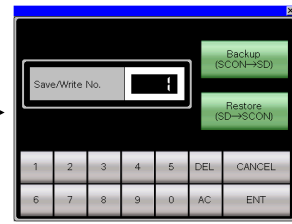
Window screen W-30001: Alarm Reset

5.2.2 Screen list and transition (individual)

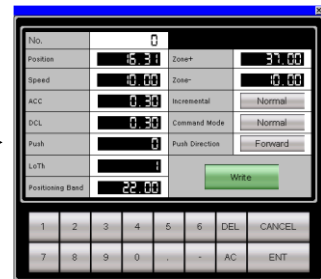


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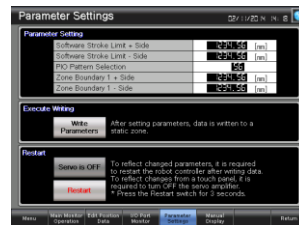
Window screen W-30007:
Position Data
Backup/Restore



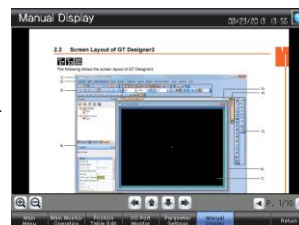
Window screen W-30008:
Position Data Edit



Base screen B-30004: I/O Port Monitor



Base screen B-30005: Parameter Setting



Base screen B-30500:
Manual Display - Language 1

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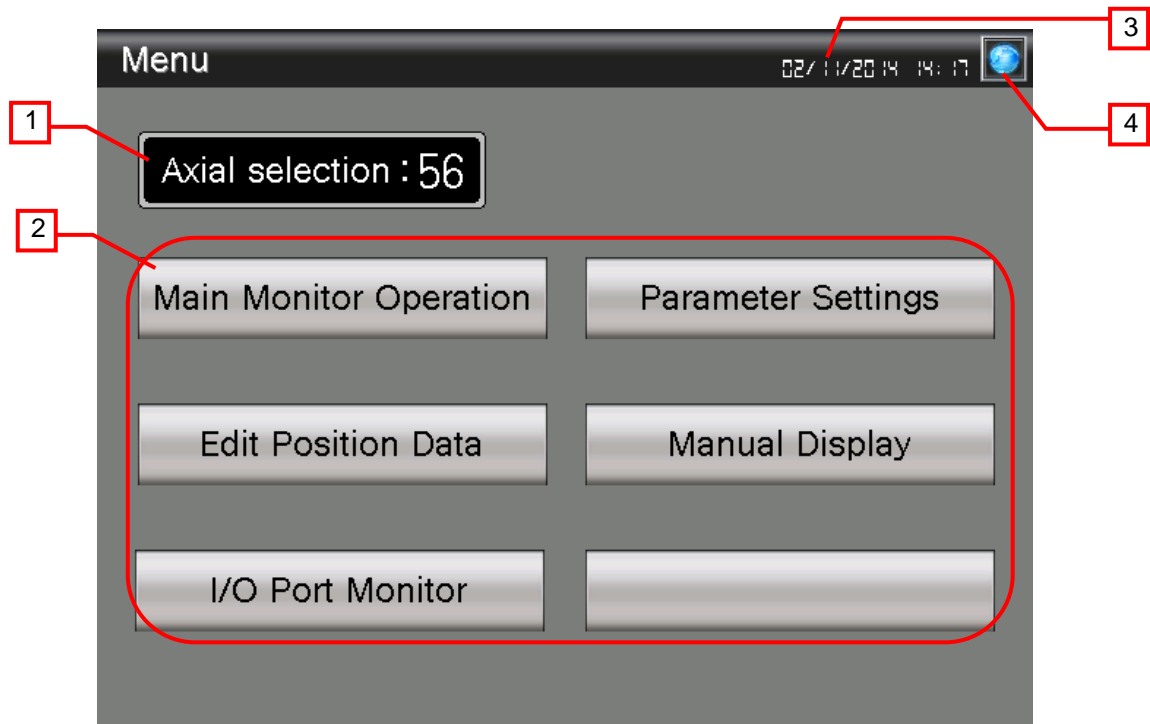
Base screen B-30501:
Manual Display - Language 2



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.

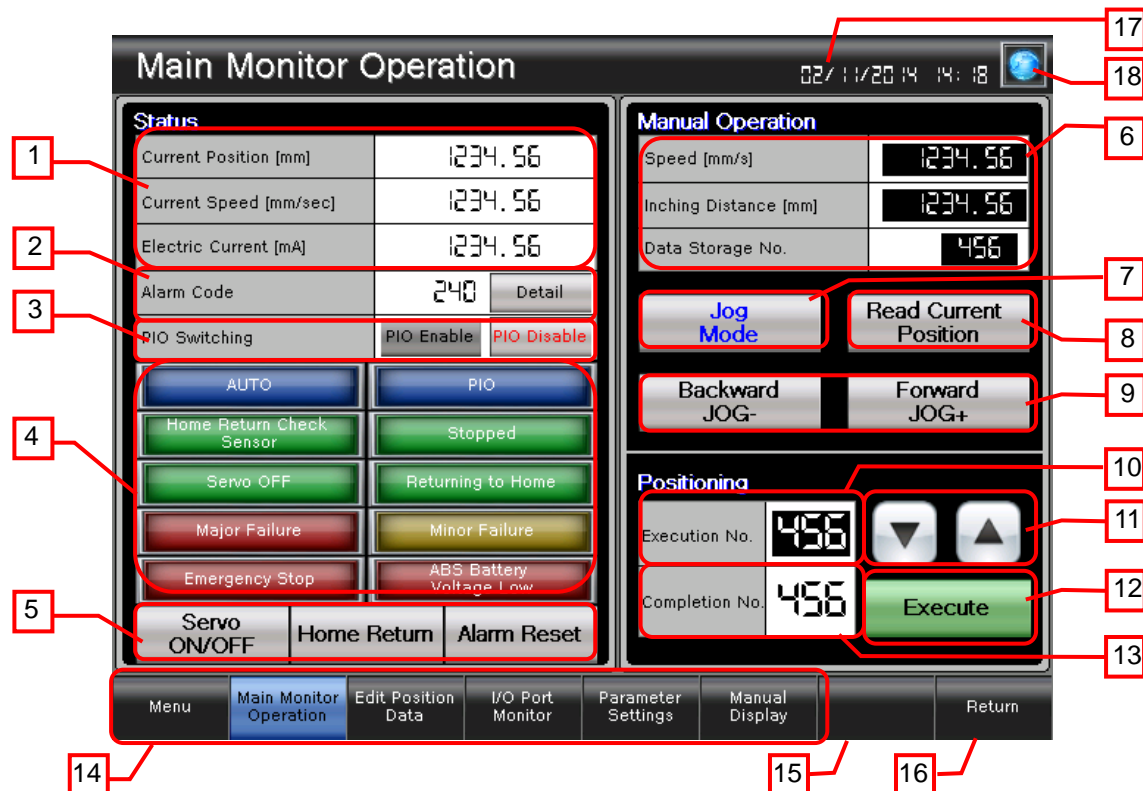
Description

1. Selects the axis to be operated.
2. Switches to each screen.
3. Displays the current date and time. Touch the button to open the [Clock Setting] window.
4. Opens the [Language Setting] window.

Remarks

- When monitoring multiple robot controllers, the robot controller with the station number set for [Host Address] of the communication settings must be included. In this sample, "0" is set. For more details about the host address setting, please refer to the "GOT2000 Series Connection Manual (Non Mitsubishi Product 1)".
- The [Manual Display] switch allows switching to the [Manual Display] screen of the currently displayed language.
- If a system alarm occurs, the alarm message will appear at the bottom of the screen. When touching the left end of the message, the display position of the message changes in the order of upper, center, and lower. When touching the other part of the message, the [Alarm Reset] window appears.

5.3.2 Main Monitor Operation (B-30002)



Outline

This screen displays the robot controller statuses and operates the actuator.

Description

- Displays the current position, current speed, and electric current.
- Displays the current alarm code. The "Detail" switch displays the window screen to display the details of the alarm. Disabled when no alarm occurs.
- Switches between enabling and disabling PIO.
- Displays the robot controller statuses.

AUTO	: Displays the operation mode.
PIO	: Displays the switched result or current status depending on the PIO/Modbus switch setting.
Home Return Check Sensor	: Displays the sensor input status for the model with the home return check sensor. Always the light is off for the model without the sensor.
Stopped	: Displays the travelling (including during the home return or push and hold operation). The light is off during pause.
Servo OFF	: Displays the servo ON/OFF status. The robot controller accepts no move operation command under the servo OFF status.
Returning to Home	: Lights when the home return is completed. An alarm occurs if a move command is executed under the status that the home return is not completed.
Major Failure	: Lights when a cold-start level alarm or operation-cancellation level alarm occurs.
Minor Failure	: Lights when a message-level alarm occurs.
Emergency Stop	: Displays whether or not the robot controller is in the emergency stop status due to the emergency stop input or drive-source cutoff.
ABS Battery Voltage Low	: Displays the voltage status of the absolute battery. Turns ON when the battery voltage is low.
- The switches to execute the servo ON/OFF, home return, and alarm reset.

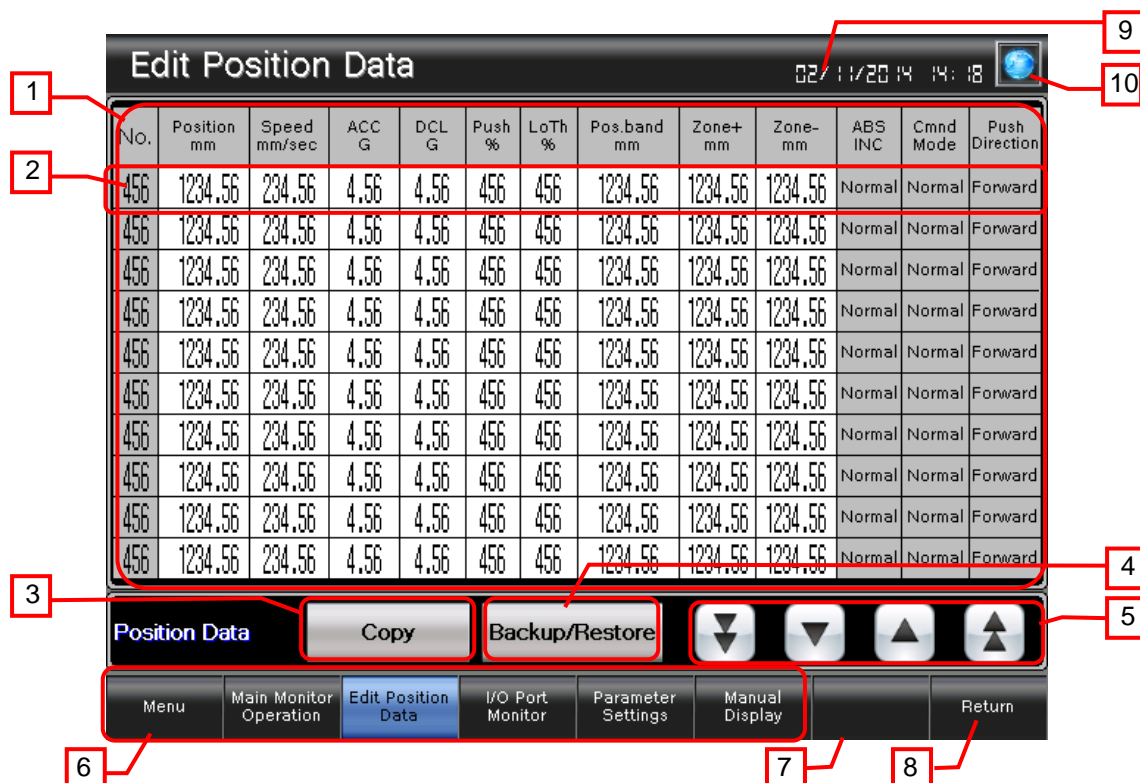
Servo ON/OFF	: Turns ON/OFF the servo.
Home Return	: Returns to the home.
Alarm Reset	: Resets the alarms and then turns OFF after two seconds.

6. Sets the speed, inching distance, and data storage No. when operating the actuator manually.
 - Speed : Sets the move speed at manual operation.
 - Inching Distance : Sets the positioning target position.
 - Data Storage No. : Sets the position No. to store the current position.
7. Switches between the jog mode and inching mode.
8. Reflects the current position in the target position of the position No. set for [Data Storage No.].
9. Operates the actuator manually. The operation differs depending on the jog mode or inching mode.
 - Jog Mode : Moves forward and backward while the key is touched.
 - Inching Mode : Moves the distance set for [Inching Distance] forward and backward.
10. Sets the position No. that the positioning is executed.
11. Increments or decrement the position No. that the positioning is executed. Hold down the switches to increment or decrement the value continuously.
12. Executes the setting of the specified position No. Hold down the switch for one second.
13. Displays the position No. that the positioning is completed.
14. Switches to each screen. The blue switch indicates the currently displayed screen, thus selecting this switch will not switch the screen.
15. Unused base screen switching switch.
16. Switches to the previously opened screen.
17. Displays the current date and time. Touch the button to open the [Clock Setting] window.
18. Opens the [Language Setting] window.

Remarks

- The manual operation of the actuator is operated by the parameter of the robot controller if the home return is not completed. For more details about the parameter of the robot controller, please refer to "4.2 Parameter Settings for the Robot Controller".
- A screen script is used for the manual operation of the actuator, reading of the current position, and execution of the position data. For more details about scripts, please refer to "5.8 Script List".
- The [Manual Display] switch allows switching to the [Manual Display] screen of the currently displayed language.
- If a system alarm occurs, the alarm message will appear at the bottom of the screen. When touching the left end of the message, the display position of the message changes in the order of upper, center, and lower. When touching the other part of the message, the [Alarm Reset] window appears.





5.3.3 Edit Position Data (B-30003)



Outline

This screen displays and edits the position data. Furthermore, backs up/restores the position data.

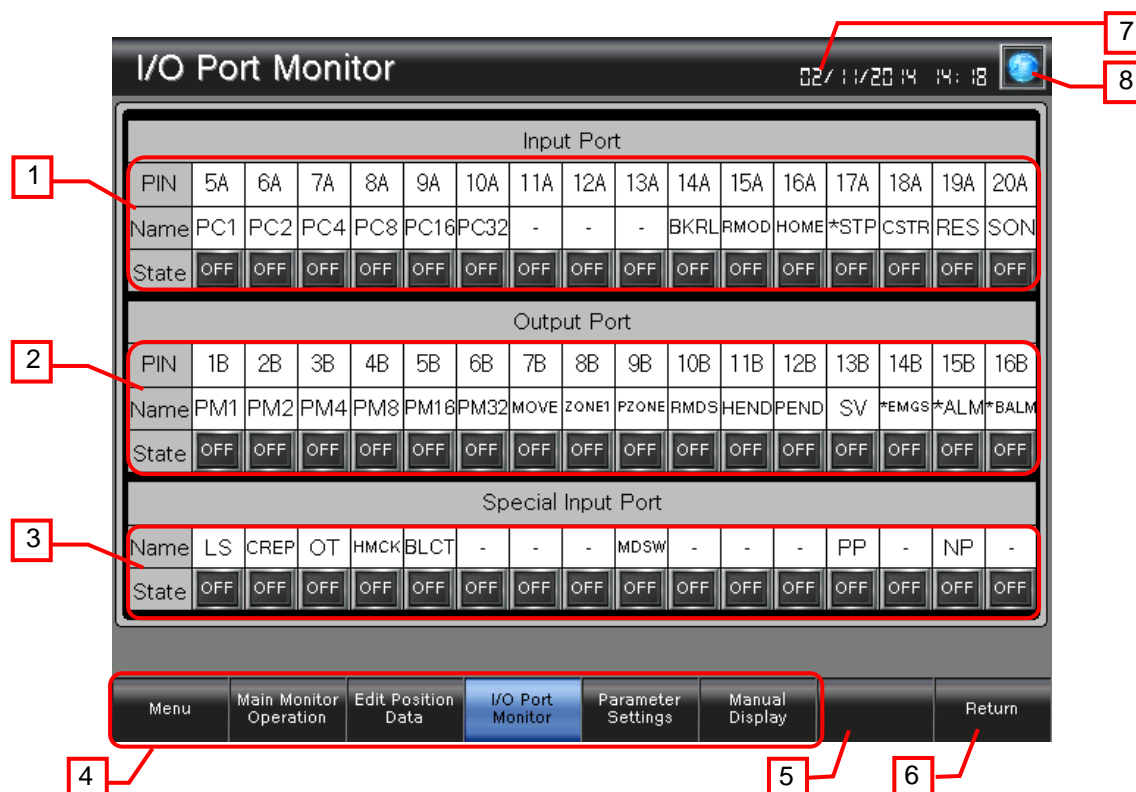
Description

- Displays the position data. For more details about each item, please refer to "5.3.14 Edit Position Data (W-30008)".
- Displays the window to edit the position data when touching the position data line.
- Displays the window to copy the position data.
- Displays the window to backup/restore the position data.
- Scrolls the position data. Hold down the switches to scroll continuously.
 -  : Scrolls 100 data down.
 -  : Scrolls 10 data down.
 -  : Scrolls 10 data up.
 -  : Scrolls 100 data up.
- Switches to each screen. The blue switch indicates the currently displayed screen, thus selecting this switch will not switch the screen.
- Unused base screen switching switch.
- Switches to the previously opened screen.
- Displays the current date and time. Touch the area to open the [Clock Setting] window.
- Opens the [Language Setting] window.

Remarks

- Up to No.511 of the position data can be displayed and edited.
- The device data transfer function and a screen script are used for copying the position data. For more details about the device data transfer function, please refer to "5.7 Device Data Transfer List" and for more details about scripts, please refer to "5.8 Script List".
- The recipe function and a screen script are used for backing up/restoring the position data. For more details about the recipe function, please refer to "5.6 Recipe List" and for more details about scripts, please refer to "5.8 Script List".
- The [Manual Display] switch allows switching to the [Manual Display] screen of the currently displayed language.
- If a system alarm occurs, the alarm message will appear at the bottom of the screen. When touching the left end of the message, the display position of the message changes in the order of upper, center, and lower. When touching the other part of the message, the [Alarm Reset] window appears.

5.3.4 I/O Port Monitor (B-30004)



Outline

This screen displays I/O port statuses of the robot controller.

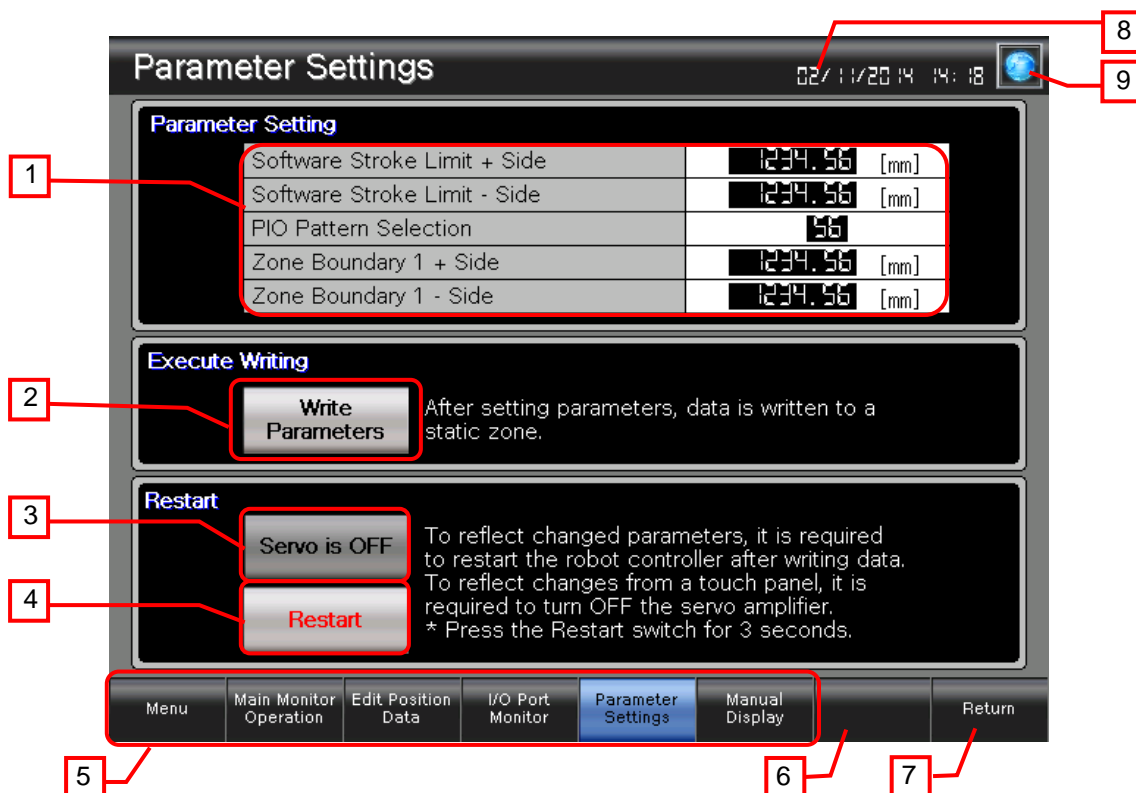
Description

1. Displays the input port statuses. The name of each PIN changes for every PIO pattern.
2. Displays the output port statuses. The name of each PIN changes for every PIO pattern.
3. Displays the special input port statuses.
4. Switches to each screen. The blue switch indicates the currently displayed screen, thus selecting this switch will not switch the screen.
5. Unused base screen switching switch.
6. Switches to the previously opened screen.
7. Displays the current date and time. Touch the button 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.
- If a system alarm occurs, the alarm message will appear at the bottom of the screen. When touching the left end of the message, the display position of the message changes in the order of upper, center, and lower. When touching the other part of the message, the [Alarm Reset] window appears.

5.3.5 Parameter Setting (B-30005)



Outline

This screen sets the parameter setting of the robot controller and restarts the robot controller.

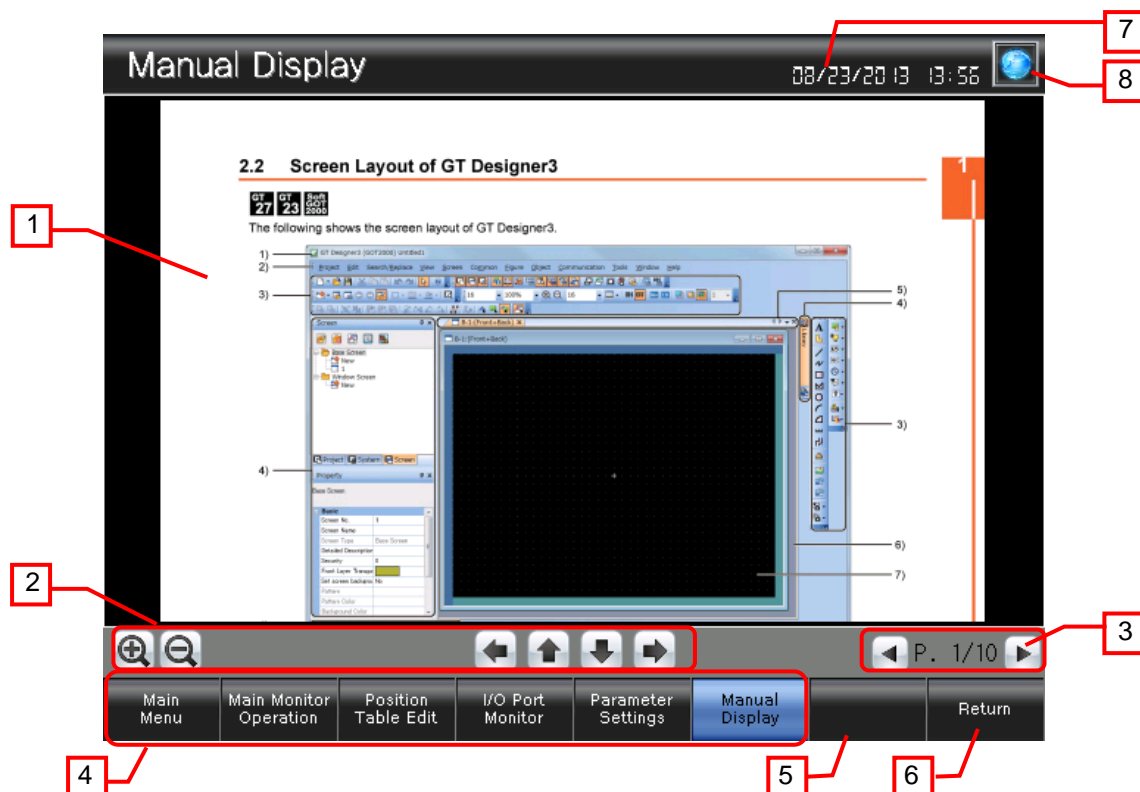
Description

- Input the parameter for the robot controller.
 - Software Stroke Limit + Side : Sets the stroke limit for + side of the actuator.
 - Software Stroke Limit - Side : Sets the stroke limit for - side of the actuator.
 - PIO Pattern Selection : Sets the PIO operation pattern.
 - Zone Boundary 1 + Side : Sets the + side of the area where the zone output signal turns ON when selecting 0, 4, 5 or pulse train input mode for PIO pattern.
 - Zone Boundary 1 - Side : Sets the - side of the area where the zone output signal turns ON when selecting 0, 4, 5 or pulse train input mode for PIO pattern.
- Writes the set parameters to a static zone.
- Turns the servo OFF.
- Restarts the robot controller. Hold down the switch for three seconds.
 - Restart is enabled only when the servo is OFF. Restart after confirming that the servo turns OFF.
- Switches to each screen. The blue switch indicates the currently displayed screen, thus selecting this switch will not switch the screen.
- Unused base screen switching switch.
- Switches to the previously opened screen.
- Displays the current date and time. Touch the button to open the [Clock Setting] window.
- Opens the [Language Setting] window.

Remarks

- The setting range of the parameter differs depending on the type of the actuator. For more details, please refer to the Manual of the actuator.
- The [Manual Display] switch allows switching to the [Manual Display] screen of the currently displayed language.
- If a system alarm occurs, the alarm message will appear at the bottom of the screen. When touching the left end of the message, the display position of the message changes in the order of upper, center, and lower. When touching the other part of the message, the [Alarm Reset] window appears.






5.3.6 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 Language 3 (B-30502)] screens. The page 1 is displayed when the screen is displayed initially. 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 or down.
3. These switches operate the displayed document page.
 : 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. Unused base screen switching switch.
6. Switches to the previously opened screen.
7. Displays the current date and time. Touch the button to open the [Clock Setting] window.
8. Opens the [Language Setting] window.

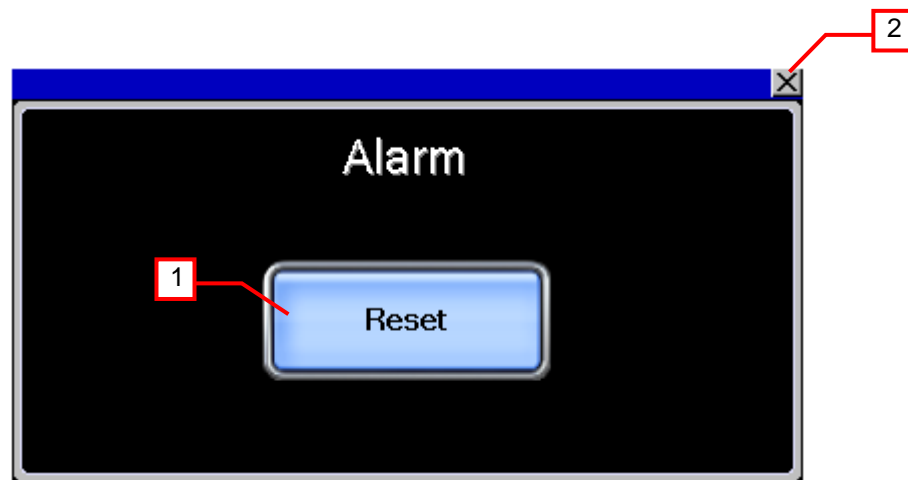
Remarks

- 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 touch switches (other than the manual display area) is the same as the language of comments specified in the columns No. 1 to No. 3 in the comment group No. 500. The relation of the document (Document ID) and the column No. in the comment group No. 500 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 GOT is started, the document page is set to No. 1 with the project script. For more details about scripts, please refer to "5.8 Script List".
- The document data for the manual display should be prepared by the customers. For more details, please refer to "6. MANUAL DISPLAY".
- If a system alarm occurs, the alarm message will appear at the bottom of the screen. When touching the left end of the message, the display position of the message changes in the order of upper, center, and lower. When touching the other part of the message, the [Alarm Reset] window appears.

5.3.7 Alarm Reset (W-30001)



Outline

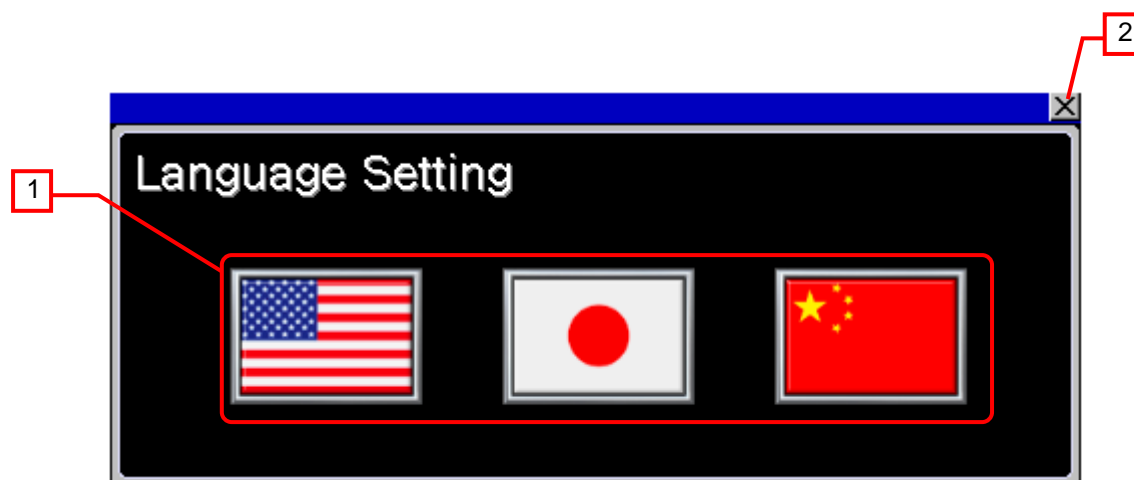
This window screen allows resetting the system alarm.

Description

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

Remarks

5.3.8 Language Setting (W-30002)



Outline

This window allows selecting the GOT language.

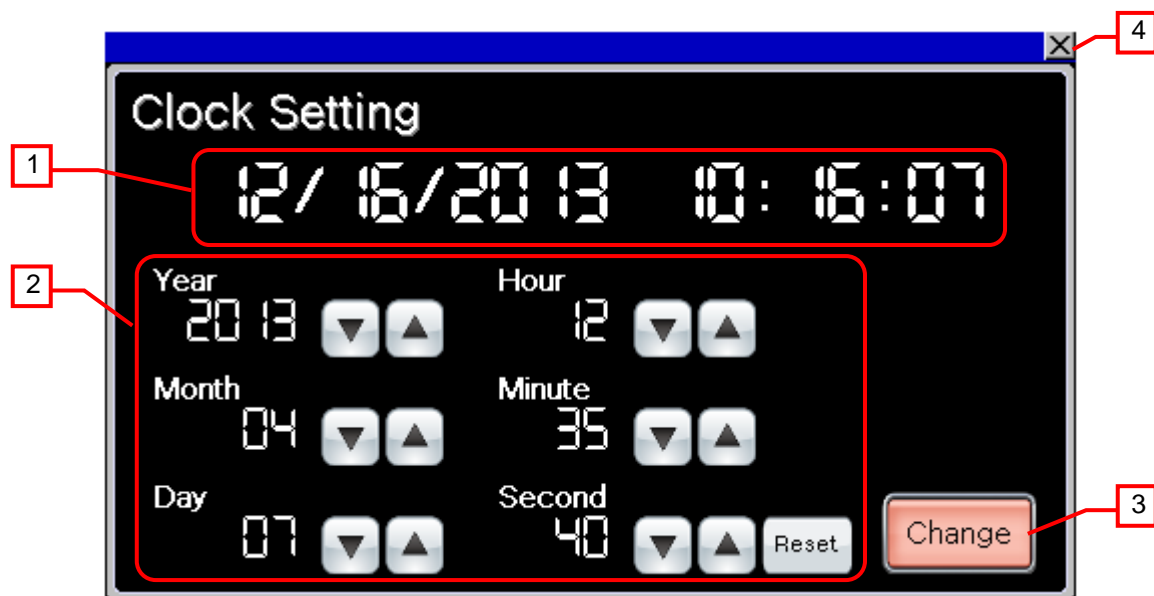
Description

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

Remarks

- The system language is also switched corresponding to the display language.
- While the base screen is one of the screens [Manual Display - Language 1 to Language 3], if the language is switched with 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 "5.8 Script List".



5.3.9 Clock Setting (W-30003)



Outline

This window screen allows changing the GOT clock data.

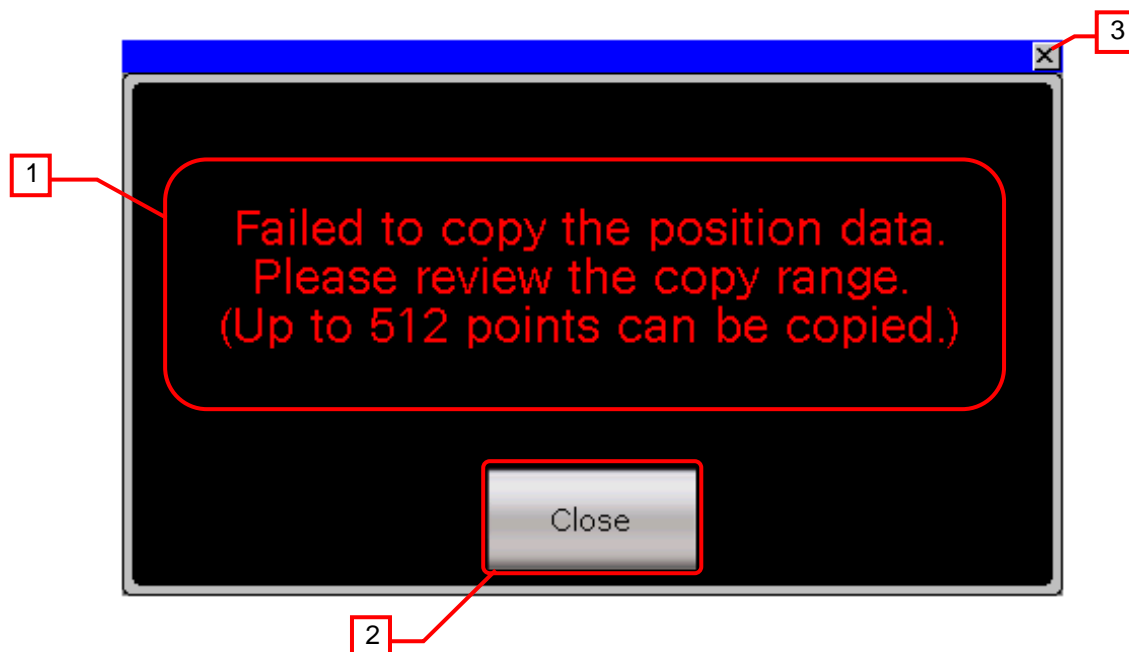
Description

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 newly set.
- 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 "5.8 Script List".

5.3.10 Position Data Copy Error (W-30004)



Outline

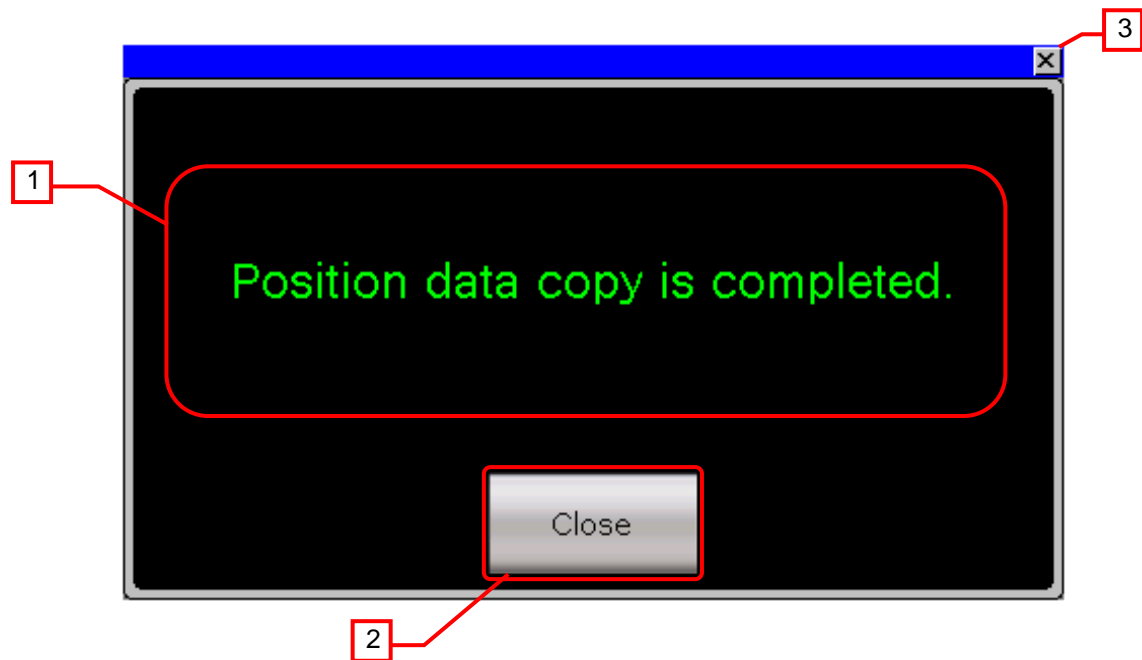
This screen is displayed if failing to copy the position data.

Description

1. Displays an error message.
2. Closes the window screen.
3. Closes the window screen.

Remarks

5.3.11 Position Data Copying (W-30005)



Outline

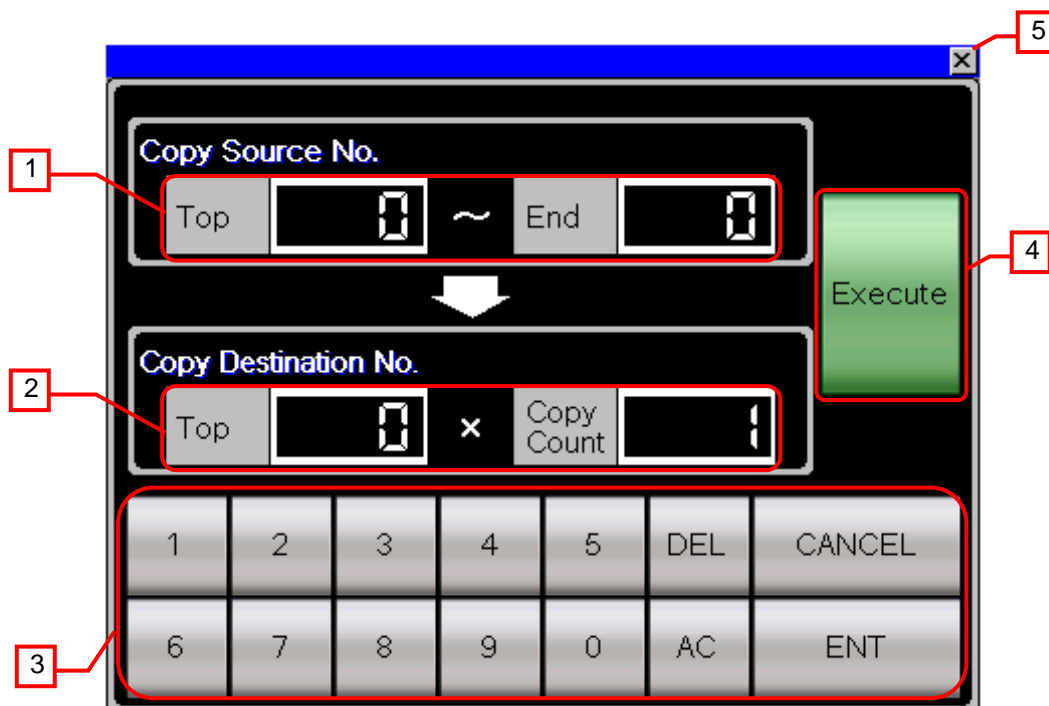
This screen is displayed while the position data is copying.

Description

1. Displays the message of copying. Displays the message of completion after the copy is completed.
2. Closes the window screen.
3. Closes the window screen.

Remarks

5.3.12 Position Data Copy (W-30006)



Outline

Copies the position data.

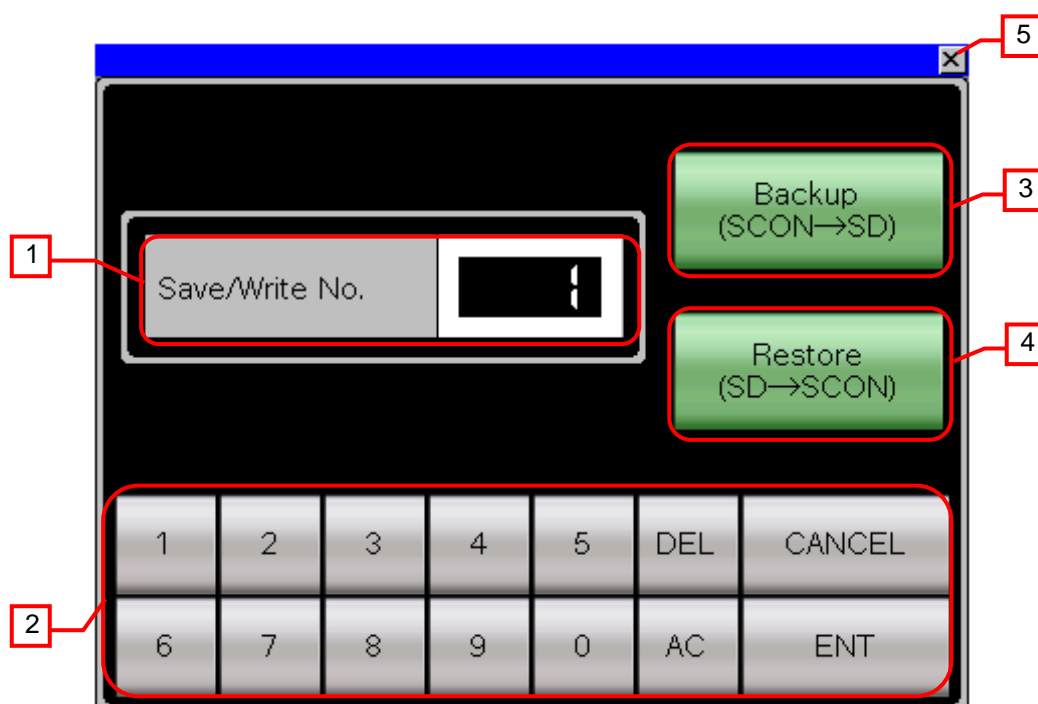
Description

1. Sets the top and end of the position data No. for copy source.
2. Sets the top and copy count of the position data No. for copy destination.
3. Numeric keypad to input.
4. Executes the copy under the specified conditions. Messages are displayed on a window when copying, when the copy is completed, or when an error occurs.
5. Closes the window screen.

Remarks

- As for the position data copy, the data from top to end of the copy source are copied by the copy count from the top which is set for the copy destination.

5.3.13 Position Data Backup/Restore (W-30007)



Outline

Backs up/restores the position data.

Description

1. Sets the record No. to be saved/written.
2. Numeric keypad to input.
3. Backs up the position data of the robot controller to the record No. of the recipe file in the SD card which is set for [Save/Write No.]. The switch blinks during the backup and when it stops blinking, the backup is completed.
4. Restores the position data stored in the record No. of the recipe file in the SD card which is set for [Save/Write No.] to the robot controller. The switch blinks during the restoration and when it stops blinking, the restoration is completed.
5. Closes the window screen.

Remarks

- The backup data can be registered up to 100 data.

5.3.14 Position Data Edit (W-30008)

No.	0	Zone+	37.00
Position	16.31	Zone-	10.00
Speed	10.00	Incremental	Normal
ACC	0.30	Command Mode	Normal
DCL	0.30	Push Direction	Forward
Push	0	Write	
LoTh	1		
Positioning Band	22.00		

1 2 3 4 5 6 DEL CANCEL
 7 8 9 0 . - AC ENT

Outline

Edits and writes the position data.

Description

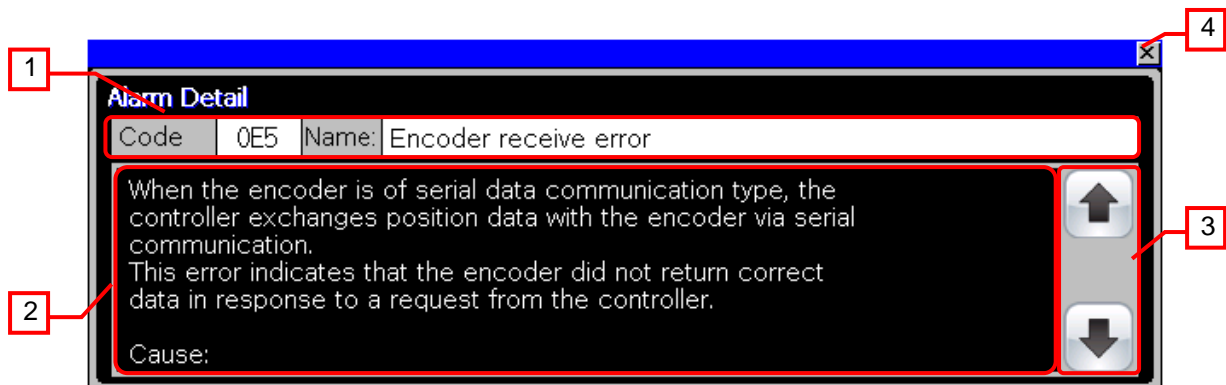
- Displays the editing position No.
- Edits the position data.

Position	: Inputs the target position to move the actuator.
Speed	: Inputs the speed to move the actuator.
ACC	: Inputs the acceleration to move the actuator.
DCL	: Inputs the deceleration to move the actuator.
Push	: Selects the positioning mode or push mode.
LoTh	: Sets the current threshold when performing the load output judgment.
Positioning Band	: Defines the distance from the target position to turn ON the positioning completion signal. As for the push-motion operation, defines the maximum push-in amount for the push-motion operation to the target position.
Zone+/-	: Defines the area to turn ON the PZONE (zone output signal) in PIO pattern 0, 1, 2, 4, or 5.
Incremental	: Defines either the absolute coordinate specification or relative coordinate specification.
Command Mode	: Defines either the normal operation or push-motion operation.
Push Direction	: Defines the direction for the push-motion operation after completing the approaching operation.
- Numeric keypad to input.
- Writes the edited position data to the robot controller.
- Closes the window screen.

Remarks

- Note that the edited position data is not reflected to the robot controller if editing the position data and closing the window without writing the data.

5.3.15 Alarm Detail (W-30009)



Outline

Displays details of the alarm that is occurring on the robot controller.

Description

1. Displays the code and description of the alarm.
2. Displays the detailed description of the alarm.
3. Scrolls the detailed description of the alarm. Hold down the switches to scroll continuously.
4. Closes the window screen.

Remarks

5.4 Device List

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

5.4.1 Devices of the controller

Type	Device No.	Application
Bit	S0100	EMG status
	S0103	Servo ON status
	S0105	Major failure status
	S0106	Minor failure status
	S010B	Home return status
	S0122	Operation mode status
	S0127	PIO/Modbus switching status
	S012A	Moving signal
	S017C	Home-check sensor monitor
	S0403	Servo ON command
	S0407	Alarm reset command
	S040B	Home return command
	S0411	Jog/inch switching
	S0416	Jog+ command
	S0417	Jog- command
	S0420	Software reset command
	S0427	PIO/Modbus switching specification
	S0428	Parameter data static zone write command
	R9003.b0 to R9003.b15	Input port query
	R9004.b0 to R9004.b15	Output port monitor query
	R9012.b0 to R9012.b15	Special input port query
Word	R9908.b3	Control flag specification register (INC)
	R0700	Software stroke limit + side
	R0702	Software stroke limit - side
	R0802	PIO pattern selection (upper)
	R0803	PIO pattern selection (lower)
	R0C00	Zone boundary 1 + side
	R0C02	Zone boundary 1 - side
	R1000 to R2C00	Position table
	R9000	Current position monitor
	R9001	Current position monitor
	R9002	Present alarm code query
	R900A	Current speed monitor
	R900C	Current ampere monitor
	R9014	Position complete number status query
	R9800	Position movement command register
	R9900	Target position coordinate specification register
	R9904	Speed specification register
	R9905	Acceleration/deceleration speed specification register
	R9908	Control flag specification register

5.4.2 GOT internal devices

Type	Device No.	Application
Bit	GB40	Script trigger
	GB41	Device data transfer reset
	GB30000	Inching mode initialization process script trigger
	GB30001	Current value reading script startup trigger
	GB30002	Forward JOG+ script startup trigger
	GB30003	Forward JOG- script startup trigger
	GB30006	Position data writing execution
	GB30007	Copy execution script startup trigger

Type	Device No.	Application
Bit	GB30008	Error screen display script
	GB30014	Window close flag
	GB30015	Scroll switch operation condition
	GB30016	Copy preprocessing script startup trigger
	GB30017	Copy post-processing script startup trigger
	GB30018	Position data copy trigger ON script startup trigger
	GB30019	Recipe various flag clearing script startup trigger
	GB30029	Script No.30009 startup trigger
	GB30030	Copy destination data read flag
Word	GD10	Station No. indirect specification device
	GD26000	Speed device
	GD26002	Inching distance device
	GD26004	Execution No.
	GD26005	Data storage No.
	GD26006	Position data No.
	GD26008	Offset to read position data
	GD26009	Copy source top
	GD26010	Copy source end
	GD26011	Copy destination top
	GD26012	Copy destination point number
	GD26014	Alarm detail start row
	GD26016	Recipe external control device
	GD26017	Recipe No. storage device
	GD26018	Record No. storage device
	GD26019	Recipe external notification device
	GD26023	Device data transfer trigger
	GD26024	Device data transfer external notification device
	GD26025	Device data transfer trigger
	GD26026	Device data transfer external notification device
	GD26027	Device data transfer trigger
	GD26028	Device data transfer external notification device
	GD26029	Device data transfer trigger
	GD26030	Device data transfer external notification device
	GD26031	Device data transfer trigger
	GD26032	Device data transfer external notification device
	GD26033	Device data transfer trigger
	GD26034	Device data transfer external notification device
	GD26035	Device data transfer trigger
	GD26036	Device data transfer external notification device
	GD26037	Device data transfer trigger
	GD26038	Device data transfer external notification device
	GD26039	Device data transfer trigger
	GD26040	Device data transfer external notification device
	GD26042	Device data transfer offset
	GD26100 to GD26114	Position table editing device
	GD27000	Device data transfer 2
	GD28024	Device data transfer 3
	GD29048	Device data transfer 4
	GD30072	Device data transfer 5
	GD31096	Device data transfer 6
	GD32120	Device data transfer 7
	GD33144	Device data transfer 8
	GD34168	Device data transfer 9
	GD35192	Work area for position table copy
	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

Type	Device No.	Application
Word	GD60080 to GD60082	Document display, page No., previous page switch, next page switch
	GD63990 to GD63995	Clock digiswitch
	GS386	Project and screen script initial operation
	GS513 to GS516	Changed time
	GS650 to GS652	Present time
	TMP0000 to TMP0008, TMP0010 to TMP0014, TMP0020, TMP0022, TMP0030, TMP0950 to TMP0996	For script operation

5.5 Comment List

Comment group No.	Comment No.	Where comments are used
497	No.1 to 348	B-30004
498	No.128 to 251	W-30009
499	No.128 to 251	W-30009
500	No.2	B-30001, B-30002
	No.3 to 8	B-30002 to 30005, B-30500 to 30502
	No.9	W-30002
	No.10 to 46	B-30002
	No.47	B-30003, W-30008
	No.48 to 59	B-30003
	No.60 to 65	B-30003, W-30008
	No.66	B-30003
	No.67	B-30003
	No.68	W-30008
	No.69 to 74	B-30004
500	No.75	W-30001
	No.77 to 79	W-30009
	No.80	B-30002
	No.81 to 90	B-30005
	No.91	B-30002
	No.92	B-30005
	No.93	B-30005
	No.94 to 101	W-30003
	No.102	W-30001, W-30003
	No.103 to 107	W-30006
	No.108 to 110	W-30007
	No.111	W-30006
	No.112	B-30003
	No.113	W-30004, W-30005
	No.114	W-30004
	No.115	W-30005
	No.116	W-30005
	No.117	B-30002
	No.119	B-30005
	No.120 to 131	W-30008
	No.133	B-30001, B-30003
	No.134	B-30001, B-30004
	No.136	B-30001, B-30005
	No.141	B-30001
	No.150	B-30001
	No.156	B-30002 to 30005, B-30500 to 30502
	No.158	B-30002 to 30005, B-30500 to 30502
	No.159	B-30001, B-30500 to 30502
	No.160	B-30002 to 30005, B-30500 to 30502
	No.161	B-30004
	No.162	B-30004

5.6 Recipe List

5.6.1 Common Setting

External Control Information	
External Control Device	GD26016
Recipe No. Storage Device	GD26017
Record No. Storage Device	GD26018
External Notification Information	
External Notification Device	GD26019
Recipe No. Notification Device	GD26020
Record No. Notification Device	GD26021

5.6.2 Individual Setting

Recipe No.30001 Recipe 1

Item		Settings
Recipe File	Recipe File	Use a recipe file (read and write)
	File Format	G2P (Binary)
	Drive Name	A: Standard SD Card
	Folder Name	Package1
	File Name	ARP30001.G2P
Trigger Device	Write Trigger 1	Not used
	Read Trigger 1	Not used
	Record No. Device	Not used
Block Number		1
Record Number		100
Block 1	Device	0-0 R1000
	Device Type	Signed BIN16
	Points	8192

Recipe No.30002 Recipe 2

Item		Settings
Recipe File	Recipe File	Use a recipe file (read and write)
	File Format	G2P (Binary)
	Drive Name	A: Standard SD Card
	Folder Name	Package1
	File Name	ARP30002.G2P
Trigger Device	Write Trigger 1	Not used
	Read Trigger 1	Not used
	Record No. Device	Not used
Block Number		1
Record Number		100
Block 1	Device	0-1 R1000
	Device Type	Signed BIN16
	Points	8192

Recipe No.30003 Recipe 3

Item		Settings
Recipe File	Recipe File	Use a recipe file (read and write)
	File Format	G2P (Binary)
	Drive Name	A: Standard SD Card
	Folder Name	Package1
	File Name	ARP30003.G2P
Trigger Device	Write Trigger 1	Not used
	Read Trigger 1	Not used
	Record No. Device	Not used
Block Number		1
Record Number		100
Block 1	Device	0-2 R1000
	Device Type	Signed BIN16
	Points	8192

Recipe No.30004 Recipe 4

Item		Settings
Recipe File	Recipe File	Use a recipe file (read and write)
	File Format	G2P (Binary)
	Drive Name	A: Standard SD Card
	Folder Name	Package1
	File Name	ARP30004.G2P
Trigger Device	Write Trigger 1	Not used
	Read Trigger 1	Not used
	Record No. Device	Not used
Block Number		1
Record Number		100
Block 1	Device	0-3 R1000
	Device Type	Signed BIN16
	Points	8192

Recipe No.30005 Recipe 5

Item		Settings
Recipe File	Recipe File	Use a recipe file (read and write)
	File Format	G2P (Binary)
	Drive Name	A: Standard SD Card
	Folder Name	Package1
	File Name	ARP30005.G2P
Trigger Device	Write Trigger 1	Not used
	Read Trigger 1	Not used
	Record No. Device	Not used
Block Number		1
Record Number		100
Block 1	Device	0-4 R1000
	Device Type	Signed BIN16
	Points	8192

Recipe No.30006 Recipe 6

Item		Settings
Recipe File	Recipe File	Use a recipe file (read and write)
	File Format	G2P (Binary)
	Drive Name	A: Standard SD Card
	Folder Name	Package1
	File Name	ARP30006.G2P
Trigger Device	Write Trigger 1	Not used
	Read Trigger 1	Not used
	Record No. Device	Not used
Block Number		1
Record Number		100
Block 1	Device	0-5 R1000
	Device Type	Signed BIN16
	Points	8192

Recipe No.30007 Recipe 7

Item		Settings
Recipe File	Recipe File	Use a recipe file (read and write)
	File Format	G2P (Binary)
	Drive Name	A: Standard SD Card
	Folder Name	Package1
	File Name	ARP30007.G2P
Trigger Device	Write Trigger 1	Not used
	Read Trigger 1	Not used
	Record No. Device	Not used
Block Number		1
Record Number		100
Block 1	Device	0-6 R1000
	Device Type	Signed BIN16
	Points	8192

Recipe No.30008 Recipe 8

Item		Settings
Recipe File	Recipe File	Use a recipe file (read and write)
	File Format	G2P (Binary)
	Drive Name	A: Standard SD Card
	Folder Name	Package1
	File Name	ARP30008.G2P
Trigger Device	Write Trigger 1	Not used
	Read Trigger 1	Not used
	Record No. Device	Not used
Block Number		1
Record Number		100
Block 1	Device	0-7 R1000
	Device Type	Signed BIN16
	Points	8192

Recipe No.30009 Recipe 9

Item		Settings
Recipe File	Recipe File	Use a recipe file (read and write)
	File Format	G2P (Binary)
	Drive Name	A: Standard SD Card
	Folder Name	Package1
	File Name	ARP30009.G2P
Trigger Device	Write Trigger 1	Not used
	Read Trigger 1	Not used
	Record No. Device	Not used
Block Number		1
Record Number		100
Block 1	Device	0-8 R1000
	Device Type	Signed BIN16
	Points	8192

Recipe No.30010 Recipe 10

Item		Settings
Recipe File	Recipe File	Use a recipe file (read and write)
	File Format	G2P (Binary)
	Drive Name	A: Standard SD Card
	Folder Name	Package1
	File Name	ARP30010.G2P
Trigger Device	Write Trigger 1	Not used
	Read Trigger 1	Not used
	Record No. Device	Not used
Block Number		1
Record Number		100
Block 1	Device	0-9 R1000
	Device Type	Signed BIN16
	Points	8192

Recipe No.30011 Recipe 11

Item		Settings
Recipe File	Recipe File	Use a recipe file (read and write)
	File Format	G2P (Binary)
	Drive Name	A: Standard SD Card
	Folder Name	Package1
	File Name	ARP30011.G2P
Trigger Device	Write Trigger 1	Not used
	Read Trigger 1	Not used
	Record No. Device	Not used
Block Number		1
Record Number		100
Block 1	Device	0-10 R1000
	Device Type	Signed BIN16
	Points	8192

Recipe No.30012 Recipe 12

Item		Settings
Recipe File	Recipe File	Use a recipe file (read and write)
	File Format	G2P (Binary)
	Drive Name	A: Standard SD Card
	Folder Name	Package1
	File Name	ARP30012.G2P
Trigger Device	Write Trigger 1	Not used
	Read Trigger 1	Not used
	Record No. Device	Not used
Block Number		1
Record Number		100
Block 1	Device	0-11 R1000
	Device Type	Signed BIN16
	Points	8192

Recipe No.30013 Recipe 13

Item		Settings
Recipe File	Recipe File	Use a recipe file (read and write)
	File Format	G2P (Binary)
	Drive Name	A: Standard SD Card
	Folder Name	Package1
	File Name	ARP30013.G2P
Trigger Device	Write Trigger 1	Not used
	Read Trigger 1	Not used
	Record No. Device	Not used
Block Number		1
Record Number		100
Block 1	Device	0-12 R1000
	Device Type	Signed BIN16
	Points	8192

Recipe No.30014 Recipe 14

Item		Settings
Recipe File	Recipe File	Use a recipe file (read and write)
	File Format	G2P (Binary)
	Drive Name	A: Standard SD Card
	Folder Name	Package1
	File Name	ARP30014.G2P
Trigger Device	Write Trigger 1	Not used
	Read Trigger 1	Not used
	Record No. Device	Not used
Block Number		1
Record Number		100
Block 1	Device	0-13 R1000
	Device Type	Signed BIN16
	Points	8192

Recipe No.30015 Recipe 15

Item		Settings
Recipe File	Recipe File	Use a recipe file (read and write)
	File Format	G2P (Binary)
	Drive Name	A: Standard SD Card
	Folder Name	Package1
	File Name	ARP30015.G2P
Trigger Device	Write Trigger 1	Not used
	Read Trigger 1	Not used
	Record No. Device	Not used
Block Number		1
Record Number		100
Block 1	Device	0-14 R1000
	Device Type	Signed BIN16
	Points	8192

Recipe No.30016 Recipe 16

Item		Settings
Recipe File	Recipe File	Use a recipe file (read and write)
	File Format	G2P (Binary)
	Drive Name	A: Standard SD Card
	Folder Name	Package1
	File Name	ARP30016.G2P
Trigger Device	Write Trigger 1	Not used
	Read Trigger 1	Not used
	Record No. Device	Not used
Block Number		1
Record Number		100
Block 1	Device	0-15 R1000
	Device Type	Signed BIN16
	Points	8192

5.7 Device Data Transfer List
ID: 201 Transfer 1

Item		Settings
Device Data Transfer Trigger	Trigger Type	Rise
	External Control Device	GD26023
	Trigger Device	GD26023.b0
	Transfer Inverting Flag Device	GD26023.b1
External Notification Information	<input checked="" type="checkbox"/> External Notification Device	GD26024
	Device Data Transfer Notification Signal	GD26024.b0
	BCD Conversion Error Notification Signal	GD26024.b14
	Device Data Transfer Error Notification Signal	GD26024.b15
Device	Block Number	3
Block 1	Device Type	Signed BIN16
	Points	1024
	Source Device	0-100 R1000
	Destination Device	GD27000
	Offset	None

Item		Settings
Block 2	Device Type	Bit
	Points	1
	Source Device	GB41
	Destination Device	GD26023.b0
	Offset	None
Block 3	Device Type	Bit
	Points	1
	Source Device	GD26023.b0
	Destination Device	GB41
	Offset	None

ID: 202 Transfer 2

Item		Settings
Device Data Transfer Trigger	Trigger Type	Rise
	External Control Device	GD26025
	Trigger Device	GD26025.b0
	Transfer Inverting Flag Device	GD26025.b1
External Notification Information	<input checked="" type="checkbox"/> External Notification Device	GD26026
	Device Data Transfer Notification Signal	GD26026.b0
	BCD Conversion Error Notification Signal	GD26026.b14
	Device Data Transfer Error Notification Signal	GD26026.b15
Device	Block Number	3
Block 1	Device Type	Signed BIN16
	Points	1024
	Source Device	0-100 R1400
	Destination Device	GD28024
	Offset	None
Block 2	Device Type	Bit
	Points	1
	Source Device	GB41
	Destination Device	GD26025.b0
	Offset	None

Item		Settings
Block 3	Device Type	Bit
	Points	1
	Source Device	GD26025.b0
	Destination Device	GB41
	Offset	None

ID: 203 Transfer 3

Item		Settings
Device Data Transfer Trigger	Trigger Type	Rise
	External Control Device	GD26027
	Trigger Device	GD26027.b0
	Transfer Inverting Flag Device	GD26027.b1
External Information Notification	<input checked="" type="checkbox"/> External Notification Device	GD26028
	Device Data Transfer Notification Signal	GD26028.b0
	BCD Conversion Error Notification Signal	GD26028.b14
	Device Data Transfer Error Notification Signal	GD26028.b15
Device	Block Number	3
Block 1	Device Type	Signed BIN16
	Points	1024
	Source Device	0-100 R1800
	Destination Device	GD29048
	Offset	None
Block 2	Device Type	Bit
	Points	1
	Source Device	GB41
	Destination Device	GD26027.b0
	Offset	None
Block 3	Device Type	Bit
	Points	1
	Source Device	GD26027.b0
	Destination Device	GB41
	Offset	None

ID: 204 Transfer 4

Item		Settings
Device Data Transfer Trigger	Trigger Type	Rise
	External Control Device	GD26029
	Trigger Device	GD26029.b0
	Transfer Inverting Flag Device	GD26029.b1
External Information Notification	<input checked="" type="checkbox"/> External Notification Device	GD26030
	Device Data Transfer Notification Signal	GD26030.b0
	BCD Conversion Error Notification Signal	GD26030.b14
	Device Data Transfer Error Notification Signal	GD26030.b15
Device	Block Number	3
Block 1	Device Type	Signed BIN16
	Points	1024
	Source Device	0-100 R1C00
	Destination Device	GD30072
	Offset	None
Block 2	Device Type	Bit
	Points	1
	Source Device	GB41
	Destination Device	GD26029.b0
	Offset	None
Block 3	Device Type	Bit
	Points	1
	Source Device	GD26029.b0
	Destination Device	GB41
	Offset	None

ID: 205 Transfer 5

Item		Settings
Device Data Transfer Trigger	Trigger Type	Rise
	External Control Device	GD26031
	Trigger Device	GD26031.b0
	Transfer Inverting Flag Device	GD26031.b1

Item		Settings
External Information	Notification	<input checked="" type="checkbox"/> External Notification Device
	Device Data Transfer Notification Signal	GD26032
	BCD Conversion Error Notification Signal	GD26032.b0
	Device Data Transfer Error Notification Signal	GD26032.b14
Device	Block Number	GD26032.b15
Block 1	Device Type	3
	Points	Signed BIN16
	Source Device	1024
	Destination Device	0-100 R2000
	Offset	GD31096
Block 2	Device Type	None
	Points	Bit
	Source Device	1
	Destination Device	GB41
	Offset	GD26031.b0
Block 3	Device Type	None
	Points	Bit
	Source Device	1
	Destination Device	GD26031.b0
	Offset	GB41

ID: 206 Transfer 6

Item		Settings
Device Data Transfer Trigger	Trigger Type	Rise
	External Control Device	GD26033
	Trigger Device	GD26033.b0
	Transfer Inverting Flag Device	GD26033.b1
External Information	Notification	<input checked="" type="checkbox"/> External Notification Device
	Device Data Transfer Notification Signal	GD26034
	BCD Conversion Error Notification Signal	GD26034.b0
	Device Data Transfer Error Notification Signal	GD26034.b14
Device	Block Number	GD26034.b15

Item		Settings
Block 1	Device Type	Signed BIN16
	Points	1024
	Source Device	0-100 R2400
	Destination Device	GD32120
	Offset	None
Block 2	Device Type	Bit
	Points	1
	Source Device	GB41
	Destination Device	GD26033.b0
	Offset	なし
Block 3	Device Type	Bit
	Points	1
	Source Device	GD26033.b0
	Destination Device	GB41
	Offset	None

ID: 207 Transfer 7

Item		Settings
Device Data Transfer Trigger	Trigger Type	Rise
	External Control Device	GD26035
	Trigger Device	GD26035.b0
	Transfer Inverting Flag Device	GD26035.b1
External Notification Information	<input checked="" type="checkbox"/> External Notification Device	GD26036
	Device Data Transfer Notification Signal	GD26036.b0
	BCD Conversion Error Notification Signal	GD26036.b14
	Device Data Transfer Error Notification Signal	GD26036.b15
Device	Block Number	3
Block 1	Device Type	Signed BIN16
	Points	1024
	Source Device	0-100 R2800
	Destination Device	GD33144
	Offset	None

Item		Settings
Block 2	Device Type	Bit
	Points	1
	Source Device	GB41
	Destination Device	GD26035.b0
	Offset	None
Block 3	Device Type	Bit
	Points	1
	Source Device	GD26035.b0
	Destination Device	GB41
	Offset	None

ID: 208 Transfer 8

Item		Settings
Device Data Transfer Trigger	Trigger Type	Rise
	External Control Device	GD26037
	Trigger Device	GD26037.b0
	Transfer Inverting Flag Device	GD26037.b1
External Notification Information	<input checked="" type="checkbox"/> External Notification Device	GD26038
	Device Data Transfer Notification Signal	GD26038.b0
	BCD Conversion Error Notification Signal	GD26038.b14
	Device Data Transfer Error Notification Signal	GD26038.b15
Device	Block Number	3
Block 1	Device Type	Signed BIN16
	Points	1024
	Source Device	0-100 R2C00
	Destination Device	GD34168
	Offset	None
Block 2	Device Type	Bit
	Points	1
	Source Device	GB41
	Destination Device	GD26037.b0
	Offset	None

Item		Settings
Block 3	Device Type	Bit
	Points	1
	Source Device	GD26037.b0
	Destination Device	GB41
	Offset	None

ID: 209 Transfer 9

Item		Settings
Device Data Transfer Trigger	Trigger Type	Rise
	External Control Device	GD26039
	Trigger Device	GD26039.b0
	Transfer Inverting Flag Device	GD26039.b1
External Information Notification	<input checked="" type="checkbox"/> External Notification Device	GD26040
	Device Data Transfer Notification Signal	GD26040.b0
	BCD Conversion Error Notification Signal	GD26040.b14
	Device Data Transfer Error Notification Signal	GD26040.b15
Device	Block Number	10
Block 1	Device Type	Signed BIN32
	Points	1
	Source Device	0-100 R1000
	Destination Device	GD26100
	Offset	Source Signed BIN16 GD26042
Block 2	Device Type	Signed BIN32
	Points	1
	Source Device	0-100 R1002
	Destination Device	GD26102
	Offset	Source Signed BIN16 GD26042
Block 3	Device Type	Signed BIN32
	Points	1
	Source Device	0-100 R1004
	Destination Device	GD26104
	Offset	Source Signed BIN16 GD26042

Item		Settings
Block 4	Device Type	Signed BIN32
	Points	1
	Source Device	0-100 R1006
	Destination Device	GD26106
	Offset	Source Signed BIN16 GD26042
Block 5	Device Type	Signed BIN32
	Points	1
	Source Device	0-100 R1008
	Destination Device	GD26108
	Offset	Source Signed BIN16 GD26042
Block 6	Device Type	Signed BIN16
	Points	1
	Source Device	0-100 R100A
	Destination Device	GD26110
	Offset	Source Signed BIN16 GD26042
Block 7	Device Type	Signed BIN16
	Points	1
	Source Device	0-100 R100B
	Destination Device	GD26111
	Offset	Source Signed BIN16 GD26042
Block 8	Device Type	Signed BIN16
	Points	1
	Source Device	0-100 R100C
	Destination Device	GD26112
	Offset	Source Signed BIN16 GD26042
Block 9	Device Type	Signed BIN16
	Points	1
	Source Device	0-100 R100D
	Destination Device	GD26113
	Offset	Source Signed BIN16 GD26042

Item		Settings
Block 10	Device Type	Signed BIN16
	Points	1
	Source Device	0-100 R100E
	Destination Device	GD26114
	Offset	Source Signed BIN16 GD26042

5.8 Script List

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

5.8.1 Project script

Script No.	30007	Script name	Script30007
Comment	Initial Setting		
Data type	Signed BIN16	Trigger type	Rise, GB40
<pre>//Script Initial Start Operation Inhibition [w:GS386] = 1; //Document Page No. Setting [w:GD60080] = 1; [w:GD60081] = 1; [w:GD60082] = 1;</pre>			

5.8.2 Screen script

Base screen 30002

Script No.	30001	Script name	Script30001
Comment	Read Current Position		
Data type	Signed BIN16	Trigger type	Rise, GB30001
<pre>//Transfer the current position to the position data that is specified by the Data Storage No. [w:TMP0000] = [w:GD26005] * 16; [0-100:w:R1000[w:TMP0000]] = [0-100:w:R9000]; [0-100:w:R1001[w:TMP0000]] = [0-100:w:R9001];</pre>			
Script No.	30002	Script name	Script30002
Comment	JOG + Start Processing		
Data type	Unsigned BIN32	Trigger type	Rise, GB30002
<pre>//Manual Operation (Forward) //9900H: Target Position Specification Register //9904H: Speed Specification Register //9908H: Control Flag Specification Register if([w:GD26000] == 0) { [w:GD26000] = 100; } [0-100:w:R9904] = [w:GD26000]; if([b:GB30000] == ON) { //Inching Processing set([0-100:b:R9908.b3]); if([w:GD26002] == 0) { [w:GD26002] = 1000; } [0-100:w:R9900] = [w:GD26002]; }else{ //JOG Operation [0-100:w:R9900] = 39999; }</pre>			
Script No.	30003	Script name	Script30003
Comment	JOG + End Processing		
Data type	Unsigned BIN32	Trigger type	Fall, GB30002

```
//Forward Operation Post-Processing
//9900H: Target Position Specification Register
//9904H: Speed Specification Register
//9908H: Control Flag Specification Register
```

```
if([0-100:b:S0127] == ON)
{
  if(([0-100:b:S0103] == ON) && ([0-100:b:S010B] == ON))
  {
    if([b:GB30000] == OFF)
    {
      //JOG Operation
      [0-100:w:R9900] = 0;
      [0-100:w:R9904] = 0;
    }
  }
}
```

Script No.	30004	Script name	Script30004
Comment	JOG - Start Processing		
Data type	Signed BIN32	Trigger type	Rise, GB30003

```
//Manual Operation (Backward)
//9900H: Target Position Specification Register
//9904H: Speed Specification Register
//9908H: Control Flag Specification Register
```

```
if([w:GD26000] == 0)
{
  [w:GD26000] = 100;
}
[0-100:w:R9904] = [w:GD26000];

if([b:GB30000] == ON)
{
  //Inching Processing
  set([0-100:b:R9908.b3]);
  if([w:GD26002] == 0)
  {
    [w:GD26002] = 1000;
  }
  [0-100:w:R9900] = [w:GD26002] * -1;
}else{
  //JOG Operation
  [0-100:w:R9900] = 0;
}
```

Script No.	30005	Script name	Script30005
Comment	JOG - End Processing		
Data type	Signed BIN32	Trigger type	Fall, GB30003

```
//Backward Operation Post-Processing
//9900H: Target Position Specification Register
//9904H: Speed Specification Register
//9908H: Control Flag Specification Register
```

```
if([0-100:b:S0127] == ON)
{
  if(([0-100:b:S0103] == ON) && ([0-100:b:S010B] == ON))
  {
    if([b:GB30000] == OFF)
    {
      //JOG Operation
      [0-100:w:R9900] = 0;
      [0-100:w:R9904] = 0;
    }
  }
}
```

}			
Script No.	30006	Script name	Script30006
Comment	Inching Mode Initial Processing		
Data type	Signed BIN16	Trigger type	Rise, GB30000
<pre>//Switch to Inching Mode if([0-100:w:R9905] == 0) { [0-100:w:R9908] = 0x000A; }</pre>			

Base screen 30003

Script No.	30012	Script name	Script30012
Comment	Copy Execution		
Data type	Signed BIN16	Trigger type	ON, GB30007
<pre>//Execute Copying //Calculate Copy Target and Position Count [w:TMP0000] = ([w:GD26010] - [w:GD26009]) + 1; //Copy Destination Address Offset [w:TMP0001] = [w:GD26011] * 16; //Copy Source Address Offset [w:TMP0002] = [w:GD26009] * 16; //Number of Copy Points [w:TMP0003] = [w:GD26012]; [w:TMP0006] = 0; fmov([w:TMP0006],[w:GD35192],8192); //Position Data Write Range Error Check (Maximum 512 Points) [w:TMP0030] = (([w:TMP0000] * [w:TMP0003]) + [w:GD26011]) - 1; if([w:TMP0030] > 511) { set([b:GB30008]); }else{ rst([b:GB30008]); } if([b:GB30008] == OFF) { //Copy Necessary Area from Copy Source Data to Work Area [w:TMP0006] = [w:TMP0030] * 16; [w:TMP0007] = [w:GD26010] * 16; [w:TMP0006] = 0; [w:TMP0007] = 0; while([w:TMP0006] < [w:TMP0000]) { bmov([w:GD27000[w:TMP0002]], [w:GD35192[w:TMP0007]], 16); [w:TMP0002] = [w:TMP0002] + 16; [w:TMP0007] = [w:TMP0007] + 16; [w:TMP0006] = [w:TMP0006] + 1; } [w:TMP0008] = 0; //Copy the data which was copied to the work area for the specified number of times. while([w:TMP0008] < [w:GD26012])</pre>			

```

{
    [w:TMP0006] = 0;
    [w:TMP0007] = 0;
    while([w:TMP0006] < [w:TMP0000])
    {
        bmov([w:GD35192[w:TMP0007]], [w:GD27000[w:TMP0001]], 16);
        [w:TMP0001] = [w:TMP0001] + 16;
        [w:TMP0007] = [w:TMP0007] + 16;
        [w:TMP0006] = [w:TMP0006] + 1;
    }
    [w:TMP0008] = [w:TMP0008] + 1;
}

set([b:GB30017]);

}else{
    //Error Display
    [w:GD60004] = 30004;
    rst([b:GB30014]);
}

```

```

//Clear Work Area
[w:TMP0006] = 0;
fmov([w:TMP0006], [w:GD35192], 8192);

```

```
rst([b:GB30007]);
```

Script No.	30013	Script name	Script30013
Comment	Copy Preprocessing		
Data type	Signed BIN16	Trigger type	ON, GB30016

```
//Read Copy Source Data
```

```

//Calculate Copy Source Top Address
[w:TMP0010] = [w:GD26009] / 64;

```

```

//Calculate Copy Source End Address
[w:TMP0011] = [w:GD26010] / 64;

```

```

//Position Data Write Range Error Check (Maximum 512 Points)
[w:TMP0012] = [w:GD26010] - [w:GD26009];

```

```

[w:TMP0030] = ((([w:TMP0012] + 1) * [w:GD26012]) + [w:GD26011]) - 1;
if((([w:TMP0012] < 0) || ([w:TMP0030] > 511))

```

```

{
    set([b:GB30008]);
}else{
    rst([b:GB30008]);
}

```

```

if([b:GB30008] == OFF)
{

```

```

    //Start Device Data Transfer
    [w:TMP0020] = [w:TMP0010] * 2;
    [w:TMP0014] = 0;
    while([w:TMP0014] < (([w:TMP0011] - [w:TMP0010]) + 1))
    {
        [w:GD26023[w:TMP0020]] = 1;
        [w:TMP0020] = [w:TMP0020] + 2;
        [w:TMP0014] = [w:TMP0014] + 1;
    }

```

```
[w:GD60004] = 30005;
```

```
set([b:GB30030]);
```

<pre> set([b:GB30018]); }else{ //Error Display [w:GD60004] = 30004; rst([b:GB30014]); } rst([b:GB30016]); </pre>			
Script No.	30014	Script name	Script30014
Comment	Copy Post-Processing		
Data type	Signed BIN16	Trigger type	ON, GB30017
<pre> //Copy Post-Processing //Calculate Copy Destination Top Address [w:TMP0012] = [w:GD26011] / 64; //Calculate Copy Destination End Address [w:TMP0013] = ((([w:GD26010] - [w:GD26009]) + 1) * [w:GD26012] + [w:GD26011]) - 1) / 64; [w:TMP0003] = [w:GD26012] * 16; [w:TMP0022] = [w:TMP0012] * 2; [w:TMP0014] = 0; while([w:TMP0014] < (([w:TMP0013] - [w:TMP0012]) + 1)) { //Start Device Data Transfer [w:GD26023[w:TMP0022]] = 3; [w:TMP0022] = [w:TMP0022] + 2; [w:TMP0014] = [w:TMP0014] + 1; } set([b:GB30019]); rst([b:GB30017]); </pre>			
Script No.	30015	Script name	Script30015
Comment	Copy Execution Trigger Start		
Data type	Signed BIN16	Trigger type	ON, GB30018
<pre> //Wait For Device Data Transfer Completion if(([w:GD26023] == 0) && ([w:GD26025] == 0) && ([w:GD26027] == 0) && ([w:GD26029] == 0) && ([w:GD26031] == 0) && ([w:GD26033] == 0) && ([w:GD26035] == 0) && ([w:GD26037] == 0)) { if([b:GB30030] == ON) { set([b:GB30029]); }else{ set([b:GB30007]); } rst([b:GB30018]); } </pre>			
Script No.	30016	Script name	Script30016
Comment	Copy Trigger Reset		
Data type	Signed BIN16	Trigger type	ON, GB30019
<pre> //Wait For Device Data Transfer Completion if(([w:GD26023] != 3) && ([w:GD26025] != 3) && ([w:GD26027] != 3) && ([w:GD26029] != 3) && ([w:GD26031] != 3) && ([w:GD26033] != 3) && ([w:GD26035] != 3) && ([w:GD26037] != 3)) { </pre>			

<pre> [w:TMP0022] = 0; [w:TMP0014] = 0; //Trigger Reset while([w:TMP0014] < 8) { [w:GD26023[w:TMP0022]] = 0; [w:TMP0022] = [w:TMP0022] + 2; [w:TMP0014] = [w:TMP0014] + 1; } rst([b:GB30019]); rst([b:GB30014]); </pre>			
Script No.	30009	Script name	Script30009
Comment	Copy Preprocessing 2		
Data type	Signed BIN16	Trigger type	ON, GB30029
<pre> //Read Copy Destination Data //Calculate Copy Destination Top Address [w:TMP0000] = [w:GD26011] / 64; //Calculate Copy Destination End Address [w:TMP0001] = ((([w:GD26010] - [w:GD26009]) + 1) * [w:GD26012]) + [w:GD26011]) - 1; [w:TMP0002] = [w:TMP0001] / 64; //Position Data Write Range Error Check (Maximum 512 Points) [w:TMP0003] = [w:GD26010] - [w:GD26009]; if([w:TMP0003] < 0 ([w:TMP0001] > 511)) { set([b:GB30008]); }else{ rst([b:GB30008]); } if([b:GB30008] == OFF) { //Start Device Data Transfer [w:TMP0004] = [w:TMP0000] * 2; [w:TMP0005] = 0; while([w:TMP0005] < (([w:TMP0002] - [w:TMP0000]) + 1)) { [w:GD26023[w:TMP0004]] = 1; [w:TMP0004] = [w:TMP0004] + 2; [w:TMP0005] = [w:TMP0005] + 1; } rst([b:GB30030]); set([b:GB30018]); }else{ //Error Display [w:GD60004] = 30004; rst([b:GB30014]); } rst([b:GB30029]); </pre>			
Script No.	30010	Script name	Script30010
Comment	Position Data Read		
Data type	Signed BIN16	Trigger type	ON, GB30015

<pre>//Read the position data to edit from the controller and [w:TMP0000] = 0; fmov([w:TMP0000],[w:GD26100],16); [w:GD26042] = [w:GD26006] + ([w:GD26008] * 16); //execute Device Data Transfer. set([b:GD26039.b0]); rst([b:GB30015]);</pre>			
Script No.	30011	Script name	Script30011
Comment	Position Data Write Execution		
Data type	Signed BIN16	Trigger type	ON, GB30006
<pre>//Write the edited position data to the robot controller and [w:TMP0000] = [w:GD26006] + ([w:GD26008] * 16); //execute Device Data Transfer. set([b:GD26039.b1]); set([b:GD26039.b0]); [w:GD60004] = 0; rst([b:GB30006]);</pre>			
Script No.	30008	Script name	Script30008
Comment	Device Data Transfer Flag Clear		
Data type	Signed BIN16	Trigger type	ON, GD26040.b0
<pre>//Reset Device Data Transfer Trigger and Transfer Destination Inversion Flag rst([b:GD26039.b1]); rst([b:GD26039.b0]);</pre>			
Script No.	30017	Script name	Script30017
Comment	Recipe Write Trigger Reset		
Data type	Signed BIN16	Trigger type	Rise, GD26019.b4
<pre>//Reset Recipe Write Trigger rst([b:GD26016.b0]);</pre>			
Script No.	30018	Script name	Script30018
Comment	Recipe Read Trigger Reset		
Data type	Signed BIN16	Trigger type	Rise, GD26019.b5
<pre>//Reset Recipe Read Trigger rst([b:GD26016.b1]);</pre>			

Window screen 30002

Script No.	30019	Script name	Script30019
Comment	Manual Display Screen Language Switching		
Data type	Signed BIN16	Trigger type	When closing a screen
<pre>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 } }</pre>			

5.8.3 Object script

Window screen 30003

Object (Name)	Numerical display (Year)		
Script user ID	1		
Data type	Unsigned BIN16	Trigger type	Rise, GB40
<pre>//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</pre>			

Object (Name)	Numerical display (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 (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 (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 (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 (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;			

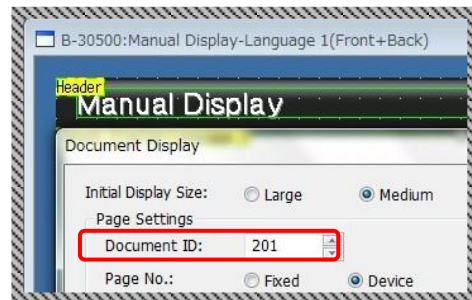
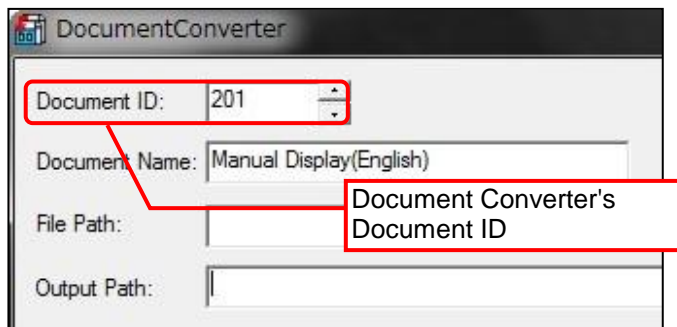
6. MANUAL DISPLAY

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, the languages of the manual are switched by switching to the base screen to which the document (Document ID) of the selected language is specified.

6.1 Preparing Document Data for Manual Display

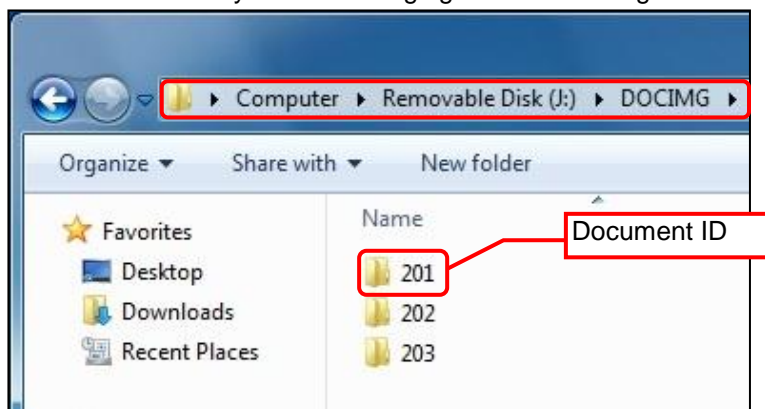
Example: Displaying a manual (document) on the base screen B-30500: Manual Display - Language 1

- (1) Convert the manual (Word or Excel, etc.) 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 in 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.

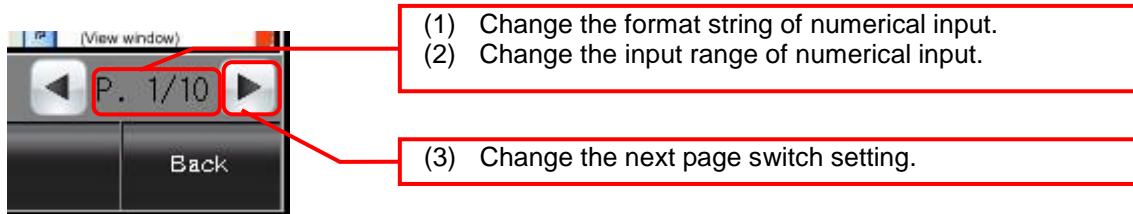


SD card folder configuration

6.2 Changing the Total Number of Document Pages

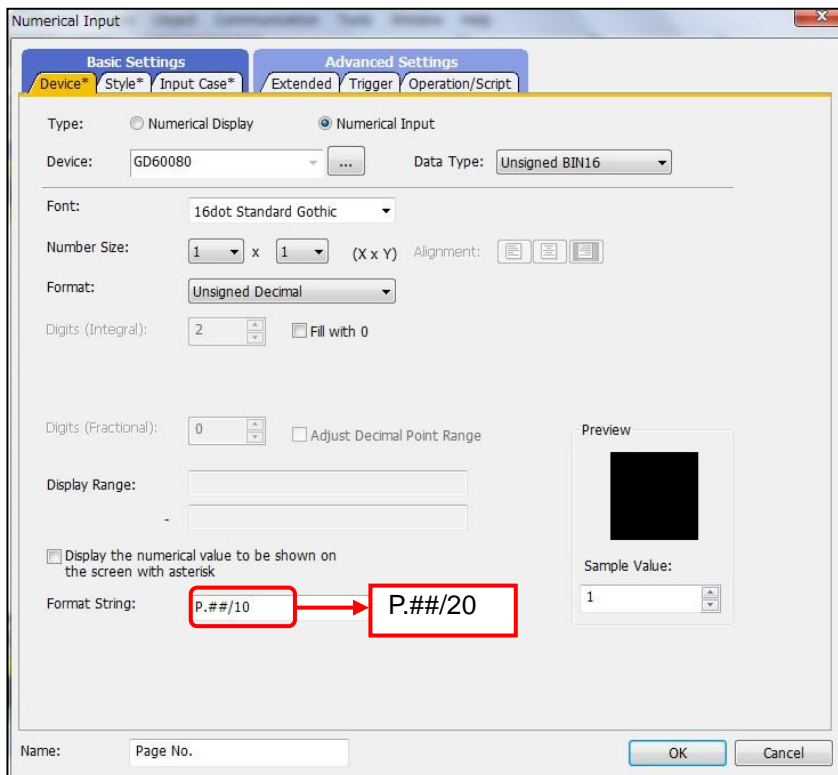
Change the total number of pages at the lower right of the screen according to the total page number of the document to be displayed.

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

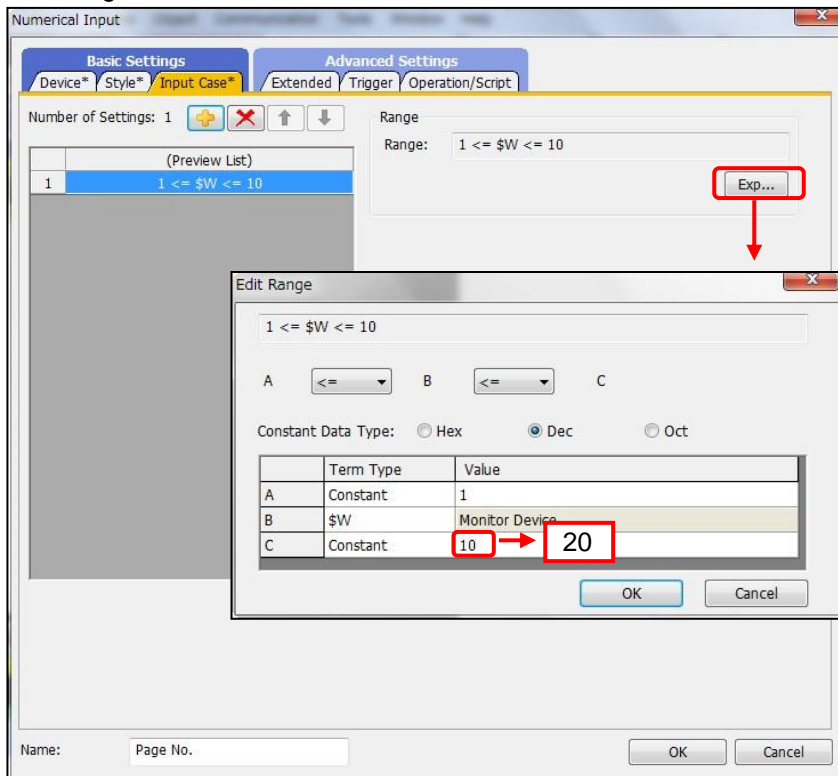


(1) Change the format string of numerical input.

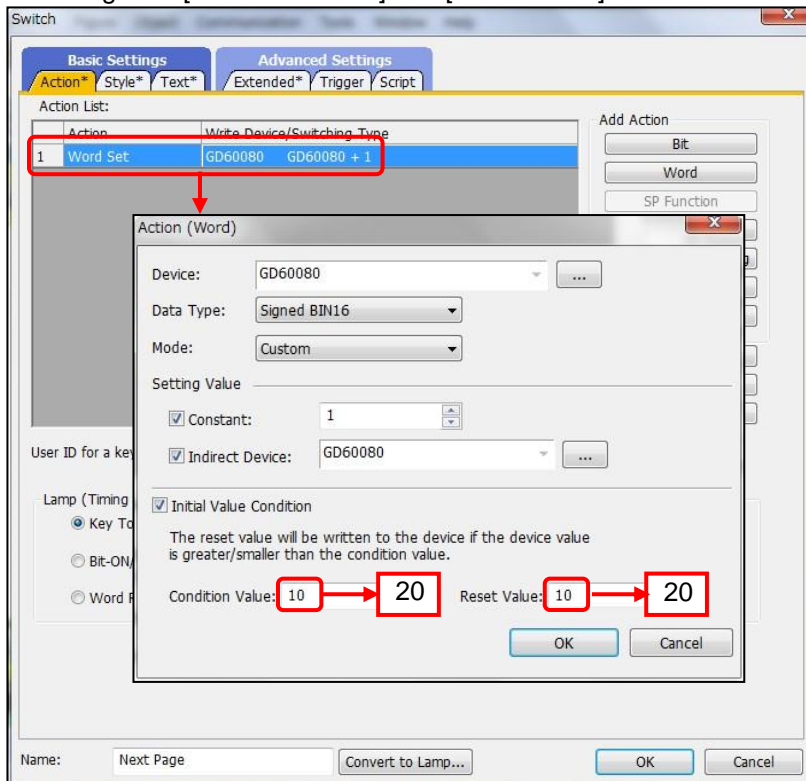
1. Double-click the numerical input, and open the [Device] tab on the dialog box.
2. Change the [Format String] from "P.##/10" to "P.##/20".



- (2) Change the input range of numerical input.
1. Open the [Input Range] tab on the dialog box.
 2. Click on [Exp...], and open the [Edit Range] dialog box.
 3. Change the constant from 10 to 20.

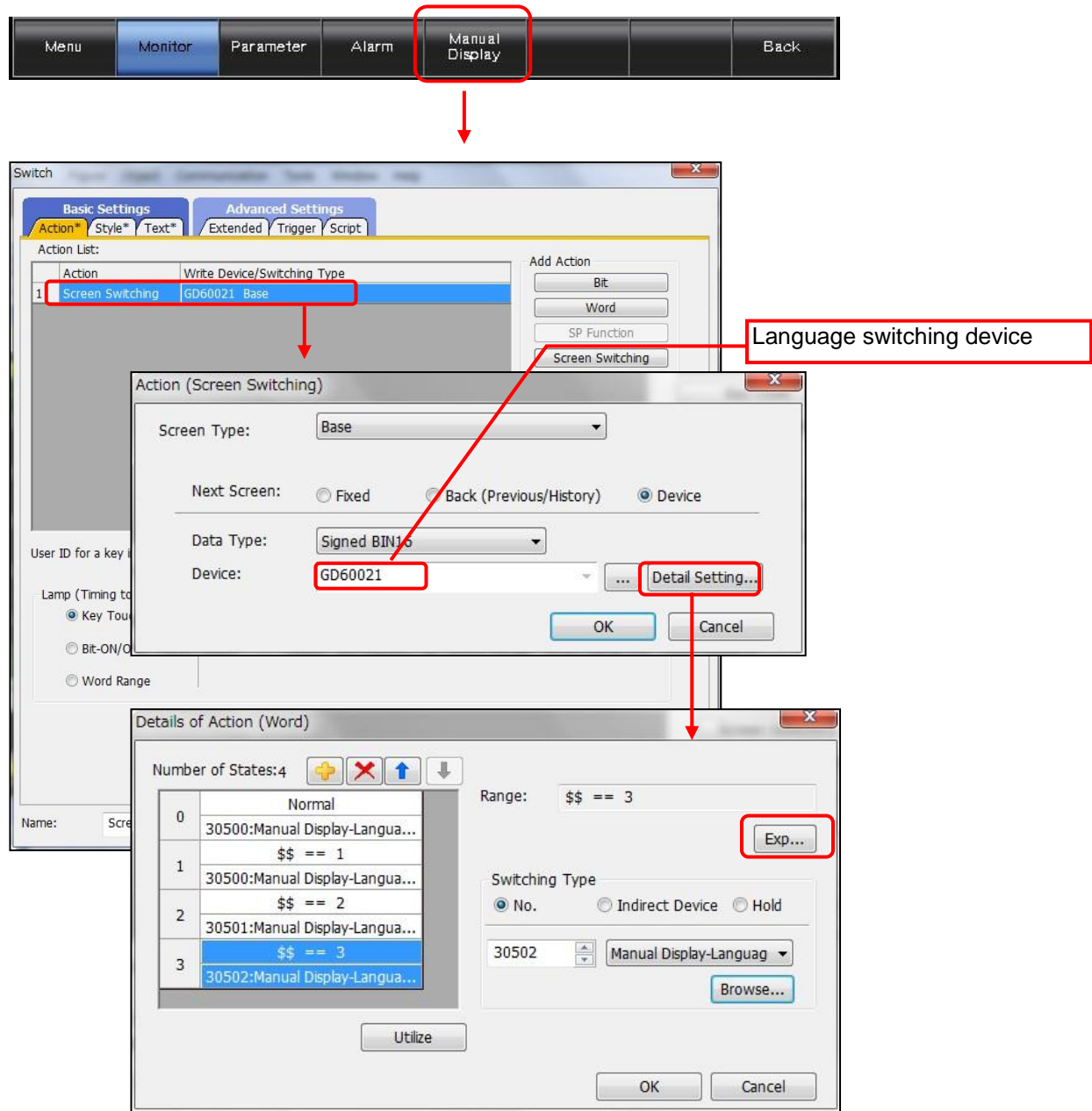


- (3) Change the next page switch setting.
1. Open the [Action] tab on the dialog box.
 2. Double-click on [Action 1], and open the [Action (Word)] dialog box.
 3. Change the [Condition Value] and [Reset Value] from 10 to 20.



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 Column No., please refer to "5.1 Display Language".



7. TEMPLATES

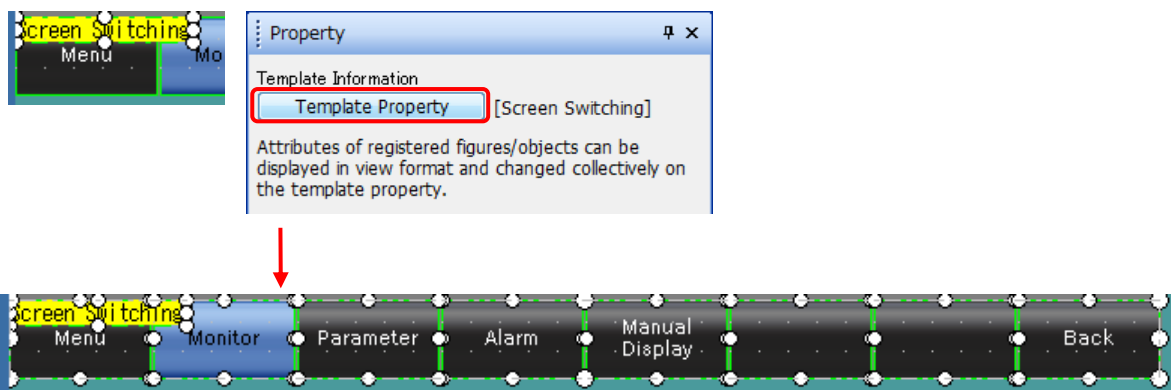
Templates are a group of figures and objects. Related settings are grouped into template attributes and registered, so the devices and colors, etc. can be easily changed in a batch. For more details about changing the attribute settings, please refer to the "GT Designer3 (GOT2000) Help".



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 on [Template Property] (or double-click [Template Information]).



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

(2) Double-click on [Setting Value] of [Switch(Each Screen)_Shape Color], and select the new color.

