# 12 Writing Excel Data in Device/PLC

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# 12.1 Try to Write Recipe Data in Device/PLC

#### [Action Example]

Detect the rising of the trigger device (bit device: "M01") of Device/PLC and write recipe sheet data created in Excel into 5 devices (word device: address "D50" to "D54") of Device/PLC.

(Example) Writing the data of record No. "1" of a recipe sheet.



This section describes the setting procedures for executing the above action (ACTION) as an example.

# [Setting Procedure]

1	Creating a Recipe Sheet (page12-4)	This step creates a recipe sheet in 'Microsoft Excel' to write in Device/PLC.
2	Starting 'Pro-Studio EX' (page12-5)	This step starts 'Pro-Studio EX'.
3	Registering Entry Nodes (page12-5)	This step registers the PC and the display units as entry nodes.
4	Registering Symbols (page12-6)	This step registers as a symbol the device of Device/ PLC to write data in.
5	Specifying a Recipe Sheet and its Output File (page12-8)	<ul><li>This step sets the following items:</li><li>Specify a recipe sheet</li><li>Specify an output file</li></ul>
6	Setting the Contents of a Recipe Sheet (page12-11)	<ul><li>This step sets the following items:</li><li>Set a writing device</li><li>Set the area to read out</li></ul>
7	Setting ACTION Node/Process Completion Notification (page12-24)	This step sets the name of an ACTION node and the alert setting whether it should be tuned on or off when the ACTION is completed.
8	Verifying Setting Result (page12-26)t	This step verifies setting results on the setting content list screen.
9	Saving a Network Project File (page12-28)	This step saves the current settings as a network project file and reloads.
10	Transferring a Network Project File (page12- 29)	This step transfers a saved network project file to the display unit.
11	Executing ACTION (page12-29)	This step verifies that recipe data is written in the specified area of Device/PLC when the preset trigger condition has become effective.

# 12.1.1 Creating a Recipe Sheet

This step creates a recipe sheet where data to write in Device/PLC exists.

1 Start 'Microsoft Excel' and create the recipe sheet below in Sheet 1.

## [Creation Example]



Leave both spaces for "Symbol Name" (Cells B1 to F1) and those for "Record No." (Cells A2 to A4) blank for these will be automatically allotted and filled in after completing the setting.

• You can prepare multiple recipe data on Excel. Allot a record No. for each recipe to specify data to write in Device/PLC. For details, refer to "12.1.6 Setting the Contents of a Recipe Sheet" mentioned later.

**2** Save the recipe sheet with the file name "recipe.xls" on PC desktop after creating.

NOTE

You can create a recipe sheet in the direction (horizontal) as shown below.

"No. of Records" insert field



# 12.1.2 Starting 'Pro-Studio EX'

This step starts 'Pro-Studio EX'.

Refer to "3 Trial of Pro-Server EX" for details about starting method.

## 12.1.3 Registering Entry Nodes

This step registers the PC and the display unit connected with network as nodes. Refer to "31 Node Registration" for details about entry nodes.



Node Name	:PC1
IP Address	:192.168.0.1



Node Name	:AGP1			
IP Address	:192.168.0.100			
Device/PLC Information				



Entry node	Setting item	Setting example
PC	Node Name	PC1
	IP Address	192.168.0.1
	Туре	GP3000 series
Display Unit	Node Name	AGP1
	IP Address	192.168.0.100

# 12.1.4 Registering Symbols

This step registers as a symbol the device address of Device/PLC to which device data is written. Refer to "32 Symbol Registration" for details about symbols.





#### • Trigger (Trigger Condition)

Setting item	Setting content
Symbol Name	Start writing
Data Type	Bit
Device address for symbol registration	"01" of Device/PLC (PLC1)
No. of Devices	1

#### Record No. storage

Setting item	Setting content
Symbol Name	Record No. Storage
Data Type	16Bit (Unsigned)
Device address for symbol registration	"10" of Device/PLC (PLC1)
No. of Devices	1

#### • Writing Device

Setting item	Setting content
Symbol Name	PLC1 data
Data Type	16Bit (Signed)
Device address for symbol registration	"D50" to "D54" of Device/PLC (PLC1)
No. of Devices	5

# 12.1.5 Specifying a Recipe Sheet and its Output File

This step specifies the pre-created recipe sheet and its output file. Refer to "12.3 Setting Guide" for more details.

# **Ex.**

Setting item		Setting content
Specify a Template	Template File	C:\Documents and Settings\Administrator\Desktop\recipe.xls
	Folder Name	C:\Documents and Settings\Administrator\Desktop
Output File	File Name	Recipe write.xls
	Start with the output file displayed	Not checked
	Do not save the output file when ACTION runs.	Not checked

1 Click the [Feature] icon on the toolbar.

饕 Pro-Studio EX 🛛 ?	.npx		
File Edit Tool Pro	gramming Assist Sett	ing Help	
💋 Start >	Node >	Symbol Symbol	Save 2
Symbol		Node Name AGP1	Device Name
Group	Ungroup	Sheet Name Sheet3	- El Set it as a glob
Insert	Delete		

2 Select [ACTION] from the tree display on the left of the screen, then click the [Add] button.

🂱 Pro-Studio EX 🛛 test.npx						
File Edit Tool P	rogramming As:	ist Se	tting He	elp		
💋 Start 🔉	• 🛐 N	ode 🔉	>	Symbol		
Add	Import					
Edit	Delete		ž	ACTION		
ACTION     Trigger Con     Data Trans     Device Cac	dition fer she		I u I r	n addition Ising appli- Ising Acce n the Pro-S eferred to «		

**3** Click the [ACTION Type] list button, and select "Create form using Excel".

Then, enter the name of ACTION to set in the [ACTION Name] field. In this example, enter "Recipe Write".

NOTE	• [ACTION Name] can be an arbitrary name.	

Set ACTION Name,	/Parameter	×
Add a new ACTION Specify an ACTION	l. N name, and set its parameter.	
ACTION Type	Create form using Excel.	•
ACTION Name	Create form using Excel. Writes Data to CSV file. Upload of GP JPEG Data. Upload of GP LEG Data. Writes Data to E-Mail. Upload to the database. Download from the database.	
	Next Cancel	1

4 Click the [Click here to set the ACTION parameter] button.

ACTION Type Creat	e form using Excel.	•
🗖 Di	splay the Actions of the old version of Pro-Server	
ACTION Name Recip	peWrite	
	Click here to set the ACTION parameter.	$\bigcirc$

- **5** Make settings regarding an Excel template and its output file.
  - 1) Click the [Reference] button of [Template File] to set the template file "templete.xlt" which you created.

Template Designation Please specify the name of Excel template file that is the source of forms. When you use the wizard, the theme template file is copied to a file with this name. When you create a new template, please specify the file name.							
Template File	C:\Documents and Settings\Administrator\D	esktopitemplate.x	Reference				
	Edit Template						
Output File The template file stor	res setting info. The actual output result will be dis	played in the followin	g file.				
Folder Name	E:\Program Files\Pro-face\Pro-Server EX\Np	xDatabase	Reference				
File Name	Report_%Y%M%D.xls	Return to Defa	ult Settings				
Start from Displa	yed State						
☐ Do not save the output file when ACTION runs. (Please use the Save or Save by Macro of Excel.)							
		ок	Cancel				

2) Click the [Reference] button of [Folder Name] and specify "Desktop" as a folder to save the output file.

Folder Name	C:\Documents and Settings\Administrator\D	esktop
File Name	Report_%Y%M%D.xls	Return to Default Settings
Start from Disp Do not save th (Please use th	olayed State ne output file when ACTION runs. e Save or Save by Macro of Excel.)	
		OK Cancel

3) Set the file name "Recipe Write.xls" in the [File Name] field for the output file to set.

Output File			
i ne template nie st	ores setting inro. The actual output result will b	e alspiayed in the folio	wing nie.
Folder Name	C:\Documents and Settings\Administrat	or\Desktop	Reference
File Name	RecipeWrite.xls	Return to D	efault Settings
🔽 Start from Disp	layed State		
Do not save the (Please use the	e output file when ACTION runs. Save or Save by Macro of Excel.)		
		ок	Cancel

# 12.1.6 Setting the Contents of a Recipe Sheet

This step sets the contents of a recipe sheet for writing data to Device/PLC. The example below shows the setting of data write area (recipe area) of a recipe sheet. Refer to "12.3 Setting Guide" for more details.



**Ex.** 

Setting item	Setting content
Entry Node	AGP1
Device Name	PLC1
Device Address/Symbol Group	PLC1 data
Add Device Address/ Symbol Name	Checked
Target Cell Range	A1 to F4
Data Direction	Specify the direction of record No.s as "Vertical".
Trigger Condition Name	Turn on write start bit
Trigger Condition	When "Start writing" (M01) is ON

1 Click the [Edit Template] button.

С	reate form using E	cel	
			Version 1.22
	<ul> <li>Template Designation</li> </ul>	)	
	Please specify the r When you use the When you create a	name of Excel template file that is the source of forms. wizard, the theme template file is copied to a file with this name. new template, please specify the file name.	
	Template File	C:/Documents and Settings/Administrator/Desktop/template.x	Reference
		Edit Template	

The recipe sheet appears.

- 2 Set a data write area.
  - 1) Click the [Recipe Area] icon on Excel.

Microsoft Ex	🛛 Microsoft Excel - template.xlt										
📳 Eile Edit y	Eile Edit View Insert Format Iools Data Window Help ExcelAction(A)										
🗋 🗅 😅 🖬 🛔	🗋 🚅 🔚 🚑 📾 🖘 + 🍓 Σ 💤 🛃 🛍 😨 🐥 Arial 🛛 + 10 + Β Ζ 🖳 🚍 + 💩 +									• 🕭 • ÷	
🔛 😭 🔂 I	🗸 🖬 🗖	• == ==		A 🗔 💈	≈						
	8 👼	of 🔐 🗖	e 🚽 📩								
		=									
A Rec	ipe Area	С	D	E	F	G	Н	1	J	K	
1											
2	10	20	30	40	50						
3	60	70	80	90	100						
4	110	120	130	140	150						
5											
8											

```
NOTE
```

• Selecting "Recipe Area" from [Excel Action] of the menu displays the same screen.



2) Click the list button of [Node] and select "AGP1" as a data transfer destination node.

Becipe	_ 🗆 X
Action Settings Record No. Settings Trigger Condition Settings	
Device Settings	
Node ITrigger-Source Node Device Name	
Device Address/Symbol AGP1 Group (TriggetsSource Node) No. of Devices	
Data Type 16Bit(Signed)	
Add Device Address/Symbol Name Note: When specifying inconcecutive memory data, please use a group symbol.	

3) Click the list button of [Device Name] and select "PLC1" as a data transfer destination device.

Recipe			<b>_</b> 🗆
Action Settings	Record No. Se	tings Trigger Condition Settings	
Device S	ettings	AGP1 Devic	
Device A	Noae ddress/Symbol Group	AdiriNam ■Na, Pauli	e #INTERNAL of PLC1
Da	ata Type	16Bit(Signed)	
🗹 Add	Device Address	Symbol Name Note: What memory da symbol.	en specifying inconcecutive ata, please use a group

4) Click the list button of [Device Address/Symbol Group] and select "PLC1 data" as a symbol of the data to write in.

👋 Rea	ipe						<u> </u>
Actio	n Settings Record No. Se	ettings Trigger Condition Se	ettings				
	Device Settings Node	AGP1	<b>•</b>	Device Name	PLC1	•	
	Device Address/Symbol Group	<b>a</b>	•	- Local:She	et3 Start		
	Data Type	16Bit(Signed)		- Reco	rdNoStorage		
	Add Device Address	s/Symbol Name	l				

The device number "1" will be automatically entered in [No. of Devices], and "16Bit(Signed)" in [Data Type].

🐝 Recipe					_ 🗆 X
Action Settings Record No. S	attings Trigger Condition Setting	gs			
Device Settings	AGP1		Device	PLC1	
Device Address/Symbol Group	PLC1data		Name No. of Devices		
Data Type	16Bit(Signed)		)		
Add Device Address	:/Symbol Name	No me syr	ote: When sj emory data, j mbol.	pecifying inconcecutive please use a group	

5) Check [Add Device Address/Symbol Name].

Г	Device Settings					
	Node	AGP1	<b>•</b>	Device Name	PLC1	<b>•</b>
	Device Address/Symbol Group	PLC1data	•	No. of Devices	1	÷
	Data Type	16Bit(Signed)				
$\left( \right)$	Add Device Address	:/Symbol Name	No me	ote: When sj emory data, j mbol	pecifying incono please use a gro	cecutive oup

• After the procedure of "12.1.9 Saving a Network Project File" described later, open the template again, and open the recipe setting dialog box. After confirming that the "Add Device Address/ Symbol Name" checkbox has been checked, click the [OK] button. Then, the device address/ symbol name will be reflected in the template.

6) Click the cell range specify button of [Target Cell Range].

Layout Settings Target Cell Range	Sample
Data Direction	The arrow points in the direction of arranging recipe data.
No. of Records	D101         D102         D103         D104           1         25         25         25         25           2         50         20         20         10           3         20         20         30         30
Note, The layout of a group symbol is lixed.	4 10 10 10 70

7) Drag the mouse to specify the data write area (cells A1 to F4). Then click the [OK] button.

	A	В	С	D	E	F	G	Н		J	K	
1												
2		10	20	30	40	501						
3		60	70	80	90	100)						
4		110	120	130	140	150						
5				Specify R	ange			? ×				
6				Dieace cor	acify the rang	0						
7				Fiease spe	sary the rang							
8												
9												_
10												
11				\$A\$1:\$F	\$4							
12				_								
13						OK		incel				
14							<u>v</u>					
15												
16												
17		1	1	1	1				1	1		
		When an		the erec	a a wan th	a aalla ta	incont	accord N	a and D	arriaa Ad	ldrogg/C	umb al l
NO	TE •	w nen sp	becitying	the area,	cover th	e cells to	) insert f	ecord No	Distand D	evice Ac	aress/S	ymdol

8) Select "Vertical" of [Data Direction].

Target Cell     \$A\$1:\$F\$4       Range     Device       Data Direction     Total State	Sample An image of writing to a cell is shown below. The arrow points in the direction of arranging recipe data.
No. of Records 3	D101         D102         D103         D104           1         25         25         25         25           2         50         20         20         10           3         20         20         30         30           4         10         10         10         70

NOTE

9) Click [Allot Record No. from 1 to Cell Range].

arget Cell \$4\$1:\$F\$4	An image of writing to a cell is shown below.
ata Direction	The arrow points in the direction of arranging recipe data.
	D101 D102 D103 D104
No. (Decenter 2 🔺	1 25 25 25 25
No. of Records P 🖃	2 50 20 20 10
Note: The layout of a group symbol is fixed	3 20 20 30 30
Hote. The layest of a group symbol is fixed.	4 10 10 10 70
	Allot Record No. from 1 to Cell Range

• Specify the recipe data to write in Device/PLC with record No.s. This example allots record No.s to the recipe data.

Record No.s and ruled lines are automatically added on the recipe sheet.

	А	В	С	D	E	F	G
1							
2	1	10	20	30	40	50	
3	2	60	70	80	90	100	
4	3	110	120	130	140	150	
5							
6							

**3** Specify a record No.

Specify the recipe data by entering a record No. in the symbol "Record No. storage" from display unit or Device/ PLC.

(Example) In case of storing device data "1" in the device "Record No. storage".





1) Click the [Record No. Settings] tab.

🖗 Recipe			_ 🗆 X
Action Settings Record No. Settings Digger Condition Settings			
Device Settings			
Node AGP1	Device Name	PLC1 💌	
Device Address/Symbol I PLC1data	No. of Devices	5 .	

2) Click "Specify by device/symbol values" in [Record No. at Write Recipe].

📽 Recipe 📃	
Action Settings Record No. Settings Trigger Condition Settings	
The recipe has two or more records. Please configure the specification method of them.	
Becord No. at Write Recipe	
Node (Trigger-Source Node Device Name	
Device Data Type 16Bit(Signed)	
No. of Characters	
O Specify by cell value	
\$4\$1	
100:200 300 400 From Cell to PLC	

• If you select [Specify by cell value], specify any cell on Excel. The number entered in the cell is recognized as the record No. Refer to "12.3 Setting Guide" for more details. 3) Click the list button of [Node] and select the node name "AGP1" which has the Device/PLC to store the record No.

8	Recipe					_ 🗆 ×			
	Action Settings	Record No. Setting	S Trigger Condition Setting	s					
	The recipe has two or more records. Please configure the specification method of them.								
	Record No. a	it Write Recipe				- I			
	Specessory	ify by device/symbol	value						
	Node	ii.	ger-Source Node) 💌 🛛	Device   Name	•				
	Device Address	/Symbol	P1 igne(Source Node)	Data Type	16Bit(Signed)				
				No. of Chara	acters 1 🔅				

4) Click the list button of [Device Name] and select the Device/PLC "PLC1" to store the record No.

8	Recipe				_ 🗆 🗙			
	Action Settings	Record No. Settings	Trigger Condition Settings	]				
The recipe has two or more records. Please configure the specification method of them.								
	Record No. a	at Write Recipe						
	Spece	ify by device/symbol v	alue					
	Node	AGF	יז די י	Device #INTERNAL				
	Device Address	/Symbol 🔳	<b>v</b>	Data Type				
				No. of Characters				

5) Click the list button of [Device Address/Symbol] and select the symbol name "Record NoStorage" of the device to store the record No.

Necipe				_ [	×
Action Settings Record No. Se	ettings Trigger Condition Se	ettings			ŀ
The recipe has two or m	ore records. Please configur	e the specification me	ethod of them.		
Record No. at Write Recipe					
Specify by device/sy	mbol value				
Node	AGP1 💌	Device Name	PLC1	•	
Device Address/Symbol	<b>a</b>	▼ ⊡- Local:Shee	t3 art NoStorage		
C Specify by cell value	\$A\$1	PLC1da	ata 🔓		

The device data type "16Bit(Unsigned)" will be automatically entered in [Data Type].

- 4 Set trigger conditions.
  - 1) Click the [Trigger Condition Settings] tab.

8	Recipe							_ 🗆 X
	Action Settings	Record No. Se	ttings   Trigger Conc	lition Settings	)			
The recipe has two or more records. Please configure the specification method of them.								
	Record No. a	at Write Recipe						
	Spece	ify by device/syr	mbol value					
	Node		AGP1	•	Device Name	PLC1	•	
	Device Address	/Symbol	RecordNoStora	ige 🔻	Data Type	16Bit(Signed)		

The "Trigger Condition Settings" screen will appear.

📽 Recipe	_ 🗆 🗙
Action Settings Record No. Settings Trigger Condition Settings	
Action Area No.	
When the specified trigger type (under-condition button) is satisfied, this area is executed. Please specify a trigger type.	
New Trigger Condition     New Trigger Button       Write     Read	
Edit         Delete           Trigger Condition         Trigger Condition	
*	
If two or more are specified, the Action is executed when any of them is satisfied.	
For more complicated operation, please configure from [Excel Action]-[Execution Sequence List] in the menu.	
OK	Cancel

2) Click the [New Trigger Condition] button.

New Trigger Condition	New Trigger Button		
Edit Delete		Edit Delete Trigger Condition	

• You can also activate ACTION by placing a button on Excel from [New Trigger Button] and clicking it. Refer to "12.3 Setting Guide" for more details.

3) Click the [New Trigger Condition] button.

Set Trigger Condition
Specify a trigger condition of the ACTION.
Trigger Condition
New Trigger Condition
Edit
Node
Close

 Enter the trigger condition name "TurnOnWriteStartBit" in [Trigger Condition Name], and select "AGP1" in [Node Name] as a name of the data transfer source.

			×
Trigger Condition Name	TurnOnWriteStartBit	-0	
Node Name	PC1 Add Node		Find Node
	AGP1		
			•

5) Click the [When Device ON] button in the [Condition 1] tab and select "PLC1" for the device name.

Condition 1		
🛒 When Turned ON	While Device is ON	While Condition Satisfied
G Specified Time	While Device is OFF	🐞 When Condition Satisfied
Constant Cycle	When Device ON	🔠 When Partner Node ON
When Device Changes	When Device OFF	When Partner Node OFF
Device Name #INTERNAL #INTERNAL PLC1 S Data Type 16Bit(Signed)	Turn OFF the Specified Processing.	d Device Address after
Limited Time Offer	hour 📑 min	Check Cycle 🗖 Always
	Detail Settings	OK Cancel

6) Click the [Device Address] list button and select "WriteStart" for the device symbol name which serves as the trigger.

Device Name		
PLC1	Local Sheet3	
Device Address		
Image: Image	Recordivertorage	
Data Type 16Bit(Signed)		
Limited Time Offer		
0 + hour 0 + min · 0 + hou	u la	
		-
	el	Í
		Ī

[Data Type] automatically appears after selection, too.

7) Click the [OK] button.

Device Name	Turn OFF the Specified Device Address after
Device Address	Processing.
WriteStart	
Data Type Bit	
Limited Time Offer	Check Cycle 🔲 Always
0 - hour 0 - min · (	hour in 500 ms
	Detail Settings OK Cancel

8) Click the [Close] button.

Set Trigger Condition
Specify a trigger condition of the ACTION.
Trigger Condition
New Trigger Condition
TurnOnWriteStartBit Edit
Node AGP1
When WriteStart of Node AGP1 is Turned ON
Close

9) Click the blank line of [Write] and select "TurnOnWriteStartBit" as a trigger condition.

New Trigger Condition New Trigge	er Button
Write Edit Delete	Read Edit Delete
Trigger Condition	/iteStartBit
	н <u>с</u>

10) Click the [OK] button.

()	If two or more are specified, the Action is executed when any of them is satisfied.
	For more complicated operation, please configure from [Excel Action]-[Execution Sequence List] in the menu.
	OK Cancel

11) Click the [OK] button.



• Here the dialog box will appear because no network project file is loaded to 'Pro-server EX'. This is not a problem, however. The file will be loaded in "12.1.9 Saving a Network Project File" mentioned later.

This is the end of the content settings of a recipe sheet.

- Can display Data/Time on an Excel sheet.
  - Can display arrows on an Excel sheet.
    - <sup>©</sup> "5.3 Writing Arrows in a Form"
  - Can display a trigger source node on an Excel sheet.

"5.4 Writing Trigger Source Node Names in a Form"

5 Close 'Excel'.

Microsoft Excel - template.xlt								×
File Edit View Insert Format Tools Data	Window Help	ExcelAction(A	Ŋ				_ 8	×
Ctrl+N		?) 🎇 Arial		• 10 •	BI	u 🖻 🖻	- 🔈 -	• »
🔽 🚰 Open Ctrl+O								-
		<u>~.</u> -						
	L							
Curro								_
	D	E	F	G	Н	1	J	
1 Web Page Preview	20	40	50					-
3 Page Setup	80	40	30 100					-
4 Print Area	► 130	140	150					1
5 👌 Print Preview								
6 ∰ Print Ctrl+P								-
7	. —							-
								-
10 <u>1</u> \Documents and Se\exceltablexis.xis								-
11 2 \Documents and Settings\A\Book1.xls								
12 <u>3</u> \Documents and Settings\m\aaaa.xls								
13 4 \Documents and Settings\mh\test.xls								-
14 15 Exit								-
16 ×								
17	_							
18								-
H I D Sheet1			•			1	•	
🐚 🖬 Of OL 🕸 🕸 🚽 = 🏷 🖉 🏌								
Ready						NUM		

The following dialog box will appear, asking you if you want to save changes before closing. Click the [Yes] button.



6 On the "Create form using Excel" screen, click the [OK] button.

Cutput File		
The template file stor	es setting info. The actual output result will be	displayed in the following file.
Folder Neme	C:\Documents and Settings\Administrato	r/Desktop Reference
T older Name	I	
File Name	RecipeWrite.xls	Return to Default Settings
🔽 Start from Displa	yed State	
- Do not save the	output file when ACTION runs.	
Please use the 9	Save or Save by Macro of Excel.)	
		OK Cancel

## 12.1.7 Setting ACTION Node/Process Completion Notification

This step sets the name of an ACTION node and the alert setting whether it should be tuned on or off when the ACTION is completed.



- ACTION Node : PC1
- Receive Notification: OFF

1 On the "Set ACTION Name/Parameter" screen, click the [Next] button.

Set ACTION Name/Parameter	×
Add a new ACTION. Specify an ACTION name, and set its parameter.	
ACTION Type Create form using Excel.	]
Display the Actions of the old version of Pro-Server	
ACTION Name RecipeWrite	1
Click here to set the ACTION parameter.	
Next Cancel	

2 Click the list button of [ACTION Node] and select "PC1" as a node where ACTION operates.

Set ACTION Node/Process Completion Notification	×
ACTION Type Create form using Excel.	
ACTION Name RecipeWrite	
Specify an action node (Windows PC) where the ACTION works practical	ly.
PC1 PC1 Paceive Notification Exists	
Please specify the notified device that will be informed of the execution of the ACTION. After the execution of the ACTION, it will be is turned on.	

**3** Turn off the [Receive Notification Exists] check box, if checked.

ACTION Nod	
Receive	Notification Exists
N Please the exe ACTIO	specify the notified device that will be informed of ecution of the ACTION. After the execution of the N, it will be is turned on.
	Device Name
	#INTERNAL
	Notified Device
	Data Type Bit

- **NOTE** Do not check "Receive Notification Exists".
- 4 Click the [Complete] button.

The "Set ACTION Node/Process Completion Notification" screen will disappear. On the left of the screen, the name of ACTION you set will appear.

Device Name	
#INTERNAL	
Notified Device	
<b>Ⅲ</b> ▼	
Data Type Bit	
Back Complete Cancel	

This is the end of the settings of the ACTION node and process completion notification.

#### 12.1.8 Verifying Setting Result

This step verifies setting results on the setting content list screen.

• With the "Excel Report" ACTION, you cannot add, edit or delete a trigger condition in "ACTIONspecific Trigger Condition/Process List". To change a preset condition, click the [Set Parameter] button, and select [Edit Template] to change data on Excel.

1 Select the ACTION name "Recipe Write" from the tree display on the left of the screen.

牧 P	ro-St	udio E	х	?.npx		
File	Edit	Tool	Pr	ogrammin	g Assist	S
	1	Start	<b>&gt;&gt;</b>		Node	2
	Ac	d		Impo	ort	l
	Ec	lit		Dele	te	l
		CTION rigger I Turr lata Tra levice I	Lond Lond nOn\ ansfe Cacl	Vrite mtag WriteStartf er ne	3 it	

Confirm that the setting content appears on the right of the screen.

	_ 🗆 ×
Setting Help	
>> ≽ Symbol >> ≷ Feature >> 📄 Save >> 🖄	Transfer Monitor Status
ACTION-Specific Trigger Condition/Process List	ACTION
Add Edit Release	Delete ACTION
Data Source Node AGP1	RecipeWrite
Trigger When WriteStart of Node AGP1 is Tu Condition Data	Rename
Completion TurnOn TurnOn	Create form using Excel.
	Set Parameter
L	ACTION Node
	PC1

2 Select the trigger condition name "TurnOnWriteStartBit" from the tree display on the left of the screen.



Confirm that the setting content appears on the right of the screen.

					_ 🗆	×
Setting Help						
» ≽ Symbol » ≷ Feature	» 🔡	Save 🔉		🤰 Transfei	Mor Sta	nitor atus
Trigger Condition	Sec	juence D	)iag	ram by Ti	rigger Condition	
	•	Collapse		Tra	nsfer ACTION/Data	
TurnOnWrite Edit	Feature	Source		Destinat	Receive/Process Co	
	<ul> <li>RecipeW</li> </ul>	AGP1.#	->	PC1.Re		
Video Vide Charles Martin ACD1						
when writestart or Node AGP1						
						_

This is the end of the verification of the settings.

# 12.1.9 Saving a Network Project File

This step saves the current settings as a network project file and reloads to 'Pro-Server EX'.

Refer to "25 Saving" for details about saving a network project file.

- 'Pro-Server EX' reads a created network project file, and then executes ACTION according to the settings in the file. The settings therefore need be saved in the network project file.
  - Be sure to reload the network project file to 'Pro-Server EX' If not, ACTION will not work.



#### 12.1.10 Test Write

You can check if the settings are correct before transferring a created network project file to entry nodes.

NOTE	You do not necessarily have to perform a test write. If you skip this, proceed to "12.1.11 Transferring a Network Project File".
MPORTANT •	Note that the data will be actually written in the Device/PLC when you specify the device of Device/PLC as a write destination. To perform a test write, it is necessary that 'Pro-Server EX', to which a created network project file has been loaded, is running.

- 1 Click the [Feature] button.
- 2 Click "ACTION" from the tree display on the left of the screen, then click the [Edit] button.
- **3** On the "Set ACTION Name/Parameter" screen, click the [Click here to set the ACTION parameter] button.
- **4** On the "Create form using Excel" screen, click the [Edit Template] button.

5 With the ACTION area selected, click the [Test Write] icon.

M	licrosoft Ex	cel - templa	ate3.xlt								_	Π×
	<u>File E</u> dit <u>V</u>	jew <u>I</u> nsert	F <u>o</u> rmat <u>T</u> ool	s <u>D</u> ata <u>W</u> ir	ndow <u>H</u> elp I	ExcelAction( <u>A</u>	)				_	Ð×
	🖻 🔒 🔒	) 🖨 🖪	🌮 🐰 🖻		- 🝓 Σ ,	f× ĝ↓ 🛍	2 ×		•	• B .	/ <u>U</u>   =	» •
¢	SnagIt 😭	Window	•	]								
🤬	🗗 👋 🖸	، 🌄 🚨 🖇 ۹	og 📃 🎒	S 🖌	ц							
		<b>T</b>	= =EMBE	D("Pro	Write mOcx.	.FormRange	elnfo.1","")					
	A	В	C	D-1630	E	F	G	Н	I	J	K	
1	·		-				-					
2	( 1						_					
3	2	•										
4	, 3			_			_					
5	, 		L	_		L	_					
6												
7												

At this point, data is written in the Device/PLC.

- You can check that data is being written on the "Symbol Monitor" screen of "Status Monitor". For more details, refer to "28 Simply Confirming On-site Status".
  - Refer to "12.4 Restrictions" for details about the restrictions on test writes.

#### 12.1.11 Transferring a Network Project File

This step loads a saved network project file to 'Pro-Server EX' and then transfers to entry nodes.

Refer to "26 Transferring" for details about transferring a network project file.

**NOTE** • Be sure to transfer a network project file. If not, ACTION will not work.

#### 12.1.12 Executing ACTION

This step verifies that enabling a trigger condition activates ACTION and writes the data of the recipe sheet (File name: "Recipe write.xls") to the specified device of Device/PLC.

🐺 Symbol - Monitor of Pro-Server EX							_ 🗆 🗡
Node AGP1   Device/PLC	PLC1	<ul> <li>Device Ad</li> </ul>	dress Sheet3	•			
Set Diff if 1000	T: 1.17 1	2047	T: 1.17 3		Start		
Polling time   Toboms	I me expended for read	3047ms	I ime expended for write				
G G Symbol Data type	+ Address	Count	+00	+01	+02	+03	+04
💷 WriteStart Bit	M0001	1	1				
RecordNoStor16Bit(Signed)	D0010	1	1				
PLC1data 16Bit(Signed)	D0050	5	10	20	30	40	50
_							
1							

NOTE

• You can check the write/read status using the symbol or device monitor. For more details, refer to "28 Simply Confirming On-site Status".

- If error occurs, you can check the log in the Log Viewer. For more details, refer to "28.5 Monitoring System Event Logs".
- If you want to achieve faster communication during ACTION, refer to "29 Tips for Faster Communication".

This is the end of the explanation of this ACTION.

# 12.2 Modifying Recipe Data from the Actual Values

#### [Action Example]

Detect the rising of the trigger device (bit device: "M01") of Device/PLC and read out the data of 5 devices (word device: address "D50" to "D54") of Device/PLC to an Excel recipe sheet.

(Example) Reading out the data to record No. "1" of a recipe sheet.



This section describes the setting procedures for executing the above action (ACTION) as an example.

# [Setting Procedure]

1	Creating a Recipe Sheet (page12-32)	This step creates a recipe sheet in 'Microsoft Excel' to write the data read from Device/PLC.
2	Starting 'Pro-Studio EX' (page12-33)	This step starts 'Pro-Studio EX'.
3	Registering Entry Nodes (page12-33)	This step registers the PC and the display units as entry nodes.
4	Registering Symbols (page12-34)	This step registers as a symbol the device of Device/ PLC from which data is read.
5	Specifying a Recipe Sheet and its Output File (page12-36)	<ul><li>This step sets the following items:</li><li>Specify a recipe sheet</li><li>Specify an output file</li></ul>
6	Setting the Contents of a Recipe Sheet (page12-39)	<ul><li>This step sets the following items:</li><li>Set a device to read</li><li>Set a recipe write range</li></ul>
7	Setting ACTION Node/Process Completion Notification (page12-53)	This step sets the name of an ACTION node and the alert setting whether it should be tuned on or off when the ACTION is completed.
8	Verifying Setting Result (page12-55)	This step saves the current settings as a network project file and reloads.
	+	
9	Saving a Network Project File (page12-57)	This step saves the current settings as a network project file and reloads.
	+	
10	Transferring a Network Project File (page12- 58)	This step transfers a saved network project file to the display unit.
	+	
11	Executing ACTION (page12-58)	This step verifies that the data of Device/PLC is written in the specified area of a recipe sheet when the preset trigger condition has become effective.

## 12.2.1 Creating a Recipe Sheet

This step creates a recipe sheet to write the data read from Device/PLC.

1 Start 'Microsoft Excel' and create the recipe sheet below in Sheet 1.

#### [Creation Example]



Leave both spaces for "Symbol Name" (Cells B1 to F1) and those for "Record No." (Cells A2 to A4) blank for these will be automatically allotted and filled in after completing the setting.

**2** Save the recipe sheet with the file name "recipe.xls" on PC desktop after creating.

**NOTE** • You can create a recipe sheet in the direction (horizontal) as shown below.



# 12.2.2 Starting 'Pro-Studio EX'

This step starts 'Pro-Studio EX'.

Refer to "3 Trial of Pro-Server EX" for details about starting method.

## 12.2.3 Registering Entry Nodes

This step registers the PC and the display unit connected with network as nodes. Refer to "31 Node Registration" for details about entry nodes.



Node Name	:PC1
IP Address	:192.168.0.1



Node Name	:AGP1	
IP Address	:192.168.0.100	
Device/PLC Information		



Entry Node	Setting item	Setting example
PC	Node Name	PC1
	IP Address	192.168.0.1
Display Unit	Туре	GP3000 series
	Node Name	AGP1
	IP Address	192.168.0.100

# 12.2.4 Registering Symbols

This step registers as a symbol the device address of Device/PLC to which device data is written. Refer to "32 Symbol Registration" for details about symbols.





#### • Trigger (Trigger Condition)

Setting item	Setting content	
Symbol Name	Start reading	
Data Type	Bit	
Device address for symbol registration	"01" of Device/PLC (PLC1)	
No. of Devices	1	

#### Record No. Storage

Setting item	Setting content	
Symbol Name	Record No. Storage	
Data Type	16Bit (Unsigned)	
Device address for symbol registration	"10" of Device/PLC (PLC1)	
No. of Devices	1	

#### Reading Device

Setting item	Setting content
Symbol Name	PLC1 data
Data Type	16Bit (Signed)
Device address for symbol registration	"D50" to "D54" of Device/PLC (PLC1)
No. of Devices	5

# 12.2.5 Specifying a Recipe Sheet and its Output File

This step specifies the pre-created recipe sheet and its output file. Refer to "12.3 Setting Guide" for more details.

# **Ex.**

Setti	ng item	Setting content
Specify a Template	Template File	C:\Documents and Settings\Administrator\Desktop\recipe.xls
	Folder Name	C:\Documents and Settings\Administrator\Desktop
	File Name	Recipe read.xls
Output File	Start with the output file displayed	Checked
	Do not save the output file when ACTION runs.	Not checked

1 Click the [Feature] icon on the status bar.

饕 Pro-Studio EX 💡	.npx		
File Edit Tool Pro	gramming Assist – Setti	ing Help	
对 Start >	Node >	Symbol Symbol	Save 🕽
Symbol		Node Name AGP1	Device Name
Group	Ungroup	Sheet Name Sheet3	Set it as a glob.
Insert	Delete		551 A 25 2 9166

2 Select [ACTION] from the tree display on the left of the screen, then click the [Add] button.

物 Pro-Studio EX	?.пря	
File Edit Tool F	Programming Assist	Setting Help
对 Start 🔉	> 🔪 Node	>> 🌔 Symbol .
Add De Lait	Import Delete	ACTION
ACTION Trigger Cor Data Trans Device Car	ndition sfer che	In addition using applic using Acce In the Pro-S referred to a
**3** Click the [ACTION Type] list button, and select "Create form using Excel".

Then, enter the name of ACTION to set in the [ACTION Name] field. In this example, enter "Recipe Read".

NOTE	• [ACTION Name] car	be an arbitrary name.
------	---------------------	-----------------------

Set ACTION Name/Parameter
Add a new ACTION. Specify an ACTION name, and set its parameter.
ACTION Type Create form using Excel.
ACTION Name Writes Data to CSV file. ACTION Name Writes Data from CSV file. Upload of GP JPEG Data. Upload of GP Log Data. Writes Data to E-Mail. Upload to the database. Download from the database.
OK Cancel

4 Click the [Click here to set the ACTION parameter] button.

ACTION Type Create form using Excel.
Display the Actions of the old version of Pro-Server
ACTION Name RecipeRead
Click here to set the ACTION parameter.

- 5 Make settings regarding an Excel template and its output file.
  - 1) Click the [Reference] button of [Template File] to set the template file "templete.xlt" which you created.

Create form using Excel		
		Version 1.22
┌─Template Designation ───		
Please specify the name When you use the wizard When you create a new l	of Excel template file that is the source of forms. J, the theme template file is copied to a file with this name. template, please specify the file name.	
Template File	C: Documents and Settings\Administrator\Desktop\template.	Reference
	Edit Template	

2) Click the [Reference] button of [Folder Name] and specify "Desktop" as a folder to save the output file.

Output File     The template file stores setting info. The actual output result will be displayed in the following file.							
Folder Name	C: Documents and Settings Administrator D	Reference					
File Name	Report_%Y%M%D.xls	Return to Default Settings					
✓ Start from Displayed State □ Do not save the output file when ACTION runs. (Please use the Save or Save by Macro of Excel.)							
		OK Cancel					

3) Set the file name "RecipeRead.xls" in the [File Name] field for the output file to set.

Folder Name	C:\Documents and Settings\Administrato	pr/Desktop Reference
File Name	RecipeRead.xls	Return to Default Settings
Start from Di	splayed State the output file when ACTION runs. he Save or Save bu Macro of Evcel 1	
Please use t		

4) Check the [Start from Displayed State] check box.

Output File The template file stores setting info. The actual output result will be displayed in the following file.						
Folder Name	esktop Reference					
File Name	RecipeRead.xls	Return to Default Settings				
Start from Displa Uo not save the (Please use the	ayed State routput me when ACTION runs. Save or Save by Macro of Excel.)					
		OK Cancel				

**NOTE** • If you check [Start from Displayed State], you can read/write data with an output file displayed. This is useful if you need to confirm data immediately.

# 12.2.6 Setting the Contents of a Recipe Sheet

This step sets the contents of a recipe sheet to write the data read from Device/PLC. The example below shows the setting of data read area (recipe area) of a recipe sheet. Refer to "12.3 Setting Guide" for more details.



**Ex.** 

Setting item	Setting content
Entry Node	AGP1
Device Name	PLC1
Device Address/Symbol Group	PLC1 data
Add Device Address/ Symbol Name	Checked
Target Cell Range	A1 to F4
Data Direction	Specify the direction of record No.s as "Vertical".
Trigger Condition Name	Turn on write start bit
Trigger Condition	When "Start writing" (M01) is ON

1 Click the [Edit Template] button.

Create form using Excel					
	Version 1.22				
Template Designation					
Please specify the name of Excel template file that is the source of forms. When you use the wizard, the theme template file is copied to a file with this name. When you create a new template, please specify the file name.					
Template File	C: Documents and Settings (Administrator Desktop template.x)				
	Edit Template				

- 2 Set a data read area.
  - 1) Click the [Recipe Area] icon on Excel.

Microsoft Excel - Recipe	.xlt								_	
Eile Edit View Insert Format Iools Data Window Help ExcelAction(A)										
0 🛩 🖬 🔒 🎒 🖻	10 v 🤮	<sub>0</sub> Σ <i>f</i> <sub>*</sub> <mark>2</mark>	l 🛍 🛛	° Arial		<b>v</b> 10	• B I	<u>U</u> ≣ ≣	E 🖂 🔹 🤇	🥭 - 🐥
🔛 🕾 🔍 🔽 🖬 🗆										
	=									
A Recipe Area	С	D	E	F	G	Н		J	K	
1										
2										
4										
5										

NOTE

• Selecting "Recipe Area" from [Excel Action] of the menu displays the same screen.



2) Click the list button of [Node] and select "AGP1" as a data transfer source node.

🐝 Rea	ipe	_ 🗆 ×
Actio	on Settings Record No. Settings Trigger Condition Settings	
	Device Settings	
	Node Node Node Node Node Node Node Node	
	Group (Trigger (burce Node) Devices	
	Data Type  16Bit(Signed)	
	I Add Device Address/Symbol Name memory data, please use a group symbol.	

3) Click the list button of [Device Name] and select "PLC1" as a data transfer source device.

🏶 Rei	ipe 🛛		
Actio	on Settings Record No. Se	ttings Trigger Condition Settings	
	Device Settings		
	Node	AGP1  Device Name N	-
	Device Address/Symbol Group	No. of PLCI	
	Data Type	16Bit(Signed)	
	Add Device Address	/Symbol Name Note: When specifying inconcecutive memory data, please use a group symbol.	

4) Click the list button of [Device Address/Symbol Group] and select "PLC1 data" as a symbol of the data to read out.

Action Settings Record No. Settings Trigger Condition Settings	
Device Settings Node AGP1  Device PLC1  Name	
Device Address/Symbol  Group	
Data Type 16Bit(Signed)	
Add Device Address/Symbol Name	

The device number "1" will be automatically entered in [No. of Devices], and "16Bit(Signed)" in [Data Type].

🖗 Recipe							_ 🗆 X
Action Settings	Record No. Se	ttings   Trigger Condi	tion Settings				
Device Se	ettings	AGP1		Device	PLC1	<b>_</b>	
Device A	ddress/Symbol	PLC1data		Name No. of	1	=	
Da	aroup ata Type 🌈	16Bit(Signed)		Device			
🔽 Add	Device Address	/Symbol Name	No me	, ote: When sp emory data, p	pecifying inconce please use a gro	ecutive up	
			syi	mbol.			

5) Check [Add Device Address/Symbol Name].

Action Settings	Record No. S	ettings Trigger Condition	Settings			
-Device S	ettings					
	Node	AGP1	•	Device Name	PLC1	-
Device A	\ddress/Symbo Group	PLC1data	T	No. of Devices	1	•
D	ata Type	16Bit(Signed)				
	Device Addres	s/Symbol Name	No me	te: When sp mory data, p	ecifying inconce blease use a gro	ecutive up

- After the procedure of "12.2.9 Saving a Network Project File" described later, open the template again, and open the recipe setting dialog box. After confirming that the "Add Device Address/ Symbol Name" checkbox has been checked, click the [OK] button. Then, the device address/ symbol name will be reflected in the template.
- 6) Click the cell range specify button of [Target Cell Range].

Layout Settings	Sample
Data Direction	An image of writing to a cell is shown below. The arrow points in the direction of arranging recipe data.
No. of Records	D101 D102 D103 D104 1 25 25 25 25 2 50 20 20 10
Note: The layout of a group symbol is fixed.	3         20         20         30         30           4         10         10         10         70

7) Drag the mouse to specify the data read area (cells A1 to F4). Then click the [OK] button.

	Α	В	С	D	E	F	G	Н		J	K
1											
2	,										
3	1										
4	[										
5	[								_1		
6				Spe	cify Range			? ×	1		
7				Plea	se specify the	e range.					
8				1100	so spoci y cir	orangor					
9											
10											
11											
12				\$A:	\$1:\$F\$4						
13											
14							ОК	Cancel			
15											
16											
17											
18											

**NOTE** • When specifying the area, cover the cells to insert record No.s and Device Address/Symbol Names.

8) Select "Vertical" of [Data Direction].

Layout Settings	Sample
Target Cell \$A\$1:\$F\$4	An image of writing to a cell is shown below.
Range	The arrow points in the direction of arranging
Data Direction	recipe data.
No. of Records 3	D101         D102         D103         D104           1         25         25         25         25           2         50         20         20         10           3         20         20         30         30           4         10         10         10         70

9) Click [Allot Record No. from 1 to Cell Range].

Layout Settings Target Cell \$4\$1:\$F\$4	Sample
Data Direction	An image of writing to a cell is shown below. The arrow points in the direction of arranging recipe data.
No. of Records 3	D101         D102         D103         D104           1         25         25         25         25           2         50         20         20         10           3         20         20         30         30           4         10         10         10         70
	Allot Record No. from 1 to Cell Range

**NOTE** • Specify the recipe data to write in Device/PLC with record No.s This example allots record No.s to the recipe data.

Record No.s and ruled lines are automatically added on the recipe sheet.

	A	В	С	D	E	F	G
1							
2	1						
3	2						
4	3						
5							

**3** Specify a record No.

Specify the recipe data area by entering a record No. in the symbol "Record No. storage" from display unit or Device/PLC.

(Example) In case of storing device data "1" in the device "Record No. storage".



1) Click the [Record No. Settings] tab.

👹 Recipe		
Action Settings Record No. Settings rigger Condition Settings		
Device Settings		
Node AGP1	Device Name	PLC1
Device Address/Symbol I PLC1data	No. of Devices	5 🕂

2) Click "Specify by device/symbol value" in [Record No. at Write Recipe].

Node	(Trigger-Source Node	Device 	<b>•</b>	
Device Address/Symbol		🗾 🛛 Data Type	16Bit(Signed)	
		No. of Char	acters 1 📑	
O Specify by cel	value			
	\$A\$1	R	am	
יזימי	200			)
.300	400 Erom Cell tr	D PLC		5

NOTE

If you select [Specify by cell value], specify any cell on Excel. The number entered in the cell is recognized as the record No.
 Defente "12.2 Setting Cuide" for more details

Refer to "12.3 Setting Guide" for more details.

 Click the list button of [Node] and select the node name "AGP1" which has the Device/PLC to store the record No.

Record	d No. at Write Re Šobecifu bu devi	cipe ce/sumbol value			
N	lode	rigger-Source Node)	Device Name	<b>•</b>	
D Ar	evice .ddress/Symbol	AGP1 Utriage Nource Node	💌 Data Type	16Bit(Signed)	
	Specify by cell (	ushe	No. of Char	acters	
	Specily by cells	sast	BK	(1) The second s	
	100	200 400 From Cell	to PLC		

4) Click the list button of [Device Name] and select the Device/PLC "PLC1" to store the record No.

Record No. at Write Reci	pe
Specify by device	s/symbol value
Node	AGP1 Device
Device Address/Symbol	
	No. of Characters
O Specify by cell value	lue
	\$A\$1
1100 2 300 4	From Cell to PLC

5) Click the list button of [Device Address/Symbol] and select the symbol name "Record NoStorage" of the device to store the record No.

Record No. at Write Recipe		
Specify by device/syr	mbol value	
Node	AGP1 Device PLC1	
Device Address/Symbol	E-Local:Sheet3	
100 200 300 400	From Cell to PLC	

The device data type "16Bit(Unsigned)" will be automatically entered in [Data Type].

- 4 Set trigger conditions.
  - 1) Click the [Trigger Condition Settings] tab.

🎬 Recipe							_ 🗆 🗙
Action Settings	Record No. Setti	Trigger Condition	Settings	)			
The recip	e has two or more	records. Please coni	gure the s	pecification m	ethod of them.		
Record No. a	at Write Recipe —						
Specific	ify by device/symb	ol value					
Node	ļ.	AGP1	·	Device Name	PLC1	•	
Device Address	/Symbol	RecordNoStorage	•	Data Type	16Bit(Signed)		

2) Click the [New Trigger Condition] button.

New Trigger Condition	Trigger Button     Read	
Edit Delete Trigger Condition	Edit Delete Trigger Condition *	

• You can also activate ACTION by placing a button on Excel from [New Trigger Button] and clicking it. Refer to "12.3 Setting Guide" for more details.

3) Click the [New Trigger Condition] button.

Set Trigger Condition
Specify a trigger condition of the ACTION.
Trigger Condition
New Trigger Condition
Edit
Node
Close

 Enter the trigger condition name "TurnOnReadStartBit" in [Trigger Condition Name], and select "AGP1" in [Node Name] as a name of the data transfer source.

			×
Trigger Condition Name	TumOnReadStartBit	FQ.	Find Node
Node Name	PC1 Add Node		Find Node
			-

5) Click the [When Device ON] button in the [Condition 1] tab and select "PLC1" for the device name.

Condition 1					
Specify the	Trigger Condition.				
35	When Turned ON		While Device is ON		While Condition Satisfied
Ġ	Specified Time	<b>1</b>	While Device is OFF		When Condition Satisfied
0	Constant Cycle		When Device ON		When Partner Node ON
	When Device Changes		When Device OFF	*	When Partner Node OFF
Device Nai #INTERN/ #INTERN/ PLC1 Data Type	me AL AL [16Bit(Signed)		Turn OFF the Specified Processing.	d Device	Address after
Limiter	d Time Offer nour O 💼 min - O 🔒	+ hour	0 🛨 min	Che	eck Cycle 🔲 Always 500 🛨 ms
			Detail Settings		OK Cancel

6) Click the [Device Address] list button and select "ReadStart" for the device symbol name which serves as the trigger.

Device Name	The OFF the Constitution Address store	
PLC1	Processing.	
Device Address		_
WriteStart 💌	Er Kocal:Sheet3	
Data Type 16Bit(Signed)	ReadStatt	
	PLC1data	
Limited Time Offer		
0 <u>→</u> hour 0 <u>→</u> min · 0 <u>→</u> hou		
	1	:el

[Data Type] automatically appears after selection, too.

7) Click the [OK] button.

Condition 1						
Specify the Trigger Condition.						
👫 When Turned ON	While Device is ON	While Condition Satisfied				
C Specified Time	While Device is OFF	When Condition Satisfied				
Constant Cycle	When Device ON	🚆 When Partner Node ON				
When Device Changes	When Device OFF	🗏 When Partner Node OFF				
Device Name       PLC1     Image: Turn OFF the Specified Device Address after Processing.       Device Address       Image: ReadStart       Data Type						
Limited Time Offer Check Cycle CAlways						
	Detail Settings	Cancel				

8) Click the [Close] button.

Set Trigger Condition
Specify a trigger condition of the ACTION.
Trigger Condition
New Trigger Condition
TurnOnReadStartBit Edit
Node AGP1
When WriteStart of Node AGP1 is Turned ON

 Click the blank line of [Clear Cel when the following condition is satisfied] and select "TurnOnReadStartBit" as a trigger condition.



10) Click the [OK] button.

$\textcircled{\below}{\b$	If two or more are specified, the Action is executed when any of them is satisfied.
	For more complicated operation, please configure from [Excel Action]-[Execution Sequence List] in the menu.
	OK Cancel

11) Click the [OK] button.

NOTE

Excel Re	port Action - Info	
•	Cannot perform Test Read. Please confirm the followings. - The network project file (npx) has been correctly loaded into Pro-Server EX. - The target node is participating. - The cable is not broken. OK	
Here the dial	og box will appear because no network project file is loade	d to 'Pro-server EX'. This is

The file will be loaded in "12.2.9 Saving a Network Project File" mentioned later.

This is the end of the content settings of a recipe sheet.

not a problem, however.

- Can display Data/Time on an Excel sheet.
  - Can display arrows on an Excel sheet.

"5.3 Writing Arrows in a Form"

- Can display a trigger source node on an Excel sheet.
  - "5.4 Writing Trigger Source Node Names in a Form"

5 Close 'Excel'.

Microsoft Excel - Book1.xls		
File Edit View Insert Format Tools Data	<u>W</u> indow <u>H</u> elp ExcelAction( <u>A</u> )	_ & ×
Ctrl+N	\$↓ <b>ML ② * • • B</b> <i>I</i> <b>U</b> ≡	😑 🛛 • 🕭 • 🔋
📊 🚰 Open Ctrl+O	<sup>1</sup> ∧ [3] *2	
Close		
Gtrl+S		
🛁 🚰 Save as Web Page	celFormOcx.FormRangeInto.1","")	
		<u> </u>
2 web Page Preview		
3 Page Setup		
4 Print Area		
5 Q Print Preview		
7 Ctrl+P		
8 Sen <u>d</u> To	•	
9 1 \Documents and Settings\A\Book1.xls		
10 2 \Documents and Settings\Ad\test.csv		
12 3 \Documents and Settin\FlingData.xls		
13 <u>4</u> \Documents and Se\mailmessage.xls		
14 15 Evit		
17		
18		<b></b>
K ( ) N Sheet1 / Sheet2 Sheet3		
] 🔚 🖬 🔍 🔅 🔍 🕂 🛨 🗮 🤧 🖉	12 -	
Ready	NUM	

The following dialog box will appear, asking you if you want to save changes before closing. Click the [Yes] button.



6 On the "Create form using Excel" screen, click the [OK] button.

Create form using Excel			
			Version 1.10
-Template Designation			
Please specify the name When you use the wizard When you create a new	of Excel template file that is the source of form d, the theme template file is copied to a file with template, please specify the file name.	ns. h this name.	
Template File	E:\Documents and Settings\Owner\Desktop\	template.xit	Reference
	Edit Template		]
Output File The template file stores s	etting info. The actual output result will be disp	played in the follo	wing file.
Folder Name	E:\Documents and Settings\Owner\Desktop		Reference
File Name	RecipeRead.xls	Return to D	efault Settings
Start from Displayed	State		
Do not save the outp (Please use the Save	ut file when ACTION runs. e or Auto-save function of Excel.)		
		ок	Cancel

# 12.2.7 Setting ACTION Node/Process Completion Notification

This step sets the name of an ACTION node and the alert setting whether it should be tuned on or off when the ACTION is completed.



- ACTION Node : PC1
- Receive Notification: OFF

1 On the "Set ACTION Name/Parameter" screen, click the [Next] button.

Set ACTION Name/Parameter 🛛 🛛 🛛 🛛 🛛
Add a new ACTION. Specify an ACTION name, and set its parameter.
ACTION Type Create form using Excel.
Display the Actions of the old version of Pro-Server
ACTION Name RecipeRead
Click here to set the ACTION parameter.
Next Cancel

2 Click the list button of [Action Node] and select "PC1" as a node where ACTION operates.



**3** Turn off the check box of [Receive Notification Exists], if checked.

Device Name #INTERNAL Notified Device Data Type Bit	ACTION Node	otification Exists pecity the notified device that will be informed of ution of the ACTION. After the execution of the it will be is turned on.
Notified Device		Device Name
Data Type Bit		Notified Device
Data Type Bit		<b>T</b>
		Data Type Bit

- **NOTE** Do not check "Receive Notification Exists".
- 4 Click the [Complete] button.

The "ACTION Node/Process Completion Notification Settings" screen will disappear. On the left of the screen, the name of ACTION you set will appear.

	Device Name	_
	#INTERNAL	
	Notified Device	
		·]
	Data Type Bit	]
Bac		ancel

This is the end of the settings of the ACTION node and process completion notification.

#### 12.2.8 Verifying Setting Result

This step verifies setting results on the setting content list screen.

• In case of the "Excel Report" ACTION, you cannot add, edit or delete trigger conditions from "Trigger Condition/Process List per ACTION". To change the settings, click the [Parameters Settings] button and change the settings in [Edit Template] on Excel.

1 Select the ACTION name "RecipeRead" from the tree display on the left of the screen.



Confirm that the setting content appears on the right of the screen.

Setting Help	
>> ≽ Symbol >> 襓 Feature >> 📄 Save >> 🖄	Transfer Monitor
ACTION-Specific Trigger Condition/Process List	ACTION
Add Edit Release	Delete ACTION
Data Source Node AGP1	RecipeRead
Trigger When WriteStart of Node AGP1 is Tu Data	Rename
Completion TurnOn	Create form using Excel.
	Set Parameter
L	ACTION Node
	PC1

2 Select the trigger condition name "TurnOnReadStartBit" from the tree display on the left of the screen.



Confirm that the setting content appears on the right of the screen.

Setting Help					
>> 🔑 Symbol >> ≷ Feature	» 🗄	Save 🔉		🤰 Transfe	r Monitor Status
Trigger Condition	Sec	juence D	iag	ram by T	rigger Condition
		Collapse		Tra	ansfer ACTION/Data
TurnOnRea 💌 🗕 Edit	Feature	Source		Destinat	Receive/Process Co
Node AGP1	RecipeR	AGP1.#	•>	PC1.Re	
When WriteStart of Node AGP1					

This is the end of the verification of the settings.

# 12.2.9 Saving a Network Project File

This step saves the current settings as a network project file and reloads to 'Pro-Server EX'.

Refer to "25 Saving" for details about saving a network project file.

- 'Pro-Server EX' reads a created network project file, and then executes ACTION according to the settings in the file. The settings therefore need be saved in the network project file.
  - Be sure to reload the network project file to 'Pro-Server EX'. If not, ACTION will not work.



- Path of network project file
- Title

: Desktop\monitor.npx : EXCEL Report ACTION

#### 12.2.10 Test Read

You can check if the settings are correct before transferring a created network project file to entry nodes.

When executing ACTION, the setting data is output to an output file. However, when executing a test read, it is reflected in a template file.

NOTE	• You do not necessarily have to perform a test read.
·	If you skip this, proceed to "12.2.11 Transferring a Network Project File".

• To perform a test read, it is necessary that 'Pro-Server EX', to which a created network project file has been loaded, is running.

- **1** Click the [Feature] button.
- 2 Click "ACTION" from the tree display on the left of the screen, then click the [Edit] button.
- **3** On the "Set ACTION Name/Parameter" screen, click the [Click here to set the ACTION parameter] button.
- **4** On the "Create form using Excel" screen, click the [Edit Template] button.
- **5** With the ACTION area selected, click the [Test Read] icon.

	licrosoft Ex	cel - templa	ate3.xlt									
	<u>File Edit Vi</u>	ew <u>I</u> nsert	F <u>o</u> rmat <u>T</u> ool	s <u>D</u> ata <u>W</u> ir	idow <u>H</u> elp	ExcelAction(A	)				_	ЪХ
	🛩 🖬 🔒	) 🖨 🖪	۵ 🎸 🌾		- 🔮 Σ	f* 🛓 🛍	2 ×		-	• B	1 U 🗐	» •
œ	SnagIt 😭	Window										
	69 👋 👩	· 🍇 🥳 .	ogi 📃 🛱	- • •	<b>1</b>							
		-	= =EMBE	D("Pro	Write	.FormRang	elnfo.1","")					
	A	В	С	D	E	F	G	Н	I	J	K	
1	-			ľ			,					
2	. 1						_					
3	2											
4	. 3			L			_					
5	,					1						
8												

The setup contents will be read in the template.

**NOTE** • Refer to "6.4 Restrictions" for details about the restrictions on test reads.

# 12.2.11 Transferring a Network Project File

This step loads a saved network project file to 'Pro-Server EX' and then transfers to entry nodes.

Refer to "26 Transferring" for details about transferring a network project file.

**NOTE** • Be sure to transfer a network project file. If not, ACTION will not work.

# 12.2.12 Executing ACTION

This step verifies that enabling a trigger condition activates ACTION, opens a recipe sheet (file name: "recipe read.xls"), and then writes the device data in the specified location on the sheet.

	A	В	С	D	E	F	G
1		PLC1data[0]	PLC1data[1]	PLC1data[2]	PLC1data[3]	PLC1data[4]	
2	1	10	20	30	40	50	
3	2						
4	3						
5							
6							
7							

NOTE

If error occurs, you can check the log in the Log Viewer. For more details, refer to "28.5 Monitoring System Event Logs".

• If you want to achieve faster communication during ACTION, refer to "29 Tips for Faster Communication".

This is the end of the explanation of this ACTION.

# 12.3 Setting Guide

This section explains how to set each screen in detail.

- 12.3.1 "Creating form using Excel" Screen
  - <sup>™</sup> "■ "Creating form using Excel" Screen"
- 12.3.2 "Recipe" Screen

"Action Settings" Tab

Device Settings Node (Trigger-Source Node) Device Address/Symbol Group Data Type [16Bit(Signed)	Device     Name     No. of     Devices     No. of     Devices
Add Device Address/Symbol Name	Note: when specifying inconcecutive memory data, please use a group symbol.
Data Direction     B\$1:\$F\$1       Device     Record       Device     Record       Direction     The layout of a group symbol is fixed.	An image of writing to a cell is shown below. The arrow points in the direction of arranging recipe data. D101 D102 D103 D104 1 25 25 25 25 2 50 20 20 10 3 20 20 30 30 4 10 10 10 70 Allot Record No. from 1 to Cell Range

Setting	item	Setting content
	Node	<ul> <li>Selects a node which has a device to read/write data</li> <li>NOTE</li> <li>Clicking the [] button can retrieve or add entry nodes.</li> <li>Selecting "(Trigger-Source Node)" will select the entry node that has triggered the action.</li> </ul>
	Device Name	<ul> <li>Selects a node which has a device to read/write data</li> <li><b>NOTE</b></li> <li>It is not necessary to set when the entry nodes are GP Series nodes and Pro- Server EX nodes.</li> </ul>
Device Settings	Device Address/ Symbol Group	Sets the device address or symbol to be used. • When specifying a device address: Enter directly from the Calculator icon Calculator icon Device Address/Symbol Group • When specifying a symbol: Select the symbol by clicking the list button. List button Device Address/Symbol Group NOTE • When setting non-sequential devices, be sure to specify a group symbol.
	Data Type	<ul> <li>When specifying a device address: Specify the data type.</li> <li>Data Type Deselect 16Bit(Signed) 32Bit(Signed) Bit 16Bit(Unsigned) V 32Bit(Unsigned) Float 16Bit(HEX) 32Bit(HEX) Double</li> <li>When specifying a symbol: Data type automatically appears.</li> </ul>
	No. of Devices	<ul> <li>Displays the number of devices to read/write, automatically calculating it from the selected cell range.</li> <li><b>NOTE</b></li> <li>If a group symbol has been selected, the number will be "1".</li> </ul>

Setting item		Setting content			
Device Settings	Add Device Address/ Symbol Name	Displays Device Address, Symbol Name, and/or Group Symbol Name above or on the left of the cells where the data is written, serving as a guide to identify the data. For the display location, specify above or left in "Data Direction" mentioned later. <b>NOTE</b> Refer to the image figure shown in the lower right of the dialog box. • Vertical <b>I</b> DI 01 DI 01 DI 02 DI 03 1 25 25 25 25 25 2 2 5 50 20 10 3 20 20 30 30 4 10 10 10 70 • Horizontal <b>I</b> DI 01 25 50 20 10 DI 02 25 20 20 10 DI 02 25 20 30 10 DI 02 25 20 30 10 DI 04 25 10 30 70			
	Target Cell Range	<ul> <li>Specifies the cell range to which data will be written/read. Clicking the button can select the cell range on Excel.</li> <li>NOTE</li> <li>For the process on how to select cell ranges, refer to "■ Action Area Settings" in "5.1.2 Setting Guide".</li> <li>The useful function is available to check the specified cell range (Action area).Refer to "■ Action Area List" in "5.1.2 Setting Guide".</li> </ul>			
Layout Settings	Data Direction No. of	Sets the data write direction when selecting multiple cells.          Device         Vertical)         Sequentially from top to bottom.         Record         Vertical)         Sequentially from top to bottom.         Vertical)         Sequentially from top to bottom.         Vertical)         Sequentially from top to bottom.         Vertical)         Sequentially from left to right .         NOTE         • The write image of the content set in "Layout Settings" appears in [Sample].         Sets and displays the number of records used for a recipe, automatically			
	No. of Records	Sets and displays the number of records used for a recipe, automatically calculating it from the specified cell range.			

Setting item	Setting content
Allot Record No. from 1 to Cell Range	Automatically inserts record No.s in the area specified in [Data Direction] of [Target Cell Range]. It is possible to enter record No.s directly on Excel, but this could cause erroneous operation due to typing error. For this, we recommend entering with the [Allot Record No. from 1 to Cell Range] button. NOTE • Clicking this button also inserts ruled lines in [Target Cell Range] automatically.

"Record No. Settings" Tab

Recipe	x
Action Settings Record No. Settings Trigger Condition Settings	
The recipe has two or more records. Please configure the specification method of them.	
Record No. at Write Recipe	
Specify by device/symbol value	
Node (Trigger-Source Node Device Name	
Device Data Type 16Bit(Signed)	
No. of Characters	
O Specify by cell value	
\$4\$1	
100 200 300 400 From Cell to PLC	
Record No. at Read Actual Value	
Specify by device/symbol value	
Node (Trigger-Source Node Device Name	
Device Data Type 16Bit(Signed)	
No. of Characters	
O Specify by cell value	
\$4\$1	
100 200 300 400 From PLC to Cell	
OK Cancel	

Setting item			Setting content		
Decord No. of		Specifies the recipe data by entering a record No. in the device or symbol specified by display unit or Device/PLC.			
Write Recipe / Record No. at Read Actual Value	Specify by device/ symbol value	Node	<ul> <li>Selects a node which has the device where a recipe record No. exists.</li> <li>NOTE</li> <li>Clicking the [] button can retrieve or add entry nodes.</li> <li>Selecting "(Trigger-Source Node)" will select the entry node that has triggered the action.</li> </ul>		

Setting item			Setting content				
Record No. at Write Recipe / Record No. at Read Actual Value	Specify by device/ symbol value	Device Name	<ul> <li>Selects a Device/PLC which has the device where recipe record No.s exist.</li> <li>NOTE</li> <li>It is not necessary to set when the entry nodes are GP Series nodes and Pro-Server EX nodes.</li> </ul>				
		Device Address /Symbol	Sets the device address or symbol to be used. • When specifying a device address: Enter directly from the Calculator icon. Calculator icon Device Address/Symbol Group I I I I I I I I I I I I I I I I I I I				
		Data Type	Data Type         Deselect         16Bit(Signed)         32Bit(Signed)         Bit         16Bit(Unsigned)         Specifying a symbol:         Data type automatically appears.				
		Charact- ers	Specifies the number of readable characters of a record No. when the specified data type of the record No. is "character string".				
	Specify by cell value		Recognizes the entered value or character string in any specified cell on Excel, as a record No. Therefore, you can select [Specify by cell value] on condition that you use recipe data in such environment as the office having PCs. <b>NOTE</b> • Be sure to place cells to specify record No.s on the same sheet as recipe data.				

"Trigger Condition Settings" tab

Setting item	Setting content
Action Area No.	Displays No. allocated to each ACTION area by template.
New Trigger Condition	Displays the "Trigger Condition Settings" dialog box. Click here to set a new trigger condition.
New Trigger Button	Displays the "Create Trigger Button" dialog box. Refer to "5.6.2 Setting Guide" for more details.
	Selects a trigger condition to write recipe data. Click the blank line of [Trigger Condition] and then the list button to display the registered trigger condition.
Write	<ul> <li>NOTE</li> <li>When plural trigger conditions have been specified, satisfying at least one of those conditions executes ACTION.</li> <li>Clicking the [Edit] button can edit the specified trigger conditions.</li> <li>Clicking the [Delete] button deletes the specified trigger conditions.</li> </ul>

Setting item	Setting content
Read	Selects a trigger condition to read recipe data. Click the blank line of [Trigger Condition] and then the list button to display the registered trigger condition. NOTE • When plural trigger conditions have been specified, satisfying at least one of those
	<ul> <li>Clicking the [Delete] button deletes the specified trigger conditions.</li> </ul>

# 12.4 Restrictions

# Changing the Security Settings

To execute the Excel Form Creation Action, you need to change the Excel security settings. If you do not change the settings, the following problems will occur.

• [Tool]  $\rightarrow$  [QC Chart]

Pareto graph tools cannot be used.

• [Tool]  $\rightarrow$  [Insert Sample]

Form templates cannot be used.

The setting change steps vary depending on the Excel version.

Change the security settings according to the following steps.

- 'Microsoft Excel 2000'
- 1 Click [Security] from [Macro] under the Excel [Tool] menu.
- 2 Check "Middle" or "Low" on the [Security Level] tab in the [Security] dialog box.

'Microsoft Excel 2002' and 'Microsoft Excel 2003'

- 1 Click [Security] from [Macro] under the Excel [Tool] menu.
- 2 Check "Middle" or "Low" on the [Security Level] tab in the [Security] dialog box.
- 3 Check the [Trust Access to Visual Basic Project] option on the [Trusted Publisher] in the [Security] dialog box.
- "Microsoft Excel 2007' or 'Microsoft Excel 2010'
- 1 'Microsoft Excel 2007': Click the [Office] button and [Excel Options]. 'Microsoft Excel 2010': From the [File] tab, click [Options].
- 2 'Microsoft Excel 2007': Click [Popular] in the [Excel Options] dialog box.
   'Microsoft Excel 2010': From the [Excel Options] dialog box, click [Customize Ribbon].
- 3 'Microsoft Excel 2007': Check the "Show Developer tab in the Ribbon" option.
   'Microsoft Excel 2010': From the [Main Tabs] list, select the [Developer] check box.
- 4 Click [Macro Security] on the [Developer] tab.
- 5 Click [Macro Settings] in the [Trust Center] dialog box.
- 6 Check the [Enable all macros] option under [Macro Settings].

7 Check the [Trust access to the VBA project object model] option.



#### Combined Cells

Do not set an ACTION area on combined cells.

For example, if you set an ACTION area in the cells as shown below, correct operation cannot be guaranteed.

	A	В	С	D
1	D1 00	D1 01	D1 02	D1 03
2				
3				
4				
5				
6				
7				

# Over-pasted ACTION Areas

When you over-paste plural ACTION areas of different size, read/write will be executed in the pasted order.

#### Writing Data of Excel in the Device/PLCs

When the data type is "Character string", write null characters (NULL) in empty cells in Excel, and in the other cases write "0".

#### Writing Character String Data

When writing "Character string" data in Excel, format the cell(s) to write data in as "Character string".

#### Excel Window

If the setting screen is hidden behind the Excel window, the screen and task tray windows will blink and notify the user. Blinking will stop automatically when the setting screen comes forward.

# Operation in ACTION area when error occurs

When you actually write/read in all the functions, such as "Device One-Shot" and "Device Logging", and exceed the ACTION area, perform the common operation as follows:

1) When performing a test read/ a test write

Error screen is displayed.

2) When executing ACTION in runtime

It will be recorded as ACTION error in the log viewer of the 'Pro-Server EX'.

#### In the case of closing the displayed output book

If you have mistakenly closed an output book of Excel Report ACTION, follow these steps to open it again: Dragging and dropping the book to open will make it read-only and the start button etc. invalid.

- 1. Double-click the output book.
- 2. When the following dialog box appears, select "No" to open it.

Microso	oft I	Excel 🛛
į		Report_20060415.xls is already open. Reopening will cause any changes you made to be discarded. Do you want to reopen Report_20060415.xls?
		<u>Yes</u> <u>N</u> o

#### Receive notification

You cannot set the receive notification which indicates the completion of ACTION.

# When setting "Trigger-Source Node"

When setting "Trigger-Source Node" at node in Excel Report action, node type and device are uncertain. Therefore, the device address is displayed in red.But, it is no problem.

#### Edit the output file

While Excel Report Action is executing, you can not edit the output file.

Therefore, it becomes very difficult to operate Excel at the setting in which the Trigger condition satisfies at a short cycle.Moreover, the following error message is displayed when the Action is executed during editing the output file.



#### Save the output file Do not use

Do not use multiple Excel form actions to save output files to the same destination.

If you set the same destination for file outputs, Pro-Studio and Pro-Server EX may not be able to run.

#### About the 1500 row limit for Action Area settings

Exceeding 1500 rows for the Action Area could cause the action to run longer. If you use Device One Shot or Device Logging's text conversion, the action could take even longer.

# Restrictions on Copying or Cutting and Pasting the Action Area

When you paste the Action area using Ctrl+C & Ctrl+V or Ctrl+X & Ctrl+V, specify [Target Cell Range] for the copied Action area.

The Action area just after pasting remains the same [Target Cell Range] as that for the original Action area.

	A	В	С	D
1				
2	T			
3				
4				
5				
6	_	_		_
7				

#### Excel Auto Save Function

The Excel auto save function does not operate due to the Excel restrictions. To save automatically, create the Excel save macro using the following procedure and execute the created save macro by Action.

1 Open a template you want to save automatically using 'Pro-Studio EX'.

Create form using Excel							
			Version 1.22				
┌─ Template Designation							
Please specify the name When you use the wizar When you create a new	of Excel template file that is the source of form d, the theme template file is copied to a file with template, please specify the file name.	ıs. 1 this name.					
Template File	C:\Documents and Settings\Administrator\De	sktopitemplate.xl	Reference				
	Edit Template						
Output File The template file stores setting info. The actual output result will be displayed in the following file.							
Folder Name	C:\Documents and Settings\Administrator\De	esktop	Reference				
File Name	Report_%Y%M%D.xls	Return to De	fault Settings				
Start from Displayed	l State						
Do not save the out (Please use the Sav	put file when ACTION runs. e or Save by Macro of Excel.)						
		ок	Cancel				

2 Select "Macro" and "Record New Macro" from the "Tools" menu.

lt												
t	Tools	<u>)</u> ata	<u>W</u> indow	<u>H</u> elp	Exc	elActio	on( <u>A</u>	)				
Ж	Spel		f*	₽↓	( <b>10</b>	2	» 4	Arial				
-	AutoCorrect						_					
Share Workbook												
	∐rac	Irack Changes										
c	Mer	ge <u>W</u>	orkbooks			F			G	Н		1
П	Prot	ectio	n	•			_					
	O <u>n</u> li	ne Co	ollaborati	on 🕨								
	<u>G</u> oa	l See	k		⊢							
	Sc <u>e</u> r	narios	5									
	Aud	iting		÷								
	Mac	ro			+	Macro					Alti	F0
-	Add	- <u>I</u> ns.			•	<u>R</u> ecor	d Ne	w Ma	cro			
	⊆us	tomiz	e			Secur	ity		ı	Г		
	Options				2	⊻isual	Basi	ic Editi	or		Alt+F	11
					00	Micros	soft :	Script	Editor	Alt+Si	hift+F	11

 ${f 3}$  Enter the macro name "Macro1" and click the [OK] button.

Recording the macro starts.

Record Macro	? ×
Macro name: Macro1	
Shortcut <u>k</u> ey: Ctrl+	Store macro in: This Workbook
Description:	1*/*/200* by ******r
	OK Cancel

4 Select "Save" from the "File" menu.

"Macro1" is recorded in the macro.



 $5\,$  Select "Macro" and "Stop Recording" from the "Tools" menu.

Recording the macro is complete.

1		
<u>T</u> ools <u>D</u> ata <u>W</u> indow <u>H</u>	elp_ExcelAction(A)	
🕺 💞 Spelling F7	🕫 🛃 🛍 🐼 💝 🗛	
S <u>h</u> are Workbook		
Protection	•	
Online Collaboration	•	
Macro	Macros Ait+ro	
Customize	Stop <u>R</u> ecording	
Options	<u>Secondy</u>	1
*	- Alt+F11	Ŀ
	Microsoft Script Editor Alt+Shift+F11	

6 Select "Execution Sequence List" from the "Excel Action" menu.



7 Create the trigger condition save automatically.
8 Select the created trigger condition and "Excel Operation Function".

Execution Sequence List		_ 🗆 ×						
Execute when Trigger Condition satisfied Execute when Trigger Button clicked Execute from another application								
When Trigger Condition is satisfied, Action is executed.								
New Trigger Condition     Please place actions to execute or EXCEL operation commands in order of execution.       Edit     Insert     Clear								
Trigger Condition 1 4	5	6						
CreateForm CreateForm Excel Uperation Function K								
4								
	OK	Cancel						

9 Select "Execute Macro" and enter the macro name "Macro1".

Excel Operation Function							
	0	New Sheet	0	Print Sheet	Sheet Name she	eet1	
	0	New Book					
	0	Show Book	0	Hide Book			
	O Print Book O Close Excel						
(	۲	Execute Macro		Macro1			
	О	Export					
		File Name		Report_%Y	%M%D%n.csv	Default	
		Saving Folde	ſ				
	Saving 💿		CSV(.c				
Format Export on Report.		only the last page ex	cept Action				
				C HTML(.	htm)		
				1	ОК	Cancel	

- 10 Click the [OK] button.
- **11** Finish editing the template.
- 12 Save/Reload the setting contents.

According to the created trigger condition, the template is automatically saved.