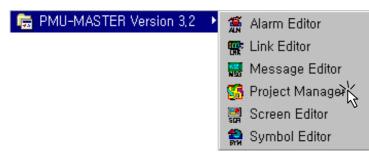
1. Edit a Main Screen ······ A-1
1-1. Create a main screen ······ A-1
1-1-1. Create a Function Key Tag ······ A-2
1-1-2. Create a Numeric Tag ······ A-5
1-1-3. Create a Lamp Tag ······ A-7
1-2. Simulation A-9
2. Edit a Link Editor ····· A-12
3. Edit a Project Manager A-14
4. Setup a PMU hardware ······ A-16
5. Edit a Program in PLC A-19
6. Cable Connection for serial Interface ······ A-20

1. Edit a main screen

1-1. Create a main screen

When you install PMU-MASTER software, 6 kinds of file managers will be created in Program group of Start menu.



- Select Project Manager in the PMU-MASTER Program group.
- Select PMU type and click OK button.

(You can select PMU type later by selecting File - Change PMU Type menu in the Project Manager)

PMU TYPE Select		×	
Select PMU(Program Series	mable Monitoring Unit)	(K)	2
@ PNU 200 >	MONO : 240 x128 dot	U	
C PMU 300	MONO : 320 x240 dot		①
C FWU 300 (OS V3.	O over) : 320 x240 dot		
C PMU 5005,600	COLOR : 640 x480 dot		
1			

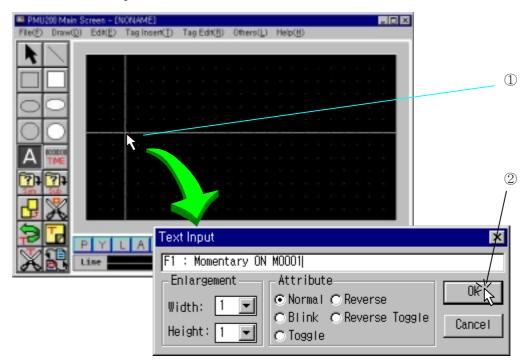
• Select *Editor-Screen Editor* in the full down menu to create a drawing file.

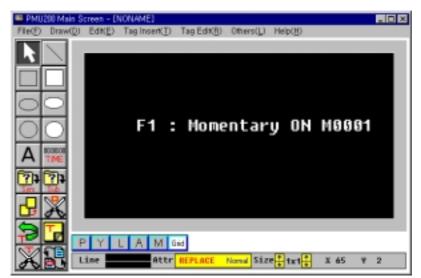
😭 PMU 20	0 Project Manager					_ 🗆 🗡				
File(E) (Communication(C)	Editor(T) H	lelp(H)							
		Screen E	ditor(S)							
			Symbol Editor(Y)							
			Message Editor(M)							
			Alarm Editor(A)							
		Link Edito	ND .							
WorkTyp	Work Dir.	Select	Add to PBJ	Make PBJ	File View	Send				
rrunkryp	Port	Cancel	Delete in PRJ	Extract PRJ	File Info.	Receive				

PMU2 File(E)	200 Main Si Draw(<u>D</u>)	creen - () Edit(<u>E</u>)			Tar	g Edit(<u>B</u>) Oth	ers(L)	Help()	47			- 0 ×
THE	Diam(D)	CON(E)	198.0	IS BEINED	1.005	1 can(D	/ 04	era/Ex	nethd	<i>v</i>			
		2.2											
		0.											
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A	TIME	• •											
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	T _												
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∇		ine	11	_	_	APE	N.		e 🚺 1x		VALE		4
20	- 12	Ine		acc.	REP	LACE	Norm	3 312	e - 1x	1 <mark>1</mark>	X145	Y	1

1-1-1. Create a Function Key Tag

- Select *Text* menu in *Draw* menu or **Text** tool (A) to insert text.
- Insert text after clicking a mouse.





- Select *Tag Insert-Function Key* in the full down menu.
- Place the direction icon of the function key tag on the main screen and click a mouse. (Position does not matter)

PMU200 Main S	Creen - [NONAME]				_ 🗆 🗙
File(E) Draw(Q)	Edit(E) Tag Inse	rt(]) Tag Edit(<u>B</u>) Others(L) H	telp(<u>H</u>)	
	F1	: Mom	enta.	ON M000	1
		M Gid Attr <mark>REPLACE</mark>		Anction Key Tag Specification Name: Funct Function Function Function Function Nord	Cancel Special
Butfer:40 Bit: 0 Decrand 0 Decrand 0 Decrand 0 Decrand 0	Deerstor Data(D	ry C DFF .te C Comparis	on		
	-	Cancel			

- After entering a name of the Function Key Tag, select function key.
- Click **Bit** button(You can select Bit, Word or Special button)

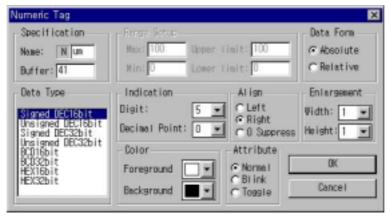
- Tag Name : The initial letter begins as 'F' and you can enter the name up to 5 characters(English, Numeric number) including initial letter.
- Enter buffer number and bit position of selected buffer. Then select operation method.
 - W User defined buffer number begins from 40(to 1024). (Please refer to User's Manual [Appendix A-3])
 This buffer number should be matched with PLC memory address. To communicate with PLC, you need to setup the *Link Editor* in the Project manager.
- Click **OK** button.

🎫 PMU	200 Main S	creen - D	KINAME]						- 🗆 ×
File(E)	Draw(D)	Edit(E)	Tag Insert())	Tag Edit(B)	Others (L)	Help(H)			
0	0		F1 :	Mome	ntar	y ON	M001	5]1	
А	TIME								
? }	2 3								
d.	*								
P	-		AMG						
×	8	ine		REPLACE	Normal S12	t 🕂 🕂	X 19	۷	0

1-1-2. Create a Numeric Tag

This tag indicates the value of the system's buffer data at the actual time on the screen of the main machine.

- Select *Tag Insert-Numeric* in the full down menu.
- Move a cursor to the place to be created and click a left mouse button.
- Enter the Tag Name and define a buffer address (from 40 to 1024: Be sure not to overwrite the buffer address with other tags)
- When it is in Decimal, it indicates a maximum of 10 digits and when it is in BCD or HEX, it indicates a maximum of 8 digits. The two methods of indicating the data are by absolute value and in relative value.
 - ① When the indication method is of relative value, and the specified buffer data goes beyond the top inch and bottom inch, it will flicker.
 - ② You can determine the indicated data's decimal point position.



- Select Data Form as Absolute type, Data Type as Signed DEC16bit, Indication digit as '5' and Decimal point as '0'.
- After setting up the configuration, click **OK** button.

If you enter the data '-12345' in buffer 41, the numeric tag will be displayed in the simulation or run mode as below.

-12345

If the data type is Signed Decimal 16bit or Signed Decimal 32bit, the total indication place is actually one place more than the Digit number.

Example) Data type: Signed DEC 16bit, Digit Number: 8

-12345678



• By double clicking the tag to edit on the editor screen, you can edit the already created tag.

[Note]



To move a tag, select this icon.



To copy a tag, select this icon.



To cut(delete) a tag, select this icon.

1-1-3. Create a Lamp Tag

According to the condition of the specified bit in the specified buffer, the specified color changes by the lamp.

- PMU200 Main Screen [NONAME]

 File(E) Draw(D) EdN(E) Tag Insert(D) Tag EdN(E) Others(L) Help(E)

 Image: Screen [Noname file(E) Tag Insert(D) Tag EdN(E) Others(L) Help(E)

 Image: Screen [Noname file(E) Tag Insert(D) Tag EdN(E) Others(L) Help(E)

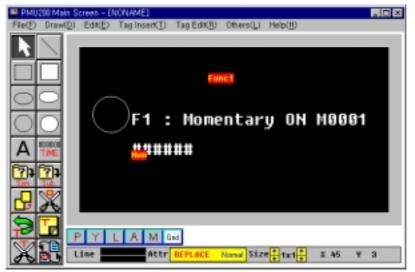
 Image: Screen [Noname file(E) Tag Insert(D) Tag EdN(E) Others(L) Help(E)

 Image: Screen [Noname file(E) Tag Insert(D) Tag EdN(E) Others(L) Help(E)

 Image: Screen [Noname file(E) Tag Insert(D) Tag EdN(E) Others(L) Help(E)

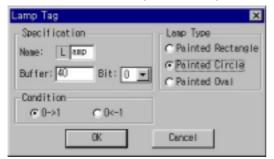
 Image: Screen [Noname file(E) Tag Insert(D) Tag EdN(E) Others(L) Help(E)

 Image: Screen [Noname file(E) Tag Insert(D) Tag EdN(E) Others(L) Help(E)
- Draw a circle by dragging a mouse with pressing a left button.
- After selecting the territory to be drawn, drop the mouse button.

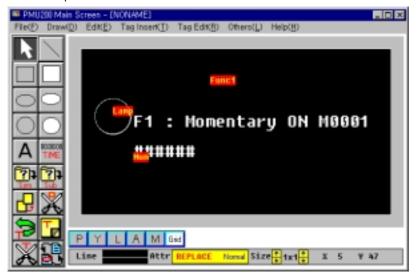


• Select Circle icon on the toolbox to draw a circle.

- Select *Tag Insert-Lamp* in the full down menu.
- Move a mouse on the circle(center of circle) and click the left button.



- Select Lamp Type(Select 'Painted Circle'), Condition.
- Click **OK** button.
- Draw the lamp area the same size as circle.



1-2. Simulation

You can simulate the edited screen in the computer before you download this file to PMU main machine.

You should save the created screen as a file before the simulation.

The name of the main screen should be saved as number from 1 to 999.

To confirm the contents of file, It's better to describe the contents in the description box.

* For the main screen, the file type should be saved as *.scr.

		Save as	×
from 1 to 999		File Name(M): Directory(D): C c:Mpmu3	
	·	1.scr	×
		File Type(I): Drive(V): *.scr *.sub ■ □ c: sthorg1 Description PMU-200 Getting Started	•
		OK Cancel	

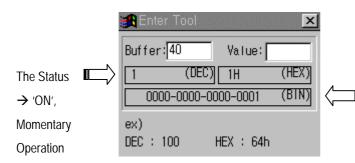
Select Others-Simulation in the full down menu.

Screen Select	×
Select message	and alarm files !
Alarm File	Message File
(None)	(None)
, OK	Cancel
UN	Cancer

- If you want to insert a alarm file or message file, select the files in the list box.
- Click OK button.
- You can simulate the main screen by using the simulation tool kit (Enter Tool) or Function Keys.



- Enter the buffer number to be simulated and the value in the Enter Tool dialog box.
- Press Enter Key to enter the data.
- If you press the function key 'F1' with the mouse, the key will be activated. The value of the buffer will be changed into '1'.



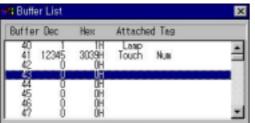
The status of the designated bit (If you setup the bit number as '3' the data of the buffer(40) will be 0000-0000-0000-1000) If you select the type of the touch tag as **Word**, these 16 bits will be displayed as Data value. • You can find that the lamp is 'ON' when you press function key 'F1' button.



[Note]

Please notice the types of the tags. In the above simulation, the data of the Lamp Tag or the Numeric Tag except Touch Tag should be sent from PLC(that is, Reading data from PLC). While, the data of the Touch Tag should be sent from PMU(that is, Writing data to PLC). This notice is very important to setup the link editor for the communication between PLC and PMU.

You can view the list of the buffers created in the main screen.



• To finish the simulation, select the *Simulation Exit* in the full down menu.

2. Edit a Link Editor

For the communication with PLC when operating the main machine (PMU), the Link Editor allows you to enter and select the communication method, PLC Type, Device, Address and others in the Link Table.

To use the selected Link File, Send a Link File from PC to the main machine (PMU) using Project Manager.

The extension name for the Link Select File is ".LNK".

Select *Others-Link Editor* in the Screen Editor or *Editor-Link Editor* in the Project Manager.

LINK Editor - E NONA	MEI
le(E) Link Setup(L)	Help(H)
PHU TYPE	: PHU 200 Link Type : Hone
	1 : 1 Communication
SERIAL Link	PLC Type :
DATALINK	Receive setup: Transfer setup:
GLOEA Enet	Receive setup: Transfer setup:
T-LINK Setup	
User-def.Setup	
	H : N Communication
NON MASTER	PLC Type :
N:N LOCAL	Receive setup: Transfer setup:

- PLC Type Setup (SERIAL) × 1 Select PLC type. C MASTER-K Series K500, K1000(L1NK) GM(L.INK) GLOFA Series 2 MnN, AnS, MOJ2(L1NK) GOLDSEC Series STARDON-NF Series ME(LINK Ŧ. C FARA Series FARA-NELINK OWRON Series WSMAC-DÜLINK ĸ AB Series Modicon Series adbus SPC Series Siemens Serie 5-3964A(LINK) × Yaskawa Servi X CLOUDER ΛÌ 3 Cancel
- Select SERIAL Link button to setup the serial communication.

Select PLC Series and Link type, then click **OK** button.

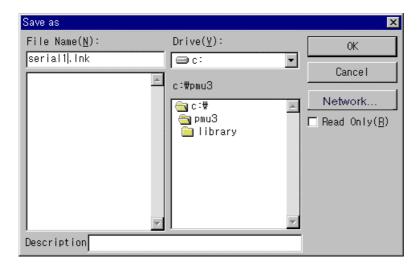
• Enter the PLC address for the communication.

Seria	I LINK Se	ևսք						X
PLC	Type: BE	Fanue (90	-30Series) LQ.K	, G, T, SX, S	B, SE, S, F	R, AL, AQ	
Na	DEVICE	No	DEVICE	No	DEVICE	No	DEVICE	ОК
0 1 2 3 4 5 6 7 6 9 10 1 12 3 4 5 6 7 6 9 10 11 2 3 4 5 6 7 6 9 10 11 2 3 4 5 6 7 6 9 10 11 12 3 4 5 6 7 6 9 10 11 12 10 10 11 12 10 10 11 10 10 10 10 10 10 10 10 10 10		16 176 19 20 20 22 22 24 25 27 25 25 25 25 25 25 25 25 25 25 25 25 25		22833485855888247 <mark>22</mark> 84454645	N0001 R0001	48 49 00 55 25 25 25 25 25 25 25 25 25 25 25 25		Cancel
4							F	
DEVI	ICE (ADDRES	s):		(E	INTER)		DELETE	

When you set a PLC address on the buffer memory area, be sure that the buffer memory is a word data. So, M0001, R0001 are word data.

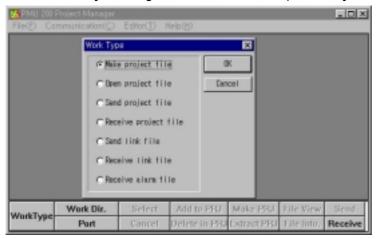
Buffer no. 40 : Function Key Tag and Lamp Tag(Writing data to PLC) – Bit data(ex. M0001 card) Buffer no. 41 : Numeric Tag(Reading from PLC) - Word data(ex. R001 card)

- Click **OK** button.
- Select *File Save* menu
- Select folder to be saved and enter file name, then click **OK** button.



3. Edit a Project Manager

Select *Others-Project Manager* in the Screen Editor or Open the *Project Manager* in PMU-MASTER.



- Select Make project file button and click OK button.
- Click **OK** button after setting up the directory.

Work Directory	×
Directory(<u>D</u>): c:₩pmu3	OK
🔄 c:#	Cancel
📄 library	Network
Y	
Drive(<u>V</u>):	
🖃 c: 🔽	

🏫 P.MU 200	Projec	t Manager	1					. D X
File(E) E	dit(E)	(V)well	Communicat	ion(C)	Editor())	Window(图)	Help(H)	
Edik Sci	reen						_ 🗆 🗵	
PROJEC	TDIR	: c.Mpmu	13					
🖿 1.scr 🗁 serial	1.lnk							
								J
	w	ork Dir.	Select	Add	to PRJ	Make PRJ	File View	Send
WorkType		Port	Cancel	Delet	is in PSU	Extract PRJ	File Info.	Receive

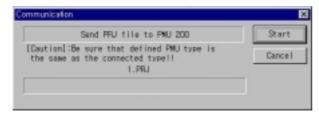
- Double click on the file to insert the file into a project file to be created.
- Then the selected file will be moved to the right box as the above.

😫 PMU	200 Projec	ct Manager	1					_ D ×
File(E)	Edit(E)	View(V)	Communicati	on(C)	Editor())	Window(H)	Help(H)	
Edk	Screen						_ 🗆 🗵	
PROJ	ECT DIR	: c.Mpmu	3					
🗀 1.s			_			1.scr		
ser	ial1.lnk					scrial1.Ink		
WorkTyp	W	ork Dir.	Select	-	to PRJ	Make PRJ	File View	Send
		Port	Cancel	Delet	s in PSU	Extract PRJ	File Info.	Receive

- Select Make PRJ button.
- Enter file name of the project file, then click **OK** button.

Make PRJ			×
File Name(<u>N</u>): [1.pr]	Directory(<u>D</u>): c:∰pmu3	[ОК
×	🔄 c:#	8	Cancel
			Network
	I	1	
File Type(1):	Drive(<u>V</u>):		
Project File(*.PRJ) 💌	⊜c: sthorg1	۲	
PMU description			
PHU FILE		_	

Select Communication-Send Project File in the Project Manager.



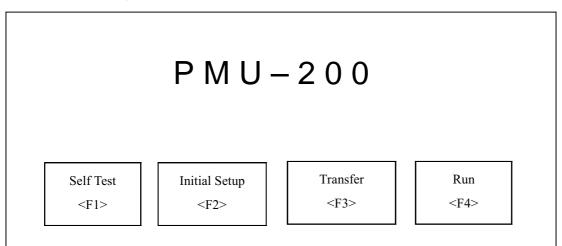
• Press Start button to send PRJ file to PMU hardware after setting up the PMU hardware for the communication.

4. Setup a PMU hardware

To communicate with PLC, you should download the Project file[*.scr, *.sub, *.alm, *.lnk, *.msg and etc.] created in the PMU-MASTER to the PMU hardware.

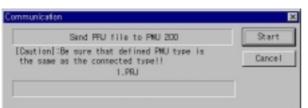
To setup the PMU hardware(main unit),

- Turn the power On[the power supply for the PMU-200 is DC24V].
- Press a function key 'F3' in the Main Menu of the main unit.



Press function key '*F1*' to be ready.

- Transfer the files from the Project Manager of the PMU-MASTER. to the Main Unit.
- Press Start button.



The message " Receiving..." appears during the downloading in the Main Unit.

ommunication	
Send PRJ file to PMU 200	Start
ICaution]:Be sure that defined PMU type is the same as the connected type!! 1.PRU	Cancel

- 'Completed! <KEY>' message is shown to the main unit after execution.
- To interrupt transfer, press ESC key. (Function key 'MENU' in the machine)
- Before the communication, you should set the Initial Setup in the Main Menu.
- Press Initial Setup key and select Serial Setup key.
- Setup value is :

Baud rate : 19200bps Data bits : 8bits Stop bit : 1bit Parity bit : odd Interface : RS-422(4line) Station number : 0

Baud rate	:	[19200]
Data bits	:	7bits 8bits
Stop bits	:	1bit 2bits
Parity bit	:	None Even Odd
Station Number	:	[0]
Interface	:	RS232 RS422
Save <enter></enter>		Cancel <menu></menu>

- To select the left menu bar(Items) : Use Function key ' \land ' and ' \lor '.
- To select the parameter : Use Function key ' <' and ' >'.
- To escape the current screen, press **Cacel** button.
- Press Enter button.

5. Edit a Program in PLC

To communicate with PMU and PLC, you should download a program to PLC using Programming Tool(LOGICMASTER 90 Software)

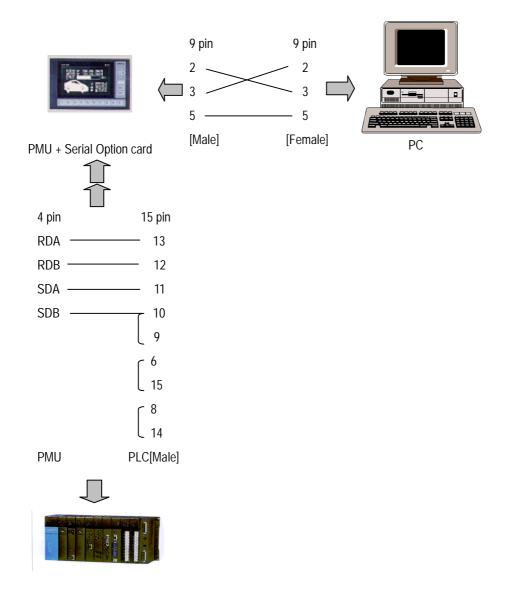
• Create a Program for the communication.

搭한글 MS-DOS - PRG9030		
NE I 🗆 🖻 🖻 📇	A	
PROGRE TABLES STATUS linsert Sedit Shodify (Search)	SETUP FOLDER UTILTY PRIN 5 6 7pption Synto Shore 10	
[BLOCK DECLARATIONS	<u>.</u>	
[START OF PROGRAM LOGIC		
+NODO 1 ADD INT		
CONST - I1 0-+R0001 +00001		
4R0001 - IS		
END OF PROGRAM LOGIC		
	OFFL INE	
C:\LM9O\RWH REPLACE	PRG: KWH BLK: MAIN SIZE: 138 RUNG O	005

M0001 : Bit address for Touch Tag and Lamp Tag(Buffer : 40, Bit number : 0) R0001 : Word address for Numeric Tag(Buffer : 41. Word data)

• For the detail information of editing a program in the programming tool, please refer to the User's Manual.

6. Cable Connection for serial Interface



GE Fanuc(90-30)series- Loader Port