Appendix. Getting Started

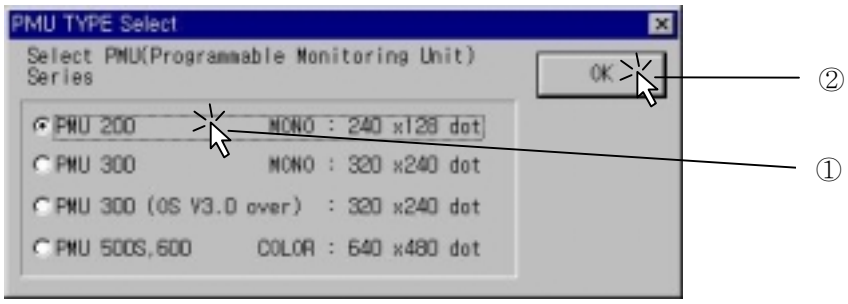
1. Edit a main screen

1-1. Create a main screen

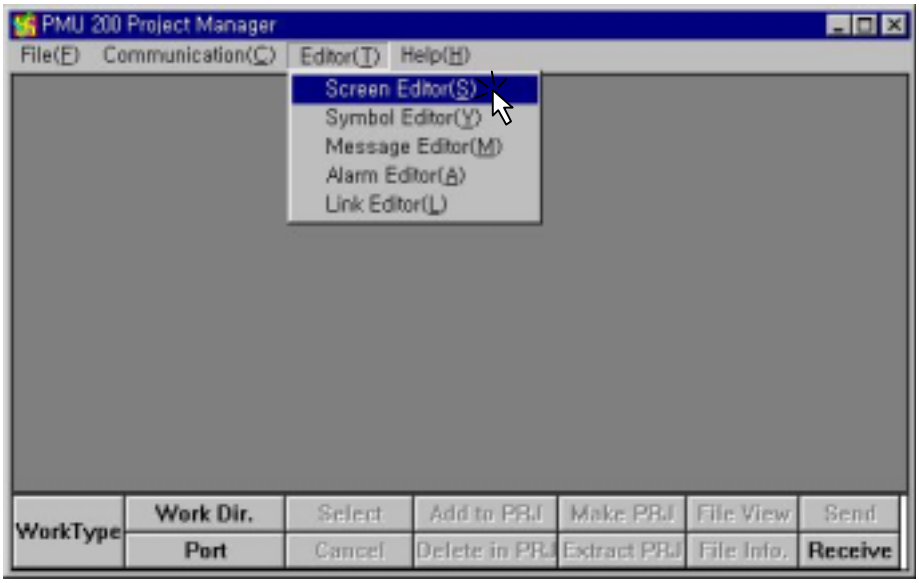
When you install PMU-MASTER software, 6 kinds of file managers will be created in Program group of Start menu.

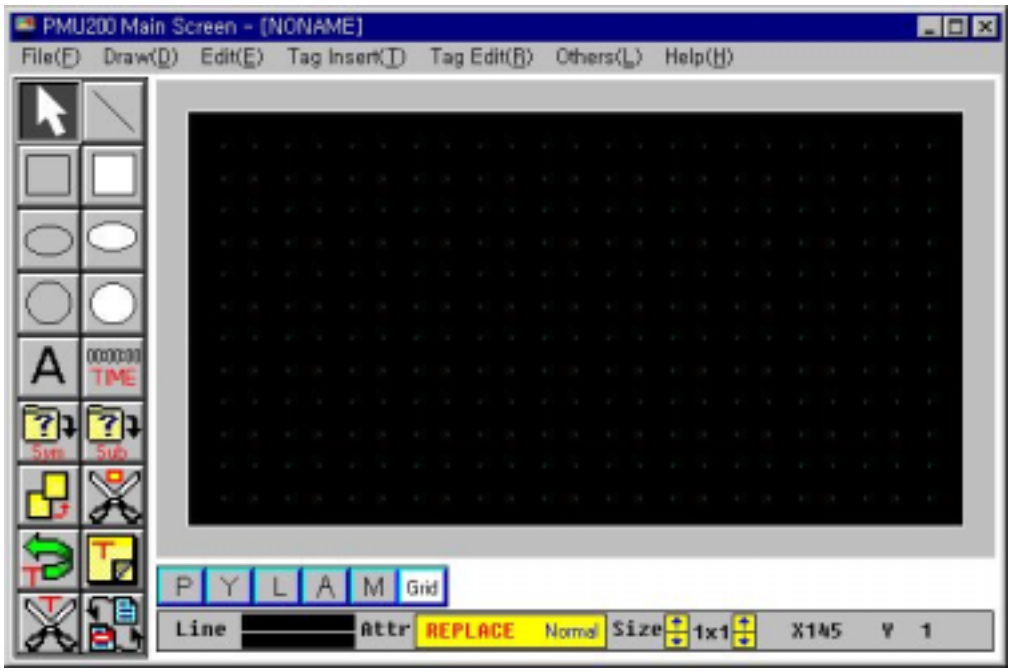
- Select Project Manager in the PMU-MASTER Program group.
- Select PMU type and click OK button.

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



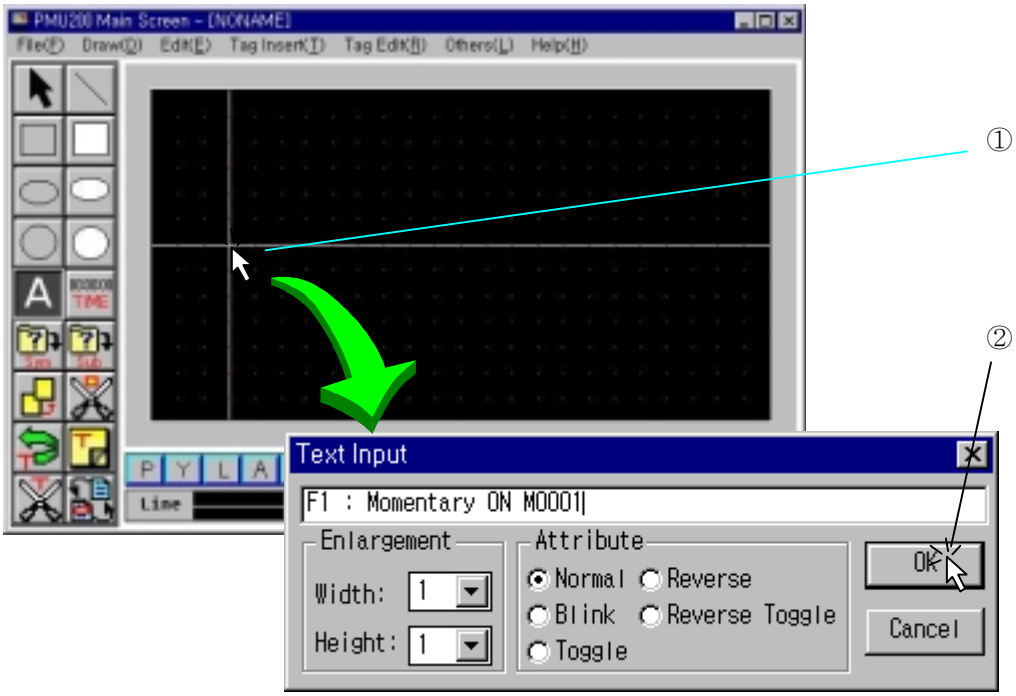
- Select ***Editor-Screen Editor*** in the full down menu to create a drawing file.

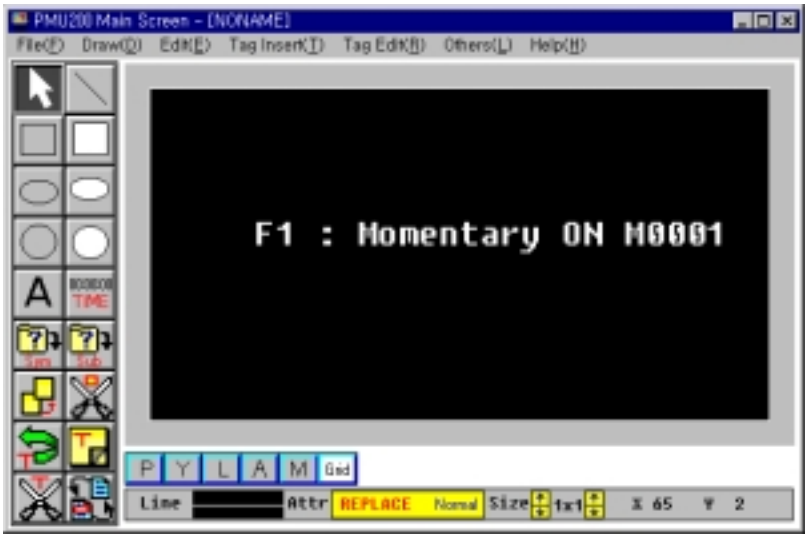




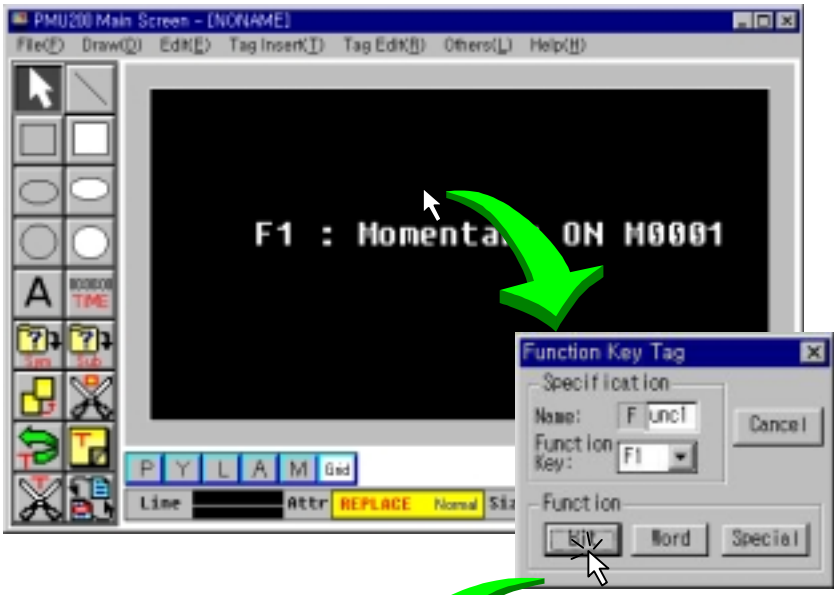
1-1-1. Create a Function Key Tag

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

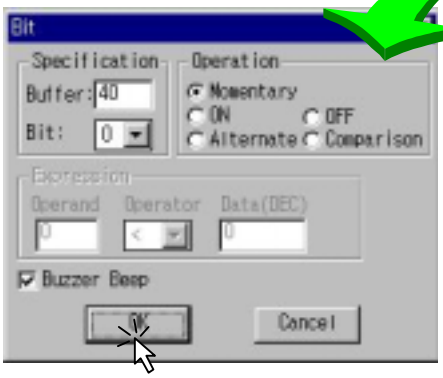




- Select ***Tag Insert-Function Key*** in the full down menu.
- Place the direction icon of the function key tag on the main screen and click a mouse.(Position does not matter)



Then, Function Key Tag dialog box appears.



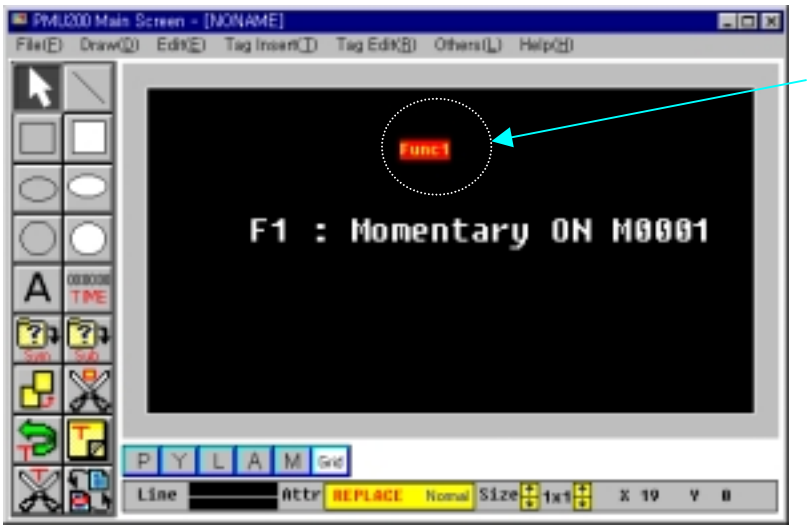
- After entering a name of the Function Key Tag, select function key.
- Click **Bit** button(You can select Bit, Word or Special button)

※ 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.

※ 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.



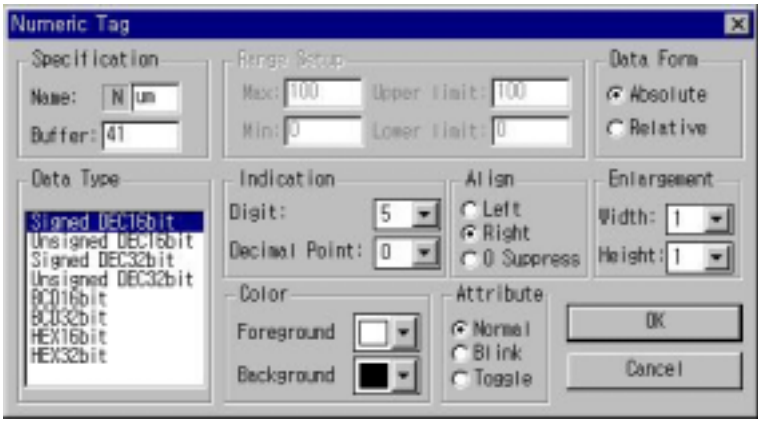
1-1-2. Create a Numeric Tag

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.

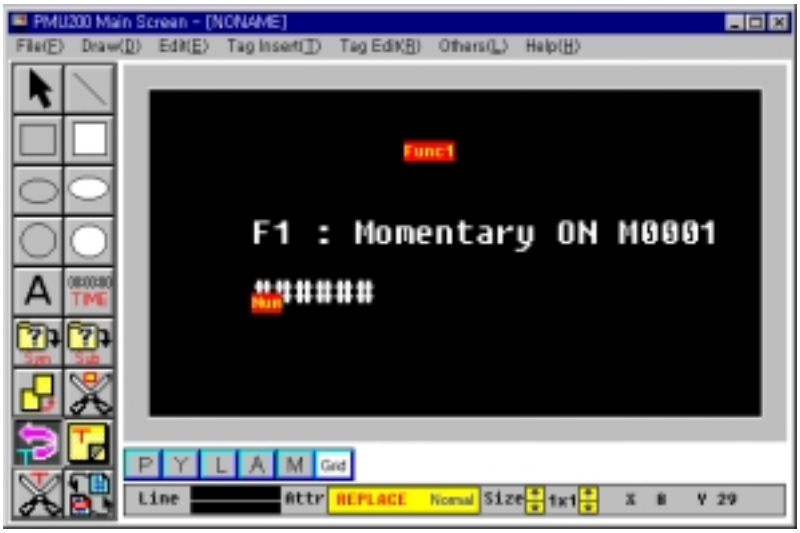


- Select Data Form as Absolute type, Data Type as Signed DEC16bit, Indication digit as '5' and Decimal point as '0'.
- After setting up the configuration, click **OK** button.

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

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.

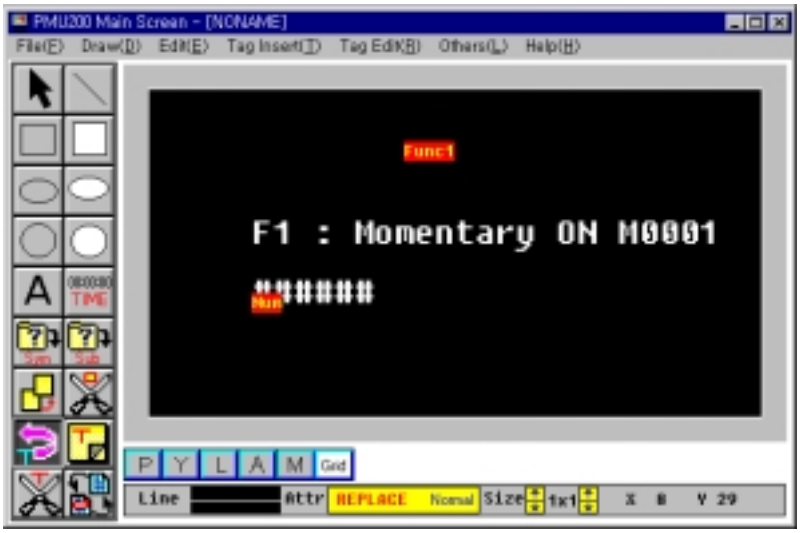
To copy a tag, select this icon.

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

1-1-3. Create a Lamp Tag

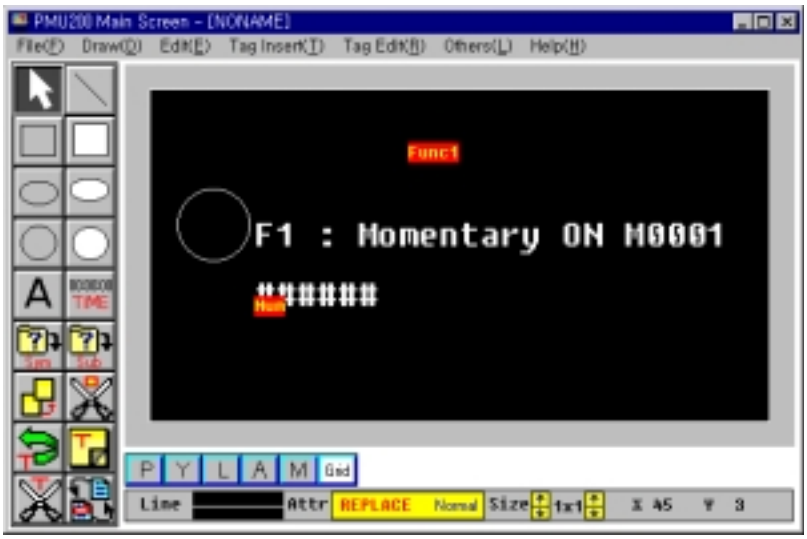
According to the condition of the specified bit in the specified buffer, the specified color changes by the lamp.

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



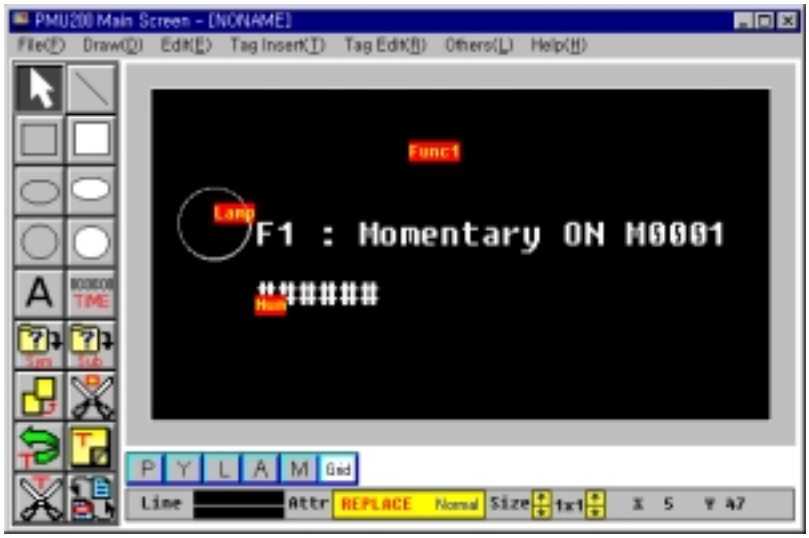
◆ Draw a circle by dragging a mouse with pressing a left button.

◆ After selecting the territory to be drawn, drop the mouse button.



- 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.

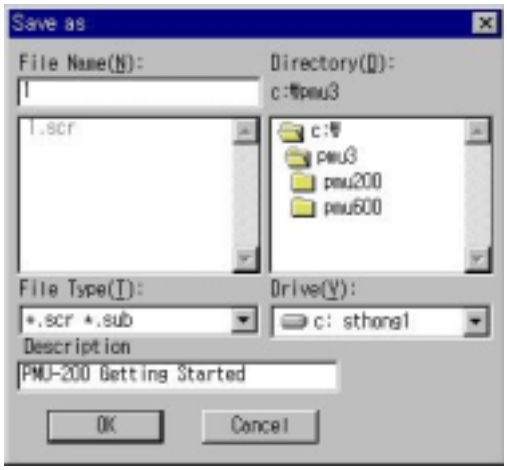
You should save the created screen as a file before the simulation.

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

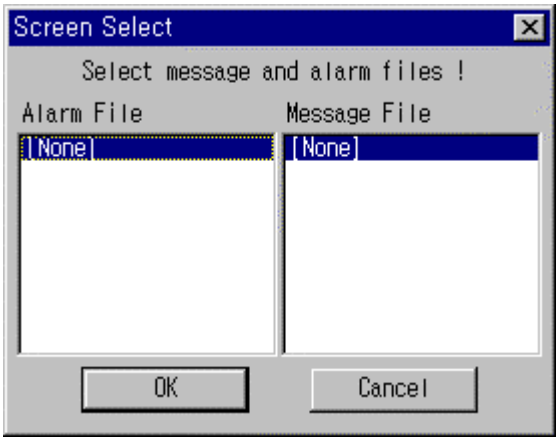
To confirm the contents of file, It's better to describe the contents in the description box.

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

from 1 to 999



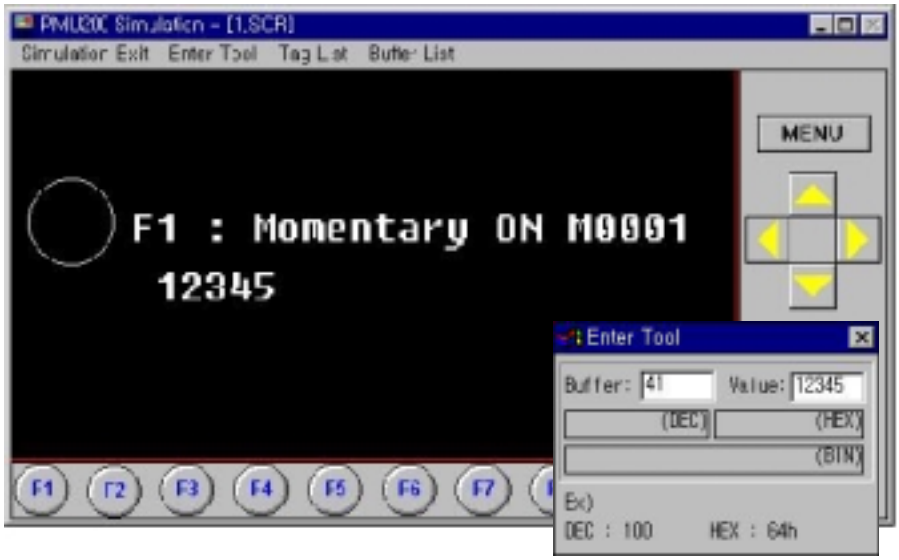
◆ Select ***Others-Simulation*** in the full down menu.



◆ If you want to insert a alarm file or message file, select the files in the list box.

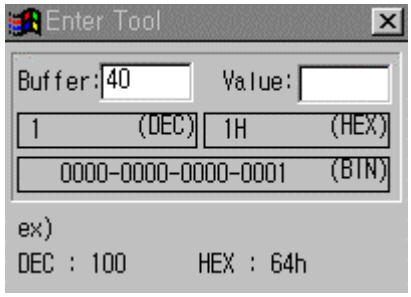
◆ Click **OK** button.

◆ 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 → 'ON', Momentary Operation



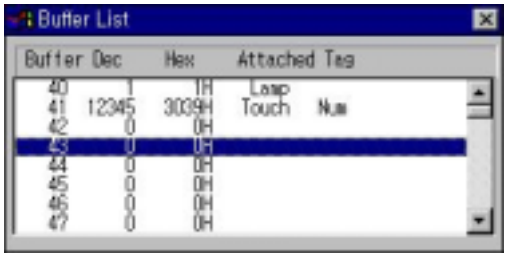
The status of the designated bit (If you setup the bit number as '3' the data of the buffer(40) will be 0000-0000-0000-1000)
If you select the type of the touch tag as **Word,** these 16 bits will be displayed as Data value.

◆ 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.

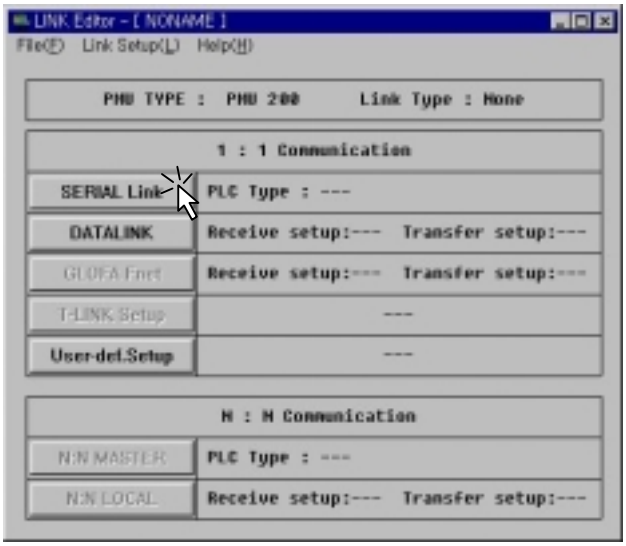
2. Edit a Link Editor

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.

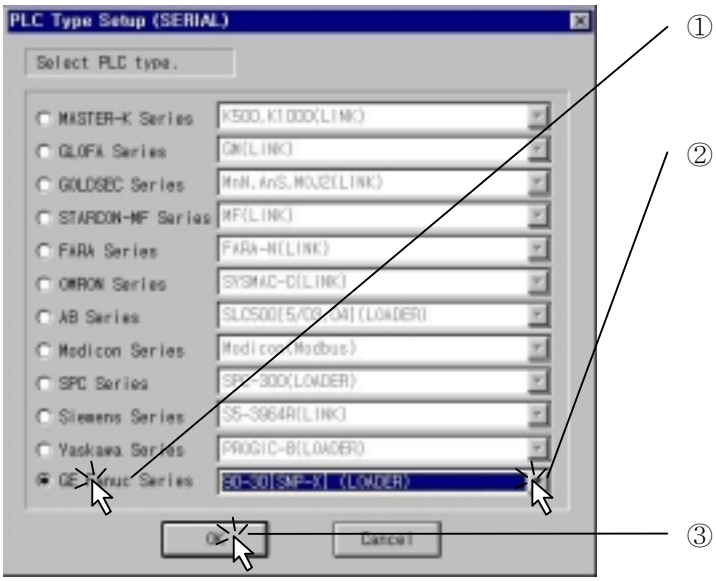
To use the selected Link File, Send a Link File from PC to the main machine (PMU) using Project Manager.

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.

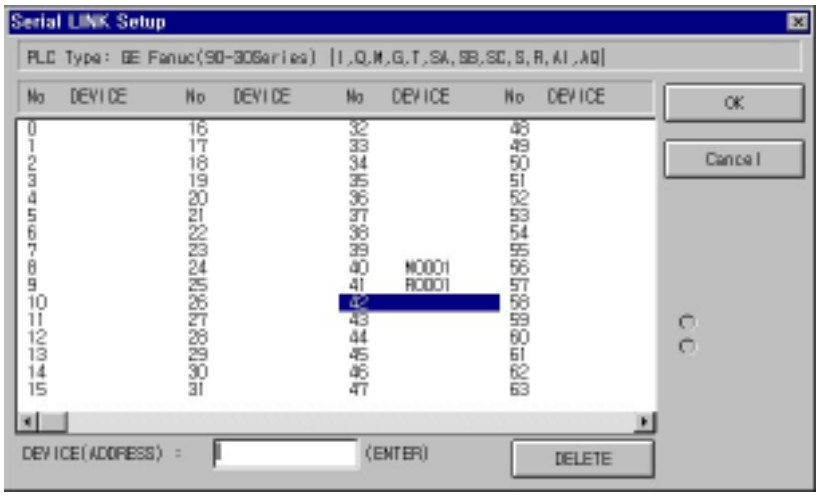


◆ Select **SERIAL Link** button to setup the serial communication.



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

◆ Enter the PLC address for the communication.



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.

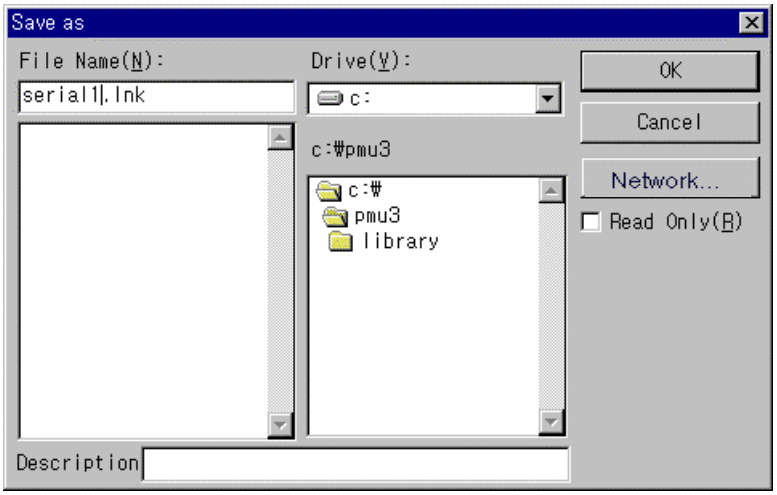
Buffer no. 40 : Function Key Tag and Lamp Tag(Writing data to PLC) – Bit data(ex. M0001 card)

Buffer no. 41 : Numeric Tag(Reading from PLC) - Word data(ex. R001 card)

◆ Click **OK** button.

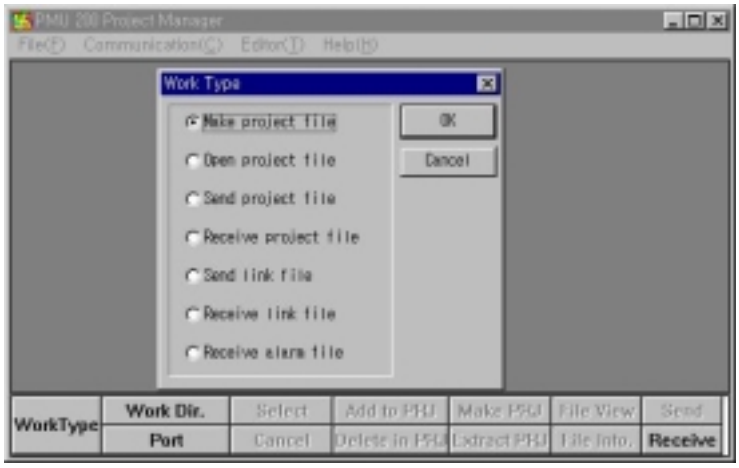
◆ Select ***File – Save*** menu

◆ Select folder to be saved and enter file name, then click **OK** button.



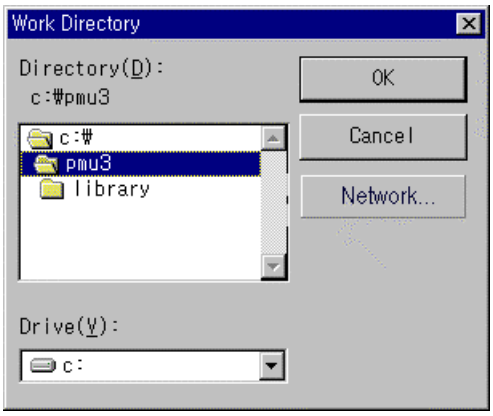
3. Edit a Project Manager

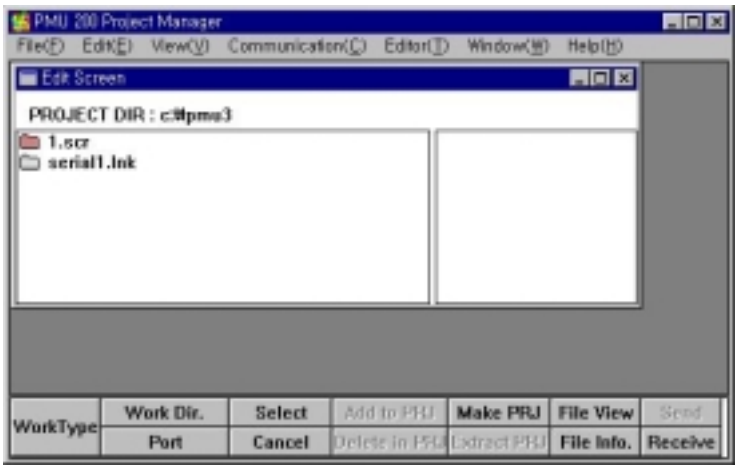
◆ Select ***Others-Project Manager*** in the Screen Editor or Open the ***Project Manager*** in PMU-MASTER.



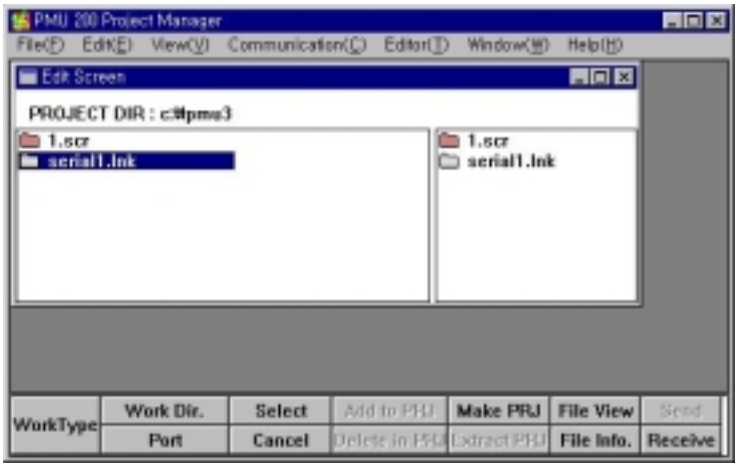
◆ Select **Make project file** button and click **OK** button.

◆ Click **OK** button after setting up the directory.

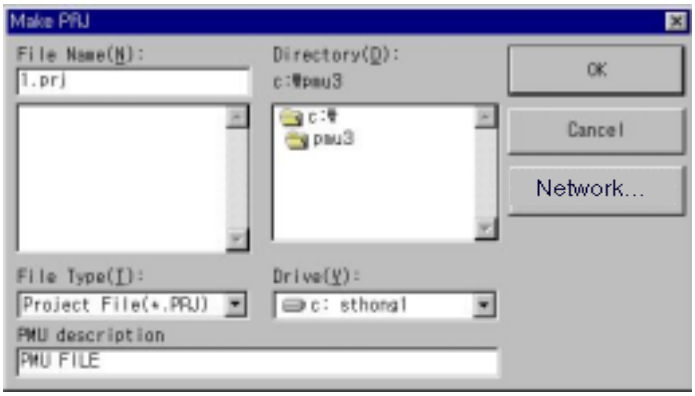




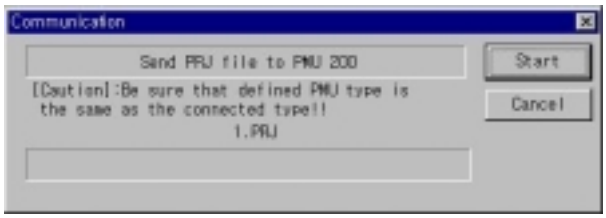
- Double click on the file to insert the file into a project file to be created.
- Then the selected file will be moved to the right box as the above.



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



◆ 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.

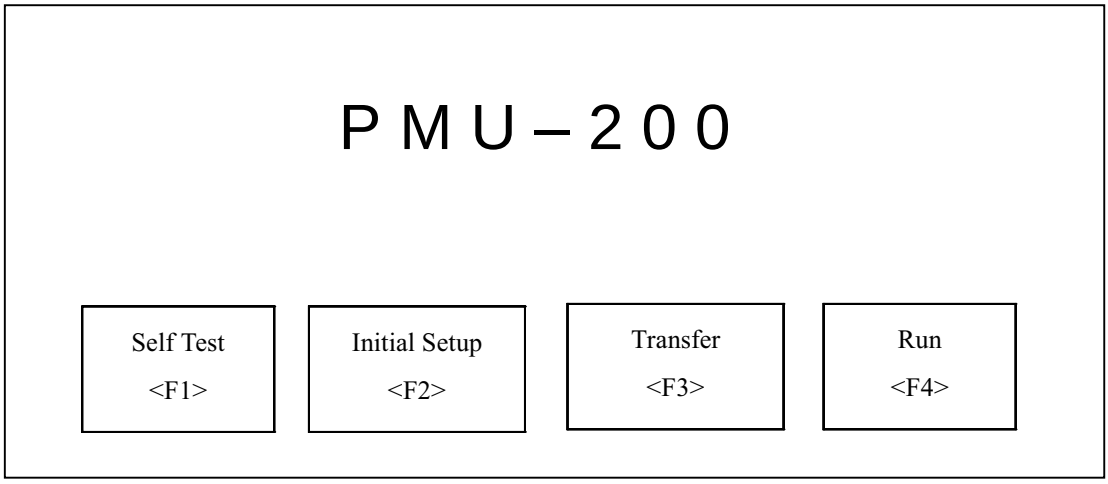
4. Setup a PMU hardware

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),

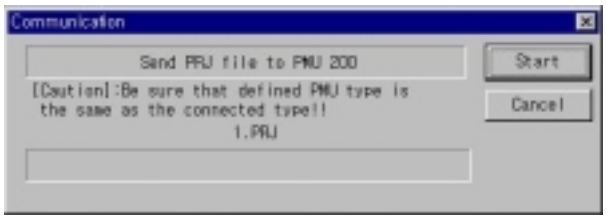
◆ Turn the power On[the power supply for the PMU-200 is DC24V].

◆ Press a function key '***F3***" in the Main Menu of the main unit.

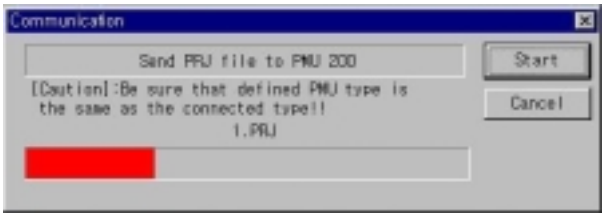


◆ Press function key '***F1'*** to be ready.

- 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.



- '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

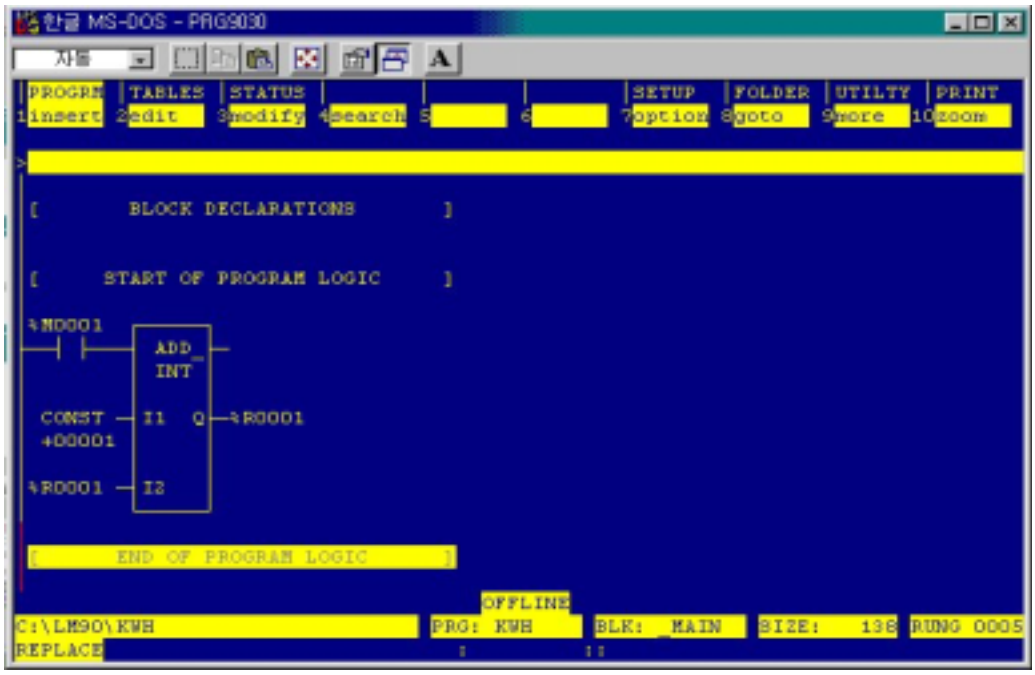
Save<ENTER> Cancel<MENU>

- To select the left menu bar(Items) : Use Function key '∧' and '∨'.
- 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.

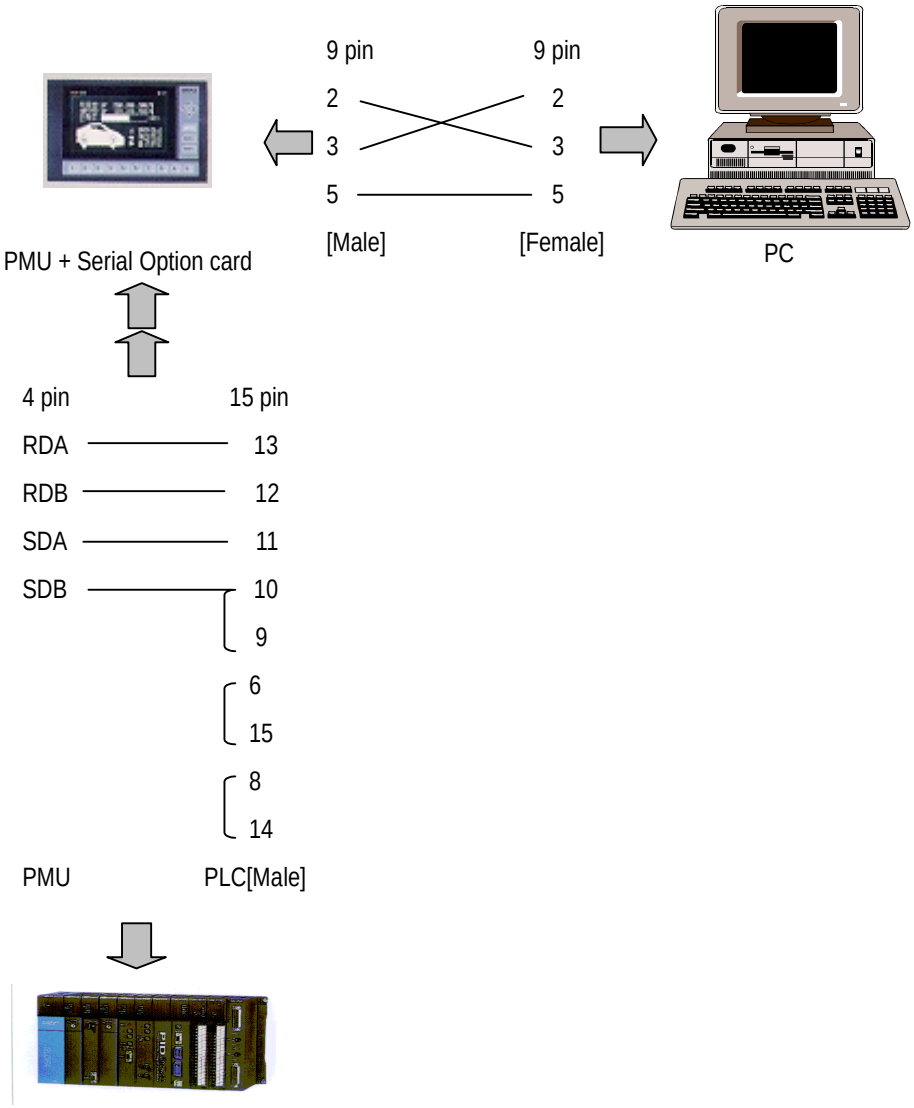


M0001 : Bit address for Touch Tag and Lamp Tag(Buffer : 40, Bit number : 0)

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