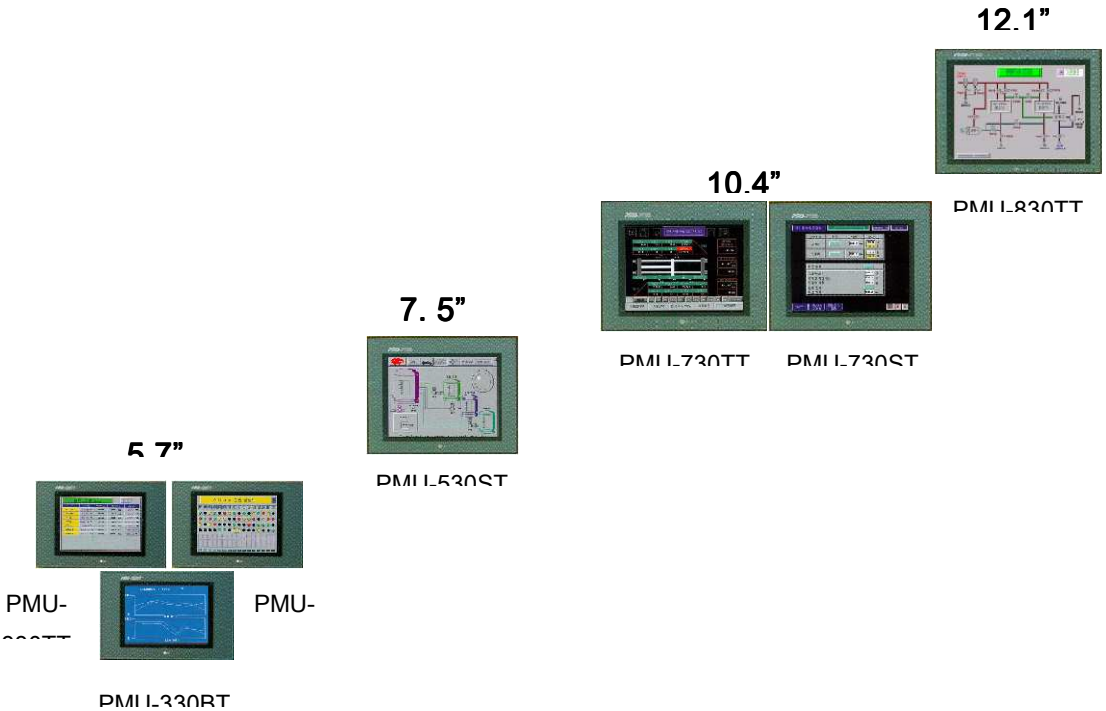
1. Features

- ✓ High speed graphic Processing by adapting 32bit RISC Processor.
- ✓ Support 256 Colors Basically.
- ✓ Supports RS-232C and RS-422 Communication Port Basically and baud rate 300bps ~ 115,200 bps.
- ✓ Supports a multi-drop Communication using RS-422 Communication Port.
- ✓ Needless Battery Back-Up system by Using Flash Memory for Saving Screen Data.
- ✓ Logging function for data back-up and analysis.
- ✓ Recipe function for transferring a block parameters according to kinds of production.
- ✓ Various Image function using BMP files.
- ✓ Easy Up-grade by download O/S and Font file using PMU-EDITOR.
- ✓ IP65F Waterproof.

2. Line-Up of PMU-30Series



3. Specifications

3-1 General Specifications

Item	PMU-830	PMU-730	PMU-530	PMU-330	Remarks
Source Voltage	85~264V AC		18~28V DC		47~63Hz
Power Consumption	20W		12W		exclude Option
Noise Immunity	1200Vp-p		900Vp-p		Impulse Noise
Ambient Temp.	0~50°C				
Storage Temp.	-10~60°C				
Ambient Humidity	85% RH or less				
Insulation Resistance	10MΩ				500V DC
Vibration	10 ≤ F ≤ 25 Hz				X, Y, Z (1G)
Shock	10G				
Water Proof	IP65F				
Grounding	100Ω or less grounding resistance				

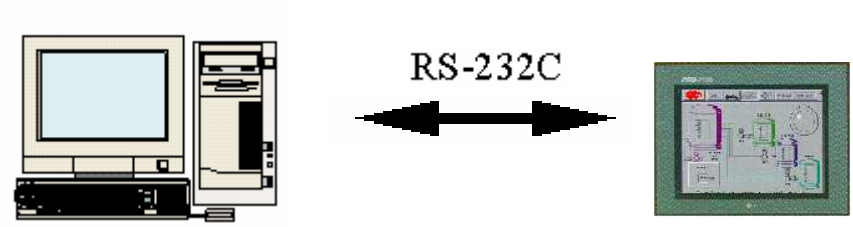
3-2 Function Specifications

ITEM		PMU-830	PMU-730		PMU-530	PMU-330		
Type		PMU-830TT	PMU-730TT	PMU-730ST	PMU-530ST	PMU-330TT	PMU-330ST	PMU-330BT
DISPLAY	Display Device	TFT Color	TFT Color	STN Color	STN Color	TFT Color	STN Color	STN Mono
	Color	256 Color						Blue & White
	Display Resolution	800 X 600	640 X 480			320x240		
	Touch Resolution	1 X 1(Dot)	20 X 20 (Dot)		1 X 1(Dot)	20 X 20 (Dot)		
	Touch Cell	800 X 600	32 X 24		640 X 480	16 X 12		
	Touch Method	Analog	Matrix		Analog	Matrix		
	Screen Size	12.1"	10.4"		7.5"	5.5"	5.7"	
	Max. BMP Size	800 X 600	640 X 480			320x240		320 X 240[*1]
	Diagram	Circle, Line, Ellipse, Rectangle, Polygon						
	Graph	Bar, Trend, Meter, Histogram						
	Character	Korean, English, Japanese, Chinese						
	Brightness	135cd/m^2	200cd/m^2	230cd/m^2	83cd/m^2	250cd/m^2	75cd/m^2	220cd/m^2
INTER-FACE	RS-232C[*2]	Inherence						
	RS-422[*2]	Inherence						
	Fnet	Option						
	Communication	Ethernet, Profibus-DP, DeviceNet (Under Development)						
	Printer Port	Inherence			Option			
MEMORY	Screen Data	4MB	4MB	2MB	2MB	2MB	1MB	1MB
	System Buffer	2048 Word						
	Logging/Recipe	256KB						
SIZE	Outer Size	305(W) X 292(H) X 55(D)			240X170	206(W) X 136(H) X 64(D)		
	Panel Cut	294(W) X 228(H)			231 X 161	198(W) X 128(H)		

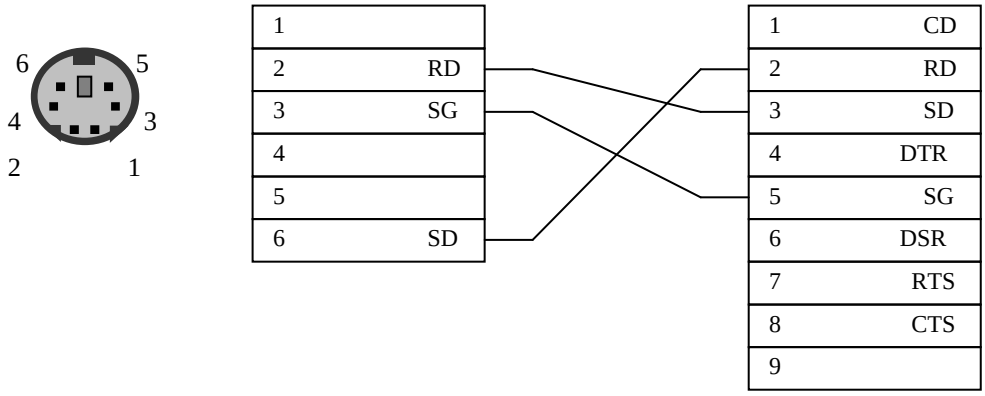
3-3 INTERFACE

After completion of programming, click 'Transmit'. All composed screen files are compiled into one '*.PMU' file and saved. It transmits compiled file to PMU through RS-232C port.

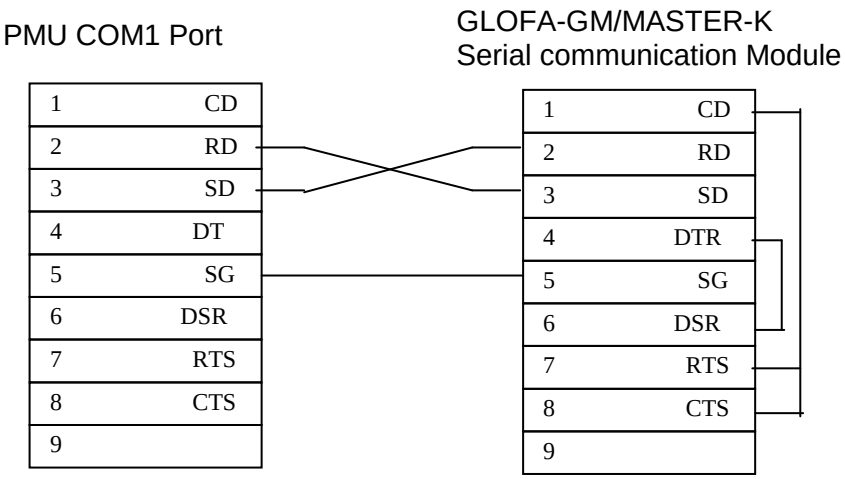
Standard Connector pin between TOP Designer and TOP is RS-232C



▹ Connection between PMU's 6pin port and PC's 9pin port



▹ Connection between PMU's COM2 port and PLC communication module

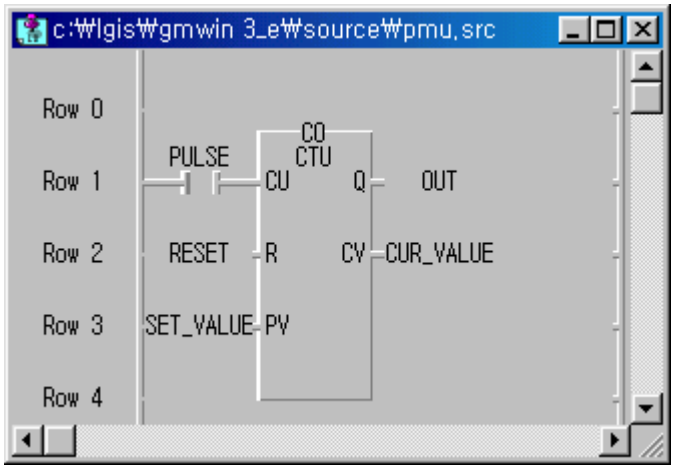


4. Functions

4-1 Basic Functions

4-1-1 PLC Program

Prior to PMU Program, PLC Program must be completed. Make PLC Program as Follows using GMWIN and download to PLC.



< PLC Program >

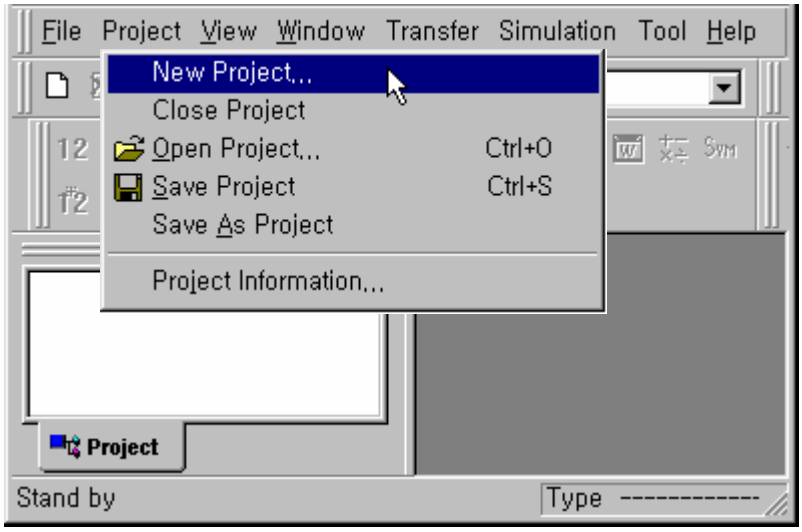
Name	Var. Ki...	Allocati...	Used	Data Type
C0	VAR	<Auto>	*	FB Instance
CUR_VALUE	VAR	%MW101	*	INT
OUT	VAR	%MX10	*	BOOL
PULSE	VAR	%MX0	*	BOOL
RESET	VAR	%MX1	*	BOOL
SET_VALUE	VAR	%MW100	*	INT

< Local Variables >

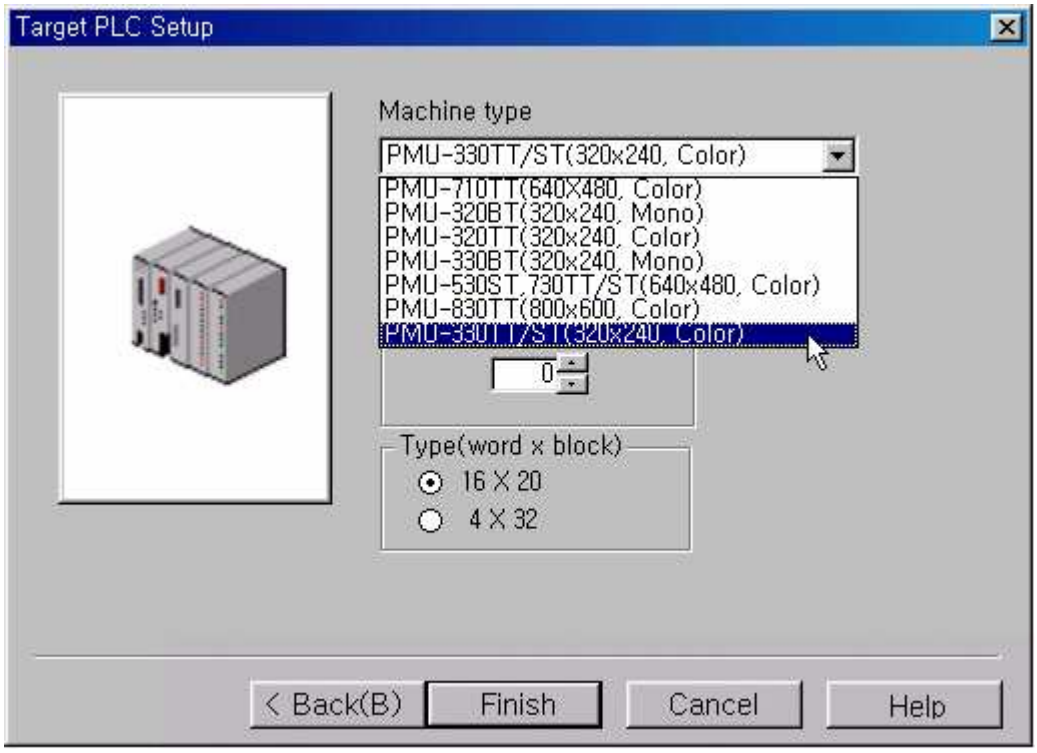
4-1-2 Make up PMU Project

① Click  icon and execute PMU-EDITOR.

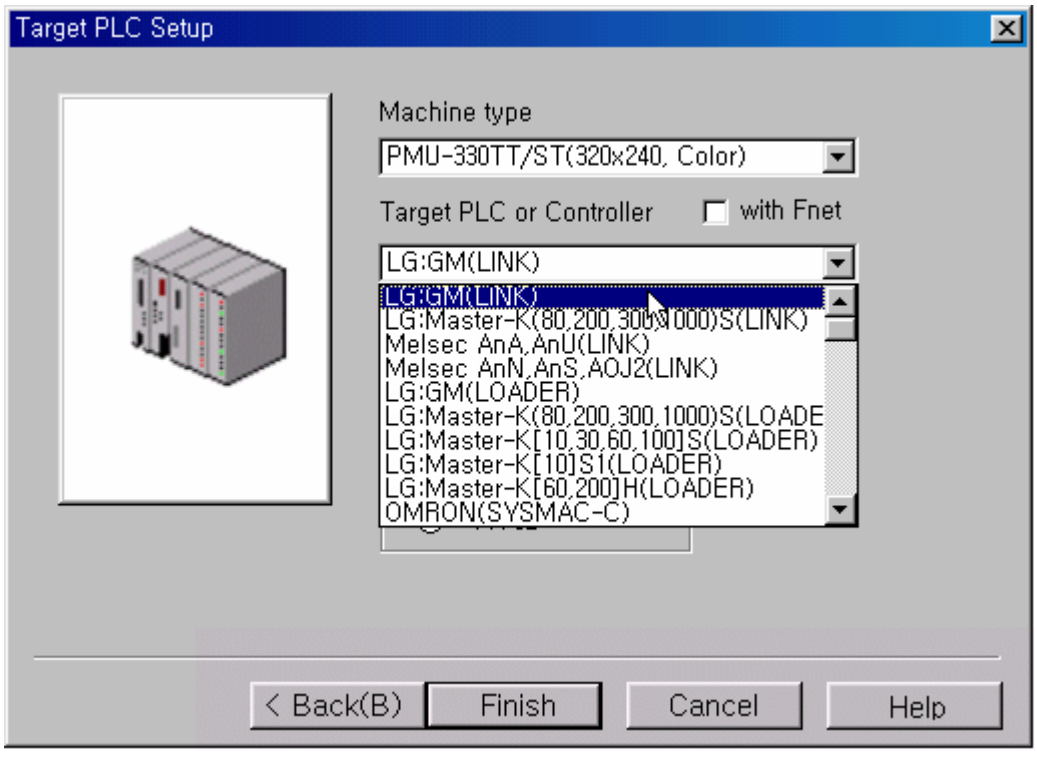
② Click Project > New Project.



③ Select PMU Type.



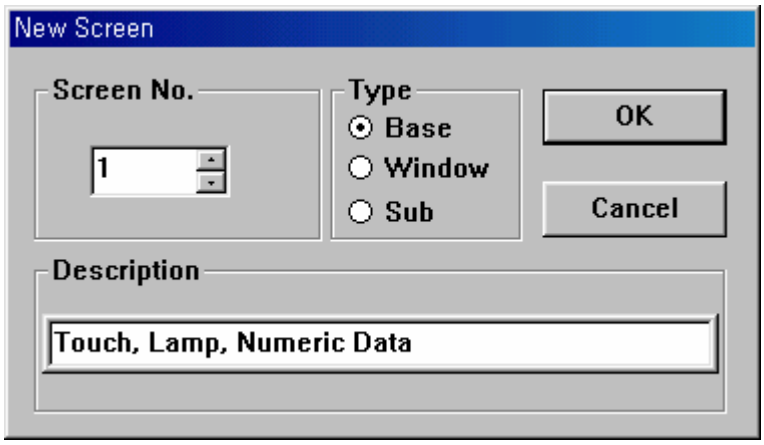
④ Select Target PLC Type - LG:GM(LINK)



▹ PLC Series Name (Loader) → Communicate between PMU and PLC through loader communication port of PLC.

▹ PLC Series Name (LINK) → Communicate between PMU and PLC through communication module of PLC.

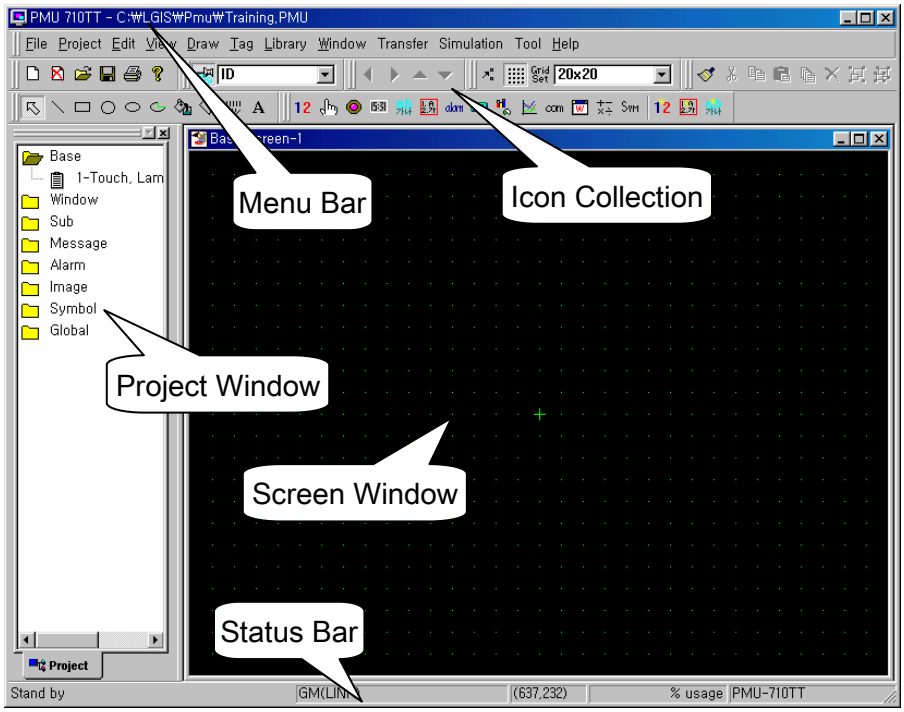
⑤ Select Screen Type and Click OK button



▹ Base Screen : Occupy Full Screen of PMU

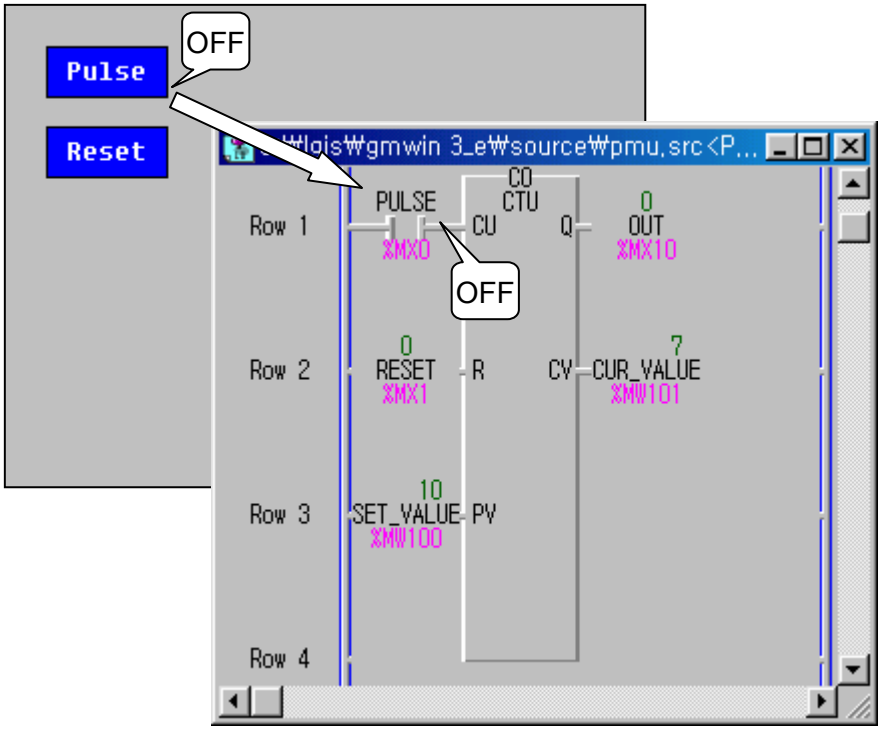
▹ Window Screen : Occupy Partial Screen of PMU. Window Screen is useful appear at need and disappear when finish its function.

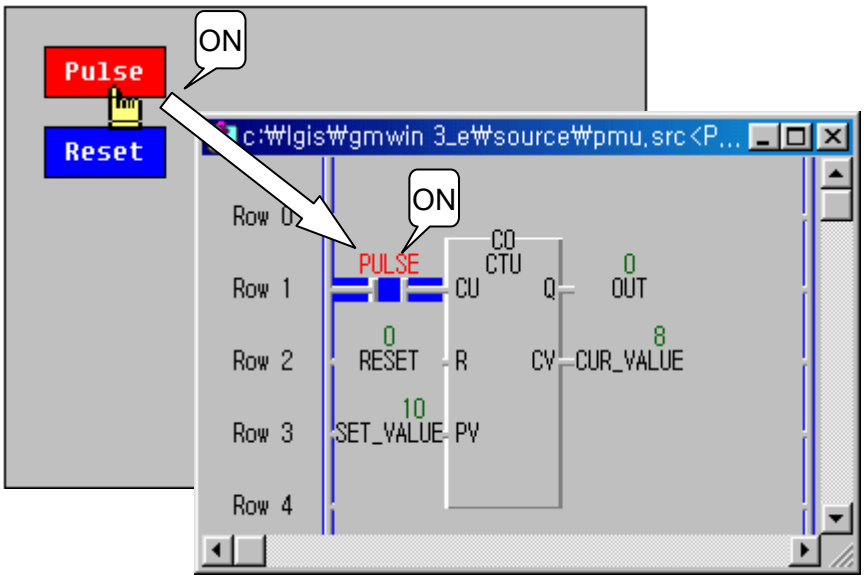
▹ Sub Screen : Overlap Base Screen.



4-1-2 Touch Tag

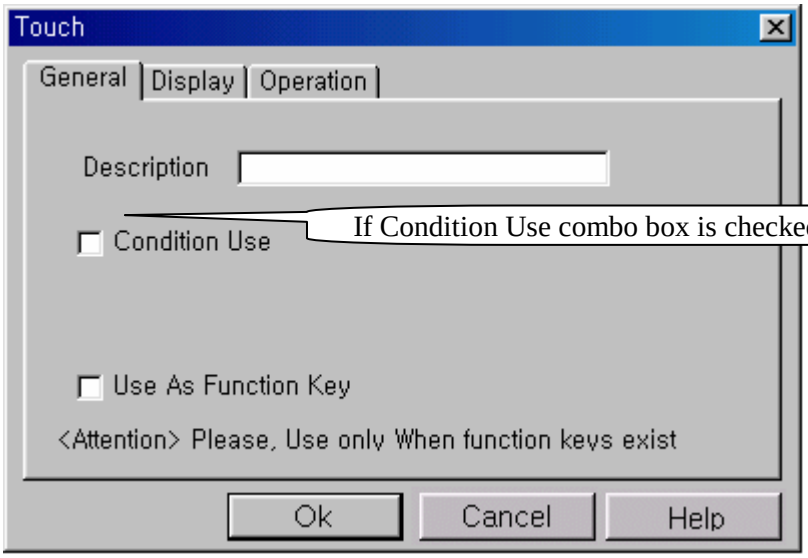
1) Convert the state of 1bit variable in PLC program by touching some point of PMU Screen .



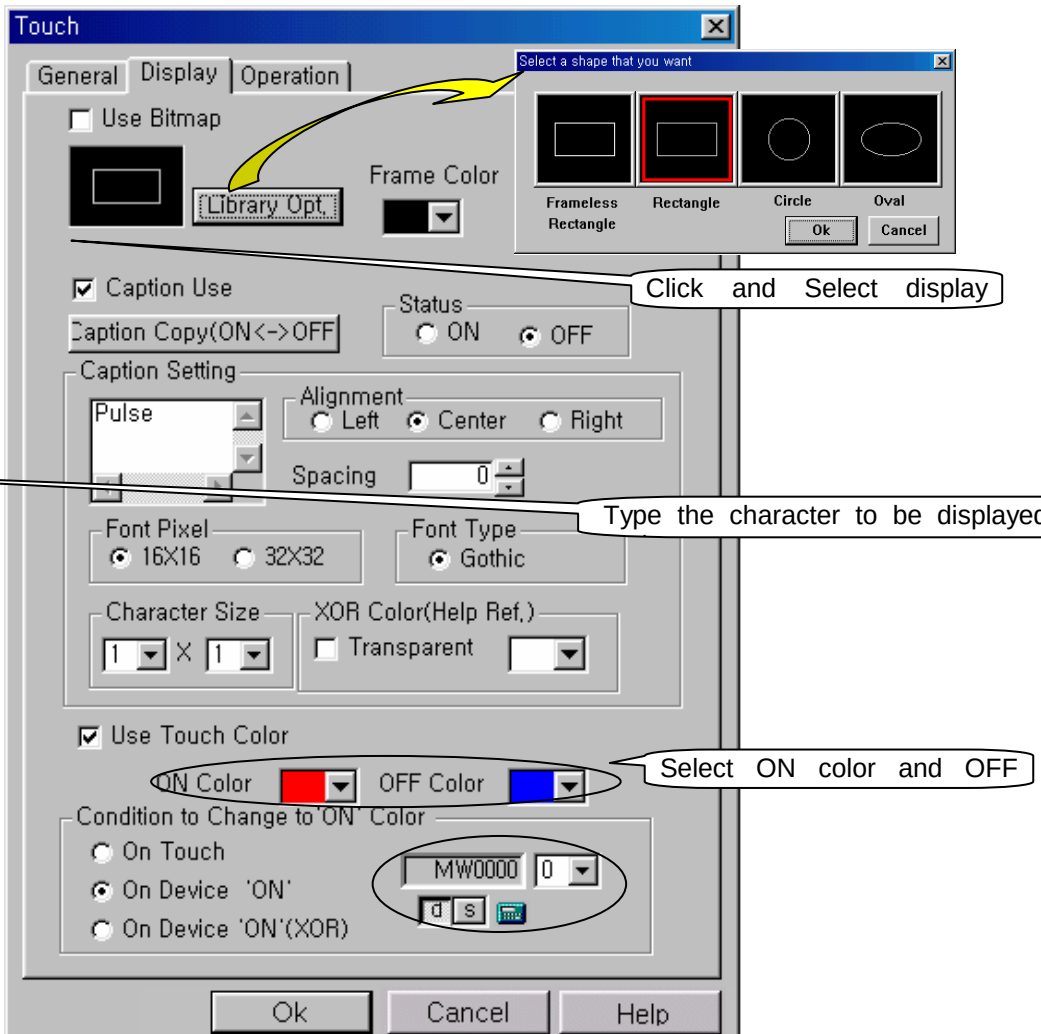


① Click  icon on icon collection or Tag > Touch on menu bar.

② General Tap : Do not set any item.



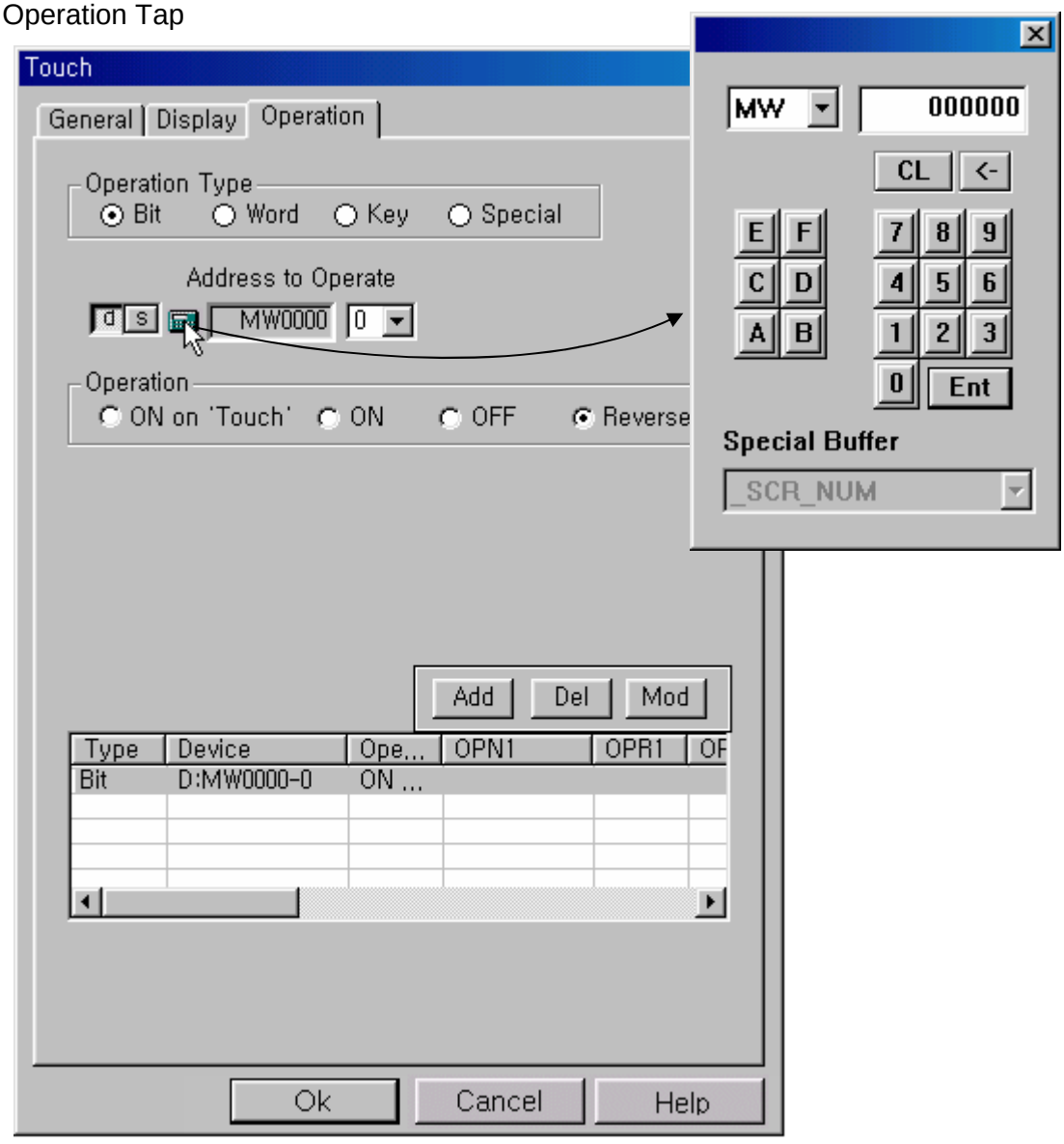
③ Display Tap



Set bit address to be monitored.
D: Use PLC address.
S: Use PMU system buffer.

- ▹ Caption Use : Display character in the touch tag region.
- ▹ Use Touch Color : After touch operation, monitor the state of designated bit address and display with colors.

④ Operation Tap



- ▹ Operation Type

  Bit : Convert the state of 1bit variable

  Word : Move set data to designated WORD address or Perform numerical calculation.

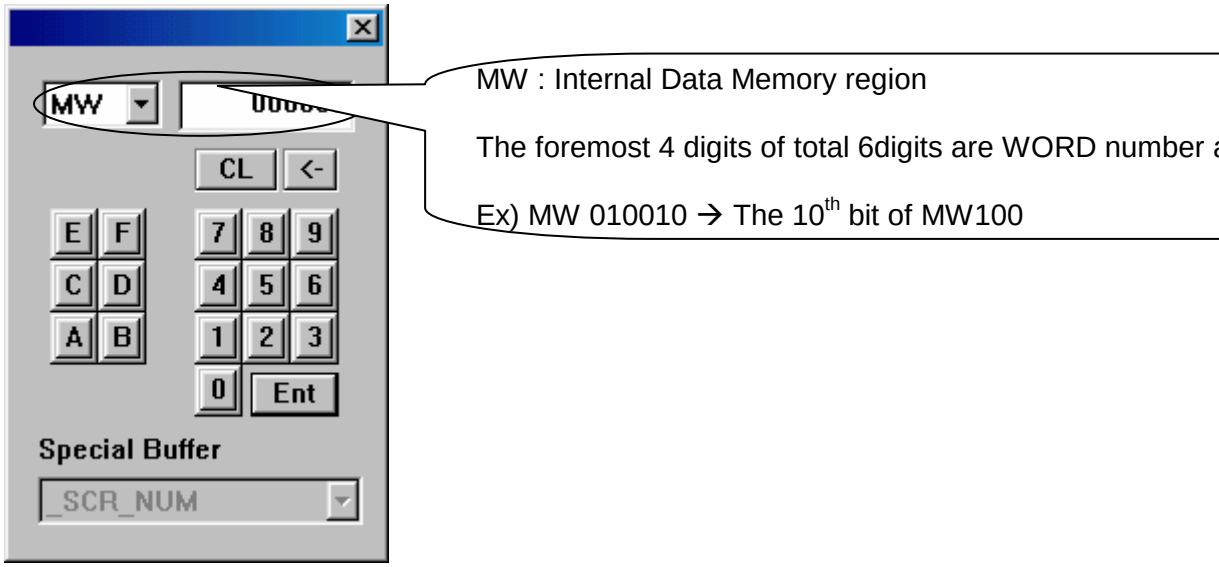
  Key: Numerical or character key input function

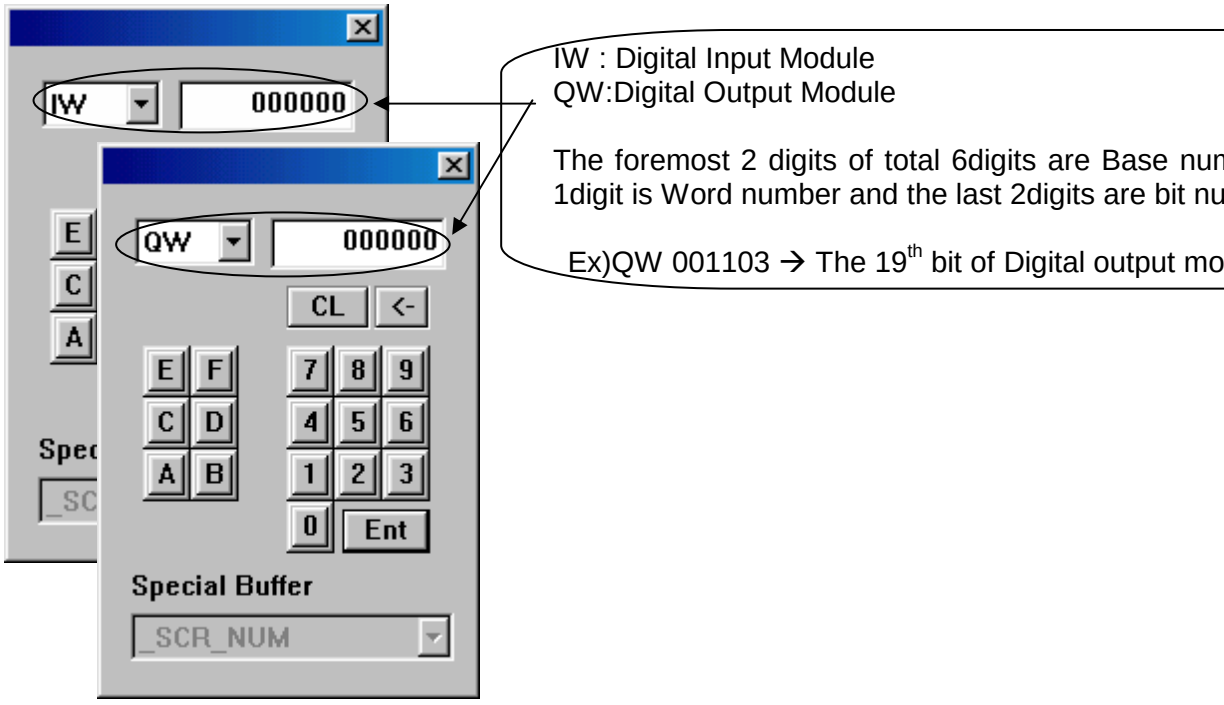
  Special : Execute special function such as Screen change, Print etc.

▹ Operation

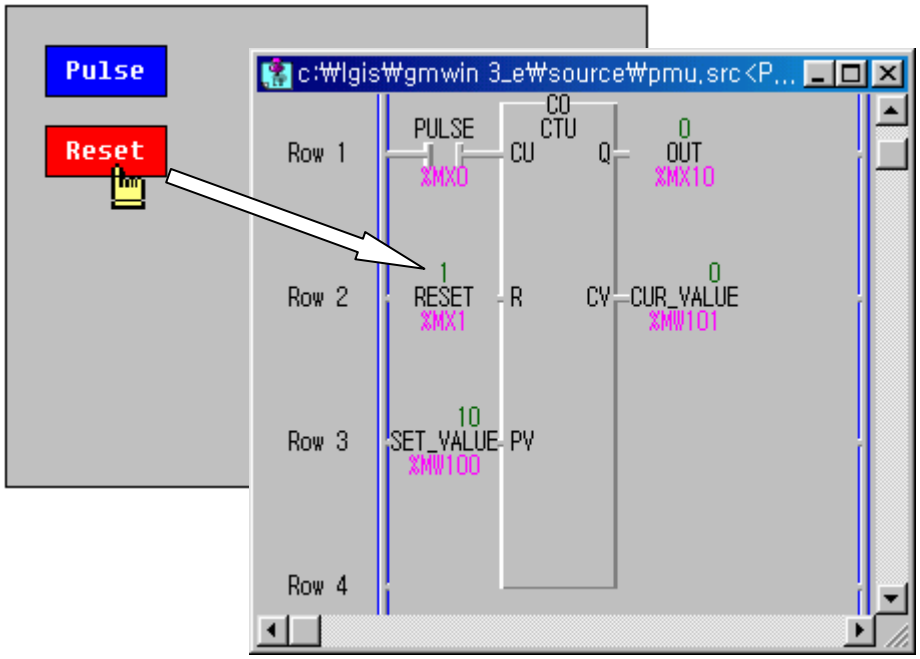
ON on touch : Turn ON when touched and Turn OFF when the finger come apart.
ON : Turn ON when touched and maintain ON state when the finger come apart.
OFF : Turn OFF when touched and maintain OFF state when the finger come apart.
Reverse : Turn ON when first touch and Turn OFF when second touch

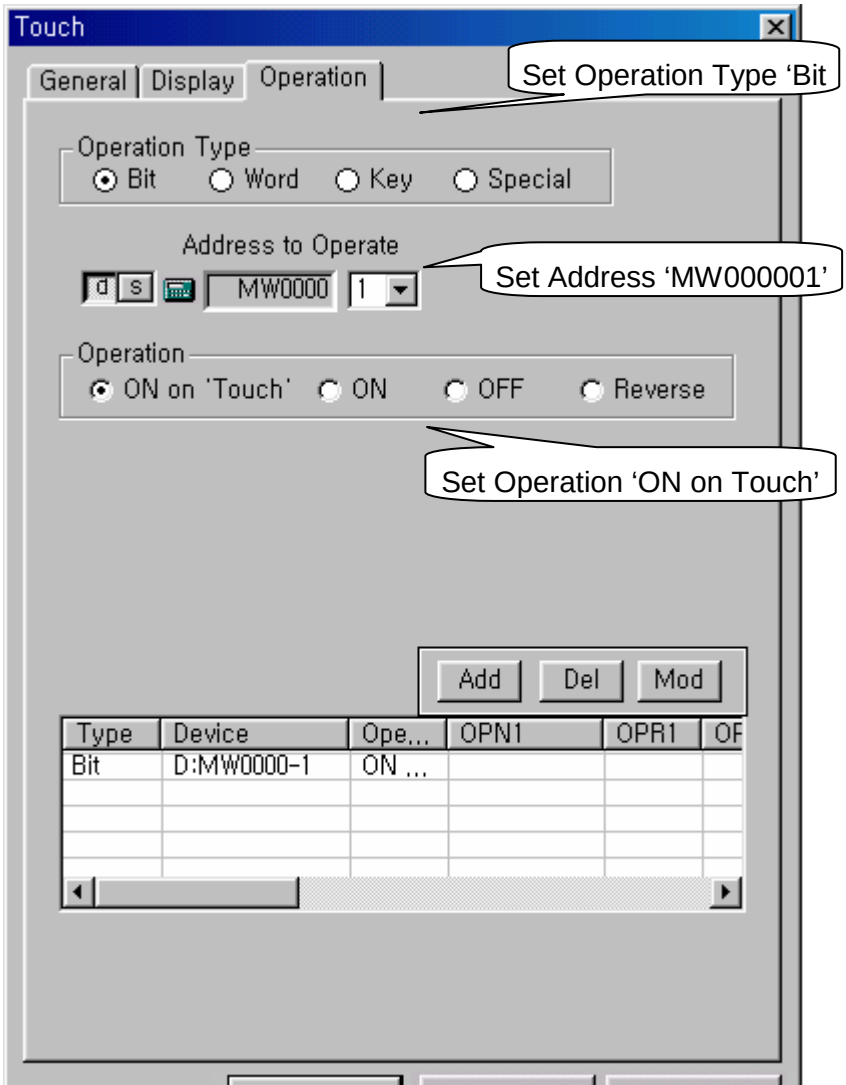
⑤ PLC Address Setting (In case GLOFA-GM Series PLC)



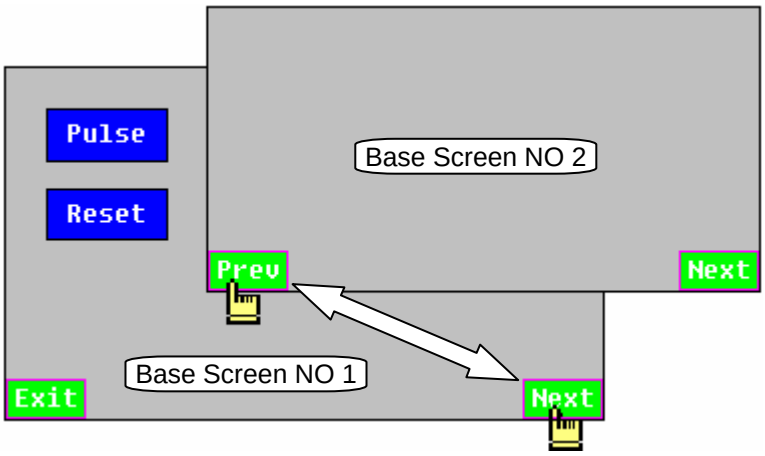


⑥ Operation Tap of Reset Touch Tag

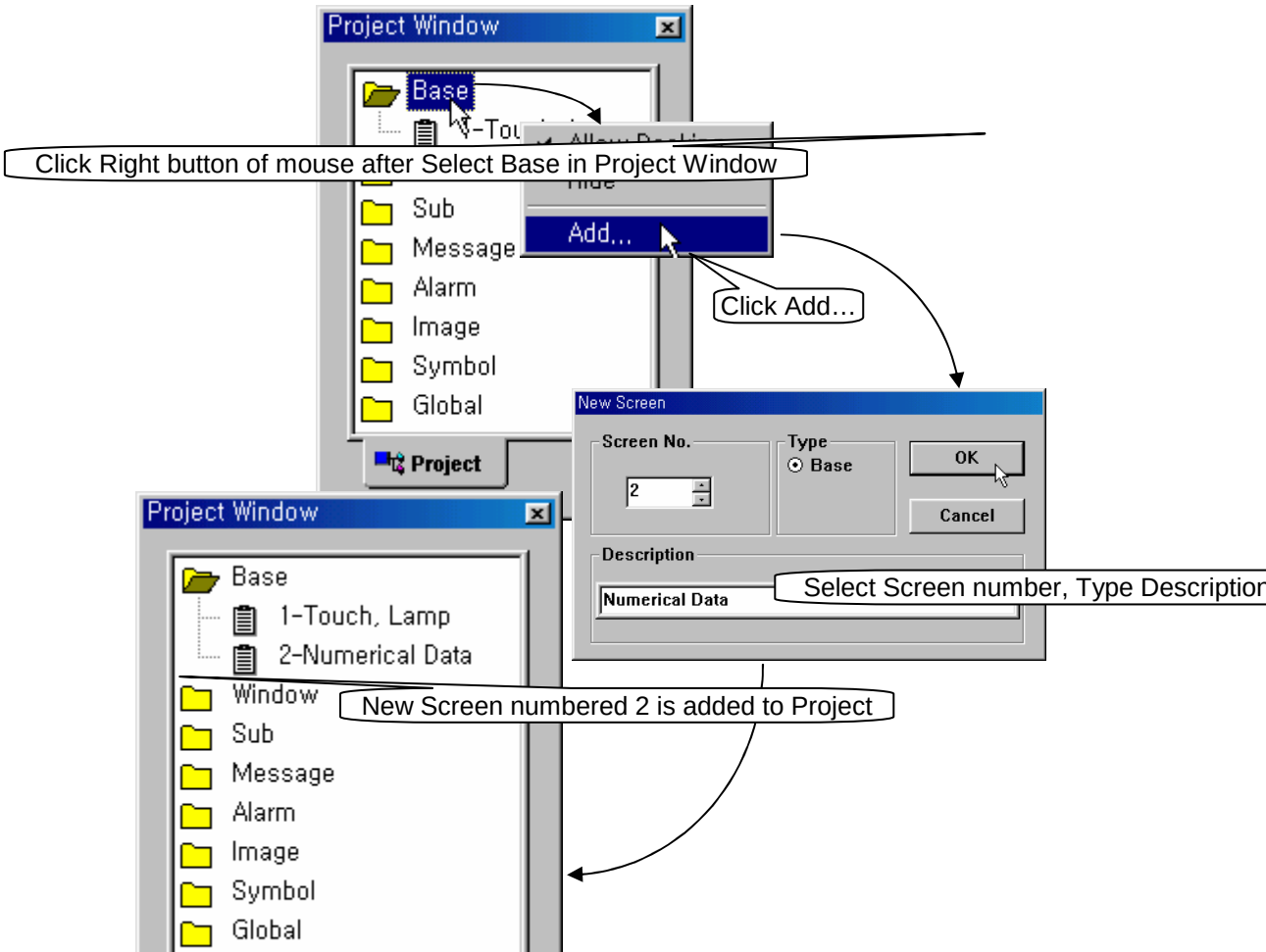




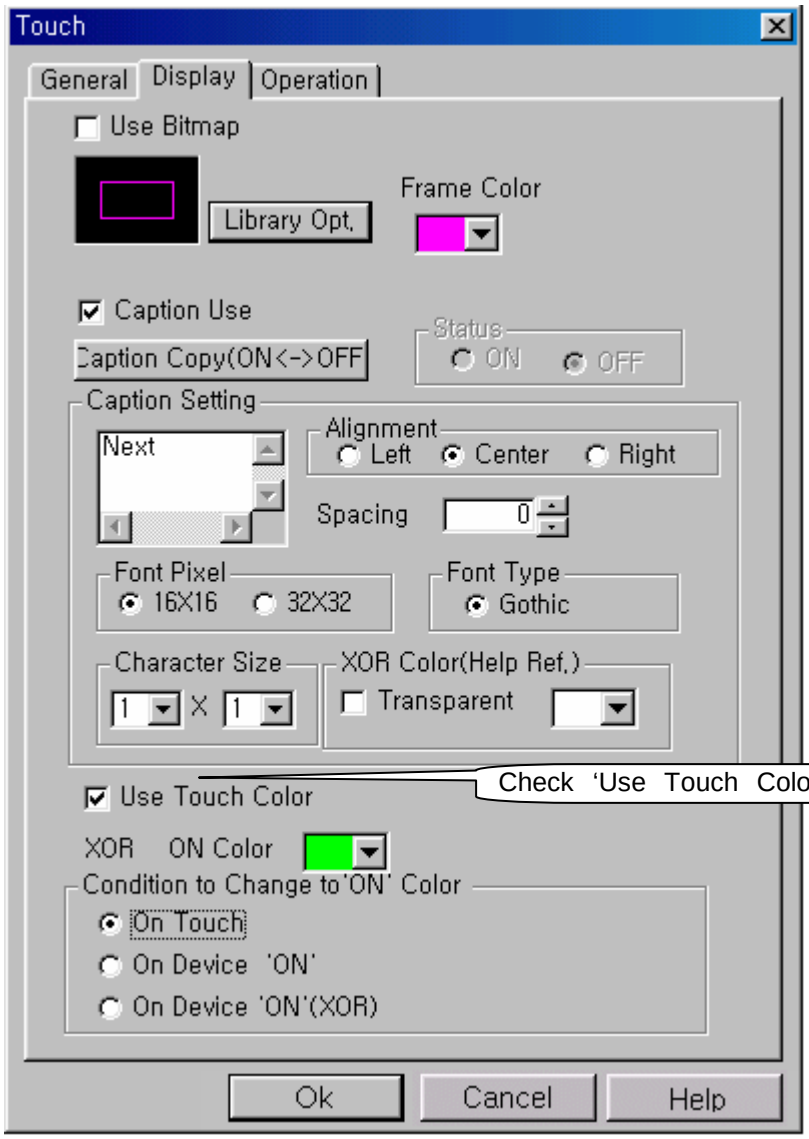
2) Screen change using Touch Tag. (Special function of Touch tag)
When tag is touched, the displaying screen of PMU is changed



① Add Base Screen



② Set Touch Tag : Display Tap



Check 'Use Touch Color' and select 'ON

▹ Condition to change 'ON' Color

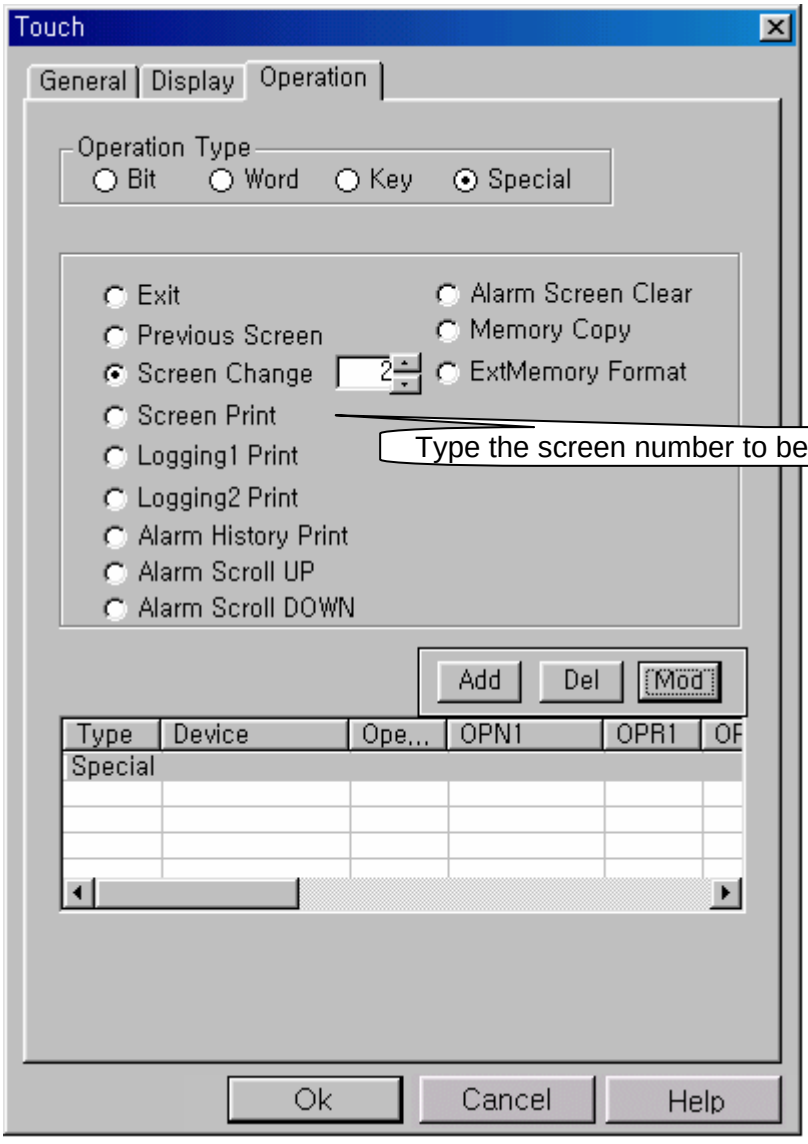
On touch: On Color is displayed only when touch tag is touched.

On Device 'ON' : ON color or OFF Color is displayed depending on the state of designated bit address, irrelevant to touch operation.

On Device 'ON'(XOR) : ON color is displayed when designated bit address is

ON state, irrelevant to touch operation. If designated bit address is OFF state, Black color is displayed in touch tag region.

② Set Touch Tag : Operation Tap

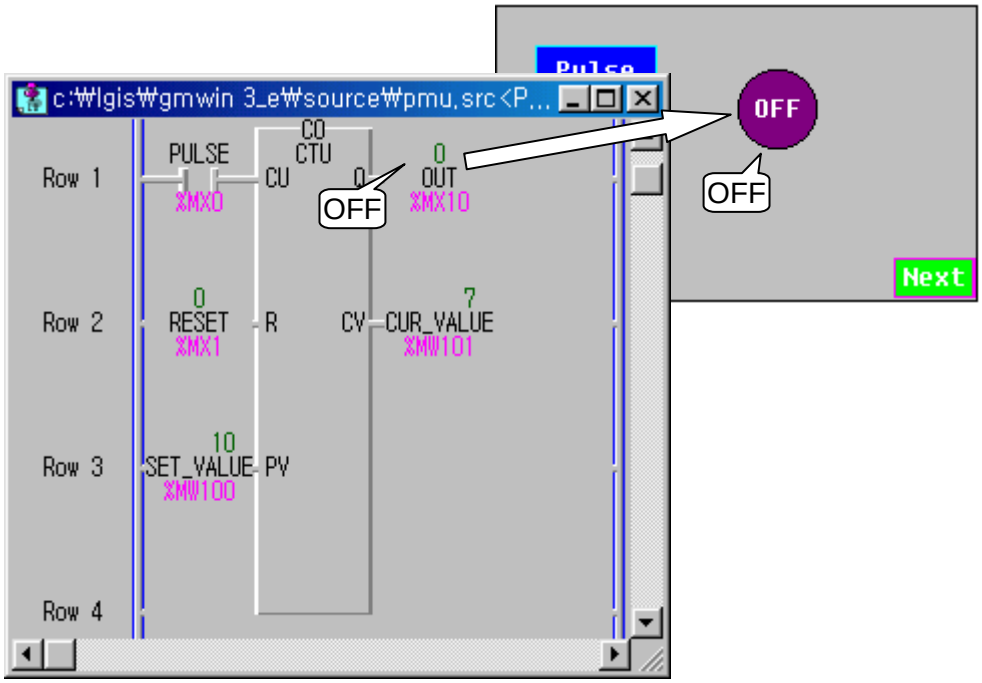


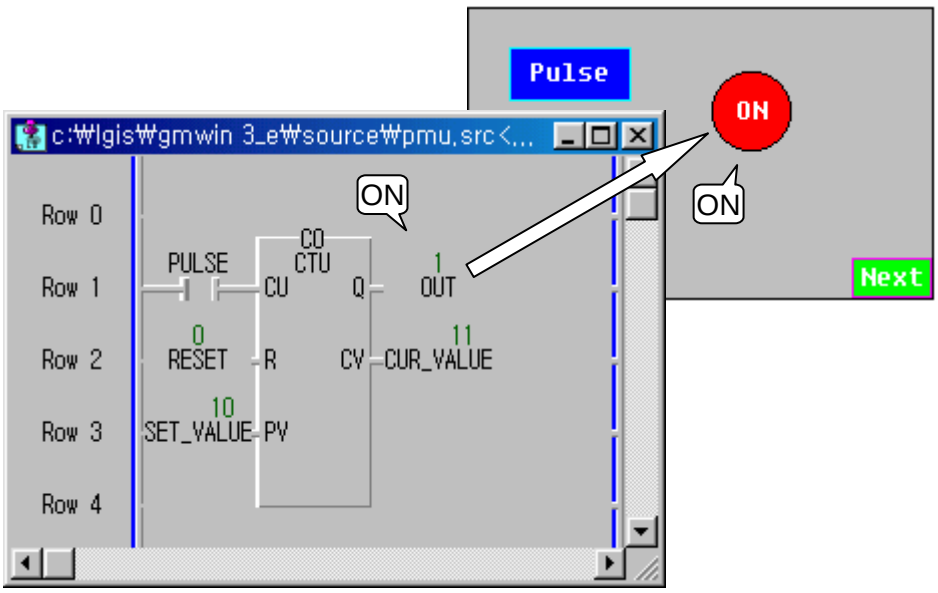
- Exit : Finish working PMU and display initial screen of PMU.
- Previous Screen : return to the screen displayed previously.
- Screen Print, Logging Print is available when a printer which supports PCL3 level is connected to PMU,

Remark	How to Exit If power on mode is set to Run and no Exit tag in Project Power OFF and ON, and touch the upper end of screen before buzzer beeps.

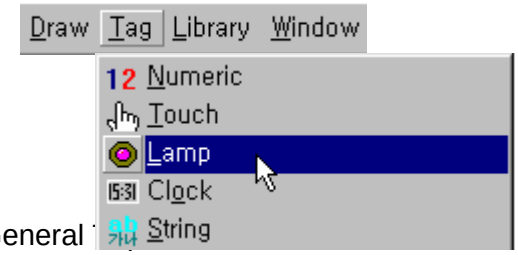
4-1-3 Lamp Tag

1) Display ON or OFF state of designated bit variable with different color.
When the variable OUT which addressed %MX10 is ON, Lamp Tag is colored with red and appear the character ‘ON’, and when the variable OUT become OFF state lamp tag is colored with purple and appear the character ‘OFF’.

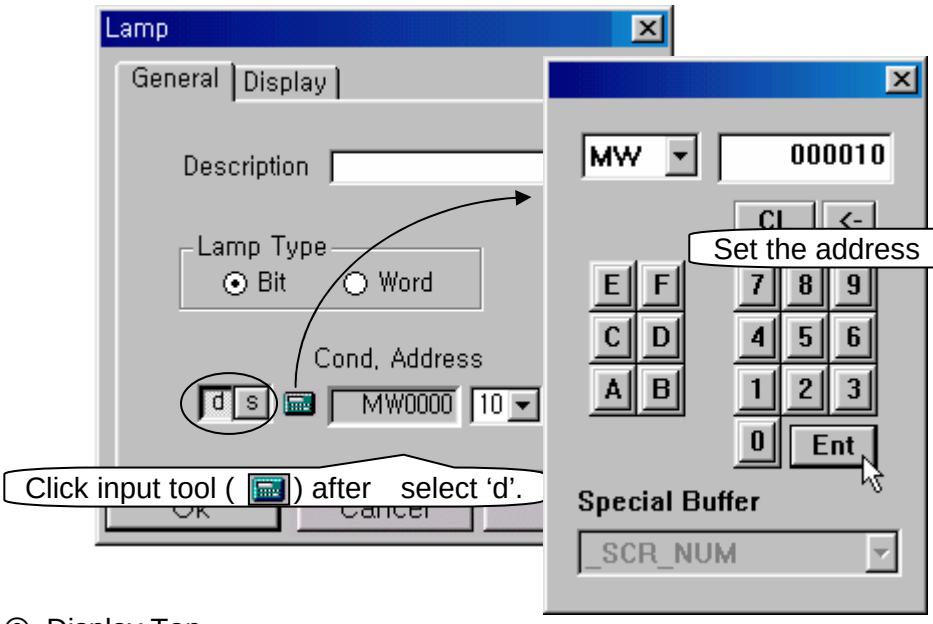




① Click  icon on icon collection or Tag > Lamp on menu bar.



② General



② Display Tap