Getting Started: Touch-8000 HMI Linking ICP DAS PAC And M-7000 I/O Modules

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Written by Chun Tsai. (<u>chun@icpdas.com</u>) Copyright Mar. 2009, by ICP DAS CO., LTD. All Rights Reserved.

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Chapter 1 : Getting Started

1.1 Introduction

The Touch-8000 series HMI supports Modbus TCP/IP master protocols via its Ethernet port and Modbus RTU master protocol via its RS-232 and RS-485 ports. Touch-8000 can link to the ICP DAS Modbus PACs and M-7000 I/O Modules easily. For example, it can link to the uPAC-7186EG and iPAC-8447/8847 and WinPAC-8147/8447/8847 and i-7188XG and M-7018z or other ICP DAS PAC which support the Modbus TCP/IP slave or Modbus RTU slave protocols.

Item	Screen size and available Modbus TCP/IP and Modbus RTU ports					
Touch-8070T	' color TFT LCD, 480x234					
	One 10/100Base-T , COM1: RS-232 / RS-485 (2 wire / 4 wire)					
	COM2: RS-232 , COM3: RS-232 / RS-485 (2 wire)					
Touch-8104T	10.4" color TFT LCD, 640x480					
	One 10/100Base-T, Other serial ports are same as Touch-8070T.					

Download Development Software from the Internet:

Please install the "EasyBuilder 8000" software (Ver. 2.10 or later version) first before you can program the Touch-8000 series touch HMI. Please download it at http://ftp.weintek.com/MT8000/eng/ "EB8000V210_090306_en.zip" or other newer version number.

User's Manual:

 1. Getting Started manual: this document. (Touch-8000 CD-ROM:\napdos\touch8000\english_manu\)

 2. User's manual:
 <u>ftp://ftp.weintek.com/MT8000/eng/UserManual/</u> > all PDF files.

More Information:NS-208/NS-205 : http://www.icpdas.com/products/Switch/switch_list.htmICP DAS ISaGRAF PAC:http://www.icpdas.com/products/PAC/i-8000/isagraf.htmWinPAC-8xx7:http://www.icpdas.com/products/PAC/i-8000/isagraf.htmTouch HMI:http://www.icpdas.com/products/PAC/winpac/wp-8x47.htmlTouch HMI:http://www.icpdas.com/products/HMI/touch_lcd/touch_human.htmM-7000:http://www.icpdas.com/products/Remote_IO/m-7000/m-7000_list.htm

Ethernet connection:

Recommend not connecting more than 6 controllers. The more connectted, the slower rate.



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Pin assignment of RS-485 ports:

The RS-485 Cable Pin assignment between the Touch 8000 and uPAC-7186EG, iPAC-8xx7, WP-8xx7 or other ICP DAS controller which supports Modbus RTU slave protocols in RS-485 port is as the following. (Recommend connect no more than 7 controllers or M-7000. The more connectted, the slower communication rate)

Touch-8000 COM1: RS-485	ICP DAS controller or M-7000	ICP DAS controller or M-7000
2 Data +	Data +	Data +
1 Data	Data	Data -
Touch-8000 COM3: RS-485	ICP DAS controller or M-7000	ICP DAS controller or M-7000
9 Data +	Data +	Data +
6 Data - 🛛 —	Data	Data -

Pin assignment of RS-232 ports:

The RS-232 Cable Pin assignment between the Touch 8000 and uPAC-7186EG, iPAC-8xx7, WP-8xx7 or other ICP DAS Modbus RTU slave controllers is as the following. (Only one controller can be connected by the RS-232 cable)

Touch-8000 COM1: R	RS-232	ICP DAS controllers
2 RXD —		TXD
3 TXD —		RXD
5 GND —		GND
7 RTS		
8 CTS		
Touch-8000 COM2: R	XS-232	ICP DAS controllers
6 RXD —		TXD
4 TXD —		RXD
5 GND —		GND
7 RTS		
8 CTS		
	~	

8 RXD ———	TXD
7 TXD ———	RXD
5 GND	GND

1.2: Setting up the IP address and password of the Touch-8000

To make your PC can connect the Touch-8000 or Touch-8000 can connect to some controllers, please setup proper IP address and its password for downloading HMI pictures.

1. First, make sure the DIP SW No. 1 to 4 on the back of the Touch-8000 are all set as OFF. Then power up the Touch-8000.

2. Then use your finger to touch the bottom-right corner to make the tools-bar appeared. You may also try to use one USB mouse to plug in one USB port on the back of the Touch-8000 to operate it. (If it is not easy to click the bottom-right corner of your Touch-8000, please go to the step 6 on the next page to do screen calibration)



🔀 07:12:25 🍃
— 🔁 EasyView —

3. Then click the fourth item to do further settings.

Enter the correct password. The default password when shipping out is 111111 .

1	
System settings	×
Enter you pass pass word	word
Ok	Cancel

4. After the correct password entered, please click the "Network" and "IP address get from below" to setup the IP address and subnet mask of the Touch-8000.

Auto Get IP A	Secunty \	Histo	ry \/	Backlig	ht CF o	Please two-click on each cell change the IP Address and Subnet Mask.
IP Address	192	. 16	3.	1	. 179	1
Subnet Mask	255	. 25	5.	255	. 0	
Cata Mari	192	. 16	а.	1	. 254	TI

5. Then click on "Security" and "Download Password" to enter new Password and confirm it. (You may use the default password 111111). This download password is necessary when user downloading HMI pictures from PC to the Touch-8000.

1	
Local Password]
Upload Password	Please enter you new password
Download Password	Password: ****** Comfirm: *****
Upload (History) Password	Pass word match
Upload (History) Password	Pass word match Ok Cancel

6. Important To do calibration or forget the password, please set Dip SW 1 on the back of the Touch-8000 as ON and SW 2 to 4 as OFF and then re-cycle the power once. Then the Touch 8000 will guide you to calibrate the screen. After that, there will have one "Restore to default password" window pop-up. You may click "yes" (or "No" to do calibration only) to make the password become 111111. Then do above steps 1 to 5 again.

1.3: A sample program for connecting the Touch-8000 to ICP DAS controllers by Modbus TCP/IP protocols

To make uPAC-7186EG, WinPAC-8xx7, iPAC-8xx7, I-7188EG & WinCon-8xx7 controllers to be accessible by the Touch-8000 HMI, variables in the controllers should be assigned with a network address. Please refer to the section 4.1 and 4.2 of the ISaGRAF User's manual. If you are not familiar with the ISaGRAF programming, recommend to review Chapter 2 of the ISaGRAF User's manual.

ISaGRAF user's manual : "user_manual_i_8xx7.pdf" and "user_manual_i_8xx7.pdf_appendix" WP-8xx7 CD-ROM: \napdos\isagraf\wp-8xx7\english_manu\ or uPAC-7186EG, iPAC-8xx7 CD_ROM: \napdos\isagraf\8000\english_manu\ or http://www.icpdas.com/products/PAC/i-8000/getting_started_manual.htm

1.3.1: ISaGRAF sample program

Please set the IP address of the ISaGRAF controller to be 192.168.1.180 and mask as 255.255.255.0. (This example will use this IP to connect to the Touch-8000)

This ISaGRAF project file is at Touch-8000 CD-ROM:\napdos\touch8000\example\touch1.pia . (Please refer to Chapter 9.5 of the ISaGRAF User's manual to restore it to PC / ISaGRAF workbench.)

Name	Туре	Attribute	Network address	Others
OUT01	Boolean	Internal	0001	
Second1	Integer	Internal	000B (Dec. is 11)	Used as 16-bit integer
VAL1	Integer	Internal	000C (Dec. is 12)	Used as 32-bit integer
F1	Real	Internal	000E (Dec. is 14)	32-bit IEEE floating point value

Variables used in this example.

A simple Ladder program to get the system time .



After you finish this project, compile it and then download it to the ISaGRAF controller.

(If you are not familiar with the ISaGRAF programming, recommend to review Chapter 2 of the ISaGRAF User's manual.)

1.3.2: Program the Touch-8000

The project file of this example : Touch-8000 CD-ROM:\napdos\touch8000\example\touch_01.mtp

The "EasyBuilder8000" software is for programming many useful pictures for the Touch-8000 series HMI. This section illustrates a simple example to program a Touch-8070T. For more information about programming on the Touch series, please refer to the Easybuilder 8000 user manual.

Please install the "EasyBuilder 8000" software (Ver. 2.10 or later version) first before you can program the Touch-8000 series touch HMI. Please download it at http://ftp.weintek.com/MT8000/eng/ "EB8000V210_090306_en.zip" or other newer version number.

User's Manual:

A. Getting Started manual: this document. (Touch-8000 CD-ROM:\napdos\touch8000\english_manu\) B. User's manual: <u>ftp://ftp.weintek.com/MT8000/eng/UserManual/</u> > all PDF files.

Steps to program the HMI project:

1. Click on the Windows "Start" button, then click on the "Program", then click on the "EasyBuilder8000" – "EasyBuilder8000".



The following windows will be displayed. Select the proper model for your application. Here use the 8070T .



Then click ok in the "System Parameter Settings" window.

		gs					
evice Mo	odel Gener	al Securit	y Font	Extended Memory	Printer Ser	ver	
Device list	:						
No.	Name	Location	Device typ	e	Interface	I/F Protocol	Station no
Local HM	I Local HMI	Local	MT6070T/	MT8070T (480 x 234)	Disable	N/A	N/A
•							
Nev	2	Delete		Settinos			
(Nev	v	Delete		Settings			
Nev Project de:	v	Delete		Settings			
Nev Project de:	xription :	Delete		Settings			
[<u>Nev</u> Project de:	v	Deletr		Settings			P
[Nev	v	Delete		Settings			
Project de:	v	Deletr		Settings			
Project de:	v	Deletr		Settings			×
Project des	v	Delete		Settings			× ×
Project de	v	Deletr		Settings			×

2. To create a new project, please run "File" > "New" as the following window.

🕓 EasyE	Builder 8000	: MTP1 -	[10 - 4	VINDOW_	_010]			
EB <u>F</u> ile	Edit View	Option	<u>D</u> raw	<u>O</u> bjects	Library	Tools	<u>W</u> indow	Help
:00	<u>N</u> ew		Ctrl+N	↓ 🤋 🕅	? 🖣		二	
: 🔊 🚔	Open		Ctrl+C					
: -1 as	⊆lose							
: 90 mil	-			-				

3. Then run "Edit" > "System Parameters ..."



Click on "New" to create a new device. Then enter the proper setting for that device as following. Here set the IP of PLC as 192.168.1.180, Port No. as 502.

System Paramet	ter Settings	×
Device Mode Device list :	el General Security Font Extended Memory Printer Server	1
No.	Name Location Device type Interface I/F Protocol Station no	
Local HMI	Local HMI Local MT6070T/MT8070T (480 x 234) Disable N/A N/A	
l I	Device Properties	
•	Name : PLC1 7	
New	O HMI ⊙ PLC	
roject desc	Location : Local Settings	
	PLC type : MODBUS TCP/IP	
4	V.1.50, MODBUS_TCPIP.so	3
	PLC I/F : Ethernet	-
	IP: 192.168.1.180, Port=502	Settings
	Use broadcast command	0
	Interval of block pack (words) : 5	
	Max. read-command size (words) : 120	
	Max. write-command size (words) : 120	
	ОК	Cancel

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4. Click on "Save" and entering a name to save the above settings.



5. Select the "object list" as the following.

🕞 EasyBuilder 8000 : MTP1.mtp - [10 - WINDOV
EB File Edit View Option Draw Objects Lib
D 🛎 🖬 X 🖻 🖻 🗅 🗠 🚭 የ 📢
: 🛠 💆 🙀 😜 🛄 🖉 🔣 💷
: 🗤 📣 🛃 🖪 📘 🕽 🖉 🥹 📓
•
: Ç 🖪 💾 🖻 🍫 쩆 🕂 🎟 🍱 🚥 🖳
i 🐘 🐘 💠 💱 🛍 🕐 🐖 📰 🔛 🛶 🔗
0 1 2 3 4 > State 0
Windows 🗸 🗸
Object list
Object list
Window preview

Then double-click the "*10: WINDOW_010". The "10" window is the starting window (First page) when power on the Touch-8000 HMI .



6. Before editing the "10" window, here we are going to create the "11" window as the following. Move the mouse cursor to "11" and **right click** on the "11". Select the "New" to create it. Select the proper Background color for this new created window.

Windows	▼ × 4
Object list	Window Settings
3: Fast Selection 4: Common Window 5: PLC Response 6: HMI Connection 7: Password Restriction	Name : Window_011 Window no. : 11
9 	Size Width : 480 Height : 234
12 New 13 Open 14 Close	Frame Width : 4 </td
	Background Color : Pattern :
1 10	✓ Filled
	Underlay window
	Bottom : None
	Middle : None
	Top : None
	Popup window
	Start pos. X : 0 Y : 0 Monopoly
	OK Cancel

7. Editing the "11" window.

First click on "*11: Window_011" to get into this window.



Then click on "A" to enter a Text Label and move it to a proper position.

N & ∧ [a]	: O O 🗆 🌣 💒 🛃 🗖 🔟	
i 🗷 😽 🖻 🛱 🔗 🥅	Test	
i 💡 🖪 💾 🖻 🐦		
i 🖫 🔛 💠 💱 🛍 🤆	Text	
0 1 2 3 4)		
Windows	🔲 Use label library	
Object list	Use bitmap font Label Library	
3: Fast Selection	Attribute	
5: PLC Response	Font : Arial	
6: HMI Connection 7: Password Restriction	Color : Size : 16	
- 8	Align : Left Blink : None	
*10: WINDOW_010	☐ Italic ☐ Underline	
12	Movement	
	Direction : No movement	
	Castata	
	Content : This is Page 2	
	T F	
	Tracking Duplicate this label to every state	۱II
		-
4 10 - WIM	NDOW_010 11 - Window_011 ×	
	and the second	
	This is Page 2	

Then Click on "Function Key" to create a "change window key" as the following. (for switching to the "10" window)

: 💡 📲 💾 🖪	💊 🔍 0- 🚥 🍱 🚥 🖳 💶	
: 🔡 🔛 💠 🐯	' 🛍 🕐 🚾 🖾 🔛 💻 💁 🐂 🚔 🕋	
0 1 2 3		
Windows	New Function Key Object	의
Object list	General Security Shape Label	ı
3: Fast Selectio	Description :	
📔 🔤 4: Common V	C Activate after button is released	
	Change full-screen window C Change common window	
	O Display popup window	Ш
	Window no. : 10. WINDOW_010	
	C Return to previous window C Close window	
	ASCIL/INICODE mode	
	○ [Enter] ○ [Backspace] ○ [Clear] ○ [Esc]	
	C [ASCII] / [UNICODE]	
	C Execute macro	
	C Screen hard copy	
	* Please select a printer type in system parameters	
	Notification	
	Enable	
]
	確定取消 説明]

Please set proper "shape", color for "shape" and Label for this function key as the following. Then move it to a proper position.

inction Key Object	t's Properties 🔀	
Beneral Security	Shape Label Profile	
_Shape	Shape Library	
	Inner Frame Frame Pattern Style	
Dup. F	anction Key Object's Properties	
Picture	General Security Shape Label Profile	
	☑ Use label ☑ Use label library	
Preview ——	Label Library	
0 1	State : 0 V V 0 1	
	Attribute	_
	Font : Arial	⊡
	Color : Size : 16	
	Align : Left Blink : None	┚
	Italic Underline Duplicate these attributes to every state	
	Movement	
	Direction : No movement	
	Content :	
L	Goto Page1	
		Þ
	Tracking Duplicate this label to every stat	e
	確定 🔪 取消 罰	明
10 - WINDOW	(010 11 - Window 011 ×	
· · · · · ·	This is Page 2	
	Goto Page1	

8. Now we are going to edit the "10" window.

0 1 2 3 4 > State 0		•													
Windows	- ▼ × _ ∢		10 ·	- W)	IND	DW_	010	×	r	11 -	- Wir	ndov	v_01	1	
Object list								-							
gene 3: Fast Selection															
- 4: Common Window															
5: PLC Response															
6: HMI Connection															
7: Password Restriction															
8															

Create a label "This is Page 1" as the following.

🕨 🗆 х в х с О Ф 🗆 🌣 📇 🌉	
💷 😼 🛱 🛱 🍙 🧰	Text
New Text Object	X
Text	
🗖 Use label library	
🔲 Use bitmap font	Label Library
Attribute	
Font : Arial	
Color :	Size : 16
Align : Left	Blink : None 💌
Italic Un	derline
Direction : No movement	
Content :	
This is Page 1	*
<u>र</u>	
Tracking	Duplicate this label to every state
	取消
4 10 - WINDOW_010 × 11 - Window_011	
This is Pag	e 1

♀ ■ ■ ■ ■ ■ ● ■ ■ ■ ● ● ■ ■ ● ● ■ ■ ● ● ■ ■ ● ● ■ ■ ● ●		
Windows Object list 	General Security Shape Label Description : Activate after button is released Change full-screen window Display popup window Window no.: 11. WINDOW_011	
	Return to previous window Close window ASCII/UNICODE mode [Enter] [Backspace] [Clear] [Exc] [ASCII] / [UNICODE] C Execute macro	
	Screen hard copy * Please select a printer type in system parameters Notification Enable	

And then create a function key to switch to the "11" window.

Please set proper "shape", color for "shape" and Label for this function key as the following. Then move it to a proper position.

Function Key Object's Properties
General Security Shape Label Profile
Shape Use shape Use shape Frame Pattern Style
Dup: Function Key Object's Properties
General Security Shape Label Profile
Use label
Label Library
0 1 State : 0 I Attribute Font : Arial Color : Image: Color :<
Direction : No movement
Content :
Goto Page 2
Tracking Duplicate this label to every state
4 10 - WINDOW_010 × 11 - Window_011
This is Page 1

9. Then we are going to create a bit lamp and two buttons to change the state of the "OUT01" variable in the ISaGRAF controller listed in section 1.3.1.

Name	Туре	Attribute	Network address	Others
OUT01	Boolean	Internal	0001	

Click on "Bit Lamp" and then select "PLC name" as "PLC1" device which we have created in step 3. The boolean operation must use "Device type" as "0x". The "Address" filed is the "Network address" number of the "OUT01" variable in ISaGRAF program. It is number "1" in this example.

: <mark>Q 1</mark> 🗠 🖳 🗸 📖 🕮 🚥 🖳 🖬
: 🐂 🚉 🛧 🐯 📶 💿 💹 🖽 🔛 🔛 🖕 📟 😭 🗟 📄
New Bit Lamp Object
General Shape Label
Description :
Read address
PLC name : PLC1
Device type : 0x
Address : 1
Address format : ddddd [range : 1 ~ 65535]
🥅 Invert signal 📃 Index register
Blinking
Mode : None
·

Click on "Shape" to setup the proper shape for this bit lamp.



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Then Click on "Label" to set proper label for state "0" and state "1" . Remember to click on "OK" and then move it to proper position as the following figure.

lew Bit Lamp Objec	t	×	
General Shape La	ıbel	- 1	
Use label	y L	Label Library	
State : 0			
Font New	Bit Lamp Object		2
Color G	meral Shape Label		
Align	♥ Use label ■ Use label library	Label Library	
-Movement	Attribute	0 1	
Content :	Font : Arial	×	
OFF	Color:	Size : 16 💌	1
4	Align : Left	Blink : None 💌	
	Duplicate these attribut	Inderline es to every state	
	Movement Direction : No movement		
	iontent :		
	DN 6		
4 10 - WI	DOW_010 × 11 - Window_011		~
	This is Page	1	
BIO	This is Fuge	FKO	
OFF		Goto Pagez	
	- 🔚 🔜 💠 💱 🛍 🕑		
1	U 1 2 3 ↓ Clic	k on State 0 or 1 can view t	the
	Objed State 0	a state of every object.	

10. Then we are going to create the first "Set Bit" button to switch the "OUT01" value to ON. Click on "Set Bit", then set "PLC name" as "PLC1" which we have created in section 1.3.1. Then set "Device type" as "0x" (0x is for Boolean variable) and the "address" as 1 (the network address of "OUT01"). And then set "style" as "Set ON".

: Ç : 📴 🕒 👽 쩆 🕂 🚥 🎟 🚥 💷 🖅
i 🔛 🔜 💠 🔛 🛍 🕐 💹 🖽 🔛 🔛 🔛 🔡 🛅
0 New Set Bit Object
General Security Shape Label
Description :
PLC name : PLC1
Write address
Device type Ox
Address 1
Address format : ddddd [range : 1 ~ 65535]
🔲 Index register
Write after button is released
Attribute
Set style : Set ON
Масто
F Execute macro
確定 取消 說明

Then follow similar step as former to set proper "Shape" and "Shape library".

t Bit Object's Properties	
General Security Shape Label	Profile
, Use label	
🔲 U e label library	
	Label Library
State : 0 🔜 💽	• 0 1
Attribute	
Font : Arial	
Color :	Size : 16
Align : Left	Blink : None
Ttalic	Underline
Duplicate these	attributes to every state
Content :	
Not_ON	
<u>.</u>	
Tracking	Duplicate this label to every state
▼ 「 Tracking 確定	Duplicate this label to every state
■ Tracking ① Tracking 確定 4 10 - WINDOW_010 ×	Duplicate this label to every state 取消 11 - Window_011
I Tracking ☐ Tracking 確定 4 10 - WINDOW_010 ×	Duplicate this label to every state 取消 I1 - Window_011 bis_is_Page 1
I Tracking □ Tracking ④ 10 - WINDOW_010 × □ T	Duplicate this label to every state 取消 11 - Window_011 his is Page 1 EK 0
■ Tracking Tracking 4 4 4 4 7 SB_0	Duplicate this label to every state

And set Label "Set_ON" to state 0 , and move it to proper position as the following figure.

Then follow the same step to create the second "Set Bit" button to switch "OUT01" value to OFF .

♀	: : : : : : : : : : : : : : : : : : :
0	New Set Bit Object
	General Security Shape Label
	Description :
	PLC name : PLC1
	Write address
	Device type Ox
	Address 1
	Address format : ddddd [range : 1 ~ 65535]
	🔲 Index register
	🔲 Write after button is released
	Attribute Set style : Set OFF
	Macro
	確定取消 説明

Then set proper "Shape" and "Shape library" for it. And set Label "Set_OFF" to state 0. Then we have the following figure.

	0W_010 × 11 - Window_011	
	This is Pag	je 1
CFR	Set_ON	Goto Page2
	Set_OFF	

11. Here we are going to create a "Numeric Display" to display the "Second1" in the ISaGRAF controller. The "Second1" in this example is to get the second number of the controller 's system time. The value is between 0 to 59. Its network address is assigned as 11 in the ISaGRAF program.

Name	Туре	Attribute	Network	address	Others
Second1	Integer	Internal	000B	(Dec. is 11)	Used as 16-bit integer

Please follow the below figure to create one "Numeric Display". Set "PLC name" as "PLC1" which we have created in section 1.3.1 and set "Device type" as "4x" (4x is for integer and floating point value). Then set "Address" as **11**, "Left of decimal Pt." as 3. Set "Data format" as "16-bit Signed" (means the value occupy only 1 Modbus word, signed value between -32768 to +32767).

이 아이	
i 🐘 🖶 💠 💱 🛍 🛈 🚾 🥅	
New Numeric Display Object	×
General Numeric Format Shape	Font
Description :	1. sour 1
V Description .	New Numeric Display Object
Read address	General Numeric Format Shape Font
PLC name : PLC1	Display
Device type : 4x	Data format : 16-bit Signed 📃 🦳 Mask
Address : 11	Number of digits
Address format : ddddd [rang	Left of declinar Pt. 15 Right of declinar Pt. 10
	Scaling option
	Limits
1.7	O Direct C Dynamic limits
	Input low : -32768 Input high : +32767
	Use alarm color
	確定 取消 説明
4 / 10 - WINDOW 010 x	11 - Window 011
	This is Page 1
Set (ON Goto Page2
OFF	
Set (DFF ####

12. Here we are going to create a "Numeric Display" to display the integer variable "VAL1" in the ISaGRAF controller. The "VAL1" in this example is used as 32-bit integer .

Name	Туре	Attribute	Network address	Others
VAL1	Integer	Internal	000C (Dec. is 12)	Used as 32-bit integer

Please follow the below figure to create one "Numeric Display". Set "PLC name" as "PLC1" which we have created in section 1.3.1 and set "Device type" as "4x" (4x is for integer and floating point value). Then set "Address" as **12**, "Left of decimal Pt." as 10. Set "Data format" as "32-bit Signed" (means the value occupy 2 Modbus words, signed value between -2147483648 to +2147483647)

🔜 💠 💱 😃 🛈 💹 🗐	Numeric Display
eneral Numeric Format Shape	Font
Read address	New Numeric Display Object General Numeric Format Shape Font
Address format : ddddd [rang	Display Data format : 32-bit Signed Mask Number of digits Left of decimal Pt : 10 Scaling option Do conversion
	Limits C Dynamic limits Input low : -2147483648 Input high : +2147483647
10 - WINDOW_010	× 11 - Window_011
Se Se	t OFF
ND_1	

13. To create a "Numeric Input" button for the "VAL1" integer, please follow steps in the following figure. Set "PLC name" as "PLC1", Device type as "4x" and "Address" as 12.

💡 🖪 💾 🖻 🐦 🔫	0- 98 🔛 88 😶 💷	
💾 🔛 💠 🐯 🛍 🕐		
New Numeric Input C	Diject	x
General Numeric Form	nat Security Shape Font	
Description :		
Read address		
PLC name : P	LC1	
Device type : 4	×	
Address : 1	2	
Address format : dd	lddd [range : 1 ~ 65535]	
	j Index register	
Notification	Enable	
Input order	=	=
	Use an external keyboard	
Window no. : 5	0. Keypad 1 - Integer 🔽 💽	00
	Popup position : C	0 0
	{relative to HMI screen}	
Hint : If the keyb or on the same wi	oard is an USB keyboard, on indirect/direct window, indow, please check "Use an external keyboard".	

Click on "Numeric Format" to set "Data format" as "32-bit signed", "Left of decimal Pt." as 10. And then move it the proper position as the following figure.

Numeric Input Object's Properties	
General Numeric Format Security Shape Font Profile	
Display	
Data format : 32-bit Signed 📃 🦳 Mask	
Number of digits	
Left of decimal Pt. : 10 🚊 Right of decimal Pt. : 10 🚊	
Scaling option	
Do conversion	
Limits	
Direct C Dynamic limits	
Input low : -2147483648 Input high : 2147483647	
Use alarm color	
<u>雌定</u> 取消 説明	
10 - WINDOW_010 × 11 - Window_011	
This is Page 1	
	_
Goto Page	2
Set_OFF ###	
ND 1	

Here we can do a tricky way to cover the "#######" symbol on the "Numeric Input" button. Double-click on the "Numeric Input" button to modify its original settings, then set the same color to both of "Shape" and "Font".

ND_1	
Ε	
lumeric Input Object's Properties	
General Numeric Format Security Shape Font Profile	
Shape View Shape	
Using	
✓ Inner same color	
Interior pattern :	
Duplica: Numeric Input Object's Properties	
General Numeric Format Security Shape Font Profile	
Preview	
Font : Arial	
Color: Size: 16 💌	
Align : Left	
10 - WINDOW_010 × 11 - Window_011	1
This is Page 1	
Set ON L Goto Page?	
Set_OFF ###	
	I
#########	-

Then add one Label "Set VAL1" to the "Numeric Input" button as the following figure. Move it to just on the "Numeric Input" button.

Use label library	
Use bitmap font	Label Library
Attribute	
Font : Arial	
Color:	Size : 16
Align : Left	Blink : None 💌
Ttalic 🔽	Underline
Content :	
SELVALI	~
4 10 - WINDOW_010 × 11 -	Window_011
This	is Page 1
SB_0 Cat ON	
Set UN	
	ALC: NO. A

14. Here we are going to create a "Numeric Display" to display the floating point value "F1" and a "Numeric Input" to modify the value of "F1".

Name	Туре	Attribute	Network address	Others
F1	Real	Internal	000E (Dec. is 14)	32-bit IEEE floating point value

The way to create them is similar as the former step 12 and step 13. However there is one quick way to create them. Just copy them from the former objects as the following.



Press the "Ctrl" key and using mouse click on these two objects one by one

Then run "Copy" and then run "Paste". Move the new copied objects to proper position.



To change the property of the new copied object, use mouse to two-click on it.

N

ND_1 ####################################	· · · ·	ND_2 ####################################	
Set VAL1		E_1	

Then modify the "Address" to 14. (the network address of variable "F1"). Then click on "Numeric format" to set the "Data format" as "32-bit Float", "Left of decimal Pt." as 5, "Right of decimal Pt." as 3, "Input low" as -9999.999 and "Input high" as +9999.999.

umeric Display Object's Properties
General Numeric Format Shape Font Profile
Description :
Read address
PLC name : PLC1
Device type : 4x
Address : 14
Address format : ddddd [range : 1 ~ 65555]
Numeric Display Object's Properties
General Numeric Format Shape Font Profile
Display Data format : 32-bit Float Mask
Number of digits
Left of decimal Pt. : 5 Right of decimal Pt. : 3
Scaling option
Do conversion
Limits
 Direct Dynamic limits
Input low : -9999.99 Input high : +9999.99
🗖 Use alarm color
確定取消 説明

Then two-click on next "Numeric Input" object to modify its property.



Then modify the "Address" to 14. (the network address of variable "F1"). Then click on "Numeric format" to set the "Data format" as "32-bit Float", "Left of decimal Pt." as 5, "Right of decimal Pt." as 3, "Input low" as -9999.999 and "Input high" as +9999.999.

Numeric Input Object's Properties
General Numeric Format Security Shape Font Profile
Description : Read address
Device type : 4x
Address format : ddddd [range : 1 ~ 65535]
Notification Enable
Input order Numeric Input Object's Properties
Enable General Numeric Format Shape Font Profile
Keyboard Display Window no. : 50. Window no. : 50. Left of decimal Pt. : 5 Right of decimal Pt. : 3
Hint : If the keyboa: or on the same wind
Limits
Direct Dynamic limits
Input low : -9999.99 Input high : +9999.99
Use alarm color
確定取消 説明

Then create one Label "Set F1" and move it to just on the "Numeric Input" button.

<u> </u>
Text
Use label library
Use bitmap font
Attribute
Font : Arial
Color : Size : 16
Align : Left Blink : None
Ttalic Underline
Movement Direction : No movement
Content
Set F1

Then we have finished the "10" window as below.

✓ 10 - WINDOW_010 × 11 - Window_011
This is Page 1
Set_OFF Set_OFF ###
ND_1 ####################################
Set VAL1 Set F1

Then click on "Save" to save it.

🔄 Ea	isyB	ailder	8000:	MTP1.
∃ EB	<u>F</u> ile	<u>E</u> dit	⊻iew	Option
: 🗅	2		χ 🖻	🛍 <u>1</u>
1 🛠	2	2		4 🕾
1.1.0	-03	ba	ve (Ctri-	-5/

1.4: Compile / Download and Test the Touch-8000

📴 EasyBu	ilder 8000 : MTP1.mtp - [10 - WINDOW_010]
EB <u>F</u> ile	Edit View Option Draw Objects Library Tools Window Help
) 🗅 🚅 I	🖬 🐰 🖻 🛍 🕰 🗠 🞒 🤗 📢 🗛 🛠 Compile 🥿
: 🖈 📃	👳 🖳 🖉 📆 🏢 📃 🕎 🕎 🕎 On-line Simulation
i 🗤 🐗 I	💋 🚍 📳 🔰 🖼 🔛 🧱 🔤 🙀
: Arial	- 16 Download
	Compiling
	Project name : C:\EB8000\project\MTP1.mtp
	XOB file name : C:\EB8000\project\MTP1.xob
	VOB password (111111) (used in decompiler)
	Font file(s) :
	C:\EB8000\font\MTP1\$0.ttf (Arial)
	C:\EB8000\font\MTP1\$1.ttf (Times New Roman)
	0 error(s), 0 warning(s)
	Object size : 21822 bytes Font size : 214444 bytes
	Picture size : 488756 bytes
	Shape size : 1108 bytes Sound size : 63164 bytes
	Macro size : 14 bytes
	Total size : 890186 bytes (0.85M)
	succeeded
	· · · · · · · · · · · · · · · · · · ·
	Compile

Please run "Tools" > "Compile..." to compile the Touch-8000 project .

After clicking on "Compile", if it shows "succeeded", then the HMI picture can be download to the Touch-8000 by steps listed on next page.

We are going to download the HMI project to the Touch-8000 by using Ethernet cable. Please make sure the Ethernet cable is connected well between PC --- Ethernet switch --- Touch-8000. And also the IP, Mask and download password are well set (refer to section 1.2).

Note: The (IP, Mask) setting of the PC must lie in the same domain as the Touch-8000. For ex, PC (192.168.1.20, 255.255.255.0) and Touch-8000 (192.168.1.179, 255.255.255.0) is ok. However PC (192.168.**3**.20, 255.255.255.0) can not connect Touch (192.168.**1**.179, 255.255.255.0).

Then run "Tools" > "Download...". Set the correct HMI IP (In this example, we are setting Touch-8000 's IP as 192.168.1.179 in section 1.2) and download password (here is using default password 111111). Then click on "Download". If everything is well set, it will take about 20 to 100 seconds to download the HMI project. Then the Touch-8000 will reboot itself once automatically.



The "On-line Simulation" is one useful utility to test the Touch-8000. Please make sure the Ethernet cables are well connected as the following figure. The "On-line Simulation" can simulate the HMI picture on PC without downloading to the Touch-8000 (The PC must link to the Touch-8000).



Then run "Tools" > "On-line Simulation"

🔽 EasyBuilder 8000 : MTP1.mtp - [10 - WINDOW_010]
EB File Edit View Option Draw Objects Library	<u>T</u> ools <u>W</u> indow <u>H</u> elp
: D 🚅 🖬 % 🖻 🛍 🗅 🗠 🚳 💡 😽 🙀	🛠 <u>C</u> ompile
: 🛠 💆 🕎 🛄 🖉 📆 🛄	👳 On-line Simulation
:	🖅 Off-line Simulation 🔪

To exit the simulation, use mouse right-click on the widow, then run "Exit simulation".



Getting Started: Touch-8000 HMI Linking ICP DAS PAC and M-7000 I/O Modules

Chapter 2 : Some Advanced Topics

2.1: Connecting one Touch-8000 to Many Controllers

The Touch-8000 's Ethernet port can link to many ICP DAS Modbus TCP/IP controllers, like the WP-8xx7, uPAC-7186EG, iPAC-8x47 or others supporting Modbus TCP/IP slave protocols. However recommend not connecting more than 6 controllers (The more connectted, the slower communication scan rate). The COM1: RS-232/485, COM2: RS-232 and COM3: RS-232/485 of the Touch-8000 can also link to ICP DAS Modbus RTU controllers, like the WP-8xx7, uPAC-7186EG, uPAC-7186XG, I-7188XG, I-8x47, iPAC-8x47 or others supporting Modbus RTU slave protocols.

In the "System Parameters" windows, user can create more than one device. The first "Local HMI" is necessary. It defines the Touch-8000 itself. We have created one device in Chapter 1.3, named as "PLC1" as below figure. **To create one more device, please click on "New"**.

L E	ısyBı	uilde	r 8000	: MTP1 -	[10 - ₩	INDOW.	_010]			
EB	Eile	Edit	<u>V</u> iev) Option	Draw	<u>O</u> bjects	Library	<u>T</u> ools	<u>W</u> indo)
: 🗅	6						' 🏪	1	희후	
: 🖈	<u>2</u>									
: 40	+						-			
:	-	_	S <u>e</u> lect	: All Objects		Ctrl+A	.	Α * Α*	= 3	
·		∎	Select	: Next Obje	ct				 	
-			Select						1.1.2	-
: 5] ⊡ • •	r	C <u>h</u> an	ge Object A	ttribut <mark>y</mark> s.		Et 🖬			
: 5	() 		Syste	m Paramete	rs					
: 0	:C	иној п. Раз	ramete	I ⊑ue ∩− T Settings			•F			
	Davi	ica Ì	M- 4-1	1 dament	la a	1	1		1	1
						 I denote the 	I E de la sel 1	- 1 1 4	D	in the Oliver second
	Devi	evice i	Model list :	General	Security	r Font	Extend	ed Mem	ory Pr	inter Server
	Devi	evice I In	moaer list :	General	Location	/ Font	Extend	ed Mem	ory Pr	Interface
		evice] Io. Iocal]	Model list : HMI	Name Local HMI	Location	/ Font Device t	Extend ype)T/MT807(ed Mem))T (480	ory Pr x 234)	inter Server Interface Disable
		evice] lo. local l	Model list : HMI PLC 4	Name Local HMI PLC1	Location Local Local	 Pont Device t MT6070 MODBU 	Extend ype)T/MT807 JS TCP/IP	ed Memi DT (480	ory Pr x 234)	inter Server Interface Disable Ethernet(IP=192.168.1.180, <mark>Port</mark>
		evice lo. ocal ocal	Model list : HMI PLC 4	Name Local HMI PLC1	Location Local	/ Font Device t MT6070 MODBU	Extend ype T/MT8070 IS TCP/IP	ed Memi	ory Pr x 234)	inter Server Interface Disable Ethernet(IP=192.168.1.180, Port
		evice lo. local l local l	Model list : HMI PLC 4	Name Local HMI PLC1	Location Local Local	Font Device t MT6070 MODBU	Extend ype T/MT807/ IS TCP/IP	ed Mem	ory Pr x 234)	inter Server Interface Disable Ethernet(IP=192.168.1.180, Port
		evice Io. ocal I ocal I	Model list : HMI PLC 4	General Name Local HMI PLC1	Location Local Local Delete	/ Font Device t MT6070 MODBU	ype T/MT807 IS TCP/IP Settings	ot (480	x 234)	inter Server Interface Disable Ethernet(IP=192.168.1.180, Port
		evice Io. ocal I ocal I cocal I	Model list : HMI PLC 4 New descrip	Vame Local HMI PLC1	Location Local Local Delete	/ Font Device t MT6070 MODBU	Extend ype T/M T8070 IS TCP/IP Settings	ed Mem DT (480	x 234)	Interface Disable Ethernet(IP=192.168.1.180, Port
		evice Io. ocal 1 ocal 1	Model list : HMI PLC 4 New descrip	General Name Local HMI PLC1	Location Local Local Delete	/ Font Device t MT6070 MODBU	Extend ype T/MT8070 IS TCP/IP Settings	ed Mem DT (480	x 234)	Interface Disable Ethernet(IP=192.168.1.180, Port
		Io. Io. Iocal I I I I I I I I I I I I I I I I I I I	Model list : HMI PLC 4 New	General Name Local HMI PLC1	Location Local Local Delete	/ Font Device t MT6070 MODBU	ype T/MT807 IS TCP/IP Settings	ed Mem DT (480	x 234)	Interface Disable Ethernet(IP=192.168.1.180, Port
	Der, Du L L L L L L	Io. Io. Iocal I Iocal I I I I I I I I I I I I I I I I I I I	Model list : HMI PLC 4 New	Vame Local HMI PLC1	Location Local Local Delete	Pont Device t MT6070 MODBU	Extend ype T/M T807 IS TCP/IP Settings	ot (480	ory Pr	Interface Disable Ethernet(IP=192.168.1.180, Port

Set proper property for this new device. Here we are connecting one another Modbus TCP/IP controller with IP=192.168.1.181 , port=502 and NET-ID = 1 (PLC station No.)

ce Properties	
Name : PLC2	
Location : Local	
PLC type : MODBUS TCP/IP	 ,
V.1.50, MODBUS_TCPIP.so	
PLC I/F : Ethernet 3 PLC c	lefault station no.
ID 102 160 1 101 Dort-502	
IP 1 192.106.1.101, POR-302	Settings
Use broadcast command	V
Interval of block pack (words) : 5	
Max. read-command size (words) : 120	
Max. write-command size (words) : 120	
Max. write-command size (words) : 120	
Max. write-command size (words) : 120	OK Cancel
Max. write-command size (words) : 120	OK Cancel
Max. write-command size (words) : 120	OK Cancel
Max. write-command size (words) : 120	OK Cancel
Max. write-command size (words) : 120	OK Cancel
Max. write-command size (words) : 120 ystem Parameter Settings Device Model General Security Font Extended Memory I Device list : No. Name Location Device type Local HMI Local HMI Local MT6070T/MT8070T (480 x 234)	OK Cancel
Max. write-command size (words) : 120	OK Cancel
Max. write-command size (words) : 120 ystem Parameter Settings Device Model General Security Font Extended Memory I Device list : No. Name Location Device type Local HMI Local HMI Local MT6070T/MT8070T (480 x 234) Local PLC 4 PLC1 Local MODBUS TCP/IP Local PLC 5 PLC2 Local MODBUS TCP/IP	OK Cancel
Max. write-command size (words) : 120	OK Cancel
Max. write-command size (words) : 120 ystem Parameter Settings Device Model General Security Font Extended Memory Device Ist : No. Name Location Device type Local HMI Local MODBUS TCP/IP Local MODBUS TCP/IP Image: Settings New Delete	OK Cancel
Max. write-command size (words): 120 ystem Parameter Settings Device Model General Security Font Extended Memory Device Ist: No. Name Location Device type Local MT6070T/MT8070T (480 x 234) Local PLC1 Local MODBUS TCP/IP Local PLC2 New Delete Settings Project description :	OK Cancel
Max. write-command size (words) : 120 ystem Parameter Settings Device Model General Security Font Extended Memory Device Model General Security Font Extended Memory Device Model General Security Font Extended Memory Device Ist<:	OK Cancel
Max. write-command size (words) : 120 ystem Parameter Settings Device Model General Security Font Extended Memory Device Ist No. Name Local HMI Local Model General Max. Max. Vice Model General Security Font Extended Memory Device Ist No. Name Local HMI Local Model Project Image: Comparison of the secting in the sec	OK Cancel
Max. write-command size (words) : 120 ystem Parameter Settings Device Model General Security Font Extended Memory Device Ist No. Name Local HMI Local Model General No. Name Local HMI Local MoDBUS TCP/IP Local PLC 4 PLC1 Local MODBUS Toget description : Project description :	OK Cancel
Max. write-command size (words): 120 ystem Parameter Settings Device Model General Security Font Extended Memory 1 Device list: No. Name Location Device type Local HMI Local HMI Local MT6070T/MT8070T (480 x 234) Local PLC 4 PLC1 Local MODBUS TCP/IP Local PLC 5 PLC2 Local MODBUS TCP/IP New Delete Settings Project description : The setting is a setting in the setting is a setting in the setting is a setting in the setting is a setting is a setting in the setting is a setting in the setting is a setting in the setting is a setting is a setting in the setting in the setting in the setting is a setting in the setting in the setting in the setting is a setting in the s	OK Cancel

If the new connected device is a Modbus RTU controller by RS-485 (2 wire) communication, the user can set its property as the following figure. Setting the "PLC type" as "Modbus RTU", "PLC I/F" as "RS-485 2W", PLC default station No. as 1 (can be modified in each object 's address setting), ...

Note: Recommend connect no more than 7 controllers or M-7000s in each Touch-8000 's RS-485 port (2-wire). The more connected, the slower communication rate.

Device Properties
Name PLC2
Location : Local Settings
PLC type : MODBUS RTU
V.1.40, MODBUS_RTU.so
PLC I/F : RS-485 2W PLC default station no. : 1
COM : COM3 (9600,E,8,1) Settings
Use broadcast command
Interval of block pack (words) +
Max. read-command size (words) : 120
Max. write-command size (words) : 120
OK Cancel

Then when creating the HMI object, please select the related "PLC name" and Address similar as below. The number before the '#' means the related PLC 's station No. (NET-ID). For ex, 1#20 means station No. 1 's address 20, While 2#150 means station No. 2 's address 150.

Ne	w Numeric Display Object	2
ſ	General Numeric Format Shape Font	
	Description :	
Г	-Read address	
	PLC name : PLC2	
	Device type : 4x	
	Address : 1#11	
	Address format : ddddd [range : 1 ~ 65535]	

If the new connected device is a Modbus RTU controller by RS-232 communication, the user can set its property as the following figure. Setting the "PLC type" as "Modbus RTU", "PLC I/F" as "RS-232", PLC station No. as 1 (NET-ID of the new PLC), ...

Device Properties
Name : PLC3
C HMI C PLC Location : Local Settings
V.1.40, MODBUS_RTU.so PLC I/F : RS-232 PLC default station no. :
COM : COM1 (19200,N,8,1) Settings 5
Interval of block pack (words) : 5
Max. read-command size (words) : 120
Max. write-command size (words) : 120
OK Cancel

Note: Each Touch-8000 's RS-232 port can connect only one controller.

Then when creating the HMI object, please select the related "PLC name" as below.

R	lew Numeric Display Object	×
	General Numeric Format Shape Font	
	Description :	
	Read address	
	PLC name : PLC2	
	Device type : 4x	
	Address : 11	
	Address format : ddddd [range : 1 ~ 65535] 🔲 Index register	
	確定取消 説明	

2.1.1: Display the PLC communication state (Via Ethernet)

The PLC communication state (via Ethernet) can be displayed on Touch-8000. Below "System Parameter" shows there is 2 Modbus TCP/IP PLCs connected by Touch-8000. One is named as "PLC1" with "No." = "Local PLC4". The other one is named as "PLC2" with "No." = "Local PLC5".

De	Device Model General Security Font Extended Memory Printer Server					
	Device list :					
	No.	Name	Location	Device type	Interface	
	Local HMI	Local HMI	Local	MT6070T/MT8070T (480 x 234)	Disable	
_	Local PLC 4	PLC1	Local	MODBUS TCP/IP	Ethemet(IP=192.168.1.180, Port	
	Local PLC 5	PLC2	Local	MODBUS TCP/IP	Ethernet(IP=192.168.1.181, Port	
L						
	New	Del	ete 🛛	Settings		

To display the communication state of "Local PLC4" and "Local PLC5", please create four "Bit Lamp" as the following figure. Check the "System tag" and select "Local HMI" to use the "LB-10100: PLC 4" to display the communication status of "Local PLC4" and "LB-10400" for "Local PLC 5". The first and second Bit lamps (PLC1, 0x, addr.=1) and (PLC2, 0x, addr.=1) are necessary to inform the Touch-8000 to read some value from these two PLCs (using other addr. is also ok).

	Bit Lamp Object's Proper	ties	Bit Lamp Object's P	roperties
	General Shape Label	Profile	General Shape]	Label Profile
Click 0 or 1 can	Description :		Read address	
view the state label	PLC name : PLC		PLC name :	PLC2
setting of state 0	Device type : Ox		Device type :	0x
anu i	Address : 1		Address :	1
Set state 0 Label to PLC1 Err State 1 Label to PLC1 Ok	D D LC1 Err	BL_3 PLC2 Err	Set state PLC2 E State 1 L PLC2 O	0 Label to rr abel to k
Bit Lamp Object's riopernes		Bit Lamp Object	's Properties	
General Shape Label Pr	ofile	General Shape	Label Profile	
Description :		Descriptio	m :	
Read address		Read address		
PLC name : Local HM	1	PLC nan	ne : Local HMI	
Device type : LB-10100) : PLC 4 status (ethernet), set o	Device typ	pe : LB-10400 : PLC 5	status (ethemet) <mark>,</mark> set oi
Address : LB10100	🔽 System tag	Addre	ss: LB10400	 ▼ System tag

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The first and second bit lamps are not necessary to display on the screen (however they are necessary to exist for detecting the communication state of the PLC1 and PLC2). So here we can move the third and fourth bit lamps to cover the first and second bit lamps as below.



Then we have the following picture. Click on State 1 can view the Label setting of state 1.



Then save, compile and download to the Touch-8000 to test it (steps is similar as Chapter 1.4).

Then user may un-plug the Ethernet cable of PLC1 and PLC2 to see if the third and fourth bit lamps change its display.

2.1.2: Display the PLC communication state (Via RS-485 or RS-232)

To detect the communication state of the PLC via RS-485 and RS-232 is similar as steps listed in section 2.1.1 . The following figure is using Touch-8000 's COM3: RS-485 to link two PLCs .

No.	Name	Location	Device type	Interface	I/F P
Local HMI	Local HMI	Local	MT6070T/MT8070T (480 x 234)	Disable	N/A
Local PLC 3	PLC1	Local	MODBUS RTU (zero-based addressing)	COM3(9600,N,8,1)	RS48

The following figure is for detecting two PLC 's communication state via COM3: RS-485. One PLC 's NET-ID (or called station No.) is 1, the other is 2. Please create four "Bit Lamp" as below figure. Check the "System tag" and select "Local HMI" to use the "LB-9801" to display the communication state of the PLC with Net-ID=1 (via COM3). And "LB-9802" for the PLC with Net-ID=2 (via COM3). "2#1" means the NET-ID is 2, data address is 1.



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The first (1#1) and second bit lamps (2#1) are not necessary to display on the screen (however they are necessary to exist for detecting the communication state). So here we can move the third and fourth bit lamps to cover the first and second bit lamps as below.



Then we have the following picture. Click on State 1 can view the Label setting of state 1.



Then save, compile and download to the Touch-8000 to test it (steps is similar as Chapter 1.4).

Then user may un-plug the Ethernet cable of PLC1 and PLC2 to see if the third and fourth bit lamps change its display.

2.2: Screen saver and Back light saver

User can enable the "Back light saver" or the "Screen Saver" as listed in the below figure.



2.3: Confirm after touching a Set-Bit button

User can enable the "Display confirmation request" on a "Set Bit" object as below figure. The "Max waiting time (sec)" define the waiting time if no answer to the confirmation window .

😔 🗄 🕎 🖻 🗇 쩆 🛛 🕢 10 - WINDOW_010 🗙
Set Bit Object's Properties
General Security Shape Label Profile
Description :
PLC name : PLC1
Write address
Device type : 0x
Address : 1 Index register
Address format : ddddd [range : 1 ~ 65535] 🔲 Write after button is released
Attribute
Set style : Set ON
MacmSet Bit Object's Properties
Execute macr General Security Shape Label Profile
Min. press time (sec) : 0
Display confirmation request Max. waiting time (sec) : 10
Interlock

Then when touch this "Set Bit" button, the confirmation window will pop-up. You can try not answering it longer than 10 seconds. You can see the pop-up window will disappear .



2.4: Setting password security for HMI objects

The project file of this example : Touch-8000 CD-ROM:\napdos\touch8000\example\touch_03.mtp

The Touch-8000 can setup password to protect each HMI object. The following example is setting User No. 1 as "Class A" with a password number of "12345". (The user No. can be 1 to 12, the password number can be 1 to 999,999,999). First do "System Parameter settings" as below. Enable "User 1" and set as Class "A" and password as "12345". And also enable the "Back light saver" and "Screen saver" as 1 minute, set the startup window no. as "10"



Then create the "11" window.

8 9 ⊕- <u>*10:</u> 1	WINDOW 019	Mouse Fright click
11 -		
- 12	New	
13	Open	
14	Close	
15	5.1.4	
- 16	Delete	
17	Settings	
i		

Then create one "Page 2" text and one "Logout" function key in the "11" window as below to switch to the "10" window.

Image: Image 2 Image 2 Function Key
Function Key Object's Properties
General Security Shape Label Profile Description :
 Change full-screen window Display popup window
Window no. : 10. WINDOW_010
C Return to previous window C Close window
ASCII/UNICODE mode O [Enter] O [Backspace] O [Clear] O [Exc] O [ASCII] / [UNICODE]
 Screen hard copy * Please select a printer type in system parameters
Notification Enable

In the "10" window, create two "text" - "User No." and "Password" and create two "Number Input" and one "Function Key" to switch to the "11" window. The upper "Numeric Input" is for entering the User No. (1 to 12). Its "PLC name" is "Local HMI", "Device type" as "LW-9219" and using "Keyboard window no" of "50", data format is "16-bit". The lower "Numeric Input" is for password. Its "PLC name" is "Local HMI", "Device type" as "LW-9220" and using "Keyboard window no" of "52". data format is "32-bit". Remember to check on "Mask" for the lower "Numeric Input".

lumeric Input Object's Properties	
General Numeric Format Security Shape Font	umeric Input Object's Properties
Description :	General Numeric Format Security Shape Font Profile
Read address 2	Display
PLC name Local HMI	- Number of digits
Device type LW-9219 (16bit) : user no. (1~12)	Left of decimal Pt : 2 - Right of decimal Pt : 0
Address LW9219 🔽 System	Bertor declinarit. 12 8 Kightor declinarit. 10
tag 3	Scaling option
Notification	Limits
Linable	O Direct C Dynamic limits
Keyboard 5 🔽 Use an external keyboard	Input low 1 Input high 12
Window no. : 50. Keypad 1 - Integer	10 11
User No. : ## Password : ******	FK_0 Login key to switch to the "11" window
Tumeric Input Object's Properties	Numeric Input Object's Properties
General Numeric Format Security Shape Font	General Numeric Format Security Shape Font Profile
1 Description :	Display 6
	Data format : 32-bit Unsigned 🚽 🔽 Mask
Read address	Number of digits 7 8
PLC name Local HMI	Left of decimal Pt. : 9 🔤 Right of decimal Pt. : 0
Device type LW-9220 (32bit) : password	9 10
Address LW9220 🔽 System	Do conversion
- Notification	Limits
Enable	C Direct C Dimenia limite
Keyboard	
5 Uan external keyboard	Input low 0 Input high 999999999
Window no. : 52. Keypad 3 - Integer	11 12

Getting Started: Touch-8000 HMI Linking ICP DAS PAC and M-7000 I/O Modules

The "Login" Function key to switch to the "11" window in the previous page must set as the following figure. Set the "Object class" as "Class A" and check the "display warnning message if access denied"

Function Key Object's Properties	×
General Security Shape Label Profile Description :	
Function Key Object's Pronerties	x
General Security Shape Label Profile Safety control Min. press time (sec) : 0	
Display confirmation request Max. waiting time (sec) : 10	
Interlock Use interlock function	
User restriction Object class : Class A Disable protection permanently after initial activation Display warning message if access denied Make invisible while protected	

Then please create one "Set Word" in the "10" window as the following. Set "PLC name" as "Local HMI", "Device type" as "LW-9220" and 32-bit Unsigned, "Set Style" as "Set when window opens", "Set value" as "0". This "Set Word" should be invisible, so do not check the "Use shape" and "Use picture".



We don't want to display any number when entering the password. So delete the ASCII Display of the "52" Keypad.



Then after compilling, download the HMI project to the Touch-8000, please test it as the following. You can see if the User No. and Password is correct, then touch at "Login" will switch to the "11" window.

User No. Password	: 1 : *****		Login	√ 3
MAX:****	MIN:000000	2		
4 5 1 2 . 0	6 Clr 3 Esc Enter			

2.4.1: Setting password protection for single object

Each HMI object may use security function to protect itself. For example, the following "Set Bit" object can be operated only for the User No. with "Class B" checked. User login with other class is impossible to operate it.



Set Bit Object's Properties	<u>×</u>
General Security Shape Label	Profile
Interlock	
🔽 Use interlock function	
User restriction	
Object class : Class B	
📃 🔲 Disable protection permanen	tly after initial activation
 Disable protection permaner. Display warning message if a 	access denied

2.5: Display local language on HMI objects

User can display local language of many countries on the Touch-8000 HMI. For example, the English, Chinese, ... When you edit the text of your HMI objects on the Easybuilder 8000 software, just type it by using your local language.



2.6: Scaling an integer value or a real value

In some application, user may want to scale an integer value or a real value to become an engineering value and then displayed on the HMI screen.

For example, to scale the integer value (-32768, +32767) to become (-10.00, +10.00). Here using the same Touch-8000 project we have created in the Chpater 1.3.2 > step 12 and step 13. Please modify the "Numeric Display" as the following figure. Modify the "Data format" as "16-bit Signed", "Left of decimal Pt" as 3, "Right of deciaml Pt" as 2. Then check the "Do conversion" and entering "Engineering low" as "-10.00", "Engineering high" as "+10.00", "Input low" as "-32768", "Input high" as "+32767"

Set_O		
ND_1	lew Numeric Display Object	×
#########	General Numeric Format Shape Font	
Set VAL1	Display Data format : 16-bit Signed Mask Number of digits	
	Left of decimal Pt. : 3 Right of decimal Pt. : 2	
	Scaling option Engineering low -10.00 Engineering high : +10.00	
	Limits	-
	O Direct O Dynamic limits Input low : -32768 Input high +32767	

Then when you re-compile and download this project. You can see the original value of "16383" is scaling to be "5.00".

		MAX:*		MIN: 163	83	Goto Page2
OFF	Set_	Z	8	9	-	
	Ser	4	5	6	Clr	
5.00	-	1	2	3	ESC	
Set VA	AL1	$\overline{\cdot}$	0	En	ter	

2.7: Touch-8000 linking M-7000 I/O modules.

The project file of this example : Touch-8000 CD-ROM:\napdos\touch8000\example\touch_02.mtp

The Touch-8000 can use its COM1:RS-485 and COM3: RS-485 and COM2:RS-232 plus one I-7520R (RS-232 to RS-485 conveter) to connect many M-7000 I/O modules.

M-7000: <u>http://www.icpdas.com/products/Remote_IO/m-7000/m-7000_list.htm</u> I-7520R: <u>http://www.icpdas.com/products/Industrial/communication_module/communication_list.htm</u>

Recommend connect no more than 7 controllers or M-7000 I/O modules in each Touch-8000 's RS-485 port (2-wire).

Touch-8000 COM1: RS-485	ICP DAS controller or M-7000	ICP DAS controller or M-7000
2 Data +	Data +	Data +
1 Data	Data	Data -
Touch-8000 COM3: RS-485	ICP DAS controller or M-7000	ICP DAS controller or M-7000
9 Data +	Data +	Data +
6 Data	Data	Data -
Touch-8000 COM2: RS-232	I-7520R	ICP DAS controller or M-7000
	(RS-232 to RS-485 conveter)	
6 RXD	2 TXD Data +	Data +
4 TXD	— 3 RXD Data - —	— Data -
5 GND	5 GND	

Note: If you are not familiar with the Touch-8000 programming, please read Chapter 1.2 to 1.4 first.

Here we are going to build an Touch-8070T HMI project and use its COM3: RS-485 to connect one M-7017R (Addr or station No. = 1, Comm. Parameter = 9600, 8, N, 1) and one M-7067D (Addr or station No. = 2, Comm. Parameter = 9600, 8, N, 1).

1. First doing initial setting for every M-7000 I/O module by the DCON utility one by one. Please connect PC 's RS-232 port to one I-7520R then connect to only one M-7000 to do the initial setting. Before doing initial settings , please switch the Dip on the back of the M-7000 module to the "INIT" position (Some may have no dip switch, then wire its "INIT*" to GND) and then power on the M-7000 and I-7520R.

PC (RS-232)	M-		M-7000	
9-Pin DSUB	(RS-232 to	o RS-485 conv	veter)	
2 RXD	2 TXD	Data +		Data +
3 TXD	3 RXD	Data -		Data -
5 GND	5 GND			

Then run the DCON utility in your PC to do the initial setting as listed in the next page. Recommend to use the DCON utility version 5.1.2 or later version. It can be downloaded at <u>ftp://ftp.icpdas.com/pub/cd/8000cd/napdos/driver/dcon_utility/setup/</u> Run DCON utility and the set proper "COM Port" setting. (The port No. should be your PC 's port No. it can be COM1, COM2, or other COM number)

🕨 🛅 ICPDAS	🕨 🕞 DCON_Utility 🔸 🖉 DCON_Utility 🖕
DCON_UTILITY	_YER[505] The Found Out I-7000/8000 :
File COMPort Sear	ch Run Terminal Language Help
module Addres	s Baudrate: Checksum format S
	Select the COM Port and Baud Rate
	COM to search: Time Out Setting :
	COM1 900 ms
	Baud Rate Option
	921600 460800 230400 115200 57600 38400 19200 9600 4800 2400 1200
Ī	Protocol Option
•	🔽 DCON 🔽 Modbus RTU 🔲 Modbus ASCII
	Checksum Option
	🔽 Disable 🛛 🗹 Enable
	-Parity Option:
	🔽 None 🔲 Even 🔲 Odd
	Cancel Ok

Then set "Start" as 0, "End" as 255 and the click on "Start Search" to search the only one connected M-7000 module. Its address must be 0 because it is in initial mode. (The Dip on the back is set on "INIT" position before power it up)

YER[505] The Found Out I-7000/8000 module							
ı Run Terminal Language Help							
	Start 0 End 255						
Bau Start Search ecksum format	Status Description						

When the Address 0 (or called station No. 0) is found as the following figure, click on "Stop" to stop searching and the click on the Module name to do further setting.

DCON_U	JTILITY_V	ER[505] Th	e I/O Modul	es Found	
File COM H	ort Search	Run Termi	nal Languag	e Help	
	∄₿		腔		Start
module	Address	Baudrate:	Checksum	format	Status
7017R	0[0]	9600	Disable	N,8,1	
	2				

Then select "Protocol" as "Modbus RTU", set proper "Address" (station No. 1 to 247, every M-7000 in the same RS-485 network should have different Address number), proper baudrate (every M-7000 in the same RS-485 network should have the same baudrate). And if the M-7000 has other necessary settings, please set it. (Don't mind at the "Checksun" and "Dataformat", it will auto-switch to "2's Complement" and "Enable" when selecting the "Modbus RTU" after the setting)

Configuration for 7017R Module Version: B200							
- Configuration	Setting:		Channel Enable/Disable Setting:				
Protocol:	Modbus RTU	-	CH:0 FFFF (000.000)				
Address[dec]:	1	1					
Baudrate:	9600	-	I CH:5 0000 (000.000]				
Checksum	Enable	•	CH:2 0000 [000.000]				
Dataformat:	2's Complement	-	CH:3 0000 (000.000) CH:7 0000 (000.000)				
Input range:	[08] +/- 10 V	-	2				
Filter Setting:	60Hz 3	-					
Mode:	Normal Mode	•					
Parity Option:	None Parity		Modbus Response Delay Time Setting Delay Time: 0 (0 ~ 30 ms) Setting				
			4				

If all settings are correct, the following window will pop-up. Then please un-plug this M-7000 and switch it back to "Normal" mode (Not "INIT" mode). Then do initial setting for next M-7000. **Every M-7000 must do the initial setting before they can be connected by the Touch-8000 HMI**.

7017R -> Setting Communication Parameters OK:
Setting Baud Rate, Checksum or Protocol OK!! Please do following steps Step1. Disconnect INIT*Pin from GND Pin. or adjust the Dip Switch to Normal side. Step2. Power off then Power on the module. Step3. Search the module again.
[]

Important note for some M-7000 Input modules:

If your M-7000 module is not in the below lists, please go ahead to the step 2.

After the above initial setting is finished, please give below Modbus command to below M-7000 modules 's Digital input channels to invert them.

01 46 29 01 (4-byte command, each byte is 2 Hex-number)

The first byte is the M-7000 Address number been set by DCON utility, it may be 01, 02, 03, ..., 0F, ... to F7 depends on your setting of the related M-7000. The other 3 bytes "46 29 01" should be always same.

	M-7000 Modules should be inverted								
M-7041	,	M-7044	,	M-7050	,	M-7053	, M-7060	,	
M-7063	,	M-7065							
M-7041D	,	M-7044D	,	M-7050D	,	M-7053D,	M-7060D ,		
M-7063D	,	M-7065D							

Please Do Not give the upper command to other M-7000 modules which are not in the above lists.

Steps to invert the digital input channels:

Power on the M-7041 or M-7044 or M-7050 or M-7053 or M-7060 or M-7063 or M-7065. Run DCON utility to search the module first. If module is found, stop searching. Make sure the Module name is one of M-7041 or M-7044 or M-7050 or M-7053 or M-7060 or M-7063 or M-7065. Then goto "Terminal" - "Single Line"

DCON Utility Ver. 4.4.2	
File COM Port Search Run Terminal Help	
The I/O Modules Found Single Line	
Module Address Baudrate Checksum Description	
Searching Status:	
COM Port: COM 3 Address: 02[dec] 2[hex] Baud Rate: 9600	
下午 02:39	1.

Select the correct baudrate, Protocol should be set to "MRTU". Then type in the inverted command as below, the first byte should be the Module's Address number. It can be 01 to F7. And then click "Go". If the response is "01 46 29 …", it means command succeed. Power off this M-7000 module. And it is well configured.



2. Set proper "System Parameter Settings" in the Easybuilder 8000 software. (If are not not familiar with the Easybuilder 8000 software, please read Chapter 1.2, 1.3 and 1.4).

Please create one new device . This example is create one "Modbus RTU (zero-based addressing)" device in COM3 with COM parameter as "RS-485 2W", "9600, N, 8, 1" (the same setting as the connected M-7000).

Note: The PLC type must set as "Modbus RTU (zero-based addressing)" if connecting the M-7000 I/O modules. Because they are using the 0-base addressing. They are not like the ISaGRAF controllers using the normal addressing (Modbus RTU).



3. In this example, we are connecting one M-7017R (station No. is 1) and one M-7067D (station No. is 2). First create one "Numeric Display" and one "Bit Lamp" for detecting the communication state of the M-7017R. Please set the "Bit Lamp" 's state 0 with a Label "Err" and state 1 with a Label "Ok".

Note: For M-7000, "**3x**" is for Analog input modules, "4x" is for Analog output modules, "1x" is for Digital Input modules, "0x" is for Digital output modules.

🔤 🕮 🚥 🛄 💷	Numeric Display Object's Properties
	General Numeric Format Shape Font Profile
	Description :
	Read address PLC name : PLC1 Device type : 3x Address : 1#0 • WINDOY_010 × • Set State 0 's Label as 'Err' Set State 1 's Label as 'Ok'
	Bit Lamp Object's Properties
	General Shape Label Profile LB-9801 is getting the
	Description : of COM3, station No. 1
	Read address
	PLC name : Local HMI
	Device type : LB-9801 : PLC 3 status (SN1, COM3), set on to r
	Address : LB9801 System tag

We don't want to display this "Numeric Display", so please move the "Bit Lamp" to covert it as below.

4	10 - WI	INDO	W_	010) >	<u>د</u> _	
		_	_				
	BL_9	rr		£.			
				.			
	1						
· ·							
		•					

Then create two "Bit Lamp" as the following to detect the communication state of the M-7067D. Please set the second "Bit Lamp" 's state 0 with a Label "ERR" and state 1 with a Label "OK".

Note: For M-7000, "3x" is for Analog input modules, "4x" is for Analog output modules, "1x" is for Digital Input modules, "**0x**" is for Digital output modules.

Ox is for M-7000 digital output.	Bit Lamp Object's Properties General Shape Label Profile Description :	
2#0 means station	PLC name PLC1	1
No. is 2		
Modbus addr. is 0	Device type : Ox	
	Address : 2#0	
	Set s BERR	state 0 's Label as 'ERR' state 1 's Label as 'OK'
	General Shape Label Profile Description :	LB-9802 is getting the communication state of COM3, station No. 2
	- Read address	
	PLC name Local HMI	
	PLC name : Local HMI	2 status (NP2_COM2) as ton to mit
	PLC name Local HMI Device type LB-9802 : PLC :	3 status (SN2, COM3), set on to reb

Then move the lower "Bit Lamp" to covert the upper one as below.

4	10 -	W	IND	DW.	_010	0 >	<				
							_				
	B	L_0	Ēr	r	1		ВĘ	ъ	Þ	£.,	
										Γ.	
								1			

We have set the M-7017R by DCON utility to measure "+/- 10V" and Addr. As 1 (means station No. is 1). So here please create one text as "Ch.1" and one "Numeric Display" as the following figure to get the Ch.1 value (1#0 means station No. 1, Modbus addr. 0) and convert it from (-32768, +32767) to (-10.00, +10.00) Volt.

Note: For M-7000, "**3x**" is for Analog input modules, "4x" is for Analog output modules, "1x" is for Digital Input modules, "0x" is for Digital output modules.

Image: Constraint of the second se	<pre> 4 10 - WINDOW_010 × BL_0Err BERR Ch.1 ####.### </pre>
General Numeric Format S Description : Read address PLC name : PLC1 Device type : 3x Address : 1#0	General Numeric Format Shape Font Profile Display Data format 16-bit Signed Under of digits Left of decimal Pt : 3 Right of decimal Pt 2 Scaling option Engineering low : -10.00 Limits
	O Direct O Dynamic limits Input low : -32768 Input high 32767

Then please create other text and Numeric Display as the following to get Ch.2 to 8 's analog input value. Copy from the first one and paste to Ch.2 to Ch. 8 .

ا <mark>تہ</mark> Ch.1 <mark>]</mark> #	Err	[®] ERR	Usi the 1	ing mou se two d	se t obje	o sele cts	ect		
	a a a a			📴 EasyBı	uilde	: 8000 :	MTP3.n	atp - [1	0 - WINDO
EasyBu	ilder 8000 : M	TP3.mtp - [1]	D - WIN	EB File	Edit	⊻iew	Option	<u>D</u> raw	<u>O</u> bjects <u>I</u>
EB File	Edit View C	ption Draw	Objects) 🗅 💕	Ω	<u>U</u> ndo			Ctrl+Z
: D 🚅	<u> </u>		Ctrl+Z	: 🛠 👳	<u>_</u>	<u>R</u> edo			Ctrl+Y
· • • •	<u>R</u> edo		Ctrl+Y	: tø +Ø	Ж	Cu <u>t</u>			Ctrl+X
: • == :	X Cut		Ctrl+X	Arial	Ē	⊆ору			Ctrl+C
: 49 H			CMLC	: Ba Da		Multi, Co	ору		
Arial	HE CODA		CultC	<u>: '6 '6</u>	6	Paste			Ctrl+V
		2		: 📐 🔊		_	3		

Remember to modify each Numeric Display 's "Address" to a proper value. Ch.1 is using 1#0, Ch.2 is 1#1, Ch.3 is 1#2, Ch4. Is 1#3, Ch.5 is 1#4, Ch.6 is 1#5, Ch.7 is 1#6, Ch.8 is 1#7.

10 - WINDOW_010	×
^{BL_0} Err	^B ERR
Ch.1 ####.##	Ch.5 ######
Ch.2 ######	Ch.6 ####.##
Ch.3 ####.##	Ch.7 ####.##
Ch.4 ###.##	Ch.8 <mark>###.##</mark>
Numeric Dieplay Object's Properties	
Rumeric Display Object's Fit perhes	Numeric Display Object's Properties
General Numeric Format Shape Font	General Numeric Format Shape Font Prof
Description :	Description :
Read address	Read address
PLC name : PLC1	PLC name : PLC1
Device type : 3x	Device type : 3x
Address: 1#3	Address: 1#7

We have set the M-7067D by DCON utility as Addr=2 (means station No. is 2). Please create one "Bit Lamp" as the following figure to display the Ch.1 state of the M-7067D (2#0 means station No. is 2, Modbus addr. Is 0).

Note: For M-7000, "3x" is for Analog input modules, "4x" is for Analog output modules, "1x" is for Digital Input modules, "**0x**" is for Digital output modules.

	BL_0	Err	⁸ ERF	i	2 2 2 2 2 2 2 2 2 2 2 2		
	Ch.1 #	##.## ## ##	Ch.5 Ch.6	###.1 ####.1	## 	OFF)
	Ch.3	##.##	Ch.7	####.i	##		
Bit Lamp Object's	Ch.4 # Properties	###.##	Ch.8	!:### /	#	2.4	2 1
Description	: []	Bit Lamp Ol	ject's Proper	rties	1		
Read address PLC name Device type Address	PLC1 0x 2#0	Shape -		Shape L	ibrary 🕚		🔽 Use shap
Shape Librar Library : button1	y A			State :	0		
button2 System Fra System Bu System La	ame ttor mp		8: Untitled States : 3 Frame	9: 51	Untitled tates : 3 ame		
State 0 ~ 9	State 11 ·		0				

Then create two "Set Bit" to switch the state of Ch.1 of M-7067D . (M-7067D is M-7000 Digital output module)

। 💡 🖪 🕎 🖪 🗇 🔫 💈	et Bit Object's Pro	operties			
	General Security	Shape	Label	Pro:	
	Description :				4 D 4 O 1
the second s	PLC name :	PLC1		>	et Bit Object's Properties
	Write address —	5.4 			General Security Shape Label
	Device type :	0x			Safety control
	Address :	2#0			-
	Address format :	ddddd [r	ange : O -	- 6553	Display confirmation request
					- Interlock
					Use interlock function
	Attribute	-		1	
	Se	t style : 🛛	Set ON		
^{BL_0} Err Ch.1 ###.## (Ch.2 ###.## (Ch.3 ####.## (Ch.3 Ch.4 ###.## (Ch.4 Ch.4 Ch.4 Ch.4 Ch.4 Ch.4 Ch.4 Ch.4	^B ERR Ch.5 ^{#######} Ch.6 ^{########} Ch.7 ^{########} Ch.8 ^{####################################}	# (et Bit O General L Write D Addr	SECON bject's P Security Description PLC name address evice type Address ess format	11 Bor FF1 roperties Shape Label Profile PLC1 (Dx 2#0 t: ddddd [range : 0 ~ 65535] Index Write Set style : Set OFF



Please create one another "Bit Lamp" and two "Set bit" for Channel 2 of the M-7067D .

We have finished the touch-8000 project. Please save it, compile it and then download it to the Touch-8000 HMI. (If you are not familiar with the Easybuilder 8000 software, please refer to Chapter 1.2 thru. 1.4)

Check if you have connected the RS-485 cable well between Touch-8000 's COM3 and M-7017R and M-7067D.

Touch-8000 COM3: RS-485	M-7017R (Addr. 1)	M-7067D (Addr. 2)
9 Data +	Data +	Data +
6 Data	Data	Data -

Then test it. You can try to turn off the power of M-7017R or M-7067D to see if the communication state change to "Err" ("ERR"). And give for example, 5 volt to Ch.2 of the M-7017R to see if the value displayed well.

Product information:

NS-208/NS-205 : <u>http://www.icpdas.com/products/Switch/switch_list.htm</u> ICP DAS ISaGRAF PAC: <u>http://www.icpdas.com/products/PAC/i-8000/isagraf.htm</u> WinPAC-8xx7: <u>http://www.icpdas.com/products/PAC/winpac/wp-8x47.html</u> Touch HMI: <u>http://www.icpdas.com/products/HMI/touch_lcd/touch_human.htm</u> M-7000: <u>http://www.icpdas.com/products/Remote_IO/m-7000/m-7000_list.htm</u>

2.8: More Topics

Please visit below web sites for more functions about the Touch-8000 series HMI.

English:ftp://ftp.weintek.com/MT8000/eng/UserManual/ > all PDF files.Chinese:ftp://ftp.weintek.com/MT8000/tw/UserManual/ > all PDF files.

For example, please refer to Chapter 7 and Chapter 13.22 for "Event log" and "Event display".

Chapter	Topics
1	EasyBuilder_8000_Installation
2	Project_Manager_Operations
3	Easy_to_using_EB8000
4	MT8000_Hardware
5	System_Parameters
6	Window_Operations
7	Event_Log
8	Data_Sampling
9	Object_General_Properties
10	Object_Secuity_Guard
11	Index_Register
12	Designing_and_Using_Keypad
13	Object
14	Shape_Library
15	Picture_Library
16	Group_Library
17	Label_Library
18	Address_Tag_Library
19	Sound_Library
20	Ethernet_Communication_and_Multi
21	HMI_State_Controlling
22	PLC_connecting_guide
23	MT8000_supports_printer
24	Transferring_Recipe_Data
25	Macro_User
26	Exemplification
Appendix 2	EasyPrinter

Service : <u>service@icpdas.com</u>