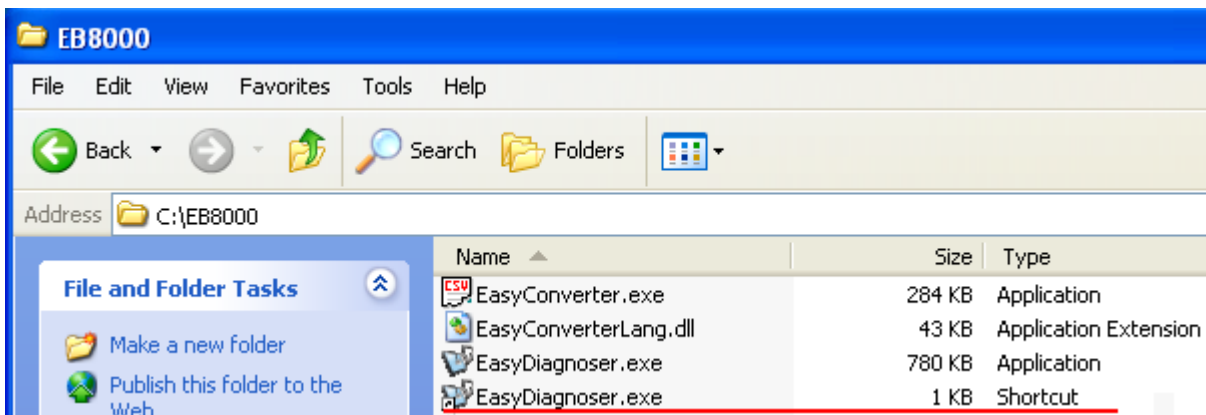# Appendix 6   EasyDiagnoser

The EasyDiagnoser is a tool for verifying the problem between HMI and PLC status, this can help user to figure out the problem.
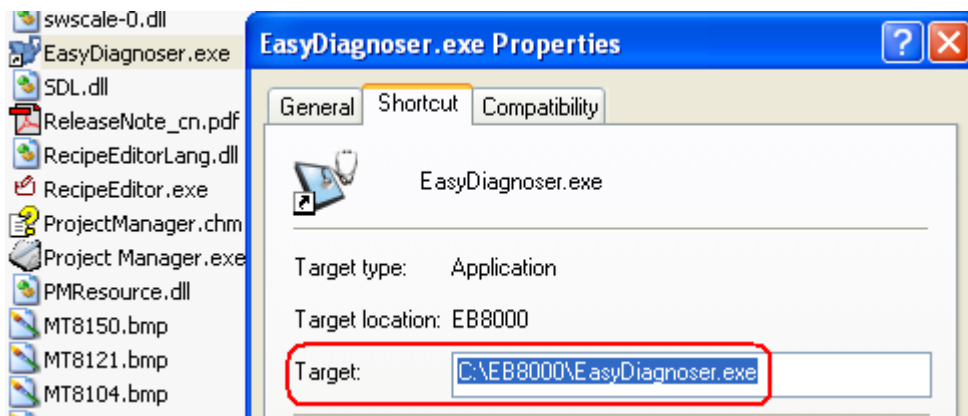
1. Introduction

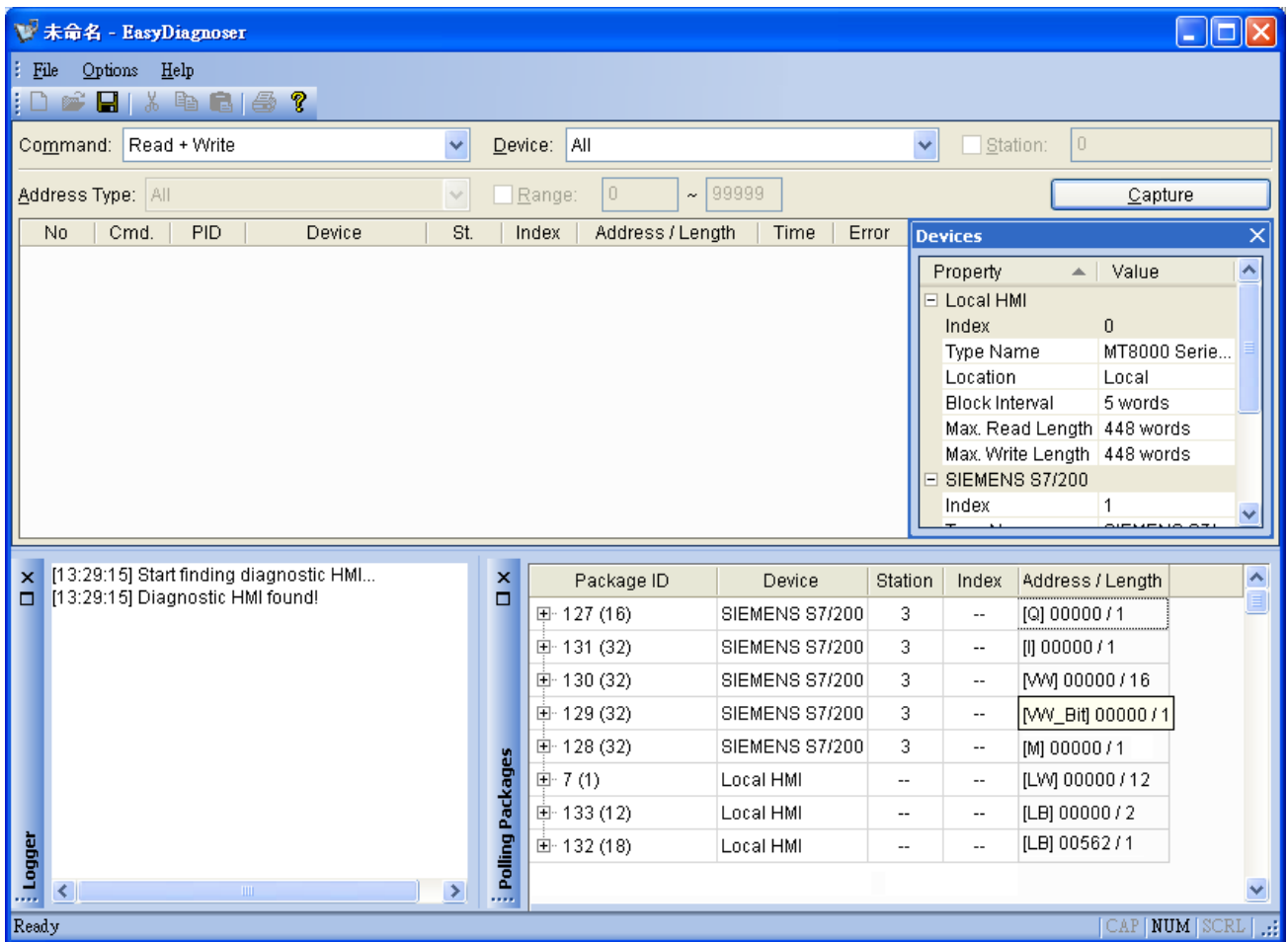Create an EasyDiagnoser.exe shortcut

Click right button of mouse and select properties to go to Shortcut settings, type in the EasyDiagnoser.exe directory and HMI's IP address as below.
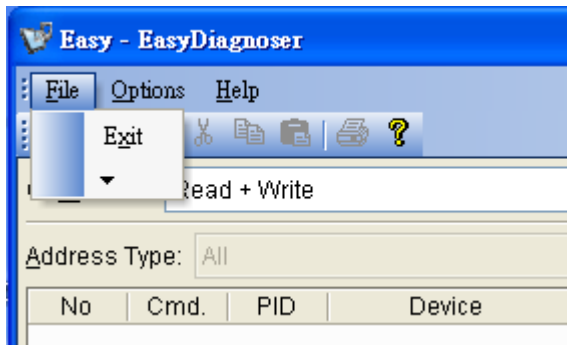
Target: C:\EB8000\EasyDiagnoser.exe -address"192.168.1.18:8001"
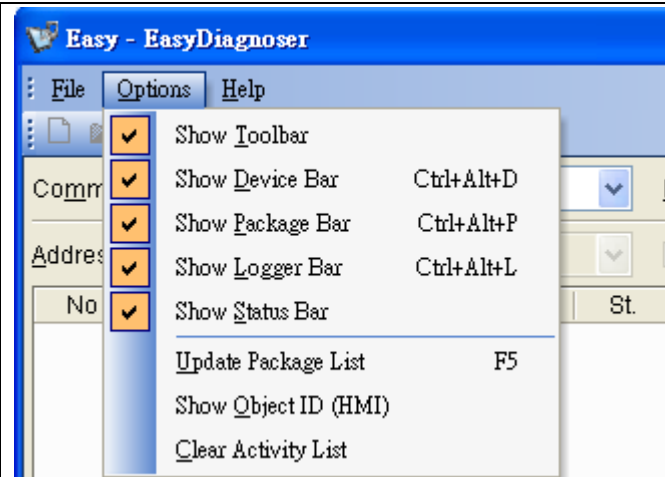

Double click shortcut of EasyDiagnoser to display below picture.

2. Setting of EasyDiagnoser

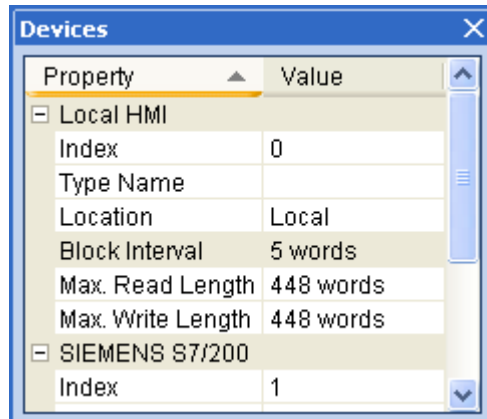| File	Exit
	To exit current file.
Options	There are 8 functions in the options list.

Show Toolbar

To display new, open, save, cut, copy, past, print tools.
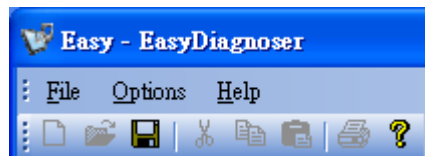
Show Device Bar

To show the HMI and PLC information.

Show Package Bar

To show the packages of current page on HMI.

	Show Logger Bar To show the status of HMI.
	Show Status Bar On the bottom of EasyDiagnoser window, to display the CAP, NUM or SCRL information.
	Update Package List When user change the page on HMI, use update package list to refresh the current package information.
	Show Object ID (HMI) To display object ID on HMI as below picture.
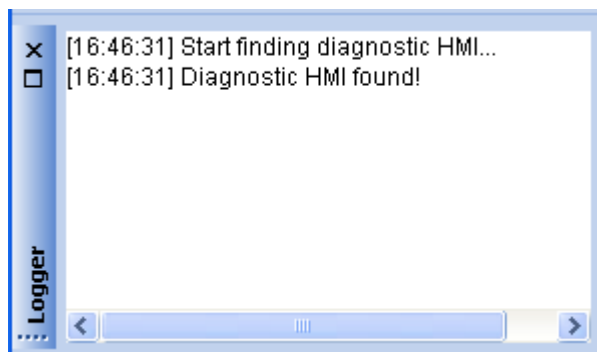
Clear Activity List

To clear activity area information.

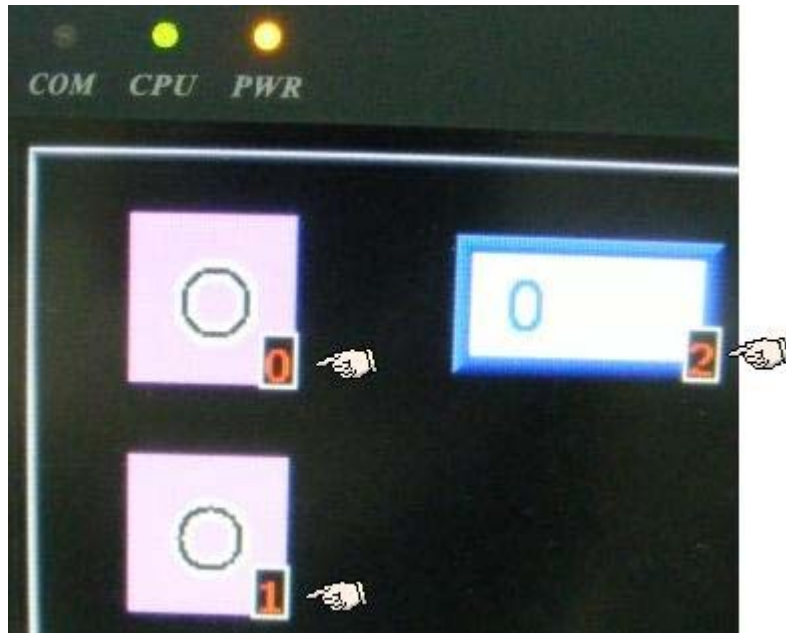|				
Help	To show the EasyDiagnoser version.			

- **Activity area**

In the activity area, user is able to observe the communication between PLC and HMI.

No	Cmd.	PID	Device	St.	Index	Address / Length	Time	Error
135	R	133	Local HMI	--	--	[LW] 00000 / 12	90	0
134	R	7	Local HMI	--	--	[LB] 00562 / 1	90	0
133	R	128	SIEMENS S7/200	3	255	[I] 00000 / 1	840	0
132	R	132	Local HMI	--	--	[LB] 00000 / 2	80	0
131	R	133	Local HMI	--	--	[LW] 00000 / 12	80	0
130	R	7	Local HMI	--	--	[LB] 00562 / 1	80	0
129	R	132	Local HMI	--	--	[LB] 00000 / 2	80	0
128	R	133	Local HMI	--	--	[LW] 00000 / 12	80	0
127	R	7	Local HMI	--	--	[LB] 00562 / 1	80	0
126	R	129	SIEMENS S7/200	3	255	[Q] 00000 / 1	840	0

Command	a. **Read + Write**
	To display read and write command in activity area.
	b. **Read**
	To display read command only in activity area.
	c. **Write**
	To display write command only in activity area.
Device	a. **All**
	To display Local HMI and PLC's information, it depends on the setting of command as following.
	If command is set as Read + Write, the activity area will show the Local HMI and PLC's Read + Write information.
	If command is set Read, the area will show the Local HMI and PLC's Read address information.
	If command is set Write, the area will show the Local HMI and PLC's Write address information.
	b. **Local HMI**
	To display Local HMI information, it depends on the setting of command as following.
	If command is set as Read + Write, the activity area will show the Local HMI's Read + Write information.
	If command is set Read, the area will show the Local HMI's Read address information.
	If command is set Write, the area will show the Local HMI's Write address information.
	c. **PLC**
	To display PLC information, it depends on the setting of command as following.
	If command is set as Read + Write, the activity area will show the PLC's Read + Write information.
	If command is set Read, the area will show the PLC's Read address information.
	If command is set Write, the area will show the PLC's Write address information.
Station	Select specific Station for display on the screen. (This is available when device is not selected All.)
Address Type	User is able to select All or any address type to display on the screen. (This is available when device is not selected All.)
Range	Setting the address range. (This is available when device is not selected All.)
Capture	Press Capture button for checking the communicating information.
Error	Please refer Error code list on the end of the document.

- **Polling Packages**

Package ID	Use the information of package id to check the PID in activity area for finding the problem.
Device	Display HMI and PLC's model
Station	Display PLC's station no.
Address/Length	Display the address of device types

Object	The objects which pack in the package ID.
Screen	Object's window no. in the project.
ID	Object's ID number.
Address	Object's address.

Note:

a. Click package ID, the third column is displayed device's station.

Package ID	Device	Station	Index	Address / Length
⊞ 131 (32)	SIEMENS S7/200	3	--	[VW_Bit] 0000..
⊞ 130 (32)	SIEMENS S7/200	3	--	[M] 00000 / 1
⊞ 129 (32)	SIEMENS S7/200	3	--	[Q] 00000 / 1
⊞ 128 (32)	SIEMENS S7/200	3	--	[I] 00000 / 1
⊟ 127 (16)	SIEMENS S7/200	3	--	[VW] 00000 / 16
Numeric Input		10	0	[VW] 00000
Numeric Input		10	65	[VW] 00001

b. Double click package ID and select object, the first column direct the object's position.
For example, the numeric input was selected and the screen no. is 10 that mean this object is in the window10 in the project, meanwhile, the object on the HMI screen will be marked in pink as below picture.

Object		Screen	ID	Address
⊞ 131 (32)	SIEMENS S7/200	3	--	[VW_Bit] 0000..
⊞ 130 (32)	SIEMENS S7/200	3	--	[M] 00000 / 1
⊞ 129 (32)	SIEMENS S7/200	3	--	[Q] 00000 / 1
⊞ 128 (32)	SIEMENS S7/200	3	--	[I] 00000 / 1
⊟ 127 (16)	SIEMENS S7/200	3	--	[VW] 00000 / 16
Numeric Input		10	0	[VW] 00000
Numeric Input		10	65	[VW] 00001

3. Error code list

In the activity area, an Error shows the reason of failure. Please refer the error code as below.

0 : Normal

1 : Time out

2 : Fail Error

12 : Ignore

When error occurred, the error will mark in red. The below picture shows the error code is 1, duo to the PLC disconnected with HMI and Error code 12 means the "PLC No Response" message window appeared.