

# PLC Connection Guide

## TN506D

Communication settings between  
Hitachi Micro-EH and PanelMaster



**Designed to be Outstanding**

## Preface

This tech note introduces how to connect **Hitachi Micro-EH** PLC with PanelMaster HMI.

### 1) PLC Parameter setting:

#### (a) Micro-EH

##### 1) Port 1

- a. Using Port 1 connect to HMI.

The communication format as follows:

**19200, 7, Even, 1 (According to the DIP-SW setting)**

- b. Port 1 Setting

Port 1 is configured by combination of DIP switch and special register (WRF01A).

DIP switch can be set when cable is not connected (DR signal is off). Switch configuration is set at cable connected (DR is high).

Value in WRF01A is saved in FLASH memory when writing flag (R7F6) is turned on. If saved in FLASH memory, it is not necessary to set again at the next power up.

#### **[Caution]**

If transmission procedure 2 is configured and saved in FLASH memory once, peripheral device/application which supports procedure 1 such as LADDER EDITOR can not be connected.

c. Port 1 hardware

WRF01A	Remarks
I0000 : Transmission procedure 1 I8000 : Transmission procedure 2	
	Default
I0000 : Prcd. 1 / H8000 : Prcd. 2 I0100 : Prcd. 1 / H8100 : Prcd. 2 I0200 : Prcd. 1 / H8200 : Prcd. 2 I0300 : Prcd. 1 / H8300 : Prcd. 2	H0*** : Procedure 1 H0*** :

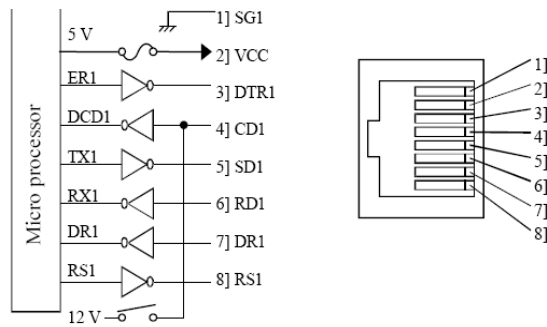
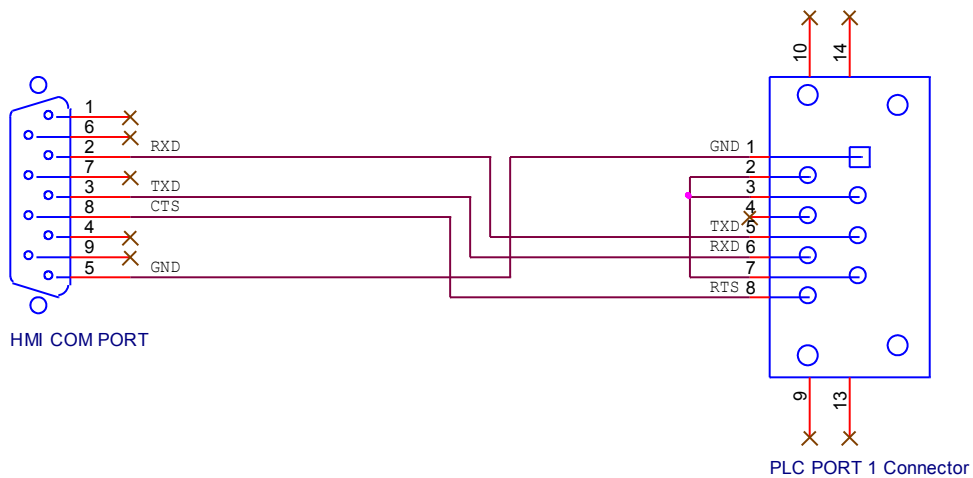


Figure 11.2 Circuit diagram and pin numbers for port 1

Table 11.3 List of port 1 signals

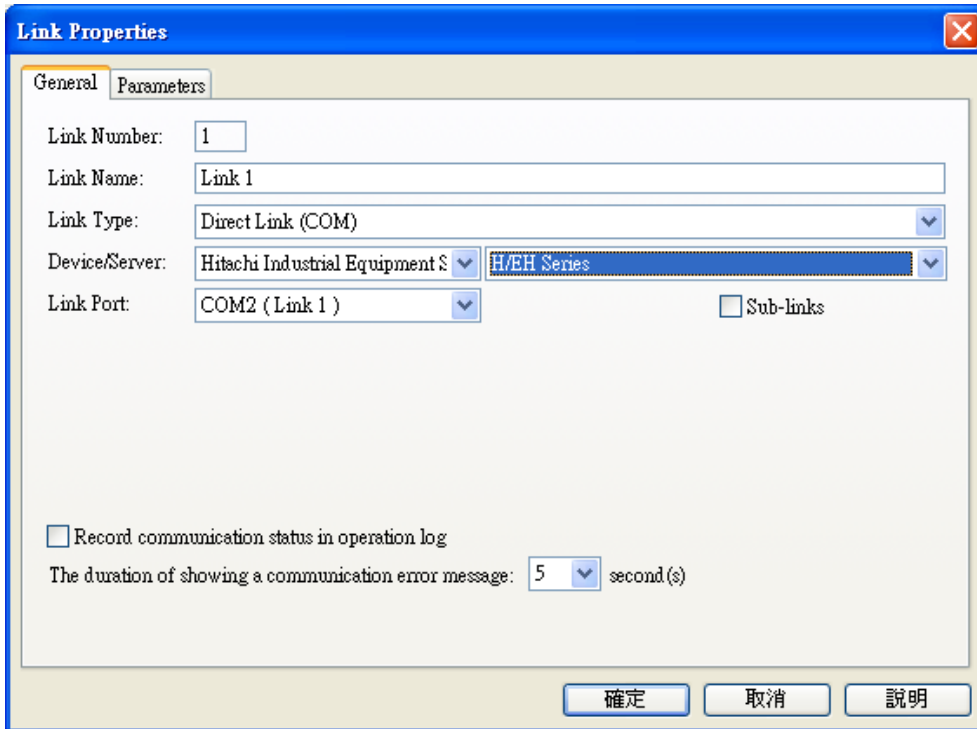
Pin No.	Signal abbreviation	Direction		Meaning
		CPU	Host	
1]	SG1	←	→	Signal ground
2]	VCC	→	→	5 V DC is supplied. (Protective fuse is connected.)
3]	DTR1 (ER)	→	→	Communication enabled signal. When it is high, communication is possible.
4]	CD1 (DCD)	→	→	12V is output when DIP switch 1 is on.
5]	SD1 (TXD)	→	→	Data sent by the CPU
6]	RD1 (RXD)	←	→	Data received by the CPU
7]	DR1 (DSR)	←	→	Peripheral units connected signal. When it is high, peripheral device is connected.
8]	RS1 (RTS)	→	→	Transmission request signal. When it is high, CPU is ready to receive data.

d. Connection Cable diagram (RS232)



## 2) HMI setting:

Select 【Device/Server : Hitachi Industrial Equipment Systems Co., Ltd.→ H/EH Series】

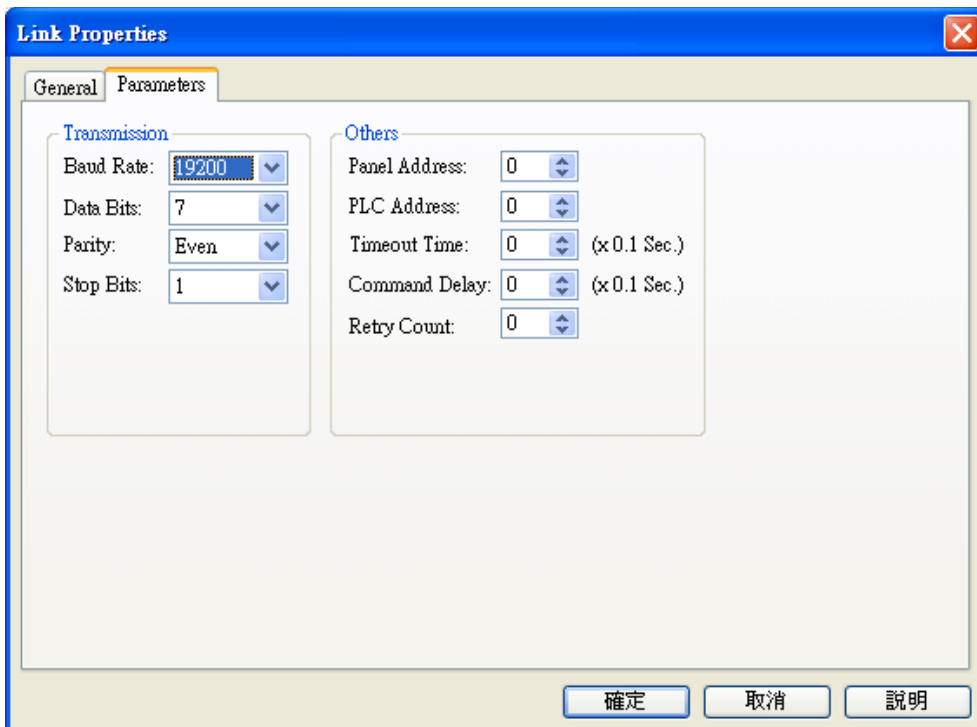


The screenshot shows the 'Link Properties' dialog box with the 'General' tab selected. The fields are as follows:

Link Number:	1
Link Name:	Link 1
Link Type:	Direct Link (COM)
Device/Server:	Hitachi Industrial Equipment S... H/EH Series
Link Port:	COM2 (Link 1) <input type="checkbox"/> Sub-links

At the bottom, there is a checkbox for 'Record communication status in operation log' and a dropdown menu for 'The duration of showing a communication error message:' set to 5 seconds. Buttons for '確定' (OK), '取消' (Cancel), and '説明' (Help) are at the bottom right.

Set the HMI link port parameter identical with PLC communication parameter



The screenshot shows the 'Link Properties' dialog box with the 'Parameters' tab selected. The fields are organized into two sections:

Transmission		Others	
Baud Rate:	19200	Panel Address:	0
Data Bits:	7	PLC Address:	0
Parity:	Even	Timeout Time:	0 (x 0.1 Sec.)
Stop Bits:	1	Command Delay:	0 (x 0.1 Sec.)
		Retry Count:	0

Buttons for '確定' (OK), '取消' (Cancel), and '説明' (Help) are at the bottom right.

### 3) PLC Memory Address

Bit Devices:

Bit Device	Address Range	Block Addr...	Comment
Xmn	m=0~4,n=0x0~0xff95	m=0~4	
Ymn	m=0~4,n=0x0~0xff95	m=0~4	
Rn	n=0x0~0x7ff	Any	
Mn	n=0x0~0x3fff	Any	
Ln	n=0x0~0x3fff	Any	
Ln	n=0x10000~0x13fff	Any	
TDn	n=0~255	Any	
SSn	n=0~255	Any	
CUn	n=0~511	Any	
CTUn	n=0~511	Any	
CTDn	n=0~511	Any	
CTn	n=0~511	Any	
CLn	n=0~511	Any	
DIFn	n=0~511	Any	
DFNn	n=0~511	Any	

Close

Word Devices:

字元件/位置	地址範圍	大小	說明
WXn	n:0x0~0x4ff7	Word	
WYn	n:0x0~0x4ff7	Word	
WRn	n:0x0~0xc3ff	Word	
WRn	n:0xf000~0xf1ff	Word	
WMn	n:0x0~0x3fff	Word	
WLn	n:0x0~0x3fff	Word	
WLn	n:0x1000~0x13ff	Word	
TCn	n:0~511	Word	
DXn	n:0x0~0x4ff8	D Word	
DYn	n:0x0~0x4ff8	D Word	
DRn	n:0x0~0xc3fe	D Word	
DRn	n:0xf000~0xf1fe	D Word	
DMn	n:0x0~0x3ffe	D Word	
DLn	n:0x0~0x3ffe	D Word	
DLn	n:0x1000~0x13fe	D Word	
WNn	n:0x0~0x7fff	Word	
DNn	n:0x0~0x7ffe	D Word	

關閉