

NB With CP1L (2pcs) Through COM2/RS422(Host Link)

Introduction

This article is related to the article **NB HMI and Connecting Peripheral Devices** and explains how connection can be established with a CP1L (2pcs) and a CP1W-CIF11/12 using Host Link (RS422).

Content

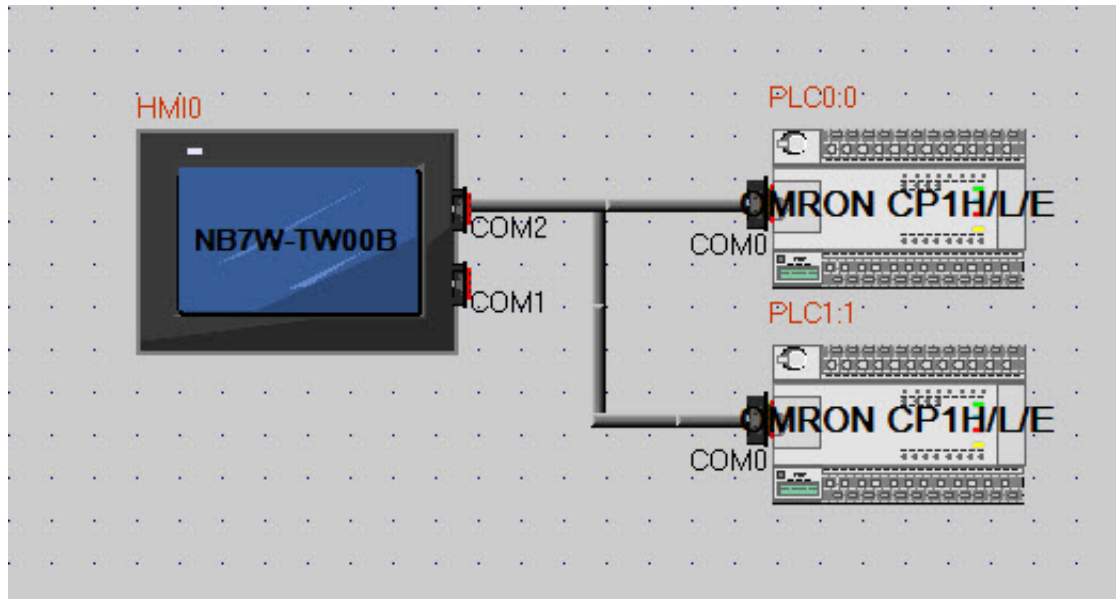
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1. Connecting Methods

Host Link (RS422)

NB with CP1L (2pcs) through COM2/RS422 (Host Link)

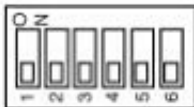
Start NB-designer, create a new program, drag and drop the NB and the two CP1L's on the "Project Structure Window". Connect with the Serial connection line the CP1L's to the COM2 port of the NB.



2. Wiring diagram

NB pin 6 (RDB+) to 1e and 2e CP1L (CP1W-CIF11/12) SDB+
 NB pin 8 (RDA-) to 1e and 2e CP1L (CP1W-CIF11/12) SDA-
 NB pin 1 (SDB+) to 1e and 2e CP1L (CP1W-CIF11/12) RDB+
 NB pin 7 (SDA-) to 1e and 2e CP1L (CP1W-CIF11/12) RDA-

Switches CP1W-CIF11/12 conform diagram (1,2,3,4 OFF, and 5,6 ON) / (2,3,4 OFF and 1,5,6 ON)



Pin	Settings		
	ON	OFF	
1	ON	ON (both ends)	Terminating resistance selection
	OFF	OFF	
2	ON	2-wire	2-wire or 4-wire selection (See note 1.)
	OFF	4-wire	
3	ON	2-wire	2-wire or 4-wire selection (See note 1.)
	OFF	4-wire	
4	---	---	Not used.
5	ON	RS control enabled	RS control selection for RD (See note 2.)
	OFF	RS control disabled (Data always received.)	
6	ON	RS control enabled	RS control selection for SD (See note 3.)
	OFF	RS control disabled (Data always sent.)	

(Default cable: NB-RSEXT-2M)

In order to avoid malfunctions caused by interferences, shield the cables properly.

3. HMI Attribute settings

Double click on the NB in the "Project Structure Window" to open the HMI Attribute.

Select the 'COM2 Settings' tab and set the Host Link Communication settings to Type (RS422), Baud Rate (115200), Data Bit (7), Parity Check (Even) and Stop Bit to (2).

HMI Attribute

HMI Extended Attributes | HMI System Information Text | Security Levels Setting

HMI | Task Bar

User Permissions Setting | Historical Events Storage | COM1 Setting | COM2 Setting

Type	RS422	PLC Communication Time Out	3
Baud Rate	115200	Protocol Time Out 1(ms)	50
Data Bit	7	Protocol Time Out 2(ms)	3
Parity Check	even	Max interval of word block pack	16
Stop Bit	2	Max interval of bit block pack	64
<input type="checkbox"/> Broadcast	65535	Max word block package size	32
		Max bit block package size	128

Use Default Setting

OK Cancel

4. PLC Attribute and PLC settings (PLC0)

Double click on the CP1(PLC0) in the "Project Structure Window" to open the PLC Attribute.
Set the Station No. to (0) in the PLC tab.

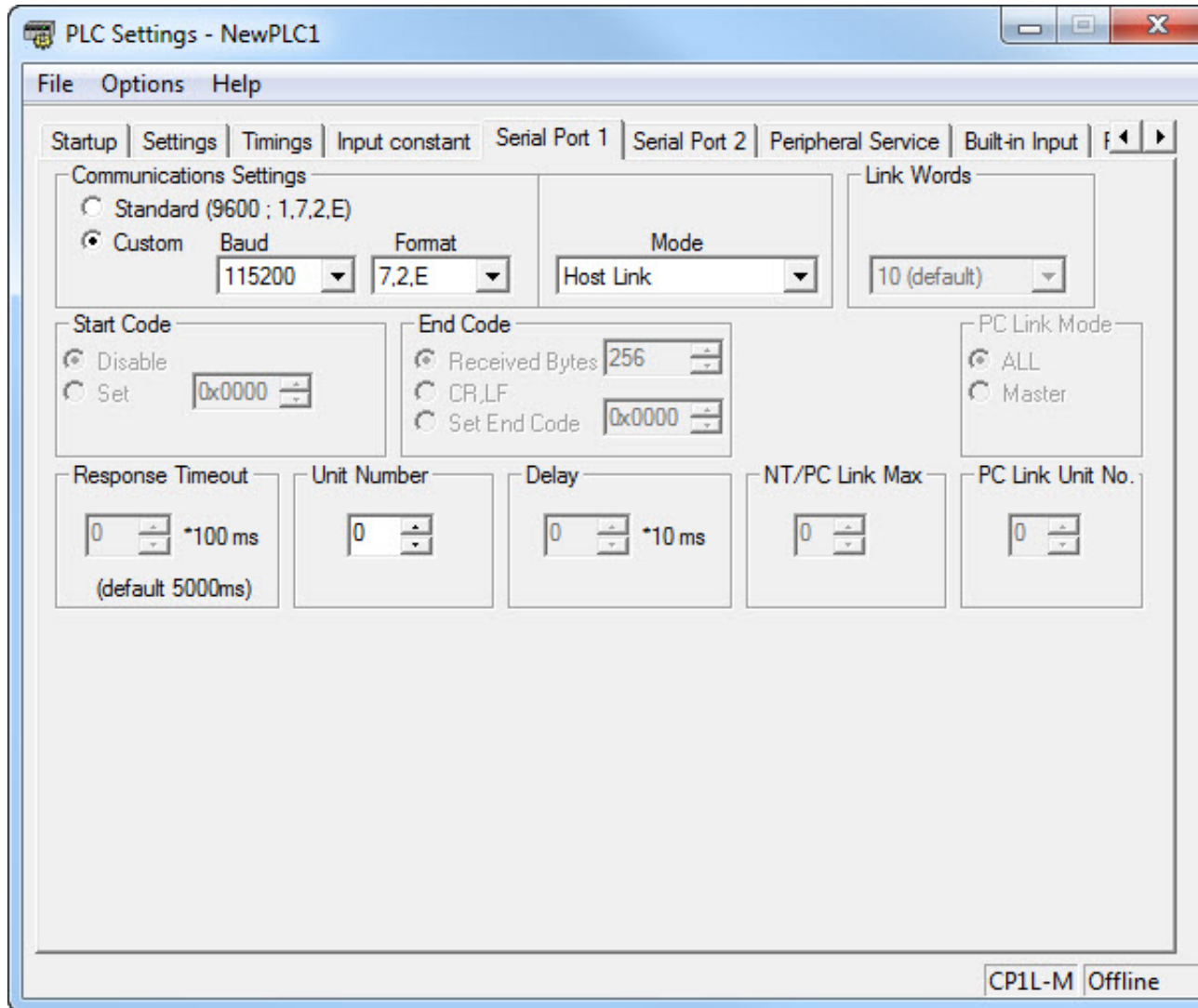
PLC Attribute X

PLC

Station No.

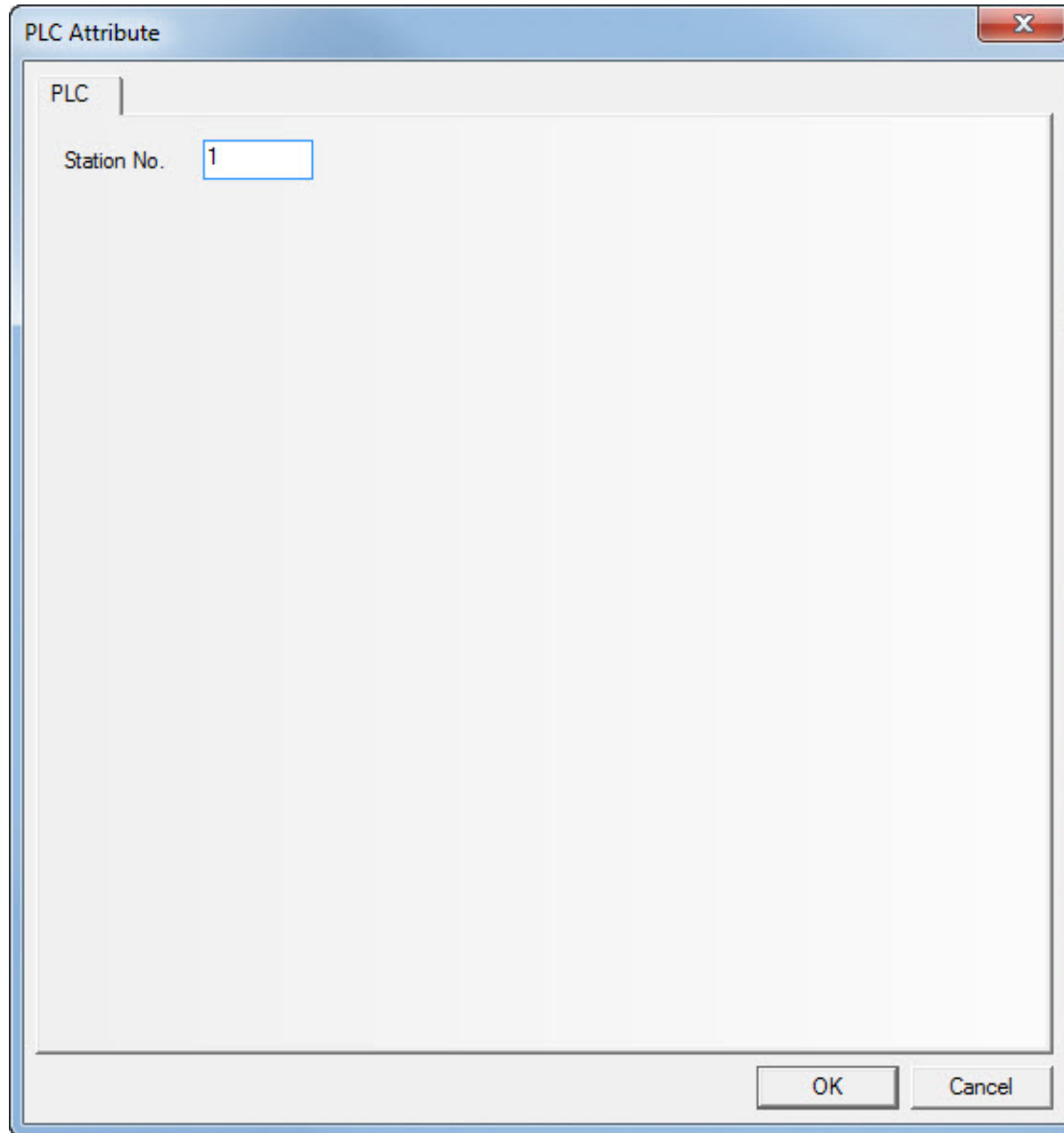
Start CX-Programmer, create a new program and select a CP1L. Open the Settings properties. Select the Serial Port 1 or Port 2 tab where CP1W-CIF11/12 is mounted.

Set the communication Settings to Custom, Baud (115200), Format (7,2,E), Mode (Host Link) and Unit Number to (0).



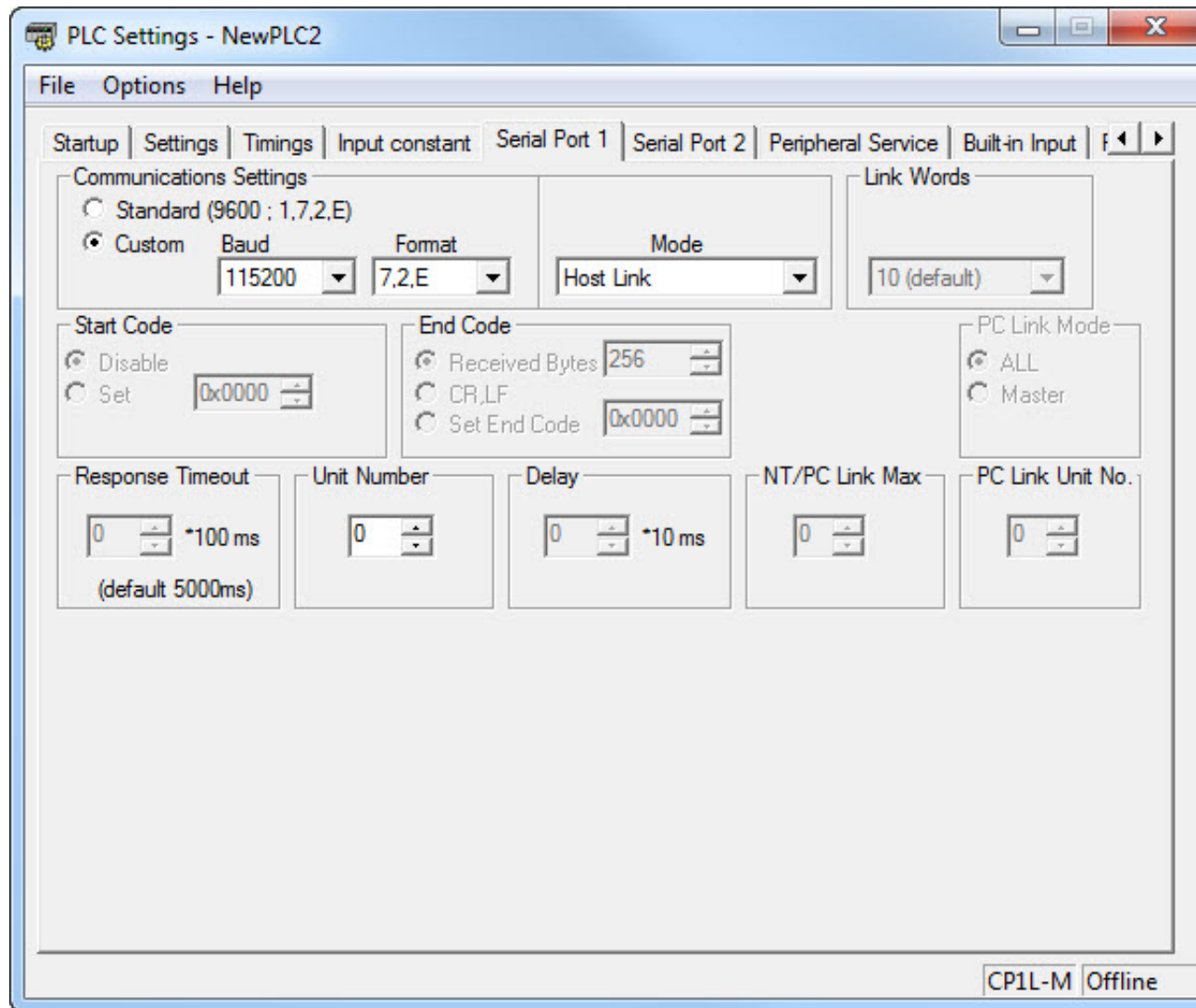
5. PLC Attribute and PLC settings (PLC1)

In NB-Designer, double click on the CP1(PLC1) in the "Project Structure Window" to open the PLC Attribute. Set the Station No. to (1) in the PLC tab.



Start CX-Programmer, create a new program and select a CP1L or add a second CP1L to the existing file. Open the Settings properties. Select the Serial Port 1 or Port 2 tab where CP1W-CIF11/12 is mounted.

Set the communication Settings to Custom, Baud (115200), Format (7,2,E), Mode (Host Link) and Unit Number to (1).



Save, compile and download the NB program and CX-Programmer settings to the units and restart all.

6. Example program

Attached file:

Example program for a NB7W-TW00B with two CP1L(PLC0/PLC1) screens for Read/Write data to the CP1L's through Host Link (RS422) and a NB Setup screen to Adjust settings like Date, Time, Buzzer, Screen Saver, Brightness adjust and Calibrate screen.

For the CP1L-M's there is a CX-Programmer file for two PLC's with the Communication settings for Serial Port 1.

Reference:

CP1L Operation Manual (Cat. No. W462)

Programmable Terminals Host Connection Manual (Cat. No. V108)

Programmable Terminals NB-Designer Operation Manual (Cat. No. V106)

Programmable Terminals Setup Manual (Cat. No. V107)

Programmable Terminals Startup Guide Manual (Cat. No. V109)

NB-series Manuals (included in NB-designer)

Program versions: NB-Designer version 1.23 and CX-Programmer version 9.4

Link:

<http://www.myomron.com/index.php?action=kb&print=1537>

Comments

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