

Omron CJ1 Ethernet Connection

Monitouch HMI Technical Note TN-MH-0009a

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1. Introduction

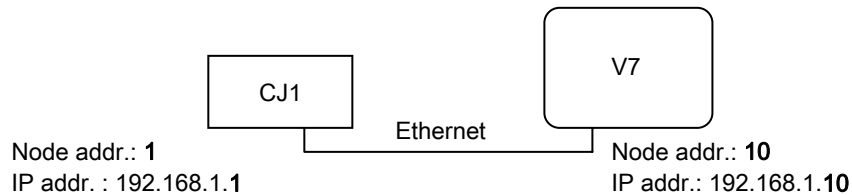
This document describes how to configure an Omron CJ1 PLC for communications to a V7i over Ethernet. The PLC used for this is a CJ1G-H (CPU65H) with an ETN11 module.

2. Configuration Notes

- When using FINS communication (Omron application layer on TCP/IP), the node number must be set in accordance with FINS addressing. Also, in order to process Ethernet read/write commands, the IP address must be set correctly. In order to do this, the CJ1 will convert the IP address to a FINS node address. There are three types of conversion methods. We will cover the setup using the "Auto" and "IP Address Table" methods.

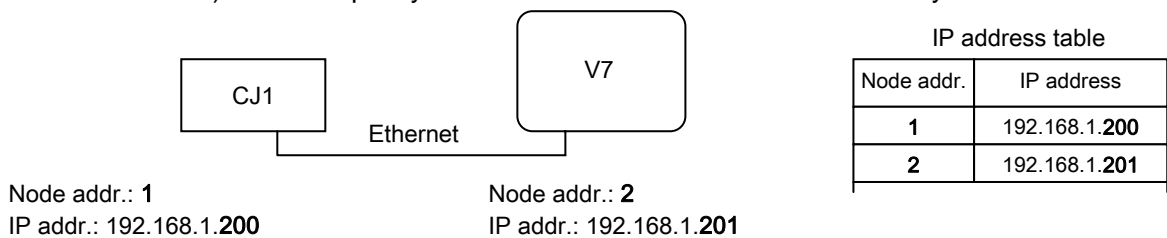
"Auto"

This method uses the lower byte of the CJ1 IP address as FINS node. The advantage is that it is easily identify the relationship of FINS node address and IP address; however, range of the node address is limited to 1 to 126. (Please note that actual maximum number is 31 because you can specify only up to 31 on V-SFT.) If the node address exceeds the limitation, use IP address table method.



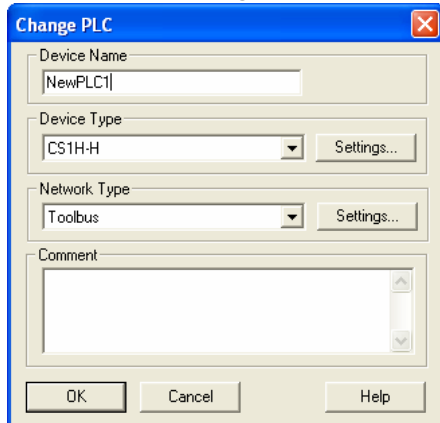
"IP Address Table"

FINS node address will be converted to the specific IP address based on a table (IP address table.) You can specify FINS node address and IP address freely.

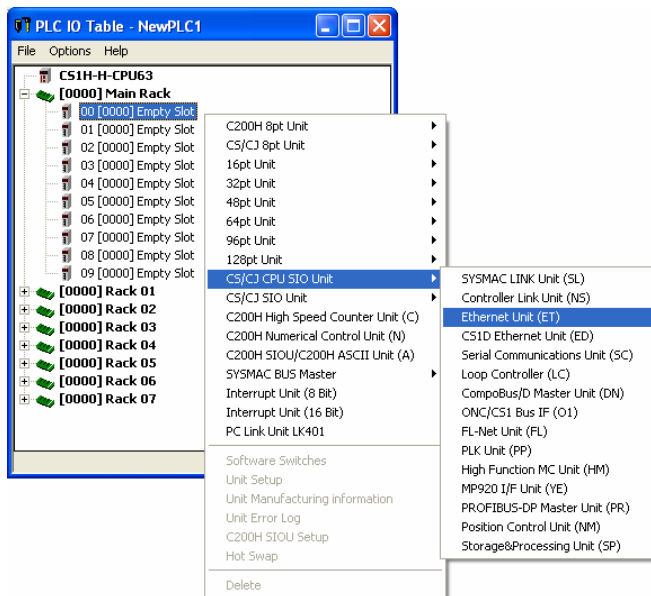


3. Configuring CX-Programmer

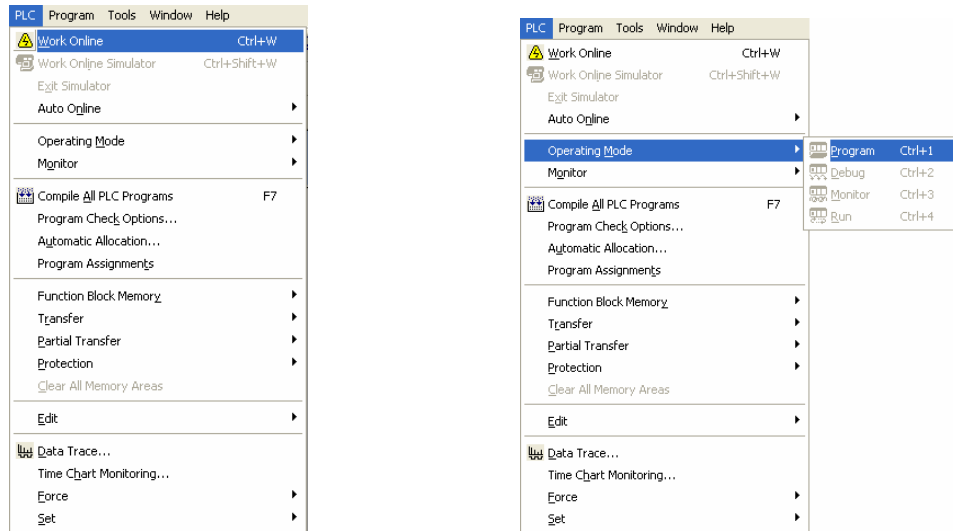
1. Open CX-Programmer and specify PLC Model



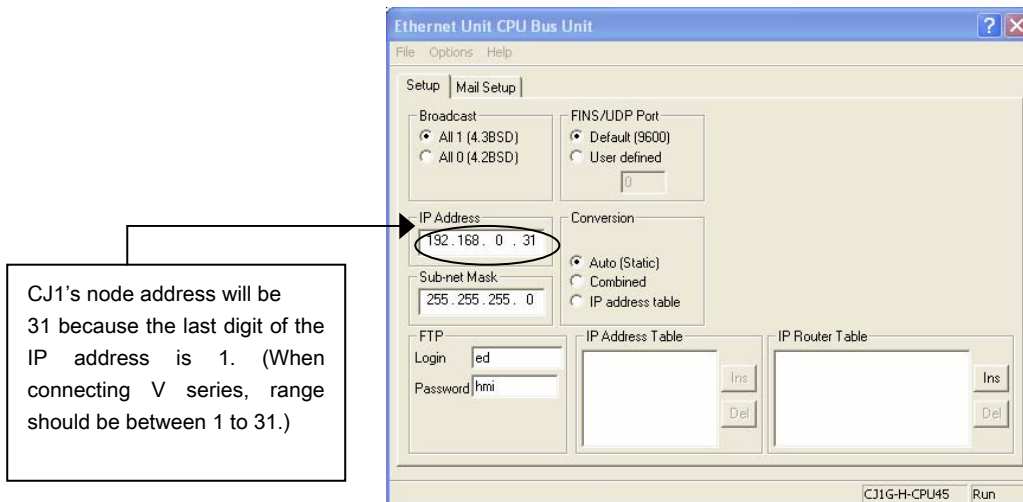
2. Specify the Ethernet Unit in the PLC I/O Table.



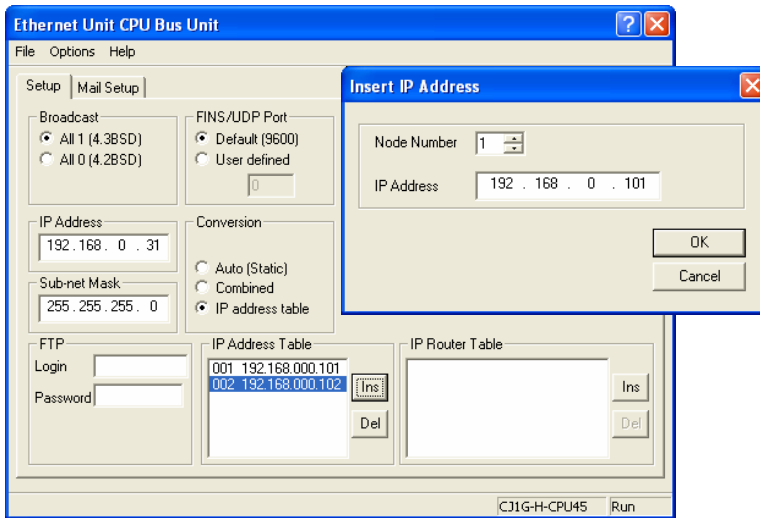
- Close the PLC I/O Table and start an online connection. Then set the PLC to Program Mode.



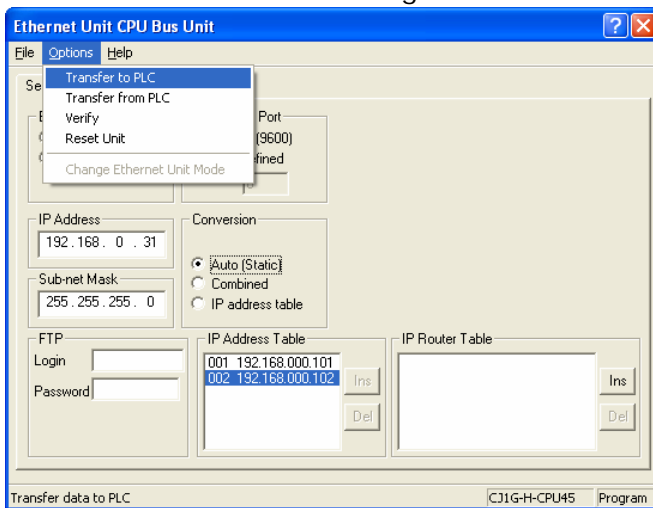
- Open the PLC I/O Table again and right click on the Ethernet Module and select Unit Setup.
 - In the case of "Auto":



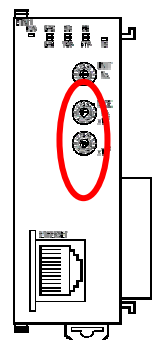
- In the case of "IP Address Table", you must enter the node number and the IP Address manually.



5. Then download the settings.

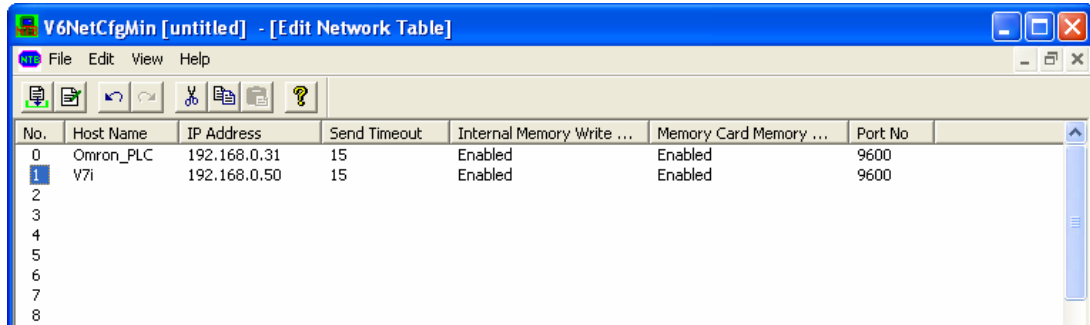


Note: The rotary DIP switches on the ETN11 module must match the node number. If they do not match the ERC LED will be on. Make sure to cycle power after changing the switch position.

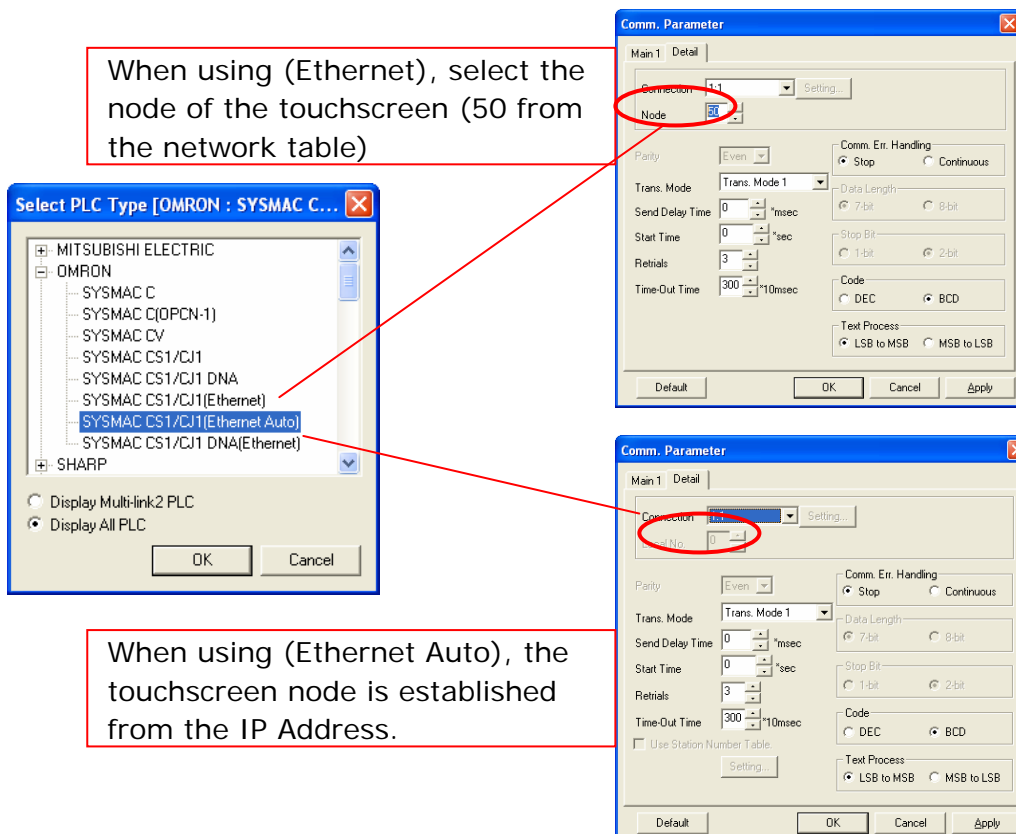


4. Configuring V-SFT

1. Set your Network Table (System Setting – Network Table – Ethernet with the IP Addresses of all of the PLCs and touchscreens that will be linked via Ethernet. Note that the port number for the PLC and touchscreen is 9600. This is the default for the PLC and can be manually configured on the ETN11 settings page. The panel setting must match the PLC setting for port number.

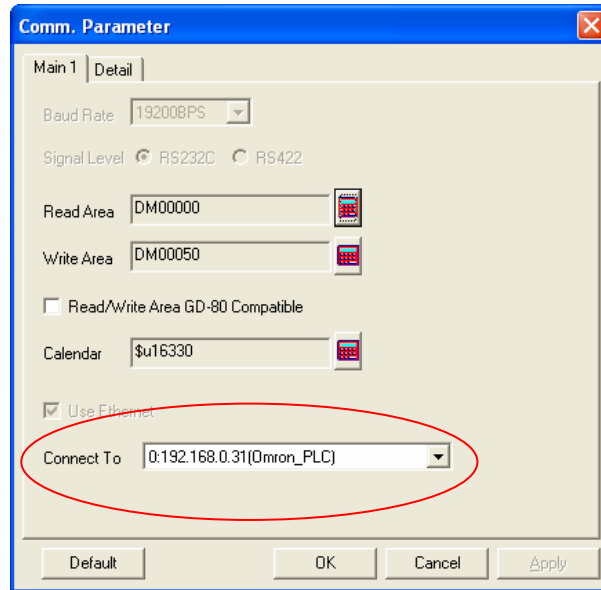


2. Select PLC type depending on your choice for "Auto" or "IP Address Table" for the PLC.
 For "Auto" choose SYSMAC CS1/CJ1(Ethernet Auto)
 For "IP Address Table" choose SYSMAC CS1/CJ1(Ethernet)





3. Make sure that the Connect To box has the correct network table address of the PLC.



4. Transfer the screen data to the V7i panel.

5. For More Information

1. Manuals (Monitouch)
 - PLC Connection Manual, Chapter 19
2. Omron Information
 - Website <http://oeiweb.omron.com/>