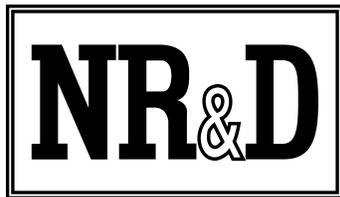


MEB II Setup Video

Companion Manual

This manual provides more detail on the the MEB II Modbus Plus to Ethernet Bridge Setup Video.

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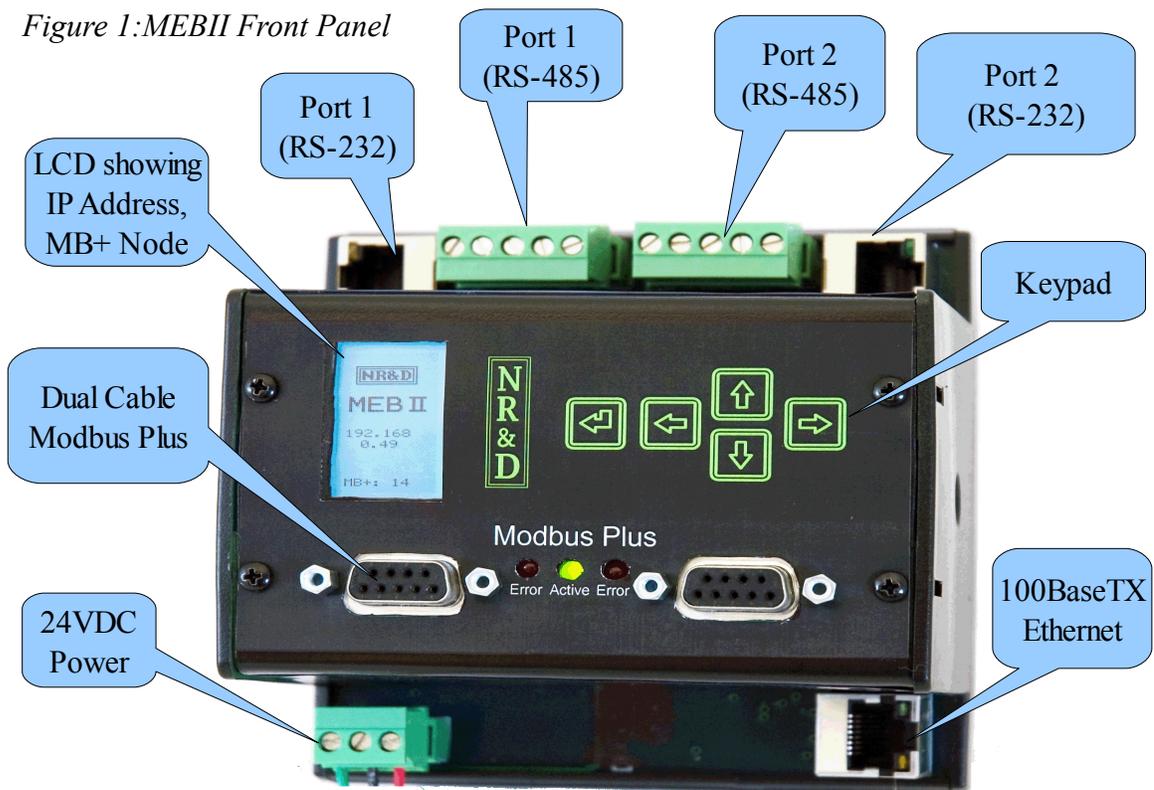
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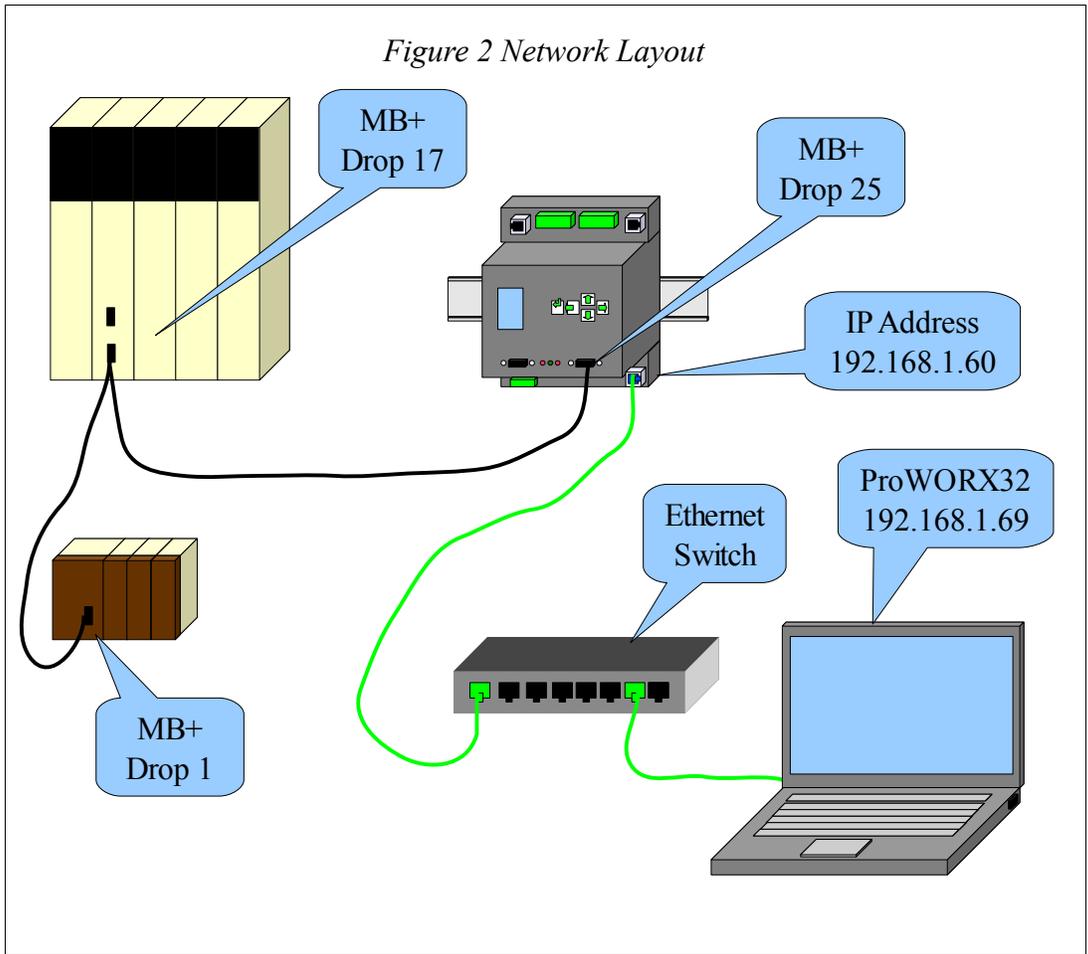
System Layout

The Niobrara MEBII is a stand-alone DIN rail mount Modbus Plus to Ethernet Bridge. It features a redundant cable Modbus Plus (MB+) port, a 10/100BaseTX Ethernet port, and two isolated serial ports. The MEB II allows simultaneous pass-through routing data messages from Modbus/TCP Ethernet, MB+, and Modbus serial between all ports. Full support of PLC programming message pass-through is also provided on all communication ports including Unity Pro, Concept, ProWORX, and Modsoft.

Figure 1: MEBII Front Panel



The MEBII Quick Setup video demonstrates a simple network setup as shown in Figure 2 Network Layout. The MEBII is connected through an Ethernet switch to a PC running ProWORX32. It is also connected via Modbus Plus to a Quantum PLC at node 17 and a Compact PLC at node 01. The MEBII is to be configured to an IP Address of 192.168.1.60 and a MB+ node of 25.



IP Settings

The IP Address of the MEBII is set to 192.168.1.60. The video demonstrates setting this value with the following screens:

NR&D	Main	Config	Comms	Enet	IP Add
MEB II 10.10 10.10 Sole Sta. MB+: 1	▶Config Status App Info System	▶Comms Display	▶Ethernet Serial Modbus+	▶Address Mask Gate IP Source Protocol Drop MB Routes IP Routes Enet Mode	192.168. 1. 60 AutoFill IP Tables? No/Yes

Figure 3: Fixed IP Address Screen

The Subnet Mask and Default Gate are also configured through the front panel.

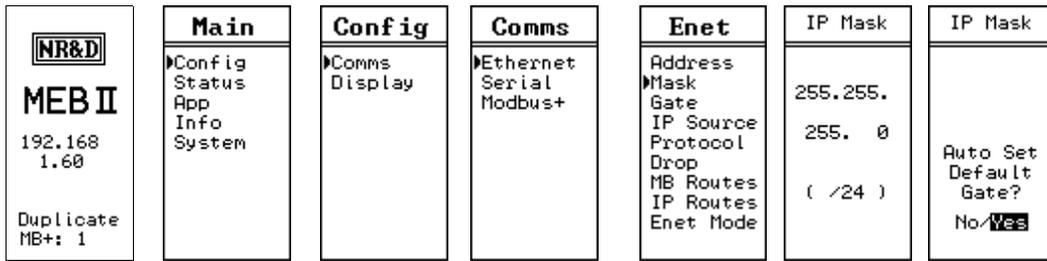


Figure 4: Subnet Mask Screens

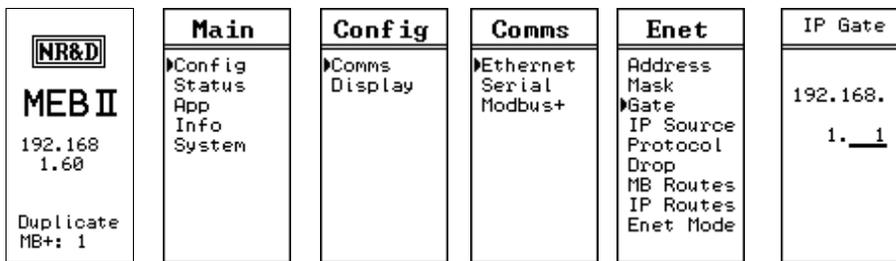


Figure 5: Default Gate Screen

Modbus Plus Settings

The MEBII is connected through a single-cable MB+ network to a Quantum PLC at MB+ drop 18 and a Compact 984 PLC at MB+ drop 1. The MEBII is configured to be at node 25.

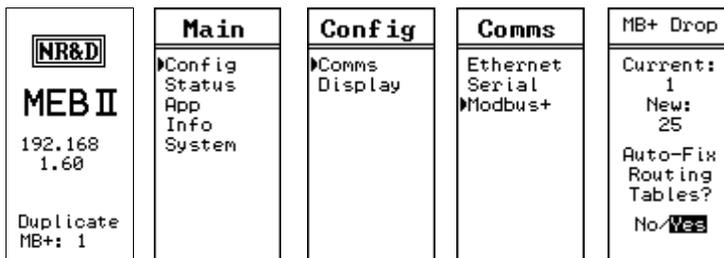


Figure 6: Edit Modbus Plus Drop

The Auto-Fix of the Routing Table automatically fixes the Modbus Routing Table for the Ethernet port to reflect the new MB+ address.

As shown below, Modbus/TCP Index 1 will be used to route to the Compact PLC at MB+

node 01. Index 17 will be used to connect to the Quantum PLC at node 17.

NOTE: The AutoFill also fixes the routing tables for Ports 1 and 2 as well.

Index	Type	Route	Notes
0	OTHER	NONE	
1	MODBUS	25,1	Compact 984 PLC
2	MODBUS	25,2	
3	MODBUS	25,3	
4	MODBUS	25,4	
5	MODBUS	25,5	
6	MODBUS	25,6	
7	MODBUS	25,7	
8	MODBUS	25,8	
9	MODBUS	25,9	
10	MODBUS	25,10	
11	MODBUS	25,11	
12	MODBUS	25,12	
13	MODBUS	25,13	
14	MODBUS	25,14	
15	MODBUS	25,15	
16	MODBUS	25,16	
17	MODBUS	25,17	Quantum PLC
18	MODBUS	25,18	
19	MODBUS	25,19	
20	MODBUS	25,20	
...	MODBUS	...	
64	MODBUS	25,64	

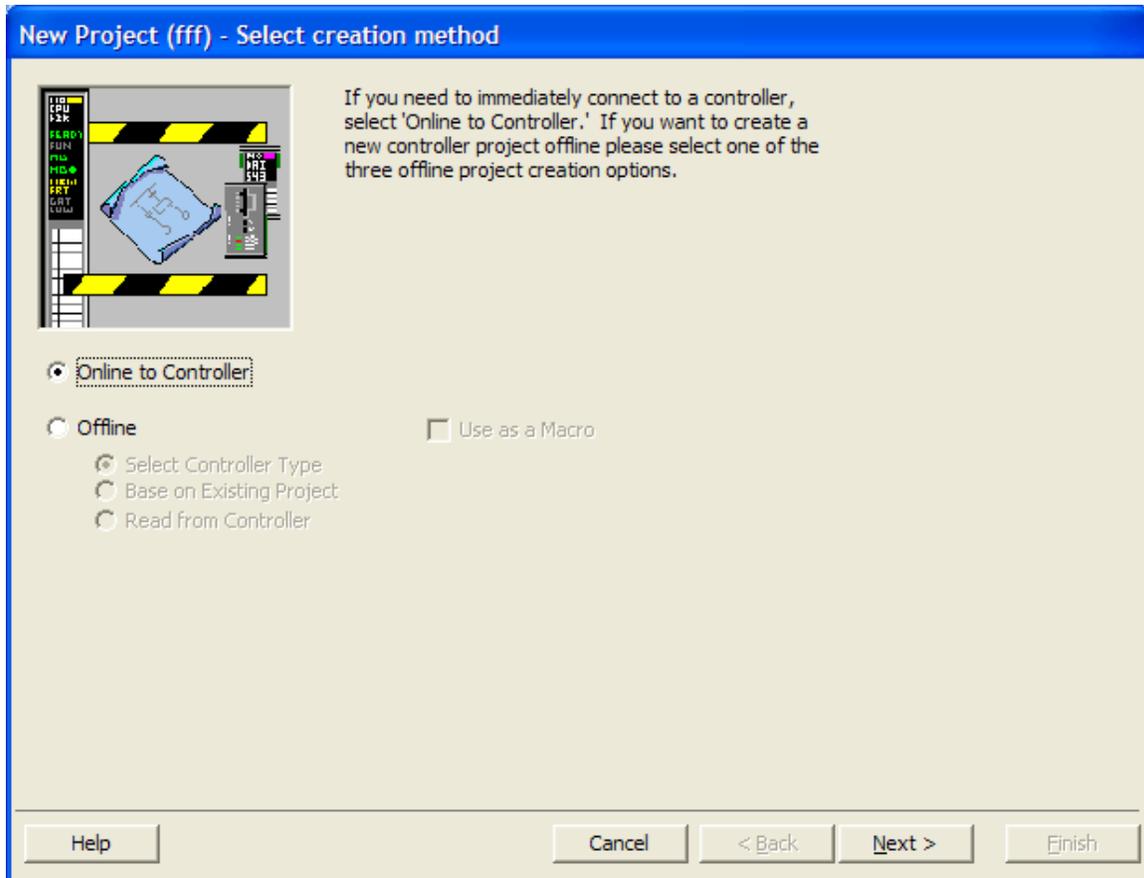
Table 1: MB+ part of the Ethernet Modbus Routing Table after Auto-Fix

The “Type” field is set almost always set to MODBUS. It should be set to OTHER when the target devices is SY/MAX.

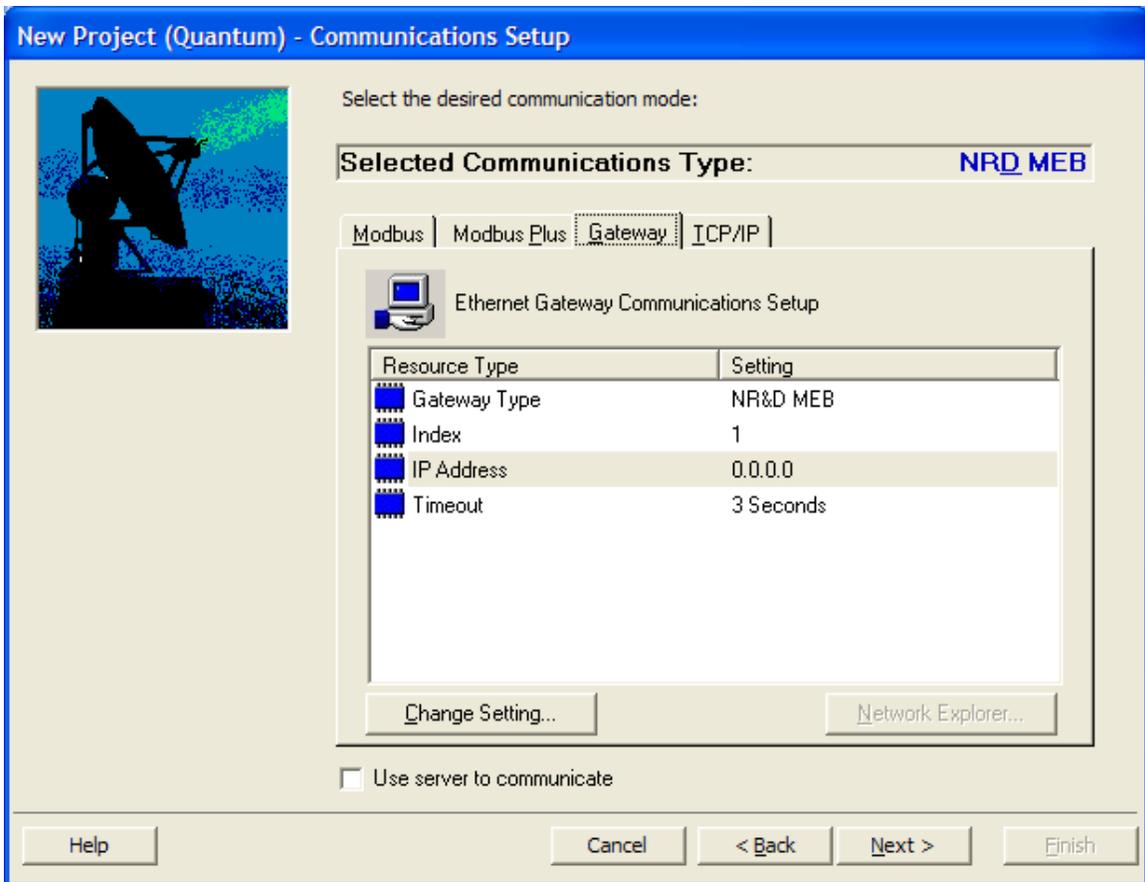
ProWORX32 Setup

In each case, ProWORX32 was simply used to verify the connection to the target PLC.

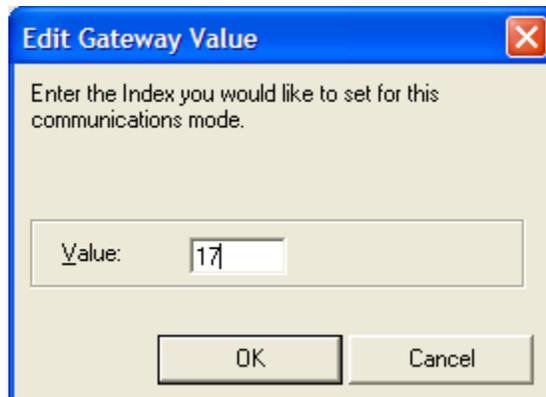
To connect to the Quantum PLC, a New Project was started with “Online to Controller” chosen for the setup.



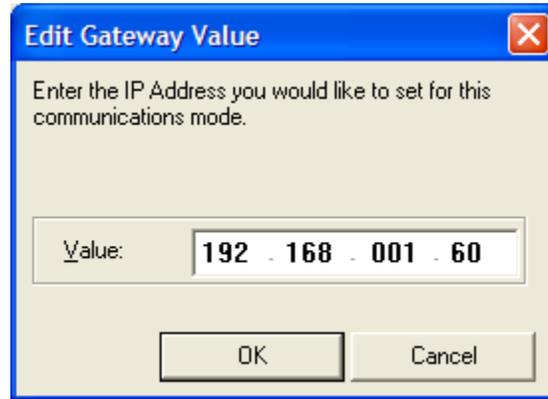
The selected communication is “Gateway” and the “Gateway Type” is NR&D MEB.



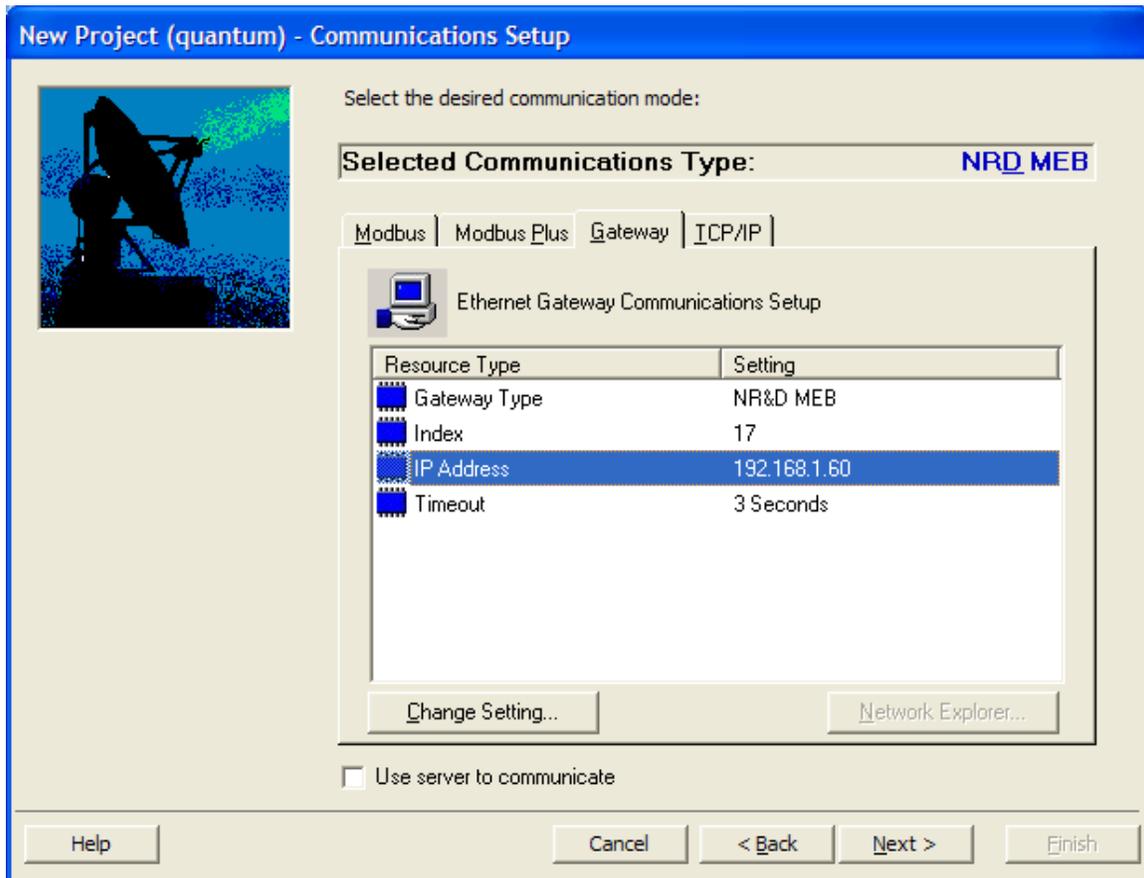
To reach the Quantum PLC, Index 17 is needed:



Also, the IP Address of the MEBII is required:



The new communications setup looks like this:



The setup to reach the Compact PLC is exactly the same, only choose Index 1.