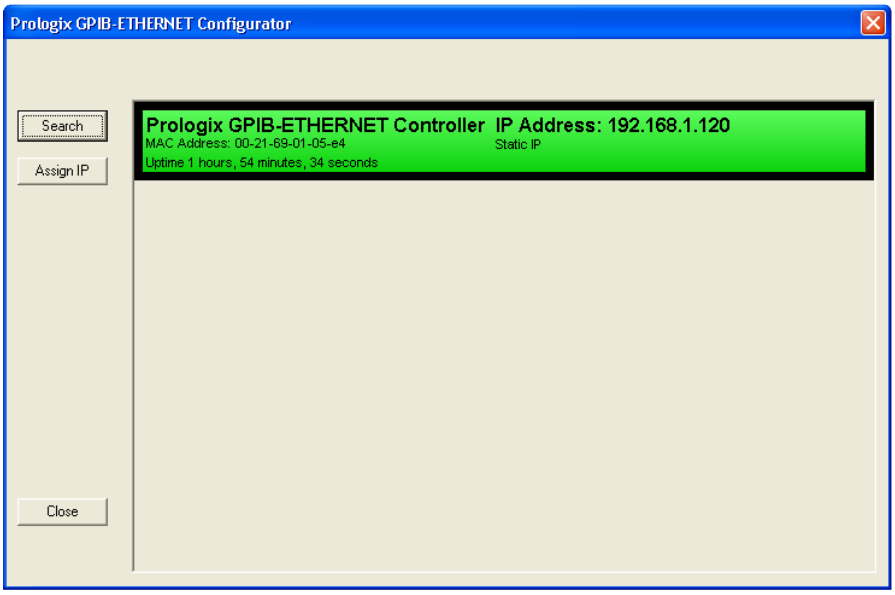
To setup Prologix ETHERNET-GPIB Controller with Agilent VEE

1. Connect the Prologix Ethernet-GPIB device to its DC supply and use an ethernet cable to connect it to your computer through a switch or hub (otherwise, for a direct connection, you need an Ethernet crossover cable). You don't have to have it connected to any GPIB bus at this point.

2. Run the Prologix netfinder.exe program, and use Assign IP to set the Ethernet-GPIB controller to a static IP address. For example, use 192.168.1.120.

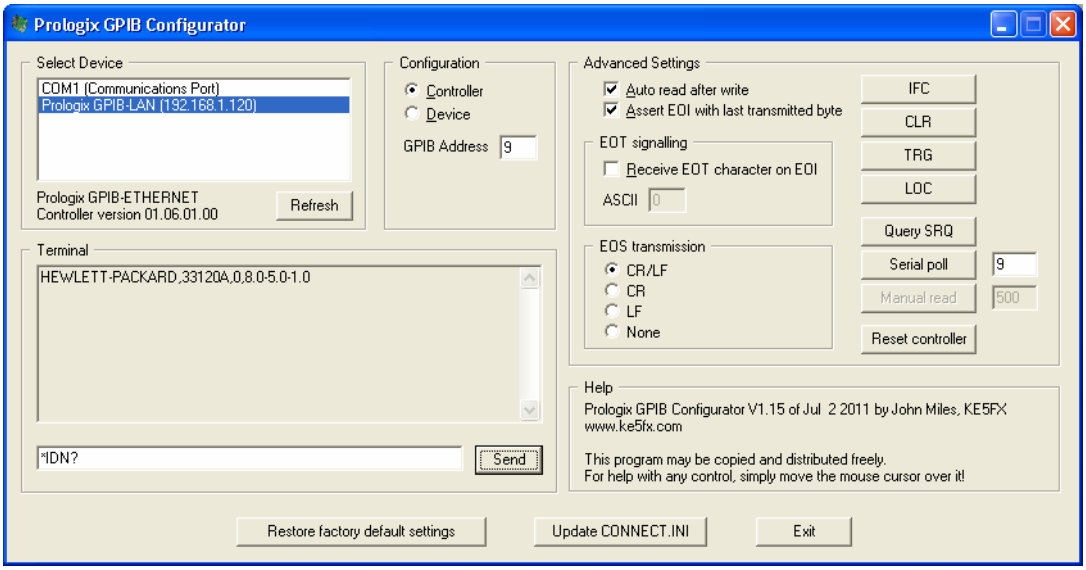


3. Connect the Prologix GPIB-Ethernet controller to a GPIB instrument. Use the instrument's front panel control (or, very old instruments, rear panel switch) to determine its GPIB address.

   Example: HP 33120A, GPIB Address 9

4. Run the Prologix GPIB Configurator program (see below). It should be able to locate the Prologix GPIB-LAN controller. Click "Restore factory default settings." Then assign the GPIB address to the instrument you wish to control (in this example, GPIB address 9 for the HP 33120A), type the command *IDN? and click Send.

   This will ask the instrument at GPIB address 9 to identify itself (if it supports the command *IDN?). In this example, the response which came back was HEWLETT-PACKARD,33120A,0,8.0-5.0-1.0. This step has established that the Prologix controller can talk to the instrument over GPIB.

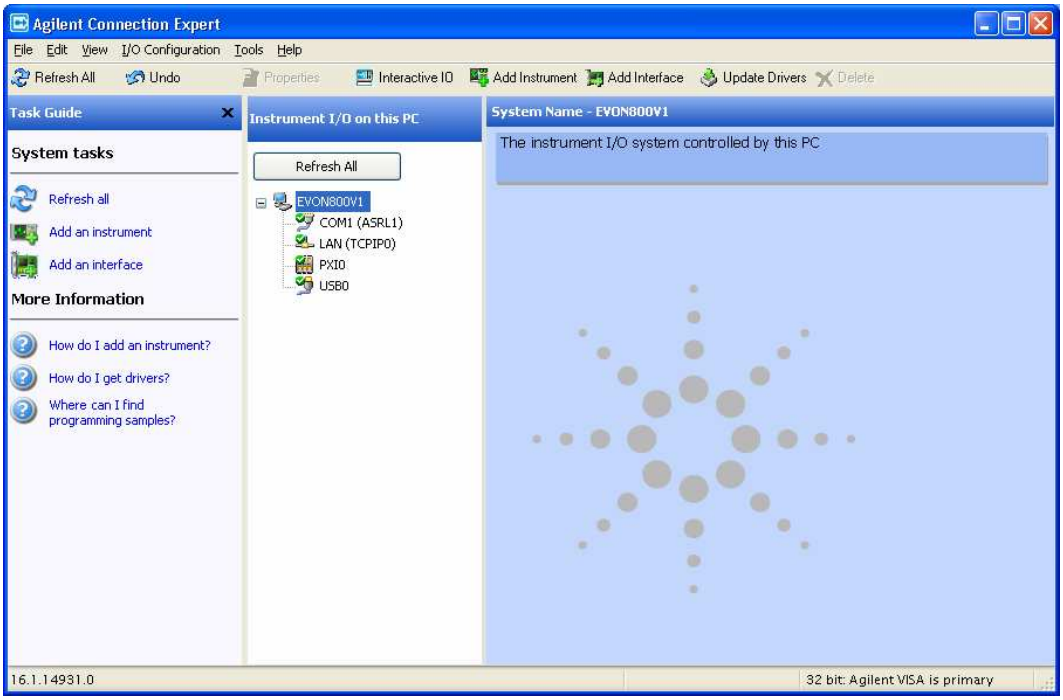


5. Download and install the Agilent IO Libraries. If you are running Windows 2000, you must install version 15.5 or earlier; otherwise, install the latest version (this example is 16.1). Run the "Agilent Connection Expert" program.

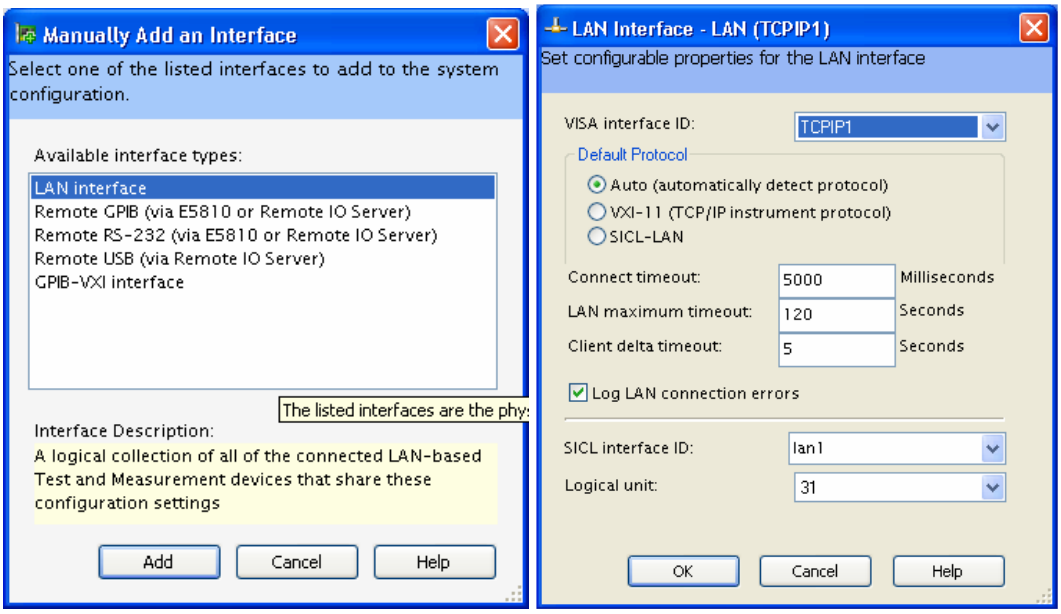
6. The Prologix documentation describes how the Ethernet-GPIB controller operates as a "virtual serial instrument." However, what you must do is set it up as a LAN instrument at IP address 192.168.1.120 (set above using netfinder.exe) and using port 1234. Doing this with the Agilent Connection Expert will let you identify the VISA address or the SICL address you will later use in VEE to identify this instrument.

   Here are the steps.

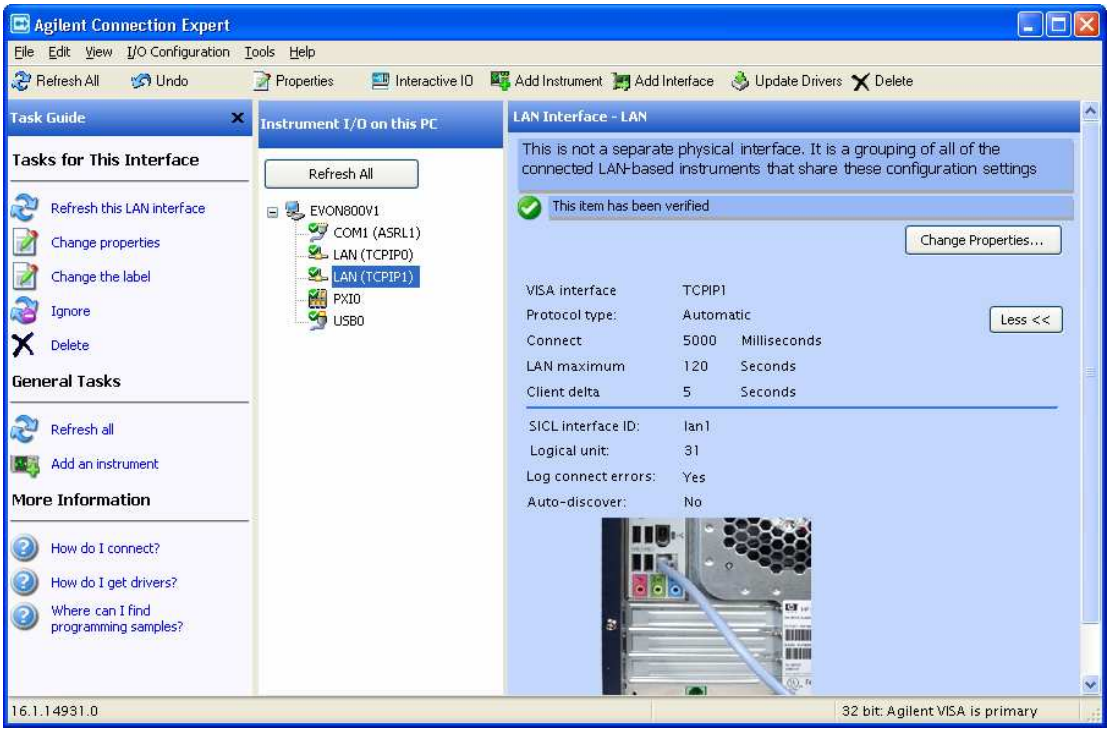
7. Using the Agilent Connection Expert (see below), you can use any existing LAN interface or else set up a new one. Click the computer icon to see the menu selections shown below under the Task Guide.



8. Click Add an interface under Task Guide. In the window that opens (see below), highlight LAN interface, and then click Add. In the next window, click OK.

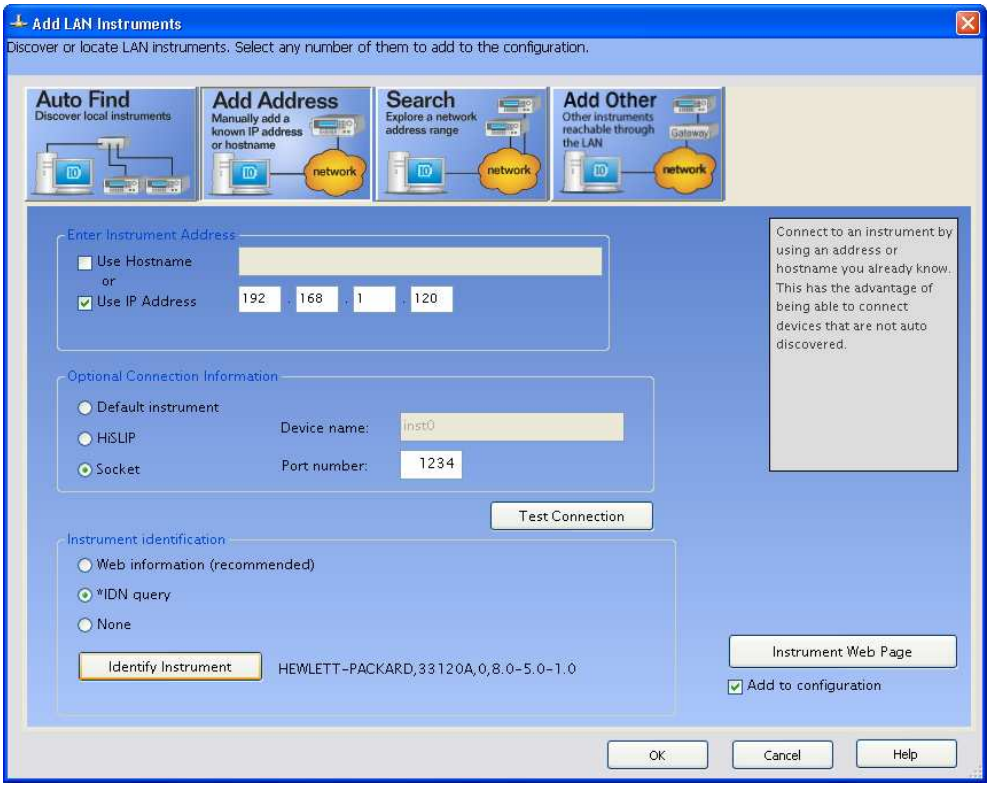


9. You now should see a new LAN interface defined under Instrument IO on this PC, shown below as TCPIP1.



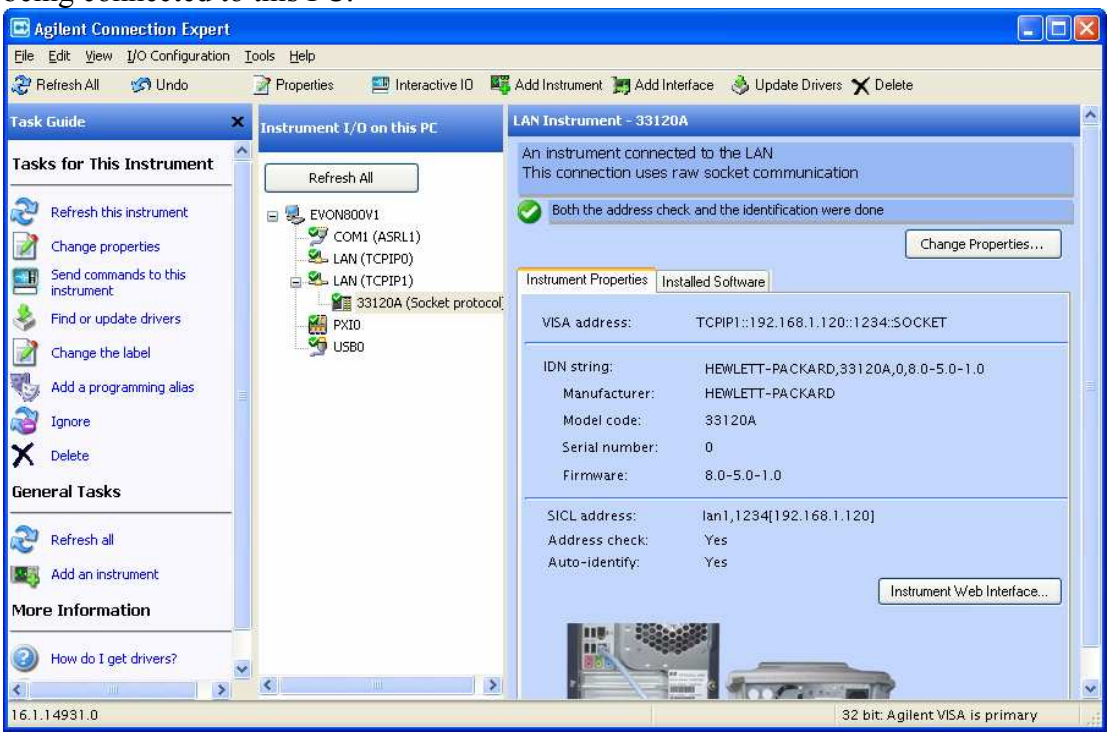
10. Highlight this interface, and then click Add an instrument under Task Guide. In the box that opens, click the Add Address box, enter the IP address (see below), select Socket connection and the Port number 1234.

    If your instrument supports IDN Query, then select *IDN query and click "Identify Instrument." If all goes well, you will see the Instrument's response to the query, as shown below.



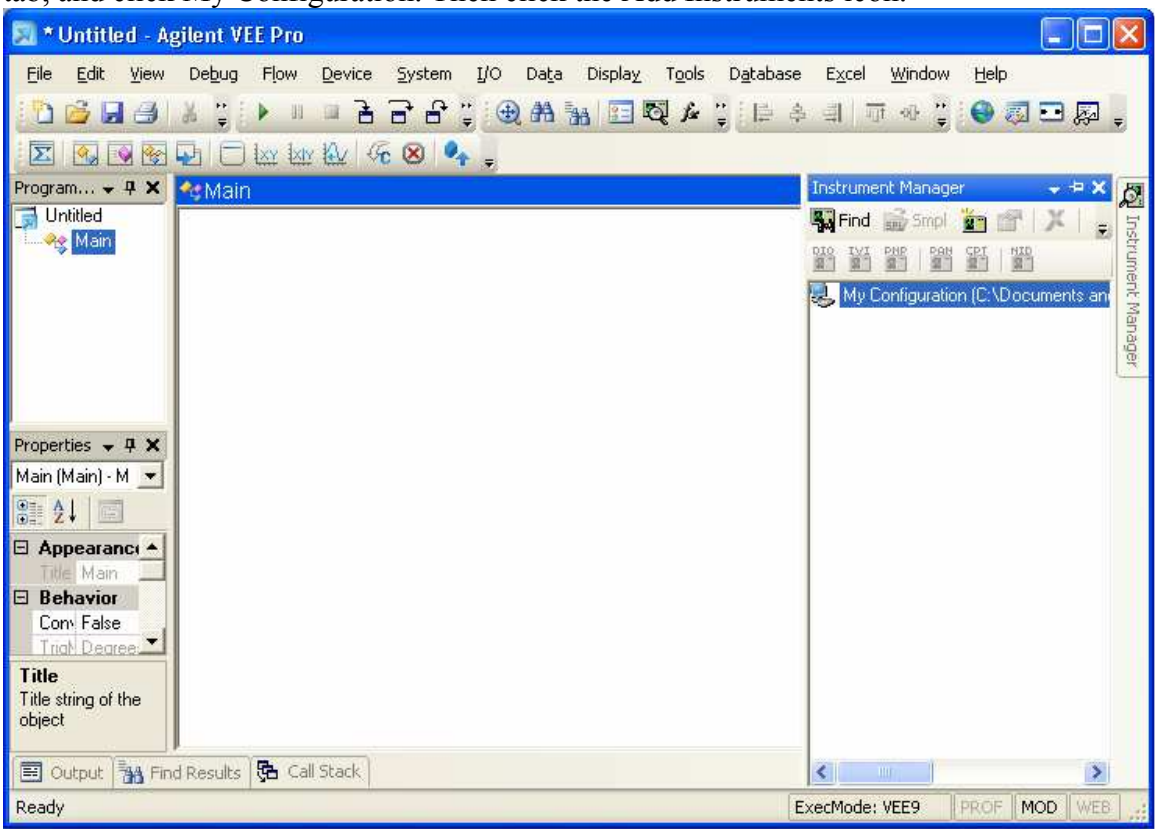
Click OK.

11. At this point the Agilent IO Communications Expert should show the new instrument being connected to this PC.

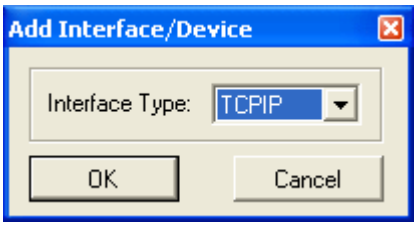


Take note of the instrument's VISA address:
TCPIP1::192.168.1.120::1234::SOCKET

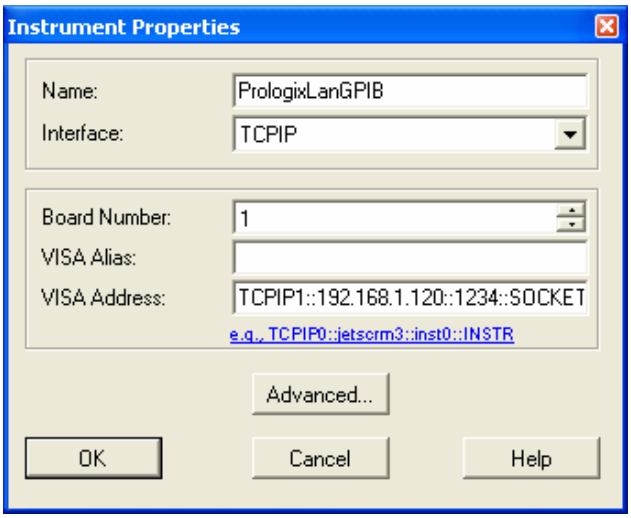
12. Run VEE (this example uses Vee 9.0). Click I/O, Instrument Manager... The Instrument Manager will appear on the right side of the display. Hover the mouse over the vertical tab, and click My Configuration. Then click the Add Instruments icon.



In the window that opens, select TCPIP and click OK.

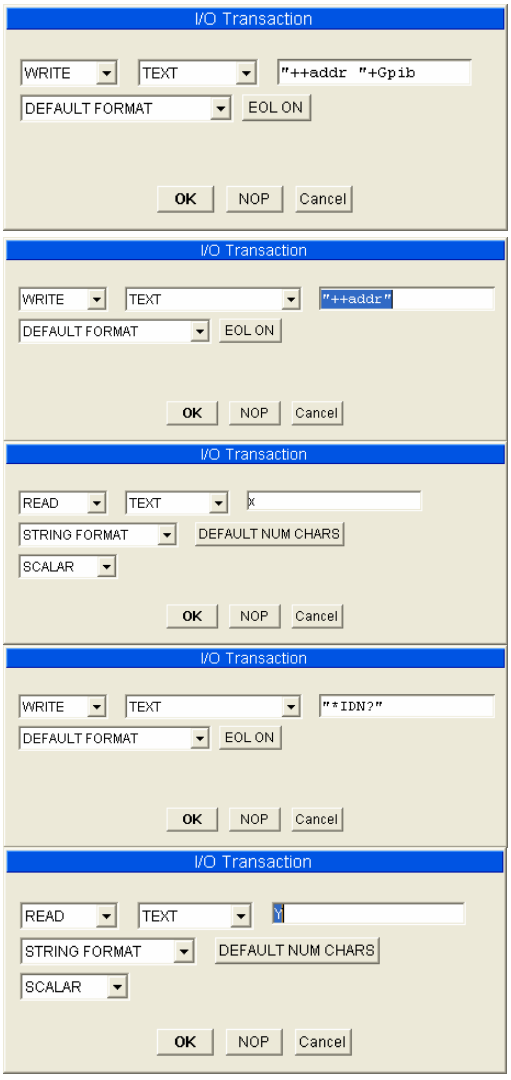


13. In the Instrument Properties box that opens, enter an identifying name, and then copy and paste the VISA address you got from the Agilent IO Expert in a previous step. Then click OK.



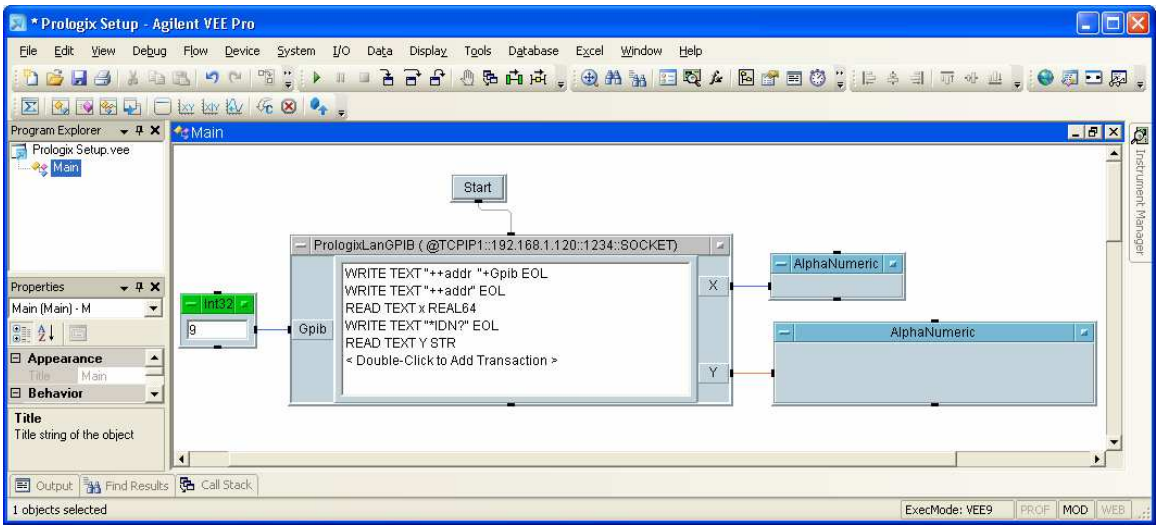
14. Re-open the VEE Instrument Manager, and you will see the new instrument. Drag its icon onto the open VEE panel. Create and run the following test program.

<Double-Click to Add Transaction> and enter the following:

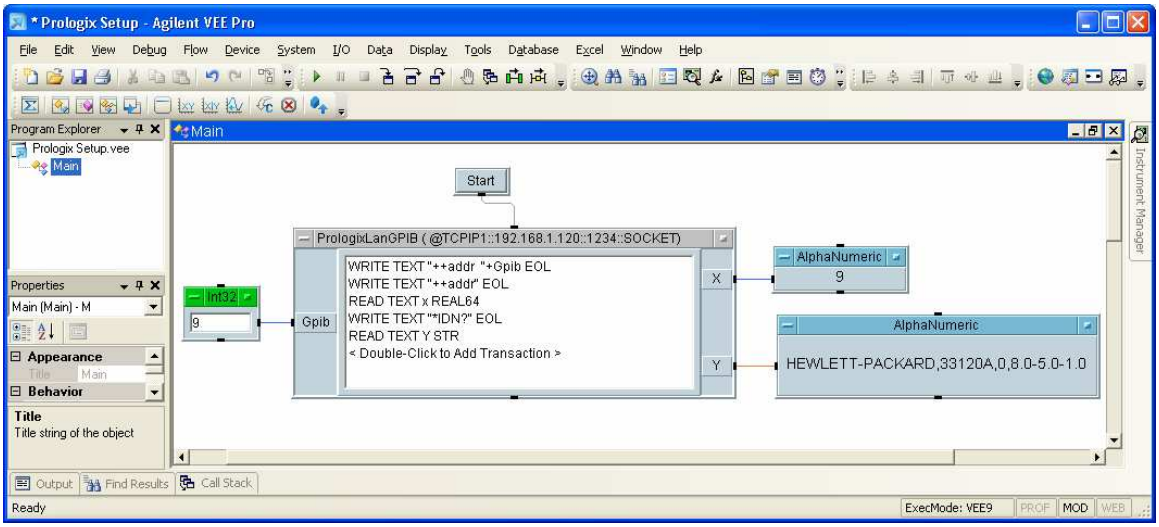


(Put one or more <u>spaces</u> in "++addr_".)

15. Click Data and choose Constant, Int32, and put the box onto the panel to use for the GPIB address. Click Display, AlphaNumeric, put two boxes to display the read back GPIB address and instrument ID string. Use the mouse to connect everything up (as shown).



16. Click the Green Run arrow.



17. Your *IDN? query should get the same response you received from the GPIB Configurator step. You now can control a GPIB instrument in VEE via the Prologix LAN-GPIB.