N4903B-01B

S E R V I C E N O T E

Supersedes:
N4903B-01A

N4903B - Serial Bit Error Ratio Tester

Serial Numbers: **DE49100100 – DE49100250**
MY49100300 - MY49100350

There are 3 items to check and modify if required:

1. **An older version of the Agilent IO-Libraries may lead to problems. Check whether the correct version is installed.**
2. **Check the configuration of the Agilent IO Libraries "Internal Instruments".**
3. **An incorrect setting within the Agilent IO Libraries may lead to programmatic inaccessibility and communication failure of the N4903B when connected via the GPIB bus.**

Parts Required:

P/N	Description	Qty.
NONE		

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY: [[]] ON SPECIFIED FAILURE XX AGREEABLE TIME	STANDARDS LABOR: 0.3 Hours		
LOCATION CATEGORY: XX CUSTOMER INSTALLABLE XX ON-SITE XX SERVICE CENTER XX CHANNEL PARTNER	SERVICE INVENTORY: [[]] RETURN [[]] SCRAP XX SEE TEXT	USED PARTS: [[]] RETURN [[]] SCRAP XX SEE TEXT	
AVAILABILITY: PRODUCT'S SUPPORT LIFE	NO CHARGE AVAILABLE UNTIL: 31-Jan-2012		
AUTHOR: HK	PRODUCT LINE: PL24		
ADDITIONAL INFORMATION:			

October 6, 2010

Agilent Technologies

Situation:

Check installed version of Agilent IO-Libraries

Units in the specified range of serial numbers may have an older version of the Agilent IO Libraries installed which shows unwanted behavior.

Please check the installed version of the Agilent IO Libraries:

1. Identify the icon of the Agilent IO Libraries in the lower right corner of the N4903B display (), right-click on it, search for the menu entry “Agilent Connection Expert” and start it.

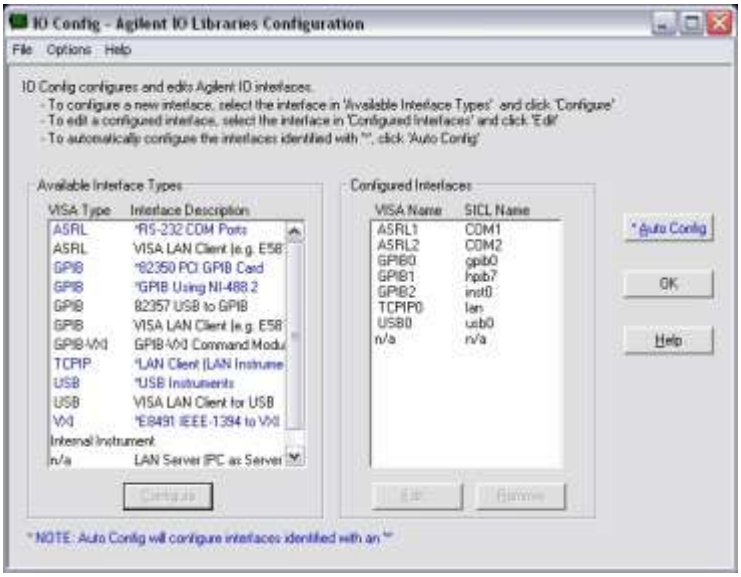
2. On the menu bar of the Agilent Connection Expert select Help → About

The version number should be at least **15.5.13009.1**.
If the installed version is lower than that please install the newer version. You can get it from here:
\\wbbnps03\ftp_support\All-Support\PV_Software\Agilent_IO_Libs\IO_Libs_15.5\IOLibSuite_15_5_13009_1.exe

Check the configuration of the Agilent IO Libraries "Internal Instruments"

Please check whether all "Internal Instruments" are set up correctly.

1. Close the Agilent Connection Expert, which may still be open from the previous step.
2. Start the IO configuration manager "iocfg32.exe" on the N4903B which is located in the directory
   C:\Program Files\Agilent\IO Libraries Suite\bin.
   You will get the following window:

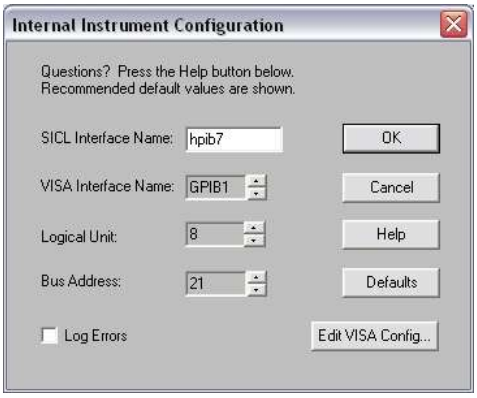


   On the right side you should see the following important configured interfaces: ASRL1, ASRL2, GPIB0, GPIB1, GPIB2, TCPIP0 and USB0. Now let's check the configuration for each of the important ones.

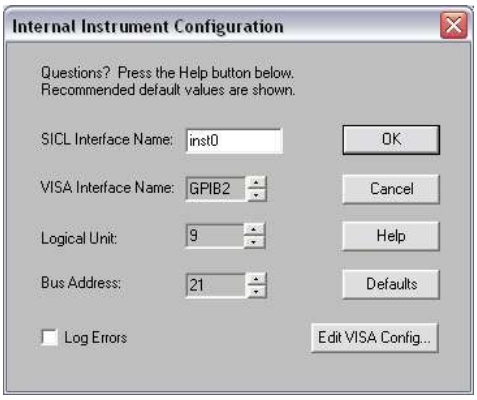
   NOTE: At the bottom of this list you find instructions on how to correct the configurations in case they do not match the descriptions!

3. GPIB0
   GPIB0 is the physical 82350 PCI GPIB card that is accessible from the rear side of the N4903B. The serial number of the N4903B is shown in the field at the top.

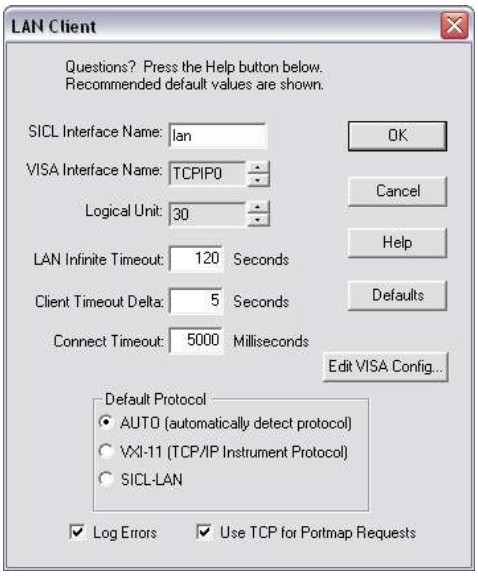
4. GPIB1
   GPIB1 is a virtual GPIB interface (“Internal Instrument”) which allows programmatic access to the N4903B via GPIB.



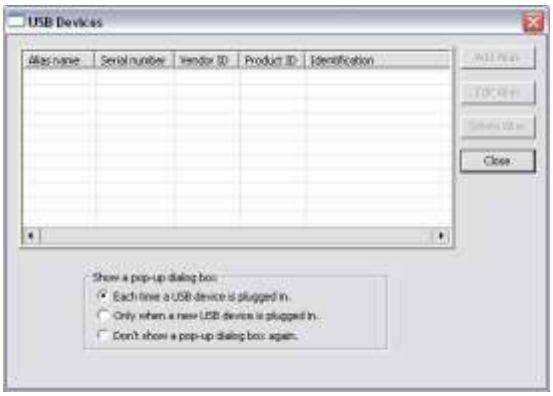
5. GPIB2
   GPIB2 is a virtual LAN interface (“Internal Instrument”) which allows programmatic access to the N4903B via LAN.



6. TCPIP0
   TCPIP0 is the physical LAN interface of the N4903B, accessible from the rear side of the N4903B.

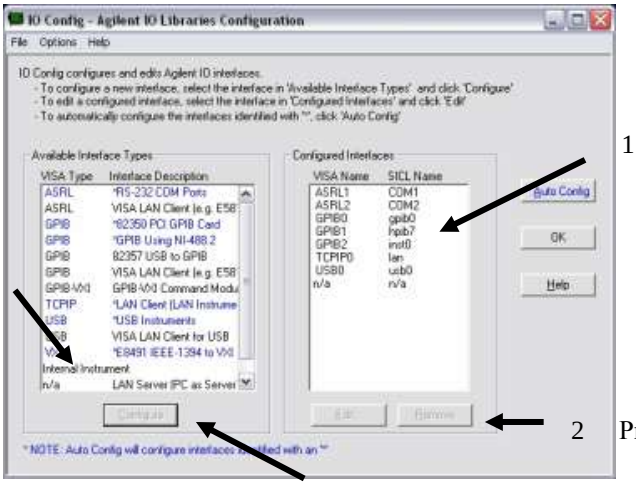


7. USB0
   USB0 is the physical USB interface of the N4903B. There may be entries in the table below depending on whether one of the following devices was connected to the instrument: N4916A, N4916B, N4876A or alike.



In case the configurations you find do not match the descriptions above, please change them using the following steps:

1. Exit the Agilent Connection Expert on the N4903B.
2. Start the IO configuration manager "iocfg32.exe" on the N4903B which is located in the directory
   C:\Program Files\Agilent\IO Libraries Suite\bin.
3. Delete all incorrectly configured interfaces from the list of interfaces below: select the mismatching interface and press "Remove" in the window below (step #1 and #2).



1 Select Interface

2 Press "Remove"

3 Select

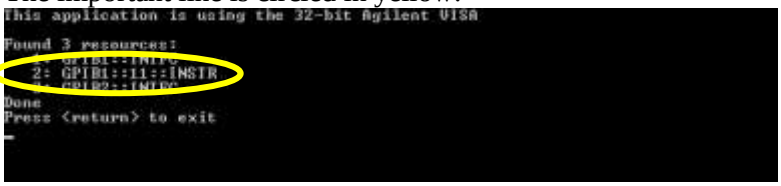
4 Press "Configure"

4. Select "Internal Instrument" in the window above and press "Configure" (step #3 and #4).

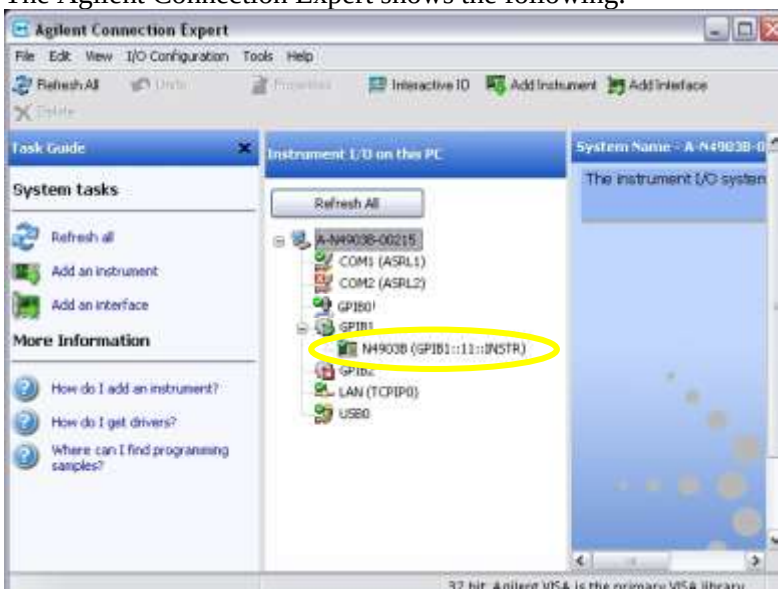
   NOTE: Enter the fields (e.g. SICL interface Name, VISA Interface name, etc.) exactly as shown in the above descriptions of the interfaces (previous page)!

5. Reboot the N4903B and check again.
   Use the ViFind32 debug utility to check the results

The important line is circled in yellow:



The Agilent Connection Expert shows the following:



GPIB Controller Configuration

The N4903B instrument has a GPIB connector on the back which may be used for programmatic control of the unit. On a GPIB bus there are several slaves and one master, which usually would be an external PC connected to the GPIB bus acting as a controller. However, in the noted serial number range of the N4903B there may be the case that the N4903B may act as master, too. This leads to a communication failure of the complete GPIB bus.

It is necessary to change the settings of the built-in GPIB controller card with the help of the Agilent IO Libraries ("Agilent Connection Expert").

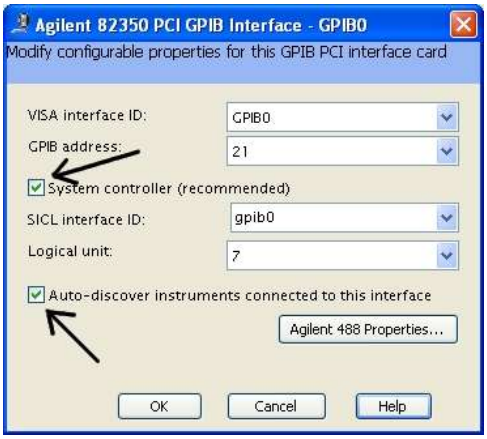
Solution/Action:
Please execute the following steps to correctly configure the N4903B GPIB interface card:

1. Identify the icon of the Agilent IO Libraries in the lower right corner of the N4903B display (), right-click on it, search for the menu entry "Agilent Connection Expert" and start it.

2. You will see the following window:

Identify the GPIB0 interface, select it with the mouse and right-click it to get the menu shown above. In the menu select "Change Properties".

3. You will see the following picture:



You will find the 2 checkboxes checked as shown in the picture above.

4. Please **uncheck** both checkboxes as shown in the next picture:

The **correct** settings shown in the picture above will make sure that the N4903B does not act as GPIB master and does not disturb communication on the GPIB bus.

5. Click **ok** in the window above (step 4) and return to the main screen of the "Agilent Connection Expert".

Identify the GPIB0 interface, select it with the mouse and right-click it to get the menu shown above. In the menu select "**Ignore**".

6. The green  next to the GPIB0 in the list should change to purple  as shown in the picture below. "Ignore" means, that the "Agilent Connection Expert" will ignore devices connected to this interface on future device scans. This will prevent the "Agilent Connection Expert" from reconfiguring devices connected to this interface and the configuration steps described above will persist.