

Application Note

NI GPIB-RS232-CV-A

GPIB to RS232 Adapter



*for use
in conjunction with*

PMM 9010/3010/3030

EMC/EMI RECEIVER & GENERATOR

EQUIPMENT SERIAL NUMBER

You can find the Serial Number on the rear panel of the instrument.

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applicable to

PMM 9010 EMI Receivers with S/N 113WJxxxx to S/N 274WXxxxx
PMM 9030 EMI Receivers with S/N 110WJxxxx
PMM 9060 EMI Receivers with S/N xxxXXxxxx
PMM 3010 RF Generator with S/N xxxXXxxxx
PMM 3030 RF Generator with S/N xxxXXxxxx

Application Note - Ed.2 (02/03/2010)

How to configure NI GPIB-RS232-CV-A Adapter for PMM 9010 and 3010/30.

NOTE

A-N.1 Introduction

All the following information are indifferently referred to: PMM 9010, 9010/30P, 3010 or 3030 and relative options.

PMM 9010 has been designed to allow remote control operations through its either RS232 or USB (Rear) ports.

When using RS232 you can use only one instrument connected to PC serial port. If using USB you can connect other instruments to the free RS232 port and the PMM 9010 or PMM 9010/30P Receiver to the USB 2.0.

PMM 9010 uses the same commands protocol for both communications.

An optional converter provides the possibility to drive the PMM 9010 from a GPIB bus via its RS232 port.



Half duplex communication, with RTS/CTS Handshake is implemented. The RS232 port has a DB-9 female connector and standard communication is implemented as **(115200 N 8 1)**:

- Speed 115200 (default), 38400 or 9600 bit/sec
- 8 bit Words
- one Start bit
- one Stop bit
- No Parity.

Refer to Remote Control chapter of the User's Manual for further information.

CAUTION

Use only the supplied GPIB-DB9 cable to connect the GPIB adapter to the PMM 9010 receiver. Any other cable may cause system damages.

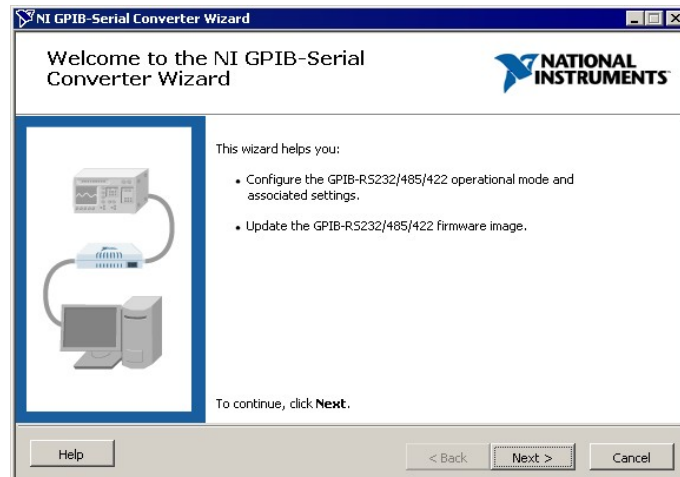


A-N.2 NI GPIB-Serial Converter Configuration

The GPIB-RS232-CV-A Adapter is normally configured before shipment to be operated in conjunction with PMM 9010, PMM 3010 or PMM 3030 and related extensions (i.e. 9030, 9060, etc.).

This paragraph is provided anyway to check or modify the configuration.

First of all the user will need to install the software by NI provided with the GPIB adapter and execute it.



A-N.3 Configuration Parameters

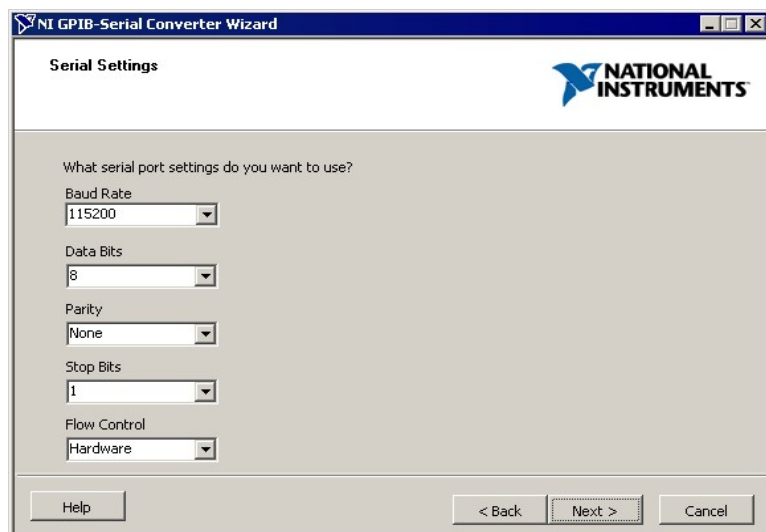
Before connecting the Adapter to PC, proceed through the installation steps by clicking NEXT and following the shown instructions.

Connect then the GPIB Adapter to the PC and set the switch on the rear panel to “**CFG mode**”, then proceed with installation by software on PC and select the **Port** where such Adapter has been connected to.

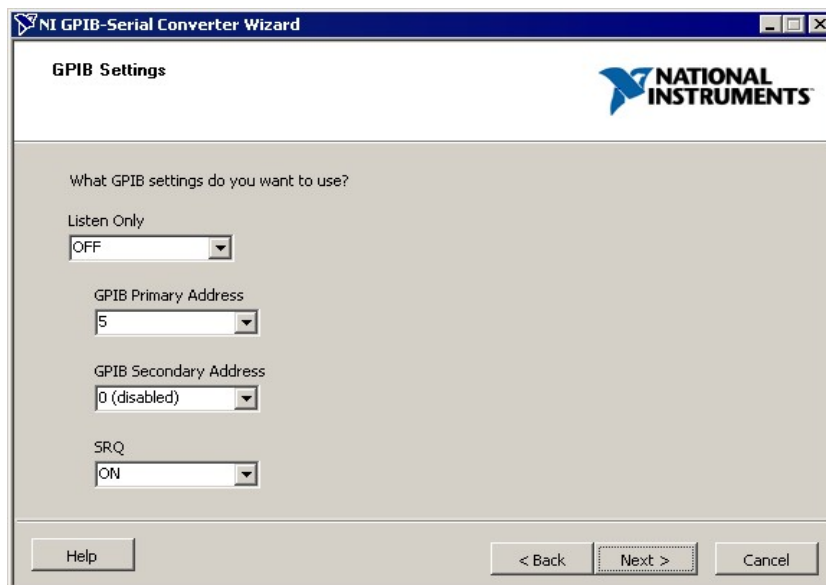
Go on and select “**Change Configuration**”, then Next again.

Select “**D Mode**” operation.


Choose the right settings also for the RS232 Port used for PMM 9010 connection, as for the following:




After that, set the GPIB main parameters as depicted in the following figure:



At the end of the process click the **UPDATE** soft-button to store the configuration into the GPIB Adapter.

 **NOTE**

It would be not necessary to repeat this process each time the Adapter is used since this configuration will remain stored in the internal memory even after switching it off.

 **CAUTION**

Be sure to move the CFG switch back to the normal operation position after having configured the unit.

 **CAUTION**

Use only the supplied GPIB-DB9 cable to connect the GPIB adapter to the PMM 9010 receiver. Any other cable may cause system damages.

A-N.4 Termination Character

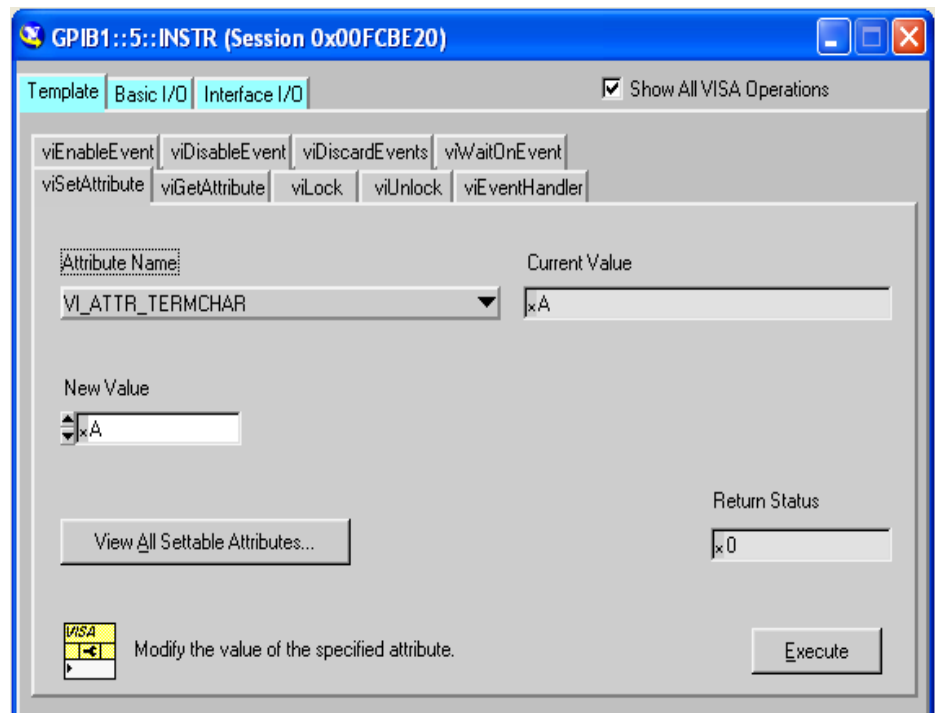
The PMM equipment communication terminates its output strings with a **Termination Character**.

It is necessary to tell the GPIB Adapter which is this termination character to allow the communication operating correctly.

If a Timeout error message comes out of the GPIB unit it is very probable the termination character has not been set properly.

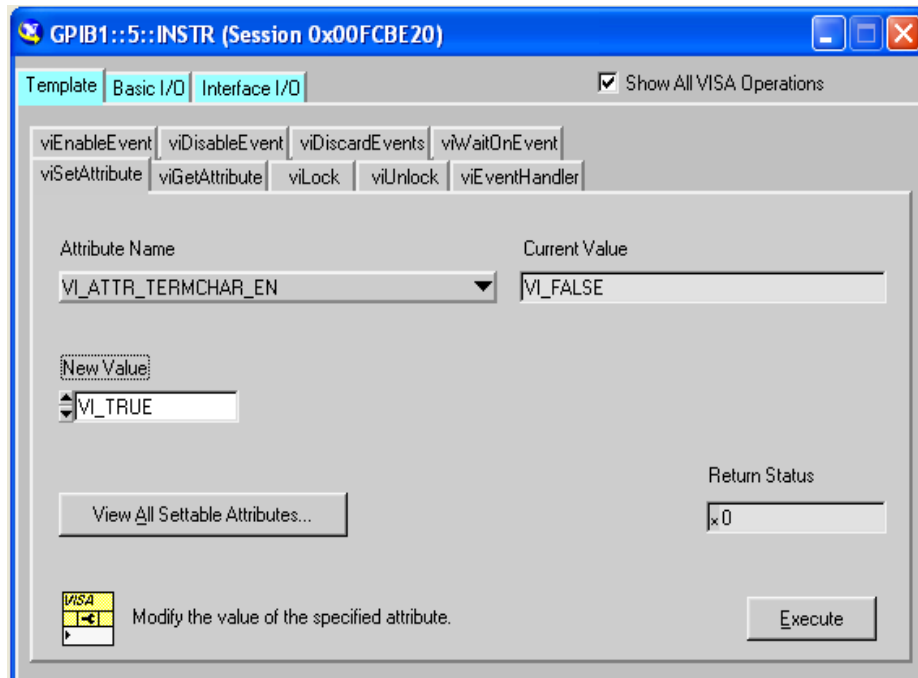
The screenshot below clearly shows an example about how to set the **TERMCHAR** variable by using a GPIB utility. The syntax depends on the GPIB software and manufacturer.

The **Termination Character** for PMM equipments must be set to: hex "0A"



At the end of the configuration process the **TERMCHAR_EN** variable must be **activated** in order to operate properly for PMM communication protocol.

As shown in the following screenshot the Termination Character check (the one selected by the previous step) is activated by setting to “**True**” the related variable:



NOTE

It would be not necessary to repeat this process each time the Adapter is used since also this configuration will remain stored in the internal memory even after switching it off.

A-A.5 Operating Manual Changes

Depending on technological improvements and availability of GPIB Adapters from various manufacturers, different Adapters could be implemented in future, so please check carefully if the device you’re owning is exactly matching the one described in this Application Note, otherwise refer to your closest NARDA-PMM Dealer for proper check and instructions.

NOTE

PMM Instruments manufactured after the printing of related User’s Manual may have a serial number prefix not listed on the title page; this indicates that instruments with different Serial Number prefix may be different from those documented in the manual itself.

Please refer to your local NARDA-PMM Dealer for a Manual update or further help.

NOTE

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