

Instructions for using National Instrument Measurement & Automation Explorer with the SR245 Computer Interface

These instructions are for the default GPIB address of 25.

If using a National Instruments GPIB-USB-HS then you need to connect a standard GPIB cable (at least 1.5 meters in length) in between the National instruments connector and the SR245

- 1. Setup the SR245 for GPIB communication (see manual page 41).
- 2. Start up Measurement & Automation Explorer
- 3. Select the + box next to "Devices and Interfaces"
- 4. Select "GPIB0 (GPIB-USB-HS)" or (PCI-GPIB)
- 5. On the upper menu click on "Scan for Instruments"
- 6. Double click on the instrument with address 25 (Bottom of the page section labeled "Connected Instruments"



7.

Sinstrument 1 - Measurement & Au	tomation Explorer		
Configuration	🐑 Open VISA Test Panel 🚽 Save 🔐 Revert 📲 Communicate with Instrument 🔮 Interactive Control 🔍	🖍 NI Spy	Note Help
My System Devices and Interfaces Devices and Interfaces Instrument 0 Instrument 0 Instrument 1 Network Devices Instrument 1 Network Devices Instrument 1 Software Serial & Parallel Remote Systems	GPIB0::25::INSTR Device Type: GPIB Instrument VISA Alias on My System: Device Status This device is working properly. Troubleshoot Device Usage V Device enabled	GPIB Inst Basics What do y do? • Communi my instrume • Interactiv the GPIB • Capture A calls • Monitor G	rument ou want to icate with ant ely control (I-488.2 PIB activity
<	Attributes 😭 VISA Properties	GPIB Inst Settings This section basic informary (PAD). Seco Address (SA response to query.	rrument provides tation about rent, such tadress ndary D), and the +IDN?

8. Select "Communicate with Instrument" on the top menu

9. Power up/down the mainframe (*idn? is an invalid command that locks up the SR245 for the first command)

🕅 NI-488.2 Communicator		
GPIBO Instrument 1 Primary	Address 25	
Send String: *IDN?	Globals ibsta: 0x100	Status ERR
Ouery Write Read		
Configured	ibcntl: 4	SRQI
String Received:		CMPL
	<u>^</u>	LOK REM
		CIC
		ATN
	~	LACS
Configure EOS Show Sample	Exit	DTAS DCAS

10.Select "Configure EOS"

Termination Meth ? 🗙		
Send EOI at end of Write		
Terminate Read on EOS		
Set EOI with EOS on Write		
8-bit EOS Compare		
10 EOS Byte		
OK Cancel		

11.Type 10 in the EOS Byte box and hit "OK".

(ALL COMMANDS SENT TO THE SR245 MUST END WITH A "\r")

- 12.In the "Send String" dialog box type: **i2\r** and then click on the "Write" button (This sets the first two ports as inputs and the remaining ports as outputs). The ACTIVITY light on the SR245 should blink the ERROR light should not.
- 13.Type: s4=3.3\r then the Write button (This sets the output voltage on port 4 to 3.3V). You might want to check it with a meter.
- 14.Type: **?4****r** then the **Querr**y button (This queries the port)
- 15. The "String Received" box should return the value of port 4.

🕅 NI-488. 2 Communicator	
GPIBO Instrument 1 Primary /	Address 25
Send String: ?4\r Query Write Read Configured	Globals ibsta: 0x2100 iberr: None ibcntl: 7 SRQI RQS
String Received:	CMPL
3.295	CIC ATN TACS LACS
Configure EOS Show Sample	Exit DTAS DCAS