Instrument Control Overview

Control any instrument if you know the following:

- Type of connector on the instrument
- Type of cables needed
- Electrical properties involved
- Communication protocols used
- Software drivers available

Instruments





GPIB Communication



GPIB Hardware Specifications



- Max cable length between devices = 4 m (2 m average)
- Max cable length = 20 m
 - Max number of devices = 15 (2/3 powered on)

SPIB <u>Software Architecture – Wi</u>ndow



Configuring GPIB Board and Instruments Measurement & Automation Explorer (MAX)

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Configuring GPIB Board and Instruments



















Configuring GPIB Board and Instruments









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Instrument Drivers More than 2,200 LabVIEW instrument drivers from more than 150 vendors

 Programming simplified to high-level Application programming interface (API)

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Hewlett 34401A Packard Multimeter				
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1 \$155 Digits \$1.00		Source (0:Internal)	U16	
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		Function (0:V DC)	U16	
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		Mandar Hange (1.00)		
		Manual Delay (0)	DBL	

Installing and Finding Instrument Drivers

- NI Web site or Instrument Driver CD
- Install the instrument driver VI Library into LabVIEW\instr.lib directory
- Access drivers from Instrument I/O » Instrument Drivers subpalette

