

Keithley Instruments:

Applications Note / Installation Guide:  
*ines GPIB-PCMCIA CARD in Windows 2000 and setup for TestPoint*

Procedure:

**1.0 Installing the drivers**

- 1.1 Boot Windows, WITH-OUT the ines GPIB card installed into the socket.
- 1.2 Place the ines CD that contains the driver into the CD reader.
- 1.3 Now, insert the ines card, and Windows should find new hardware and load the "Found New Hardware Wizard"
- 1.4 Follow the "Found New Hardware Wizard: instructions through a Finish Option. This is a necessary step to open a registry key; however additional files are installed by the "Found New Hardware Wizard" that will conflict with the ines hardware installer. We will remove 3 of these files in step 1.6.
- 1.5 Reboot.
- 1.6 Remove these files listed below:
  - C:\WINNT\System32\drivers\iieee488.sys
  - C:\WINNT\ie488f3w.dll
  - C:\WINNT\ie488h3w.dll
- 1.7 Navigate to the ines CD ROM :/WIN2000/pcmcia and run setup.
- 1.8 Next click through the installation choosing the defaults. This should result in a successful card installation.

**2.0 Changing the Base Address of the ines CARD**

- 2.1 The ines GPIB PCMCIA card may install with a high base address number. The Base Address should be lowered to 0X1080 or lower.
- 2.2 From Start > Settings > Control Panel, double click Administrative Tools, then Computer Management. Select Device Manager, double click the ines GPIB icon, double cclick the ines GPIB-PCMCIA line, choose Resources, uncheck Automatic settings and move the address to a lower number. Reference Figure No. 1. below. Be sure to choose an address and IRQ number that is not in conflict with other installed hardware. Additional Note: You can use an application called System Information to check for conflicts that may not be reported by the Device Manager. Use Start > Search > For Files Or Folders to locate System Information in the Windows Directory path.

**3.0 Setting up for TestPoint:**

- 3.1 For a GPIB card installed at 0x0320 with irq=5 the TestPoint ini file entries as follows:

```
[GPIB0]
io=0x320
irq=5
dma=-1
myaddr=21
iostep=2
```

note: myaddr is the GPIB primary address of the ines PCMCIA CARD, it is NOT the address of the particular instrument/s that will be interfaced, this default address is 21.

**4.0 Installation and functional verification:**

- 4.1 From Start > Programs > ines IEEE488.2 there are two diagnostic tools, ines GPIB Diagnostics and Wali32, run both, setup for Wali32 is listed below.
  - 4.1.1 From C:\INES4882 run the application iediag. Follow the instructions.
  - 4.1.2 From C:\INES4882, run Wali32. For a board installed at hex 320, with IRQ 5, and an instrument installed at GPIB addr 16 the following command lines will communicate with the device. F9 to display the I/O Buffer, and F2 to execute the command lines Reference the ines HELP and Figure No. 2 below

```
init 0320,0,5,0
output 716, "*IDN?"
enter 716, #6
```
- 4.2 For a TestPoint verification, from C:\Testpt\Examples\ run GPIB.tst .

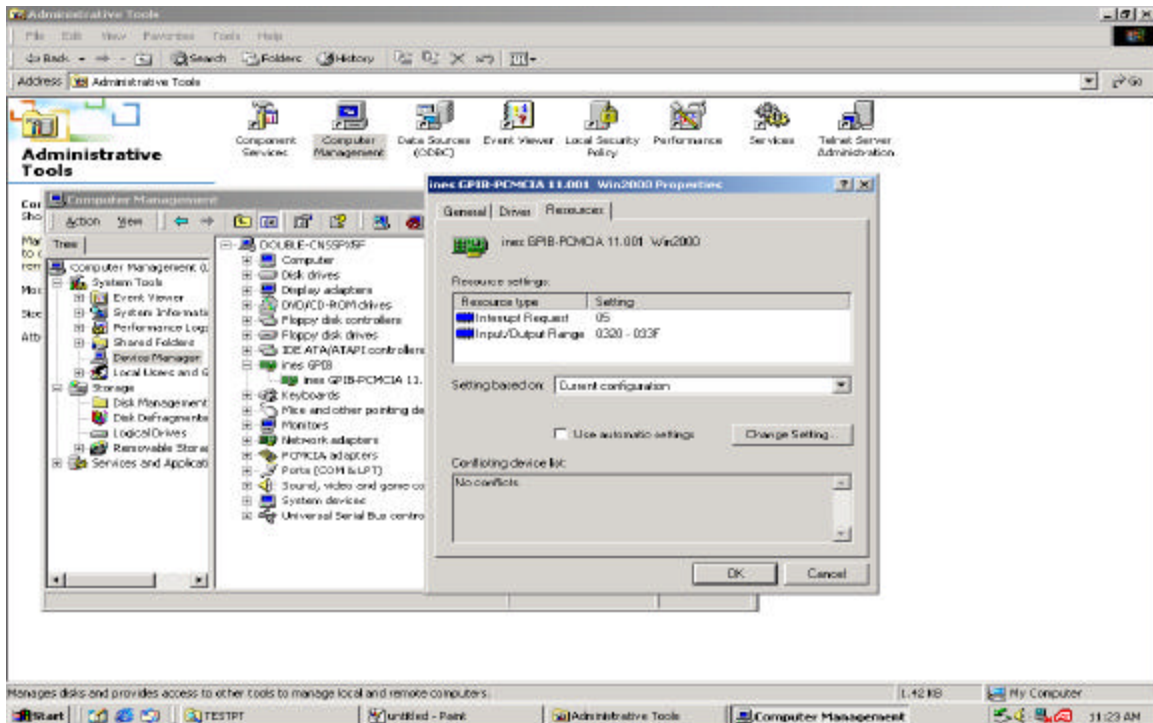


Figure No. 1: Changing the ines GPIB-PCMCIA base address and IRQ settings.

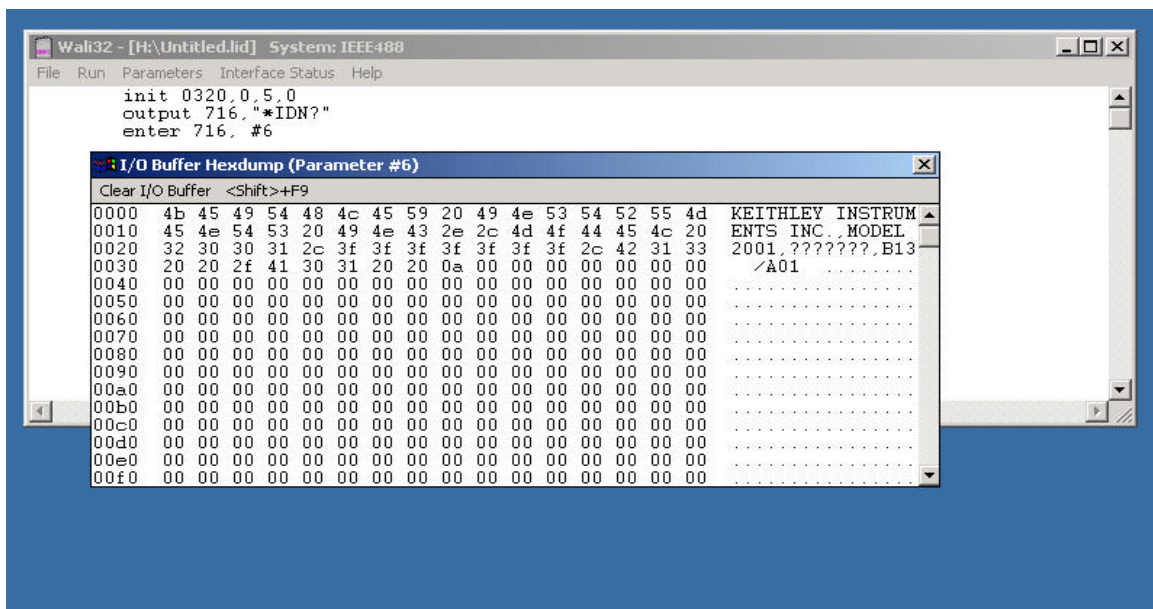


Figure No. 2: Wali32 Functional Verification.