

## instruNet World crashes or does not see the PCI Board, due to a buggy PCI BIOS:

*Application Note #8, 8/13/2002*

### **WHAT IS A PCI BIOS?**

The PCI BIOS on Windows/Intel computers is a piece of software that is supplied by the manufacturer of the computer. It is specific to the particular hardware on the computer. The operating system interacts with this software in order to set up PCI cards. The BIOS is stored in a ROM chip or a flash memory chip on the motherboard. To upgrade the BIOS, the flash memory chip must be reprogrammed with a floppy disk; and the ROM chip must be physically removed and replaced with a new chip. To do this upgrade, please contact the manufacturer of your computer and ask for a PCI BIOS upgrade (e.g. Unicore, Tel 1/800-800-2467, [www.unicore.com](http://www.unicore.com)).

Before contacting a bios upgrade company, it is recommended that collect the following information: computer manufacturer, computer model, processor, processor speed, bios version, and related bios information. To get the bios version and related information, please reboot your computer, and when the message appears relating to your bios, press the PAUSE key to freeze the computer, and write down all the information that you see on the screen. Include the series of numbers that might appear at the bottom of the screen -- these may contain information about the pci bridge on the motherboard and the pci routing system. To continue with the boot process, press the ENTER key.

### **WHAT IS THE PROBLEM?**

The problem is that the first PCI BIOS's were extremely buggy. These are BIOS's on motherboards manufactured before 1/95 or so. And some of them conflict with PCI cards running with a new Windows OS (e.g. Windows 95B, Windows 97, Windows NT), and therefore require an upgrade from the manufacturer of the computer. Also, some of the very new computers (especially the more complicated computers) are running bios's that have not been fully tested with those computers and many pci cards. And these are infamous for having trouble with pci cards. A bios upgrade on a 3mth old computers is not uncommon since the bugs are sometimes not apparent and fixed until the computer has been shipping for a while.

### **HOW DO I KNOW IF I NEED A PCI BIOS UPGRADE?**

If the instruNet software crashes upon launch, or does not see the PCI card, it might be due to a buggy PCI BIOS; especially if the motherboard was manufactured before 1995.

If you fax a copy of the Windows System Resource Report to your instruNet supplier, they might be able to tell you if they see any conflicts. To print a copy of this, run Windows "Explorer", Open the "Control Panels" folder, double-click on "System", select "Device Manager" tab, press "Print", select "All devices and system summary", and then press "OK".

### **Windows 95:**

One of the jobs of the PCI BIOS is to assign memory addresses to the PCI card. To see what address have been assigned to an installed instruNet PCI card: Run "Explorer", Open the "Control Panels" folder, double-click on "System", select "Device Manager" tab, double-click "Other Devices" to show "PCI Card", select "PCI Card", click "Properties", click "Resources", and wait up to 30seconds for a list of address to appear. If the ranges start with 0000000, or overlap with each other, or overlap with any other assigned addresses in the computer, or are less than 4K away from any other address range in the computer; then you've got a buggy PCI BIOS (sorry). If so, call the computer manufacturer and request a PCI BIOS upgrade.