



DataRay Inc. Powering-up Systems

BeamMap/Beam'R/ColliMate PCI card versions 1 and 2

605 STAPP ROAD
BOULDER CREEK, CA 95006

Beam Profiling ... Engineered as a System
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Purpose: This note is to clarify the order in which systems with Version 1 and 2 PCI cards must be plugged-in and powered-up.

Applies to: PCI card Versions 1 and 2 used with BeamMap, Beam'R, BeamScope-P7 & ColliMate heads. The version number is found at lower left on the component side of the board. See example.

Does not apply to: Version 3 cards and WinCamD cards of any revision.

The Issue: If the head is plugged in *after* the computer has been powered up, *some* boards can randomly set the zero level below the baseline.

This is most easily seen in **Log 40dB mode**; (Right-click on the profile/graph area). Instead of showing noise around the -30 dB level, the signal will 'Flatline' in the wings of the profile.

Some boards appear more susceptible than others to this problem.

The Consequence: If this problem occurs the zero level is set wrong and the measured beam diameters will be too small.

What you should do: Be aware that the problem can occur.

The Solution: Always plug the head in before powering up the PC.

Detail: If the problem is observed, power down the software and the PC. Unplug the power from the PC*, count to 30 and then plug in the power again.

[*Many PC's do not power down all the power lines when "turned off". You **must** disconnect the power and allow the capacitors to discharge in order to set the power condition to 'OFF'.]

