

# PC Electrometer™

## The Ultimate in Portable Reference Dosimetry

A high performance, reference class electrometer that is highly portable, and easy to use.

### The PC Electrometer Advantage

- ▶ World's smallest reference class electrometer
  - > Compact size, lightweight - 0.4kg
  - > Industry leading specifications
  - > High performance - Fast sampling - 80μs
- ▶ USB powered - no batteries or power cord
- ▶ Quick to setup and easy to use
- ▶ Fully configurable software interface
- ▶ Interfaces with the Sun Nuclear 1D Scanner™

### Hardware

- ▶ Two independent measurement channels
- ▶ Less than one minute warm up time
- ▶ Temperature probe input
- ▶ Flexible connection options
  - > USB or Sun Nuclear standard power/data cable

### Software

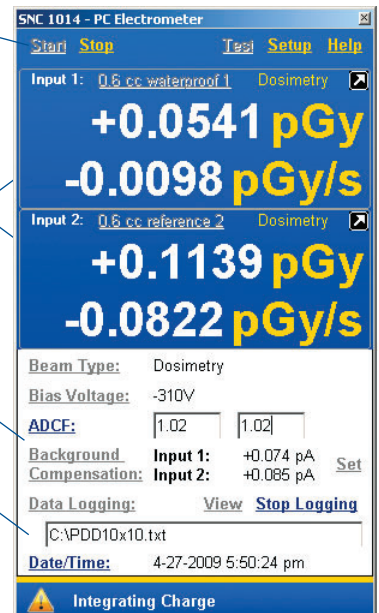
- ▶ Unique configurable design
- ▶ Hide/show different functions
- ▶ Expand data display for distance viewing
- ▶ Detector library stores calibration factors

Automatic start/stop with threshold detection

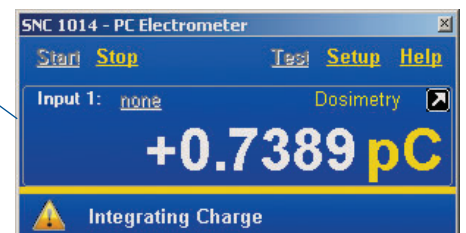
Data display with configurable units and detector calibration library

Fully configurable interface and parameter options

Data logging capability

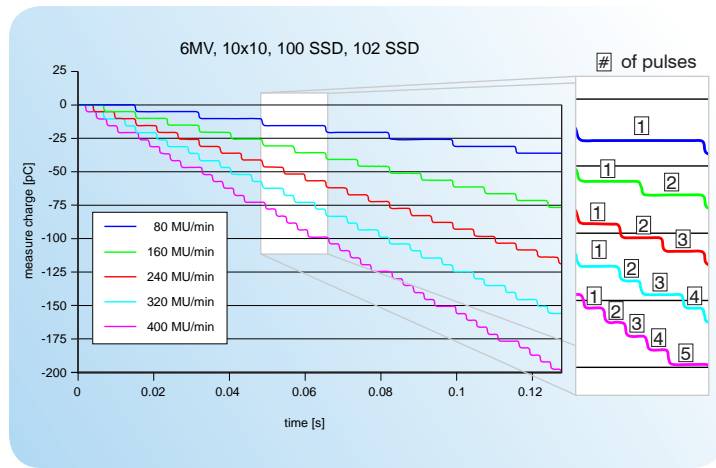


Software can be configured to hide/show any parameter, from simple to complex views

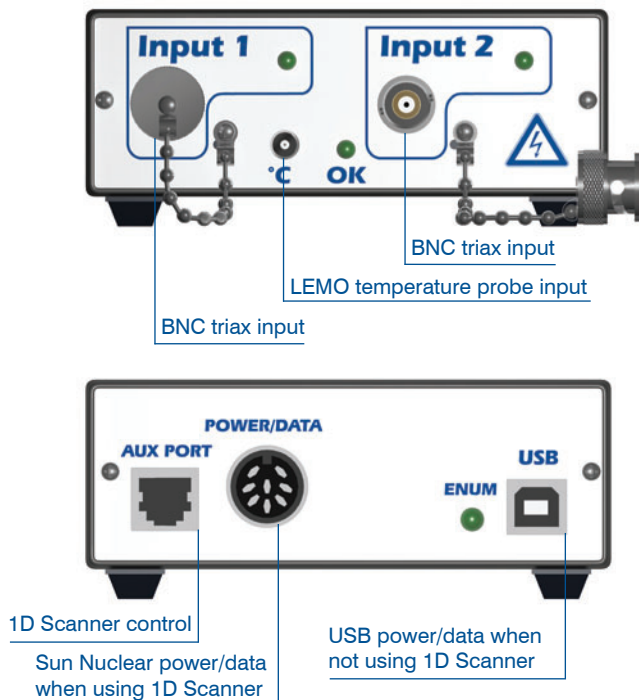
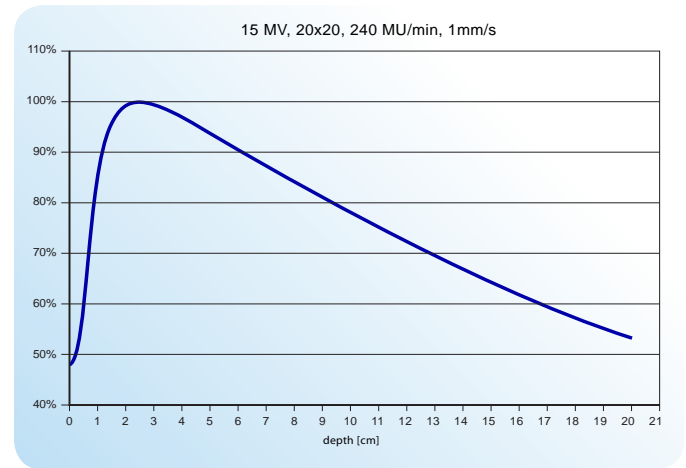


## Features and Specifications

PC Electrometer sampling interval is  $80\mu\text{s}$ . Each step in this graph of total charge indicates a linac pulse as measured with a 0.6cc chamber. PC Electrometer clearly shows the increase in linac pulse frequency as a function of dose rate. From 80MU/min, the additional pulses are 1, 2, 3, and 4 for the respective rates of 160, 240, 320, 400.



Fast sampling makes PDD curves smooth and accurate when measured with the PC Electrometer and 1D Scanner. The PDD curve below is an un-smoothed ratio of Field to Reference, using 0.6cc Farmer type chambers.



The PC Electrometer directly connects to the 1D Scanner for monthly and annual QA

Warm up time (min):	< 1.0
Charge:	2pC – 10mC, 15fC resolution
Rate:	Low: 2pA – 50nA High: 2nA – 10,000nA
Leakage (fA):	< 10
Update frequency (ms):	0.10
Bias voltage (V):	Adjustable, 0 to $\pm 400$
Non-linearity:	$\pm 0.1\%$

Long term stability:	$\leq \pm 0.25\%$
Repeatability:	$\pm 0.05\%$
A/D Converter:	16 bit
Auto start/stop with threshold detection:	Included
Operating system:	Windows 2000, or 32-bit XP, Vista
Dimensions / Weight:	14.0 x 11.0 x 5.0cm / 0.4kg
Number of connection cables:	USB or single power/data cable

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