DOSIMETRY, ADVANCED

An intuitive user-interface and a host of innovative features make the SuperMAX the premier reference-grade electrometer on the market.
The **Premier, Reference-Grade** Electrometer

The SuperMAX Electrometer is the culmination of one simple notion – *surpass expectations for a reference-grade electrometer*. Each aspect of the SuperMAX has been engineered to integrate seamlessly into clinical quality assurance, forming the preeminent dosimetry tool available.

- **Superior Accuracy and Stability**
  Standard Imaging’s legacy of accuracy, and rounds of rigorous testing, ensure the SuperMAX exceeds requirements for reference grade instruments. This exceptional stability allows for measurement after only one minute of warm-up time.

- **Touchscreen Operation**
  A color, touchscreen interface has an on-screen keypad and pull-down menus for easy operation.

- **Unmatched Versatility**
  Two measurement channels with independent control over range, bias voltage and applied factors, and an extensive range are ideal for external beam IMRT, brachytherapy and stereotactic radiosurgery.

“The SuperMAX is a great electrometer. Its interactive screen is big and easy to see and use. Its small footprint makes it possible to set-up on even the most crowded work surface. Most importantly, it is fast to warm up, precise and very reliable. I particularly like the fact that the SuperMAX will store calibration factors for all of my chambers, as well as all my readings from our evening of data collecting. The SuperMAX is a great piece of gear.”

**David J. Misisco, MS**  
Medical Physicist  
Community Hospital of the Monterey Peninsula
SuperMAX Electrometer shown with the Exradin A19 Ion Chamber and the Exradin A10 Ion Chamber
Two Independent Channels

The SuperMAX Electrometer has two measurement channels with independent control over range, bias voltage and applied system factors. Both channels have an extensive range (0.001 pA to 500.00 nA, 0.001 pC to 999.9 µC) with automatically scaling units, ideal for a spectrum of applications, including:

- Cross calibration between two chambers
- Isocenter versus off-axis comparisons
- In-air versus in-water comparisons

These channels can be viewed individually in full screen or together in a split-screen interface, with the option to display the ratio of the two channels.
Flexible Collection Modes

The SuperMAX Electrometer has three charge collection modes, facilitating data acquisition in a variety of clinical applications.

- **Timed Charge Collection**: obtain measurements in 1 second intervals from 1 second – 24 hours. Perform these measurements sequentially without re-zeroing the electrometer.
- **Continuous Charge Collection**: Manual start/stop measurement for an unlimited duration.
- **Triggered Charge Collection**: Automatically start, stop and save measurements at custom thresholds for high and low ranges. This mode is ideal for external beam measurements.

Comprehensive Detector Library

A detector library built into the SuperMAX can store over 100 calibrations and/or system factors, which are easily input using a step-by-step wizard. Once entered, these corrections can be quickly sorted and applied for real-time display of dose or dose rate values. Factor-applied measurements are shown side-by-side with raw data for increased analysis. No extra PC software or cables are needed to take advantage of this functionality.
Easily **Save and Export** Data

As charge collections are completed, measurements are automatically stored in a time- and date-stamped list. Rate or dose rate measurements can be added manually by tapping the “Add Measurement” button. At any time, this list can be exported to the USB flash memory in .csv or .txt files, transferred to a PC and opened in Microsoft Excel or other spreadsheet applications.

**Exradin W1 Scintillator** Integration

The Exradin W1 Scintillator is a new detector with characteristics that closely mimic water, negating many measurement corrections required with other detectors. When used in conjunction, these tools effectively eliminate Cherenkov Effect without the need for extraneous calculations. Two dedicated modes in the SuperMAX provide an intuitive interface for scintillator setup and measurement.
The SuperMAX can store over 100 sources for quick projected strength calculations. Enter the known activity on a given date and the Check Source Utility can display either the current strength or calculate future strength.