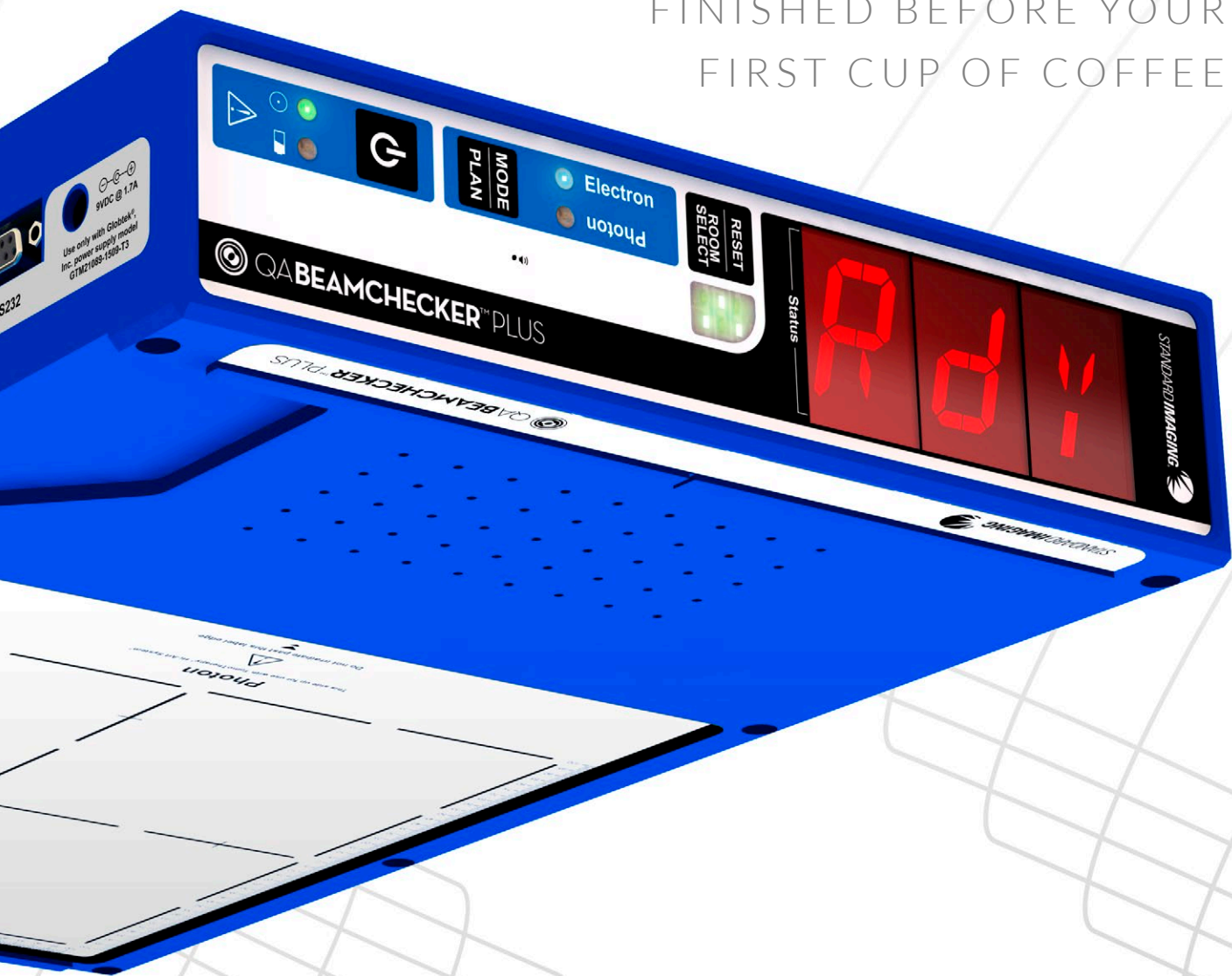


STANDARD IMAGING®



DAILY QA

FINISHED BEFORE YOUR
FIRST CUP OF COFFEE



QA BEAMCHECKER PLUS

QA BEAMCHECKER PLUS

RELIABLE AND UNCOMPLICATED DAILY QA

Save valuable time with fewer trips in and out of the vault, automatic energy detection, quick measurements and customizable QA interface - no cables and no PC required.

Perform routine daily QA measurements for traditional linear accelerators and rotational VMAT systems including those from Varian, Elekta, and Accuray.



WE HAVE THE QA BEAMCHECKER PLUS AT THREE SITES. IT IS THE BEST DEVICE I HAVE USED IN 25 YEARS AS A MEDICAL PHYSICIST."

AL FOSTER, PHD
SENIOR MEDICAL PHYSICIST
IU HEALTH BALL MEMORIAL HOSPITAL



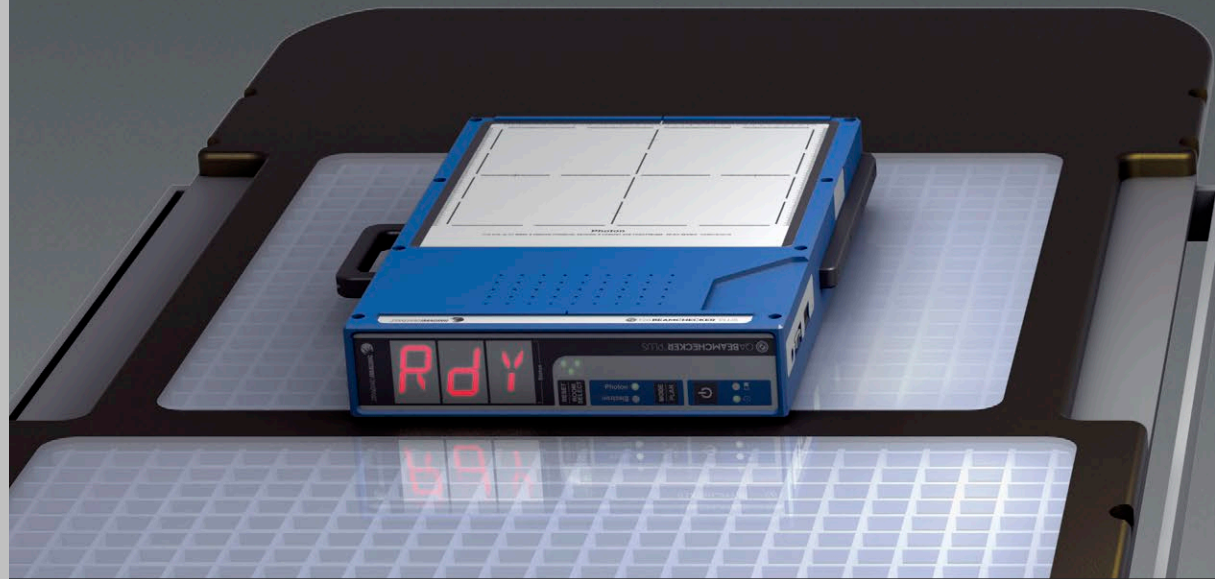
The QA BeamChecker Plus performing a combined dosimetric check in rotational mode

PATENTED
SOFTWARE-FREE
TECHNOLOGY

After creating measurement baselines using the included PC software, no cables or software are needed for your daily QA routine. With automatic energy detection you can complete efficient daily QA in seconds.

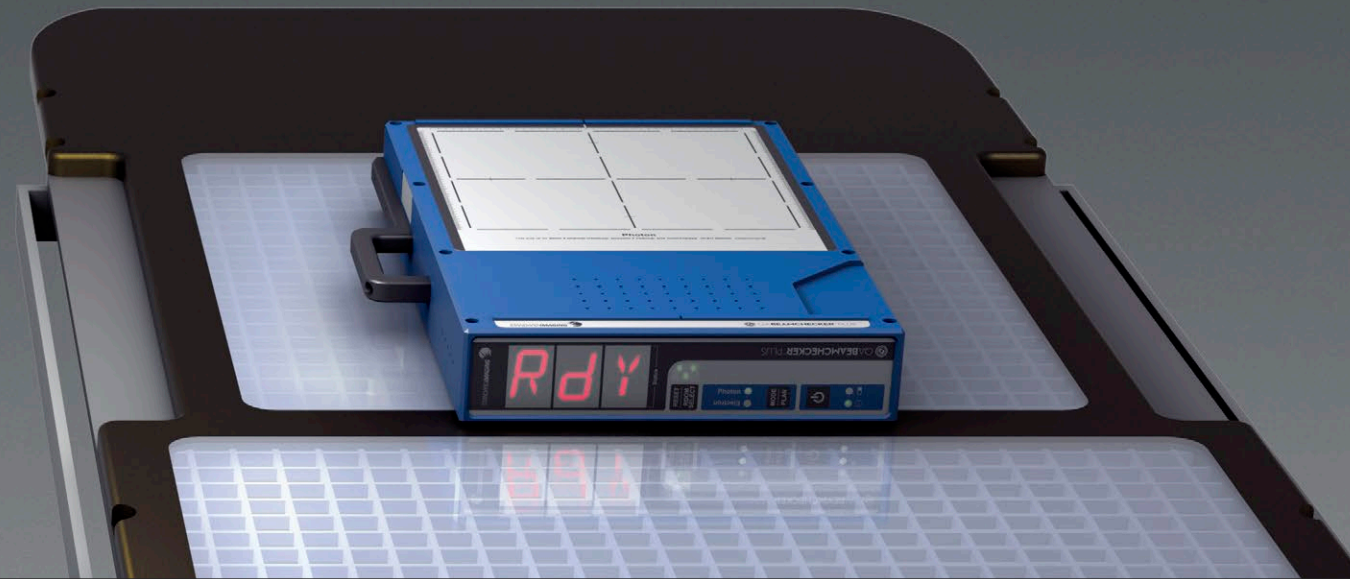
QA BEAMCHECKER PLUS

SOFTWARE-FREE QA



QA BEAMCHECKER PLUS – WIRELESS

COMMUNICATE WIRELESSLY WITH VAULT PC FOR EASY QA



SOFTWARE-FREE MODE

A pass/fail result for each energy is indicated in a large, brightly lit display, clearly visible from the patient monitor. Unlike other devices, you do not have to control the QA BeamChecker Plus from a PC. The device is a cable- and software-free solution right out of the box, with a more streamlined user experience than the competition to help minimize the potential for user error. This means less clutter in the accelerator room, no cable replacement costs, and a safer work environment.

MULTIPLE VAULT CAPABILITY

Up to 9 treatment rooms/vaults can be managed with just one QA BeamChecker Plus. Using the communication software, a complete set of baselines can be created for each specific room. Once a room has been created, it's saved within the QA BeamChecker Plus and available in any module, including software-free. Simply select the desired room and the QA BeamChecker Plus automatically detects the daily energy output by the treatment machine.

REAL-TIME OPERATION

The Real-Time Operation module provides the same QA information as the software-free module, however it displays comprehensive measurement parameters at the time of exposure via a PC software interface. Get access to baseline settings along with percentage comparisons, temperature/pressure readings, and precise chamber measurement information. Information collected in this module can be optionally discarded from the QA record, making this module ideal for teaching, troubleshooting, and research.

WIRELESS COMMUNICATION

The Bluetooth Adapter Kit allows PC-only operations to be performed wirelessly. Take advantage of this convenient kit and experience the additional freedom of using the software while remaining wireless. Upgradeable at any time.

FAST & EASY ... QA BEAMCHECKER PLUS

REDUCE UNNECESSARY TRIPS INTO THE TREATMENT ROOM



ADAPTABLE TECHNOLOGY

The physics Module puts the physicist in complete control of the accumulation and interpretation of measurement data. Use the QA BeamChecker Plus as a basic ion chamber array for research, experimentation, and other custom applications. By providing access to raw chamber readings, it is possible to perform rate and timed charge measurements via an intuitive software interface. Beam parameters unique to the treatment method used are displayed, such as flatness and symmetry in linac module or lateral profile constancy in TomoTherapy module. When completed, measurement data can be exported to a .csv file for additional analysis.

ENHANCED FEATURES

The QA BeamChecker Plus is capable of handling output measurements for the most advanced accelerator modes, such as flattening-filter free beams using the integrated baseline comparison for easy tracking and trending of values. Deliver a unique plan with a dynamic wedge included to assess the core functionality of it.

- 1** BEAMCHECKER
- CAN BE USED FOR UP TO
- 9** TREATMENT ROOMS

INTEGRATED BUILDUP

Integrated build-up for all supported energies eliminates the need to enter the vault between measurements. A built-in 3.5 cm layer of water equivalent material for photons, or 1.5 cm layer for electrons, eliminates the need for build-up plates. Easily toggle between photon and electron measurements by simply turning the device over.

POWER/DATA CRADLE

Quickly download up to one month of stored data and simultaneously ensure the QA BeamChecker Plus is fully charged using the Power/Data cradle. Complete your routine, place the instrument back on the cradle for easy charging and PC communication. The cradle connects to your PC and provides quick, convenient downloading of measurement data using the powerful software interface.



HIGH DOSE RATE COMPATIBILITY

DOSE RATES UP TO 2400 MU/MIN

ROTATIONAL AND DYNAMIC QA

The QA BeamChecker Plus has Varian Rapid Arc and Elekta VMAT systems covered with the Dynamic 5 Channel Capability. This module provides a combined dosimetric check of the treatment system, allowing for an output constancy check of each temperature and pressure corrected detector within the instrument. Up to 25 plans can be created for each treatment room, so highly customized QA procedures can be developed to test multiple aspects of the system such as various energies and gantry rotation speeds. This allows for advanced testing to meet your TG-142 or other protocol requirements.

Using this device, perform enhanced dynamic wedge and tissue phantom ratio measurements- further accomplishing multiple QA tasks while saving time and money. The QA Beamchecker Plus provides even more confidence in your Daily QA testing.

ADVANCED SIGNAL PROCESSING The QA BeamChecker Plus features advanced signal processing allowing for accurate analysis of beams delivered at high dose rates up to 2400 MU/min. This capability meets the requirements for full use with machines such as the Varian TrueBeam and Versa HD.

INTUITIVE COMMUNICATION SOFTWARE

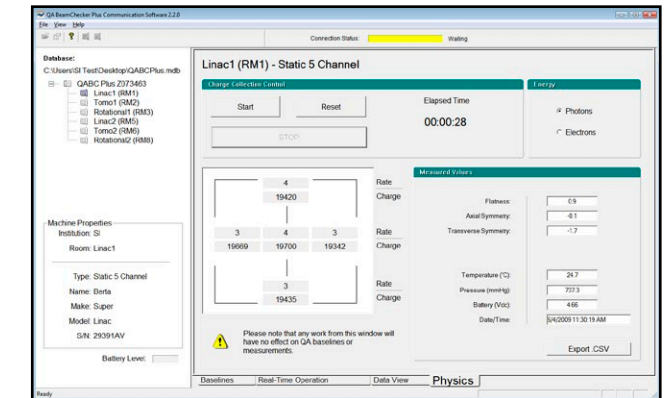
A STRAIGHT OUT OF THE BOX SOLUTION

EASY TO USE COMMUNICATION SOFTWARE

The QA BeamChecker Plus software provides an intuitive platform to establish baselines or acquire data with if desired. Historical measurements can be easily accessed, analyzed and exported if desired. The software is compatible with server-based IT solutions making the QA BeamChecker Plus an excellent solution for any institution with an internal network.

POWERFUL REPORTING

After measurement data has been acquired by the QA BeamChecker Plus in software-free or Real-Time Operation modes, details and trending can be reviewed using the Data View module. QA data can be viewed in chart or table format by specified date range, printed in a convenient report, or exported to a .csv file including raw measurement information for further analysis. Additionally, PDF reports include signoff and variable charting capabilities.



QA BeamChecker Plus Physics Mode



View measurement data in chart or table view, print a report, or export to .csv for a custom reporting solution

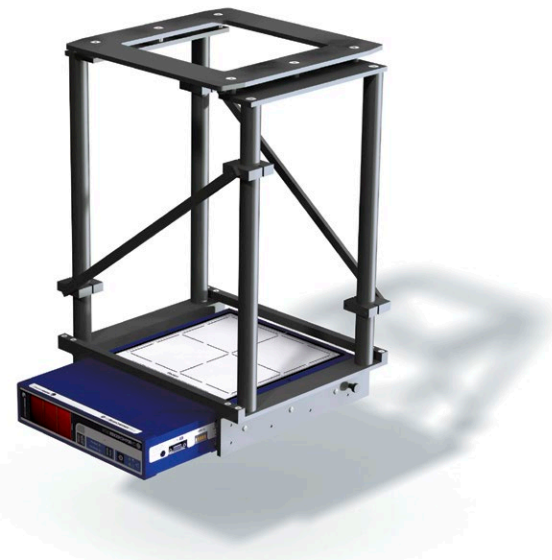
Don't Chart	Date Time	Constancy	AXSym	TRSym	Flatness
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<input type="checkbox"/>	20-Mar-07 05:35:49	-0.3	-0.3	0.4	-0.1
<input type="checkbox"/>	21-Mar-07 05:40:49	-0.2	-0.3	0.2	-0.1
<input type="checkbox"/>	21-Mar-07 05:40:49	-0.2	-0.3	0.2	-0.1
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<input type="checkbox"/>	23-Mar-07 05:31:17	0.1	-0.3	0.3	-0.1

ADDITIONAL ACCESSORIES

ADD EVEN MORE QA FLEXIBILITY

GANTRY MOUNT

Attach the QA BeamChecker Plus to the linear accelerator gantry for precise, repeatable positioning. Rotate the treatment machine and test at multiple angles for even more QA options.



PRECISION TOMOTHERAPY LEVELING PLATFORM

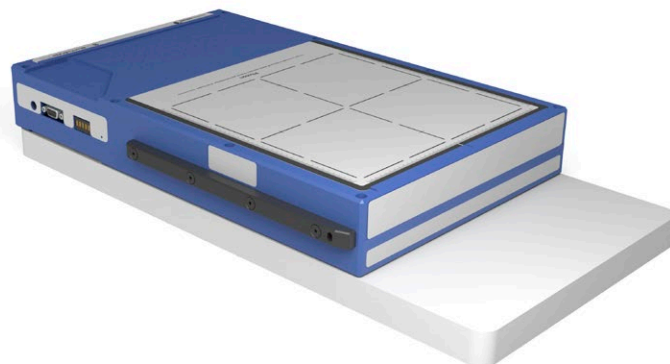
Level the QA BeamChecker Plus on the TomoTherapy Hi-Art System treatment couch for virtual and real isocenter laser accuracy measurements. Integrates seamlessly with other TomoTherapy daily QA procedures. Bubble level stores conveniently when not in use.



Alignment marks facilitate the TomoTherapy® laser accuracy test (D6)

AUTOMATIC ALIGNMENT FOR CYBERKNIFE SYSTEMS

The Cutting Board for QA BeamChecker Plus is equipped with implanted fiducial markers which allow for accurate alignment of the QABC+ using the CyberKnife® system's treatment localization system (TLS).



TOMOTHERAPY HI-ART SYSTEM DAILY QA

The QA BeamChecker Plus can be used for TomoTherapy Hi-Art System daily QA tests following those listed in J.D. Fenwick et al, "Quality assurance of a helical TomoTherapy machine". Develop custom static and 4D treatment plans and deliver to the QA BeamChecker Plus to establish baselines.

Additionally, multiple static and dynamic plans can be developed to test each jaw width setting individually. Only two exposures are needed to perform these tests. No re-positioning of the QA BeamChecker Plus is necessary between the two exposures, saving you time.

QA BEAMCHECKER PLUS SPECIFICATIONS

8 VENTED IONIZATION CHAMBERS, FULLY GUARDED — One center detector // Four quadrant detectors (7.5 cm from center) // Three energy identification chambers

CHAMBER VOLUME — 0.6 cm³ // **PARALLEL PLATE SEPARATION** — 4.0 mm // **COLLECTION ELECTRODE** — 1.39 cm diameter

INHERENT WATER-EQUIVALENT BUILDUP — PHOTONS: 3.5 cm // ELECTRONS 1.5 cm

SUPPORTED ENERGIES — PHOTONS 60Co to 25 MV // ELECTRONS 6 MeV to 25 MeV

MULTIPLE VAULT CAPABILITY — Up to 9 rooms, any combination of linear accelerator or rotational systems

TEMPERATURE AND PRESSURE MEASUREMENT — Precision sensor on board, automatic compensation

QABC PLUS

DIMENSIONS — Height 6.15 cm (2.42 in) // Width 30.86 cm (12.15 in) // Length 40.64 cm (16 in) // Weight 5.0 kg (11 lbs)

POWER/DATA CRADLE

DIMENSIONS — Height 7.16 cm (2.82 in) // Width 10.16 cm (4.0 in) // Length 29.21 cm (11.50 in) // Weight 1.8 kg (4 lbs)

LIGHT FIELD ALIGNMENT — 20 cm x 20 cm alignment grid for easy setup

TOMOTHERAPY ALIGNMENT — Three 2 mm embedded lead BBs, top, rear, side alignment marks

REAL TIME CLOCK — Date and time stamp for all measurements

INTERNAL MEMORY — Store 512 data points before transfer required

POWER/DATA CRADLE — Two 9 pin serial cables provided, 7.6 m (25 ft) and 33 m (100 ft)

BATTERY — 1.3 Ah SLA, approximately 4 hours continuous use, user replaceable

CHARGER INPUT — 90 - 240 VAC, 50-60 hz, IEC 60601-1 approved wall mounted power supply

PERIPHERALS — CD-ROM Drive, One available serial port

OPTIONS — Gantry Mount (REF 70500) // Additional Power/Data Cradle (REF 70502) // Serial to USB adapter (REF 70503) // Precision TomoTherapy Leveling Platform (REF 70505) // Bluetooth Adapter Kit (REF 70504)

SOFTWARE/COMPUTER REQUIREMENTS

OPERATING SYSTEM — Windows® 10 Professional, 64 bit recommended

PROCESSOR — Dual Core, 1 GHz; Quad Core, 2 GHz Recommended

MEMORY — 32-bit OS: 2 GB, 4 GB Recommended 64-bit OS: 4 GB, 8 GB Recommended

HARD DRIVE — 32 GB or greater, 1 GB free space for initial software setup. 25% free space recommended.

SCREEN RESOLUTION — 1024 x 768 or greater // **OPTICAL DRIVE** — Compact Disc (CD) or Digital Versatile Disc (DVD)

CONNECTIVITY — 9 pin RS-232 serial port and IPv4 LAN, 100 Mbit/s or greater

Windows® is a registered trademark of Microsoft Corporation. Bluetooth is a registered trademark of Bluetooth SIG, Inc. CyberKnife® is a registered trademark of Accuray Incorporated.

Specifications subject to change without notice.

DAILY QA



STANDARD IMAGING®



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