

Quick Reference Product Guide

FOR ALL RIT PACKAGES

An impressive **range** of convenient packages that span from basic testing to the most complex analyses in Medical Physics

Rotational Therapies, IMRT, TG-142, TG-148, TG-135

Patient QA Machine QA MLC QA Imaging QA

RIT *Complete*

All of RIT's therapy products in one convenient and comprehensive package

RIT113 *Classic*

The original RIT product combining patient and machine QA

RIT *TG142*

All of the machine and imaging tests for TG-142 in a "just what you need" package

RIT *TG148+*

A comprehensive test suite for helical tomotherapy machines

RIT *TG135*

A comprehensive test suite for robotic radiosurgery

kadia therapy *kadia* diagnostic

Automated phantom analysis for QC of Therapeutic and Diagnostic imagers

RIT *Film*

Full suite of film dosimetry routines including patient and basic machine QA

RIT *Film Lite*

Basic film analysis package



The RIT Family OF PRODUCTS

RIT Complete	RIT G142	RIT113 Classic	RIT G148	RIT G135	RIT Film	RIT Film Lite
--------------	----------	----------------	----------	----------	----------	---------------

REPORTING & DATA MANAGEMENT

RITtrend Statistical Trend Database

Set your own specifications and RITtrend automatically analyzes process control limits on RIT113 analyzed equipment. The Multi Source Data Manager gives you even more control for reporting on your entire Medical Physics program. It's customizable format allows you to add analysis data from any and all equipment used in your Medical Physics program, including non RIT113 analyzed data. It redefines database recording into a major tool for analysis and record keeping in your department.



RIT Mirror Trend Comparison

Compare your results with other centers around the world with RIT Mirror. Anonymously upload your test results to RIT's Mirror server to compare your data to that of other treatment centers using a wide variety of filtering tools.



IMAGING QA

Planar kV Imaging Module

DISC Plus
IBA Primus L
PTW Normi-4
Leeds TOR 18FG



MV (EPID) Imager

RIT EPID
PTW EPID QC
Las Vegas
QC-3



CBCT/MVCT Module

Catphan® 504 - Varian
Catphan® 604 - Varian
Catphan® 503 - Elekta XVI
Siemens MVCT



Electron Density / Tissue Characterization Module

CIRS 062M
CIRS 062MA
Gammex 467



Tomotherapy Cheese



IGRT kV/MV Coincidence Routines

ISOCube™ kV-MV Isocenter Coincidence
ISOCube™ CBCT Isocenter Coincidence
ISOCube™ kV Collimation
ISOCube™ MV Collimation / Light Field
ISOCube™ 6 Degree of Freedom Couch Test



Penta-Guide Phantom



Catphan® is a registered trademark of The Phantom Laboratory
Primus is a registered trademark of IBA
ISOCube™ is a trademark of IMT, Inc.

The RIT Family OF PRODUCTS

RIT Complete	RIT G142	RIT113 Classic	RIT G148	RIT G135	RIT Film	RIT Film Lite
--------------	----------	----------------	----------	----------	----------	---------------

MLC QA

RIT EPID Picket Fence A completely automated version of the classic picket fence test.	✓	✓	✓				
Hancock Test for Elekta Simultaneous Jaw Setback & Leaf Position Measurement using iViewGT	✓	✓	✓				
Automated Analysis of Varian RapidArc Tests Images may be taken at any distance from EPID, Film, or CR images.	✓	✓	✓				
Bayouth MLC Analysis Analyzes MLCs that require leaf gaps between banks.	✓	✓	✓				
Memorial Sloan Kettering Test Pattern	✓	✓	✓				
MLC Transmission Analysis (TG50 Recommended)	✓	✓	✓				
TG50 Picket Fence	✓	✓	✓				
Varian DMLC Test Pattern Analysis	✓	✓	✓				

MACHINE QA

3D Stereotactic Alignment Test Automatically process a set of EPID Winston-Lutz images to give a fast, accurate measurement of isocenter position. RIT's version of this classic test allows you to use 3-10 images and not only gives you an accurate measurement of isocenter displacement, but also an error estimate to determine the wobble around the isocenter and ball setup error. (US Patent 9192784, CA Patent 2918045, JP Patent 6009705)	✓	✓	✓				
Stereotactic Cone Profiles	✓	✓	✓			✓	✓
Stereotactic Alignment Stereotactic images may be analyzed without applying a calibration file. Winston Lutz images are supported.	✓	✓	✓			✓	✓
Field Alignment Improved alignment routine for low contrast cones.	✓	✓	✓	✓		✓	

Beam Measurements

Star Shot Analysis Star Shot and Stereotactic images may be analyzed without applying a calibration file. Performing MLC Starshot test using the RIT Image Compositor to make MLC starshot patterns from EPID images.	✓	✓	✓			✓	
Radiation/Light Field Coincidence Radiation/Light Field EPID images may be analyzed without applying a calibration file. You can also have custom field sizes, not just 5, 10, 15, and 20 cm., and take a BB or pin prick for center location or use RIT's L-Rad Phantom.	✓	✓	✓			✓	
Asymmetric Field/Matchline	✓	✓	✓				
Depth Dose Profiles Measures DMAX, D ₁₀ , D ₂₀ and other statistics.	✓	✓	✓			✓	✓

The RIT Family OF PRODUCTS

	RIT Complete	RIT G142	RIT113 Classic	RIT G148 ⁺	RIT G135	RIT Film	RIT Film Lite
Cross Profiles Measure FWHM, Penumbra, Flatness, Symmetry and other statistics.	✓	✓	✓			✓	✓
Orthogonal Profiles	✓	✓	✓	✓	✓	✓	✓
Electron Energy TG25 and other measurements.	✓	✓	✓			✓	✓
Quick Flatness & Symmetry A fully automated routine for monthly QA.	✓	✓	✓			✓	✓
Isodose Contours	✓		✓			✓	✓
Import Tomo "DICOM" film files	✓		✓	✓			
Water Tank Beam Measurement Analysis	✓	✓	✓				
TomoTherapy							
Beam Planarity and Jaw Twist	✓		✓	✓			
Overhead Laser Position Tool	✓		✓	✓			
Import TomoTherapy Calibration files	✓	✓	✓	✓	✓	✓	✓
Static Gantry Angle Tool	✓			✓			
Helical Gantry Angle Tool	✓			✓			
Field Center vs. Jaw Setting Tool	✓			✓			
Couch translation/gantry rotation	✓			✓			
Interrupted Treatment	✓			✓			
MLC Center of Rotation Tool	✓			✓			
IGRT Alignment	✓		✓	✓			
Vidar TIFF Export	✓			✓			
Robotic Radiosurgery							
End-to-End Test	✓				✓		
AQA Test	✓				✓		
Laser Coincidence Test	✓				✓		
IRIS Test	✓				✓		
Fully Automated MLC Test for the M6 Collimator	✓				✓		

The RIT Family OF PRODUCTS



PATIENT QA

Automated Batch Analysis

Automate your patient QA by setting up scripts for your repetitive Patient QA workflows.	✓		✓			✓	
Automated matching and sorting of reference and target images along with thumbnail of all images simultaneously	✓		✓			✓	

IMRT, IGRT & RapidArc/VMAT Analysis

Gamma Function Several gamma calculation algorithms are available to choose from.	✓		✓			✓	
Distance To Agreement	✓		✓			✓	
Profiles	✓		✓			✓	
Van Dyk's Analysis	✓		✓			✓	
Subtraction	✓		✓			✓	
Composite Analysis	✓		✓			✓	
Isodose Curves	✓		✓			✓	
Addition	✓		✓			✓	
IGRT Alignment- measure the spatial misalignment between the IGRT imaging system and the treatment beam	✓		✓	✓			
Register Template	✓		✓			✓	
IMRT Automatic Fine Tune Registration	✓		✓			✓	
Bilinear Interpolation & Non-cropping Rotation	✓		✓				
Automated Registration Fully automated registration control point positioning in both traditional and RunQueueA IMRT simultaneously.	✓		✓			✓	
Proportion Passing Plot Plots the proportion passing for a range of subtraction tolerances	✓		✓			✓	
Case files can be saved from IMRT analysis toolbars. Archive image sets, send IMRT results to other RIT users or Tech Support.	✓		✓			✓	
Save and Restore IMRT Analysis Layouts	✓		✓			✓	
Plan-Based Calibration (US Patents 7233688, 7024026, CA Patent 2567197, EU Patent 1683546, JP Patent 4366362) The ability to make quick relative comparisons between any dose map and your EPID, Film, and CR images.	✓		✓			✓	

The RIT Family OF PRODUCTS



2D Detector Array Analysis							
Import From 2D Arrays Ion Chamber arrays from IBA and PTW and MapCheck diode arrays are supported. IMRT analysis routines have been revised to handle sparse data. Results can be saved as an RIT Array Case file.	✓		✓				
Calibration							
Daily Output Factor Adjustment for your calibration curves	✓		✓				
MLC Calibration Technique (US Patents 6675116, 6934653, CA Patent 2418252, EU Patents 1318857, 1252550)	✓	✓	✓	✓		✓	✓
2D Scanner Spatial Calibration for both Vidar and Flatbed Scanners	✓	✓	✓	✓	✓	✓	✓
Perpendicular Dose Calibration	✓	✓	✓	✓	✓	✓	✓
iView Calibration	✓		✓				
Parallel Dose Calibration	✓		✓			✓	✓
Kodak CR Perpendicular Calibration	✓		✓				
Kodak CR Spatial Calibration	✓		✓				
PDD Table Editor	✓		✓			✓	✓
Calibration File Merge	✓	✓	✓	✓	✓	✓	✓
GENERAL							
Image Compositor GUI interface for easily making composite images. Add together images for use in MLC QA, Stereotactic QA, and large field IMRT analysis. Primarily used for EPID images but can be used on all image types. Supports a number of other operations: Add, subtract, multiply, divide, and other operations including scaling.	✓	✓	✓		✓		
Pin Prick, Erase, and ROI Tool	✓	✓	✓	✓	✓	✓	✓
PDF reports for every analysis routine	✓	✓	✓	✓	✓	✓	✓
EPID							
Importing EPID Images for QA Use your Elekta, Varian or Siemens EPID for QA with a seamless interface that does not require additional manufacturer hardware and software.	✓	✓	✓				
EPID Calibration RIT's patented Plan Based Calibration routine gives you the ability to make quick relative comparisons between any dose map and your EPID, FILM or CR.	✓		✓				
Elekta iView Calibration	✓		✓				
Scale DICOM images from Varian EPIDs Some Varian EPID images may contain scaling information to restore dose information. If this featured is enabled (in preferences) the Varian aS Portal Image Interface will detect these parameters and restore the EPID image. An optional scaling factor may also be applied.	✓	✓	✓				

The RIT Family OF PRODUCTS



Film Dosimetry for QA							
Radiochromic and Radiographic Film with Vidar and Flatbed Scanners	✓	✓	✓	✓	✓	✓	✓
EBT2 and Flatbed Scanner Correction Corrects EBT film scanned on a flatbed scanner for: Red/Blue channel correction AND scanner flatness and uniformity. A dose calibration file is also created all from one image set. Utilizes RIT's patented Plan Based Calibration to develop optimized calibration curves. (Available for international customers only. Not available in the USA.)	✓	✓	✓				
Radiochromic Film Uniformity Correction	✓	✓	✓		✓	✓	✓
Automated 21 Point Film Processor Correction (US Patent 6528803, JP Patent 3817176)	✓		✓			✓	✓
Sensitometry	✓		✓			✓	✓
2D Scanner Spatial Calibration (Vidar and Flatbed Scanners)	✓	✓	✓	✓	✓	✓	✓
Generic Image File Import Importing generic JPEG, TIFF and Bitmap image files from sources other than your Vidar Scanner gives you increased flexibility in your workflow to use RIT's exclusive analysis routines. Perfect for flatbed scanners.	✓	✓	✓	✓	✓	✓	✓
Vidar Advantage Pro 180° Correction For use on Advantage Pro RED units only: Corrects for sloping profile from left side to center; Works with film up to 10" wide and Improves flatness by a factor of 2 to 4.	✓		✓			✓	✓
Vidar Scanner Interface (Vidar Scanner Control Center) Allows for multiple film scanning, auto-naming, and autocropping, auto-flipping, and preview of scanned images	✓	✓	✓	✓	✓	✓	✓
CR							
3D CR Flatness & Uniformity Correction	✓		✓				
Kodak CR Perpendicular Calibration	✓		✓				
Kodak CR Spatial Calibration	✓		✓				
3D Gels and Solids Are Supported	✓		✓				



RADIMAGE.COM

719-590-1077 • sales@radimage.com