SUN NUCLEAR corporation

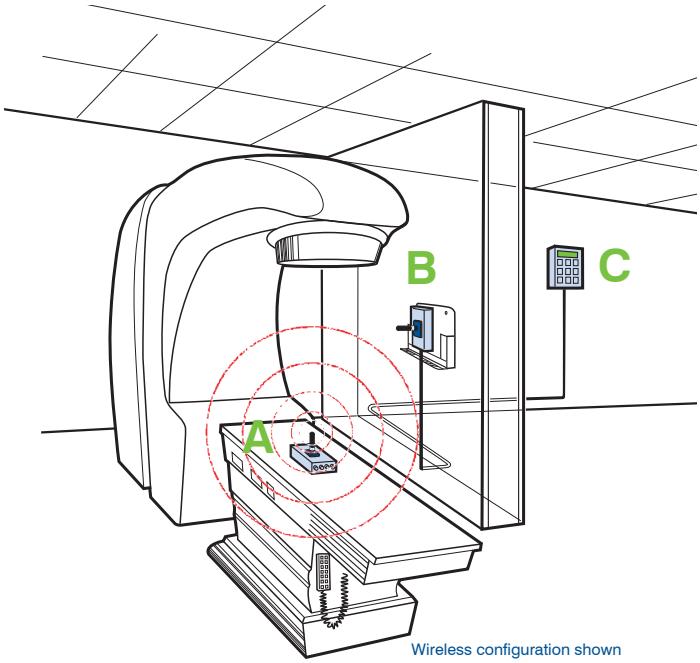
InVivo Solutions

Therapist Friendly - Physicist Approved

Easy to use real-time patient dose radiation monitoring with available wireless technology.

The IVD 2 / rf-IVD 2 Advantage

- Simple to install, and easy to use
- Automatic patient temperature compensation
- Real-time wireless available (rf-IVD 2)
  - Safely keep cables off the treatment floor
- Use with Control Module or PC Software
- Patient database and correction factor tools
- Accuracy and reliability proven worldwide



Wireless configuration shown

Hardware

- Choose four (wired) or eight (wireless) input channels
  - Expand to 52 inputs for TBI
- Programmable Control Module
- Use with industry standard re-usable detector options
  - QED – flat for easy patient placement
  - ISORAD – cylindrical for isotropic response

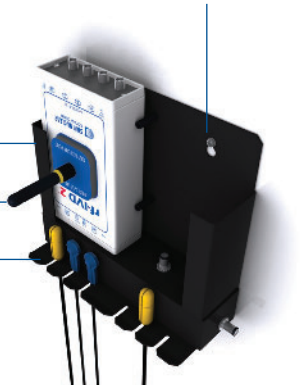
A,B IVD 2 wireless (1136)

Charging slot for (A)

Wall mounted charger

Wireless IVD 2 pod (B)

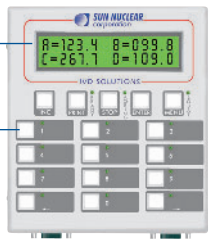
Detector holder



C IVD 2 Control Module

16 character display

12 programmable measurement options



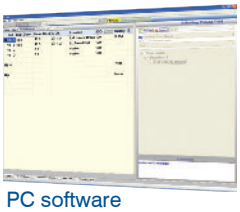
Pa PATIENT

Your Most Valuable QA and Dosimetry Tools

SUN

InVivo Choices


Control Module


PC software

IVD 2:
- Real-time wired operation
- Four standard channels
  - Expandable to 52
- Standard Control Module and PC software

rf-IVD 2 adds:
- Wireless operation
  - No cables on treatment room floor
- Eight standard channels

Control Module:
- PC not required
- Takes up less space
  - Wall mountable

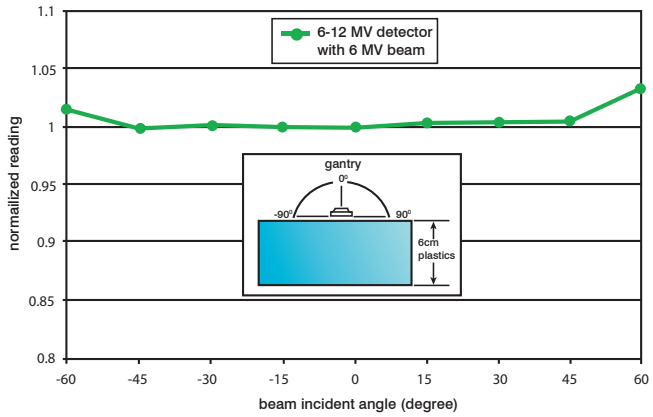
PC Software adds:
- Patient database
- Automatic correction factors
- Record and Verify interface
- Additional measurement options

Detector Choices

QED™ Detector Easy Placement Dose Monitoring

Features

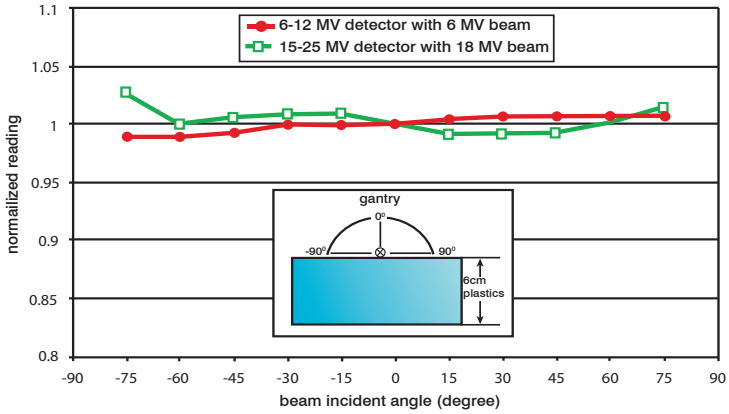
- Flat design for easy placement on patient
- Accurate and stable SunPoint™ Diode Detector
- Active dimension of 0.8 x 0.8mm
- 32 nC/Gy sensitivity
- 3m/1.5m cable lengths available



IsoRAD™ Detector Angular Independent Dose Monitoring

Features

- Cylindrical design for isotropic response
- Accurate and stable SunPoint Diode Detector
- Active dimension of 1.4 mm in diameter
- 27 nC/Gy sensitivity
- 3m/1.5m cable lengths available

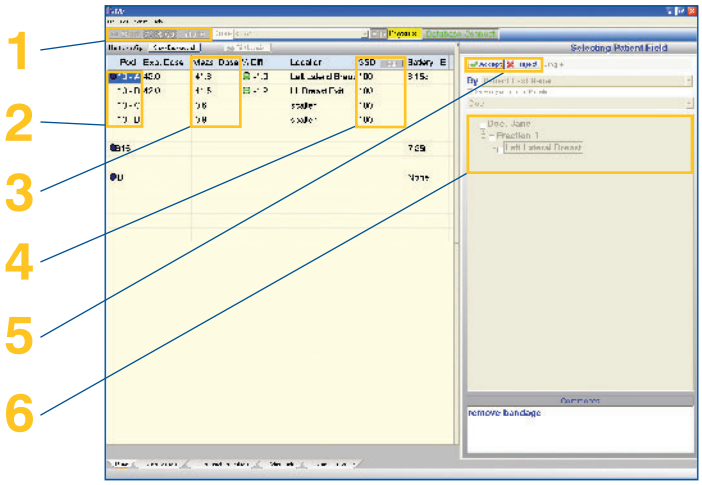


Software

- Networkable patient database for storing results
- Programmable templates
- 'Single Measurement' and 'Patient Measurement' mode
  - For multiple fraction dose recording
- Expected vs measured dose difference and visual indicator
- Automatically apply selected correction factors
- Password protection
- Electronic signatures
- Record & Verify (R&V) interface links

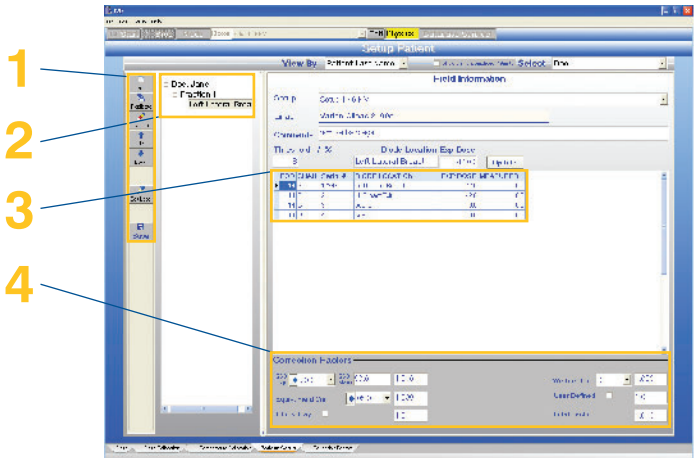
Patient measurement

1. Start/Stop measurement buttons
2. Channel results (expandible to 52)
3. Measured, expected dose and percent difference
4. Option to change SSD prior to measurement
5. Accept or reject collected measurement
6. Select patient, fraction and field



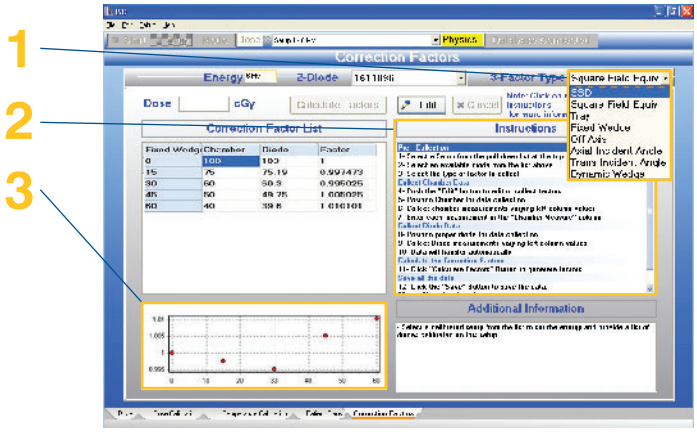
Patient database

1. Database edit toolbar
2. Patient specific tests
3. Measurement results per channel (up to 52)
4. Correction factors applied per test



Correction factors

1. Correction factor type
2. Instructions for setting up correction factor
3. Currently selected correction factor



Features and Specifications

Pods


Control Module

Pods:

Channels:	Standard: 4 (IVD 2) / 8 (rf-IVD2) Maximum: 52
Temperature compensation:	Automatic-within 0.1°C (Negative polarity only)
Repeatability:	± 0.2% or ± 0.1cGy
Polarity:	Bipolar (negative or positive polarity detectors)
Leakage:	Automatic compensation
Calibration:	User calibrated
Warm-up time (sec):	< 30
Wireless frequency (MHz):	rf-IVD 2 : USA: 916.5 EU: 433.92 / IVD 2: N/A
Power:	rf-IVD 2 : Rechargeable NiMH battery (12 hr) IVD 2 : Power supply
Dimension (cm) / Weight (kg):	7.0 x 12.0 x 3.0 / 0.34

Control Module:

Display Range:	0 to 99.999Gy; 0 to 9999.9cGy; 0 to 9999.9R
Display:	LCD, 2 Line, 16 characters/line
Power:	Medical power supply operating on 100-240 VAC, 47-63Hz mains, providing 18 VDC output
Dimension (cm) / Weight (kg):	14.0 x 16.0 x 3.5 / 0.78

What is included:

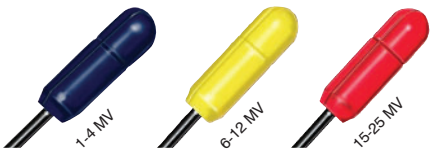
Control module:	Standard
PC Software:	Standard
Number of pods:	IVD 2: one (four channels) rf-IVD 2: two (eight channels)
Wall mounted charging cradle:	Standard

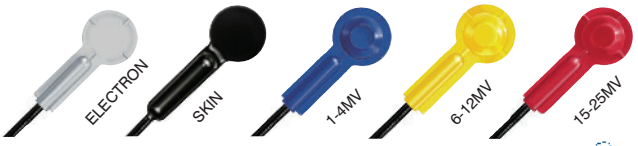
IsoRad:

Voltage range:	1-4 MV	6-12 MV	15-25 MV
Buildup material:	Brass	Molybolenum	Tungsten
Buildup (g/cm^2):	1.4	1.6	2.6
Energy used for directional response:	Co-60	6 MV	18 MV
Detector area (mm^2):	0.97		
Active dimension (mm):	1.4 diameter		
Dose rate dependence:	± 1%, 75 - 250cm SSD		
Detector sensitivity (nC/Gy):	27.0		
Detector stability:	0.5%/kGy at 6MV		
Color:	BLUE	YELLOW	RED
Negative output P/N:	1162000-2	1163000-2	1164000-2
Positive output P/N:	1162000-3	1163000-3	1164000-3

QED:

Voltage range:	ELECTRON	SKIN	1-4 MV	6-12 MV	15-25 MV
Buildup material:	Acrylic	None	Aluminum	Brass	Brass
Buildup (g/cm^2):	0.36	0.11	1.09	1.91	3.10
Energy used for directional response:	6 MeV	Co-60	Co-60	6 MV	18 MV
Detector area (mm^2):	0.64				
Active dimension (mm):	0.8 x 0.8				
Dose rate dependence:	± 1%, 75 - 250cm SSD				
Detector sensitivity (nC/Gy):	27.0				
Detector stability:	0.5%/kGy at 6MV				
Color:	GREY	BLACK	BLUE	YELLOW	RED
Negative output P/N:	1112000-2	1113000-2	1114000-2	1115000-2	1116000-2
Positive output P/N:	1112000-3	1113000-3	1114000-3	1115000-3	1116000-3





SunPoint

SUN NUCLEAR corporation

Corporate Headquarters
425A Pineda Court
Melbourne, Florida 32940
tel: + 1 321 259-6862
web: www.sunnuclear.com

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