



## SURVEY METER

# RDS-31iTx™ RDS-31iTxSD™

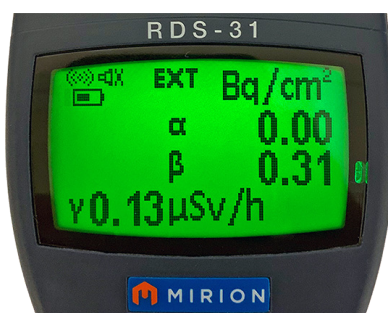
### Telemetry Survey Meter

The RDS-31iTx/iTxSD meters are Wireless Ready Telemetry Survey Meters, utilizing the WRM2 communication protocol for Wireless Remote Monitoring applications. The use of radiation telemetry equipment improves the communication between workers, technicians and supervisors.



## FEATURES

- H\*(10) ambient dose equivalent dose and dose rate measurements
- Wide range of external alpha, beta, gamma and neutron probes for direct connection with RDS-31iTx/RDS-31iTxSD meter
- New ergonomic design
- Large graphic display, configurable backlight with automatic illumination control
- High impact durable case construction, IP-67 immersion proof
- Internal memory to store measurement data
- Flexible histogram functions
- Firmware of instrument upgradable through cable link
- Operational parameters fully configurable with CSW-31 software
- Configurable shortcut functions
- WRM communication 2.4 GHz 10 mW ISM radio for European frequency range, 900 MHz 100 mW ISM radio for US frequency range



## DESCRIPTION

RDS-31iTx/iTxSD meters are small handheld, battery operated survey instruments using an energy compensated GM-tube or PIN diode as primary detector. Due to its versatile functions and durability it is suited for a wide range of applications in civil defense, industrial and laboratory use etc. It helps in making real time decisions quickly, providing real time survey data. It also reduces critical work time and most importantly enhances safety and ALARA procedures.

RDS-31iTx/iTxSD feature excellent ergonomics; light weight and easy handling, with visual and audible alarms and internal vibrator. The large graphic display with Energy Save Backlight is well visible even in sunny conditions due to the illumination control.

To extend the capabilities of the instrument, external probes from GMP-12/GMP-25/GMP-11-3 series, and CSP™ probes SAB-100, SABG-100, SG-1/2R, SX-2R and SN-S can be connected to RDS-31 meter directly through binder connector.

With SAB-100 probe, RDS-31 displays simultaneously alpha and beta contamination measurements in addition to internal detector dose equivalent rate.

**RDS-31iTx™**

- Radiation detected: gamma and X-rays, 48keV...3MeV. Alpha, beta, and neutron radiation with external probes
- **Detectors: one energy-compensated GM tube,** energy response according to ambient dose equivalent H\*(10)
- **Dose rate measurement range: 0.01 µSv/h...0.1 Sv/h or 1 µrem/h...10 rem/h**
- **Dose measurement range: 0.01 µSv...10 Sv or 1 µrem... 1000 rem**
- Resolution: three significant digits or 0.01 µSv/h on dose rate and 0.01 µSv on dose (1 µrem/h on dose rate and 1 µrem on dose)
- Calibration accuracy: ± 5%, 137Cs , calibration direction and in the calibration field, temperature +20 °C (68°F)
- Variation of the response due to photon radiation energy and angle of incidence: ( R E,A ) 71% < RE,A < 160% (48 keV...3 MeV ); ± 60°
- Complies with ANSI N42.33 and IEC 60846 standards

**RDS-31iTxSD™**

- Radiation detected: gamma and X-rays, 60keV...6MeV. Alpha, beta and neutron radiation with external probes
- **Detectors: silicon detector, one large area PIN diode,** energy response according to ambient dose equivalent H\*(10)
- **Dose rate measurement range: 10 µSv/h...10 Sv/h or 1 mem/h...1000 rem/h**
- **Dose measurement range: 10 µSv...200 Sv or 1 mrem... 20 krem**
- Resolution: three significant digits or 0.01 µSv/h on dose rate and 0.01 µSv on dose ( 1 µrem/h on dose rate and 1 µrem on dose)
- Calibration accuracy: ± 5%, 137Cs , calibration direction and in the calibration field, temperature +20 °C (68°F)

**FUNCTIONAL CHARACTERISTICS**

- Two buttons to operate the instrument
- Configurable units: Sv/(h), R/(h), with external detector Gy/(h), cps, cpm, dpm, Bq and Bq/cm<sup>2</sup>
- Flexible histogram functions (dose rate, dose, diagnostic logging depending on configuration, time stamp, optional location control for mapping and repeating room measurement analysis)
- Additional histogram analyzing capabilities on CSW-31 software
- Real time clock function
- Configurable audible, visual and vibration alarm
- RF-communication and USB-communication with adapter

**ELECTRICAL CHARACTERISTICS**

- Power supply: 2 AA size batteries (alkaline or NiMH)
- Contacts for external power and charging of NiMH battery (charging conditions +5... +35°C)
- Operation time with fresh alkaline batteries more than 4 months at background radiation at +23°C, 8 h use/24h
- Operation time with fully charged NiMH batteries more than 1 month at background radiation at +23°C, 8 h use/24h. At higher/lower temperatures the operation will be shorter.

**ENVIRONMENTAL CHARACTERISTICS**

- -25°C...+60°C (-40°F to 131°F), operating temperature
- -40°C...+70°C (-40°F to 158°F), storage temperature
- Relative humidity: up to 85% at +35°C (95 °F)
- Fulfills the RF-immunity levels of applicable standard

**MECHANICAL CHARACTERISTICS**

- Case high impact durable plastics reinforced with glass fibre
- Ergonomic design, rubber grip and cushion around the case
- Enclosure class IP67 (IEC 60529), water proof including battery compartment
- Dimensions: 100 x 67 x 33 mm (3.93 x 2.63 x 1.29 in)
- Wight: 175 g without batteries (0.385 lb), 220 g with batteries (0.485 lb)
- Wrist/neck strap
- Belt clip

**OPTIONS**

- Electrical cradle or mechanical cradle e.g. for easy vehicle installation
- Alarm monitor combinations for fixed/deployable applications
- Coil or straight cable for external probes

**RADIO MODULE**

- 2.4 GHz ISM DSSS Transmitter
- Default transmit power: 10 mW
- FCC ID: OUR-XBEEPRO
- IC: 4214A XBEEPRO
- 900 MHz ISM FHSS Transmitter
- Transmit power: 100 mW
- FCC ID: MCQ-XBEEEXSC
- IC: 1846A XBEEEXSC

