

RD8000™

UNIVERSAL PRECISION CABLE AND PIPE LOCATOR



RD8000™ – delivering fast, accurate, reliable and repeatable locate data.

The RD8000PDL and PXL are powerful multifunctional pipe and cable locators designed for use across the pipe and cable location industry. With several unique features, the RD8000 delivers speed, accuracy and reliability, yet remains a cost-effective solution for any application. Designed with the latest digital architecture and software, RD8000 delivers a highly accurate, controllable and reliable locate solution to service any industry, anywhere in the world.

ERGONOMICS

The RD8000 is ergonomically designed to deliver a superior performing locator that provides the user with a light weight, energy efficient and exceptionally well balanced tool. At only 4lbs (1.9kg), the RD8000 is comfortable for extended periods

of use. Despite its weight and form, the RD8000 retains the environmental durability associated with an IP54 rating, meaning you can operate it in almost any environment.

The locator and transmitter both feature large, high contrast, backlit LCD screens that provide the user with clear information in any light conditions. The intuitive and responsive user interface has easily identifiable icons that are consistent across the locator and transmitter range, ensuring straightforward operation.

CENTROS™

All RD8000 units are Centros™ enabled. Centros is a measurement engine based on more than 30 years of continuous development, combining new and innovative algorithms with established software on a high-performance processor core. Centros improves location accuracy and repeatability and delivers timely responsiveness in the field.



ERGONOMIC DESIGN

Light weight, with high contrast LCD display providing clear information in any light condition.



CENTROS

Improves the accuracy and repeatability of measurements and delivers unprecedented responsiveness in the field.

ILOC™

Save time by remotely controlling the transmitter using an advanced long range Bluetooth® link.

SURVEYCERT™

Share RD8000 data with PC or PDA applications for reporting, audit and analysis.



TRUDEPTH™

Indicates depth when the locator is oriented correctly above the target for the most accurate reading.



DYNAMIC OVERLOAD PROTECTION

Allows use of locator in areas where excessive signals are present.



ECAL™

Validate your RD8000 against its original factory calibration using Centros™ Manager on your own PC.

ILOC™

iLOC™ is an advanced long range Bluetooth® link between the RD8000 locator and transmitter that helps save the operator time and effort. iLOC allows the operator to control the transmitter remotely using a number of unique features. With iLOC you can spend less time walking and more time locating. iLOC operates at distances up to 300 meters (328 yards) line of sight providing an operator with a fast and unique means of conducting a survey.

iLOC applications supported are:

- **SideStep™** – enables an operator to move the transmitter frequency slightly above the selected frequency enabling locates in areas prone to interference or where multiple operators are locating.
- **Frequency Select** – choose an active frequency on the RD8000 and synchronously change the transmitter frequency to match.
- **Power Management** – an operator can adjust the output power of the transmitter to optimize output signal, leading to efficient use of transmitter batteries.
- **Transmitter remote sleep/wake** – enter standby mode to prolong battery life. Conveniently wake the transmitter with a simple key press on the locator. Transmitter can be set to standby mode each time passive location is carried out.

SURVEYCERT™

SurveyCERT™ gives the operator the tools to pass survey information to third-party applications for audit, analysis and reporting. With the RD8000, the operator can store and review up to 1000 locate records. Upload this information to a PDA or PC using the RD8000 Bluetooth® connection and you can instantly view the data using the SurveyCERT graph program. If the PC/PDA has a GPS receiver, SurveyCERT will automatically add the timestamp and position to the record. Built for interoperability, SurveyCERT data is compatible with commercial Geographical Information System (GIS) package.

ECAL™

eCAL™ is a novel Radiodetection technique that allows the operator to validate the original factory calibration of the RD8000. This means the operator has confidence that the locator continues to meet its factory calibration. eCAL can issue and print a validation certificate without needing to return the RD8000 to a service center.

TRUDEPTH™

TruDepth gives the operator the confidence that the depth reading is accurate by only indicating a locate depth when the locator is correctly oriented directly above the pipe/cable.

High contrast LCD with auto-backlight operates from -4 to +140°F (-20 to +60°C)

Splash-proof keypad

Intuitive on-screen menus make the RD8000 easy to setup and provide easy access to advanced features



Accessory connections

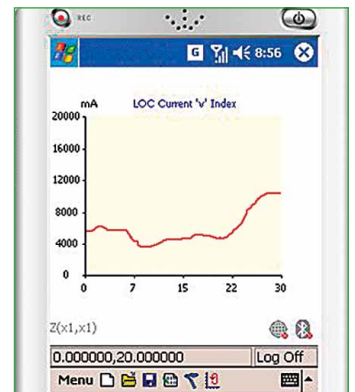
Headphone connection



High visibility reflective safety arrows

Powered by 2 x NiMH or alkaline LR20 (D-Cell) batteries, or optional rechargeable battery pack

SurveyCERT™



High contrast LCD with auto-backlight operates from -4 to +140°F (-20 to +60°C)

iLOC™

Splash-proof keypad

Stored data from RD8000 transferred by Bluetooth® may be displayed on a PC or PDA using Radiodetection's SurveyCERT™ application

Ergonomic, robust ABS shock resistant and water resistant plastic case ensures reliable use in hostile environments

Powered by 8 x NiMH or alkaline LR20 (D-Cell) batteries, or optional rechargeable battery pack

Ergonomic robust ABS case

Base tray for accessories



PEAK/NUL MODE

Simultaneous screen view with proportional arrows enables swift identification of magnetic field distortion due to ground effects or nearby utilities.



COMPASS

Visually follow the target cable or pipe orientation with the dynamic line indicator.

PASSIVE AVOIDANCE

Rapidly survey an area using power and radio signals simultaneously.

CD

Current direction arrows allow identification of target utility, eliminating faulty trails on parallel conductors.

SIDESTEP™

Lets the operator adjust the transmitter frequency to avoid unwanted interference.

DYNAMIC OVERLOAD PROTECTION

Dynamic Overload Protection extends the RD8000 operation into areas where other products fail. In electrically noisy environments, particularly in areas where very large signals are present, it automatically filters out unwanted signals allowing the operator to work effectively in areas such as power substations and overhead railway HV cables.

PEAK/NUL MODE

Peak/Null Mode is a tool to identify the effects of field distortion due to ground conditions or nearby utilities. Simultaneous display of Peak bar graph response and proportional Null arrows allow a quick assessment of locate conditions.

STRIKEALERT™

StrikeAlert reduces the risk of accidents by detecting shallow power cables and alerting the operator with an audio warning.

PASSIVE AVOIDANCE

Passive Avoidance allows the operator to survey the ground quickly using simultaneous detection of Power and Radio signals carried on underground pipes or cables. The RD8000 provides real audio to differentiate the relative proportions of Power and Radio signals present.

COMPASS

Compass provides the operator with a visual indication of the target cable or pipes direction. With this feature, the operator can easily follow the target line and then position the locator correctly to maximize depth accuracy.

FAULT FIND

Fault Find is a technique that enables an operator to locate a cable fault using an A-frame attached to the Locator. On-screen arrows help show the fault's direction and help the operator locate the fault accurately to within 39" (1m).

CD (CURRENT DIRECTION)

A method of identifying a target cable amongst a number of parallel cables using CD direction arrows. With CD the operator can locate a target quickly and eliminate wasted time following faulty trails.

The RD8000 represents the latest in electromagnetic locator technology. Designed to meet our customers' needs, the RD8000 provides a highly controllable, intuitive, cost-effective and reliable solution for any application, building on the reputation that Radiodetection has for supplying highly accurate, reliable and robust location products.

RD8000PXL

The RD8000PXL is the industry standard high performance cable and pipe locator. It has a broad range of active, passive and sonde frequencies as well as a number of unique user features supplied as standard.

RD8000PDL

Radiodetection's most advanced cable and pipe locator delivers a broader range of frequencies and sophisticated fault-finding capabilities. It has all the features of the RD8000PXL and a larger range of active and passive frequencies (including CATV and CPS) plus Current Direction (CD), and Fault Find (FF) modes.

Additional features

- Power, Radio, CATV and CPS passive modes
- 50Hz to 200kHz active frequency bandwidth
- Single antenna mode
- Peak Mode
- Null Mode
- Peak/Null Mode
- TruDepth™
- Current Measurement
- Real sound

User configurable features

- Selectable 50/60Hz
- Selectable metric/imperial
- Selectable language
- Selectable battery type
- Selectable frequency and function set
- Selectable antennae modes
- Settings saved on power down

Support Features

- USB port for upgrades using Centros™ Manager
- Online warranty registration for software and feature upgrades
- Compatible with RD4000 accessories
- High visibility reflective labels



RD8000 product features comparison table

MODEL NO.	RD8000PXL	RD8000PDL
Passive frequencies:		
Power/Radio	✓	✓
CATV / CPS		✓
Active frequencies:		
ELF (98/128Hz)		✓
570Hz		✓
577Hz	✓	✓
512Hz	✓	✓
640Hz	✓	✓
760Hz		✓
870Hz	✓	✓
920Hz		✓
940Hz	✓	✓
8kHz	✓	✓
9.8kHz		✓
33kHz	✓	✓
65kHz	✓	✓
83kHz	✓	✓
131kHz	✓	✓
200kHz	✓	✓
CD pairs:		
256Hz		✓
285Hz		✓
320Hz		✓
380Hz		✓
460Hz		✓
Sonde frequencies:		
512Hz	✓	✓
640Hz	✓	✓
8kHz	✓	✓
33kHz	✓	✓
Peak Mode	✓	✓
Null Mode	✓	✓
Peak/Null Mode	✓	✓
Single Mode	✓	✓
Fault Find CD & 8K		✓
Current Direction (CD)		✓
Centros™	✓	✓
Compass	✓	✓
SurveyCERT™	✓	✓
TruDepth™	✓	✓
Dynamic overload protection	✓	✓
StrikeAlert™	✓	✓
Passive Avoidance		✓
Depth on Power		✓
eCAL™	✓	✓
iLOC™	RD8000PXLB	RD8000PDLB

RANGE OF TRANSMITTERS

1 Watt, 3 Watt and 10 Watt power ratings and features suitable for a broad range of applications.



POWER MANAGEMENT

The operator can control transmitter output power remotely using iLOC™.



DIGITAL DESIGN

Fully digital platform provides the transmitters with unparalleled flexibility of power, frequency and control.

Radiodetection Transmitters

Based on a fully digital platform, the new family of Radiodetection transmitters support the entire range of Radiodetection RD7000+ and RD8000 cable and pipe locators.

The Tx-1 is a low power transmitter. The Tx-3 has a higher power and induction capability as well as Fault Find. The Tx-10 has the highest power capability with both Fault Find and CD modes as standard.

All models feature a three-stage phase sensitive amplifier that delivers a ground-impedance compensated, constant current across its entire bandwidth in either direct connect, clamp or inductive mode. The transmitters use less power and are ergonomically designed to deliver superior performance in a new light-weight, well-balanced case.

The transmitters weigh in at just 6lb (less than 2.9kg) yet each is IP54 rated to cope with demanding environmental conditions. Each model has a removable accessory tray and a weatherproof battery compartment. A large, high contrast, backlit LCD screen provides the user with clear information. The interface is intuitive and responsive, allowing the operator to access any feature with ease.

SideStep^{auto}™: allows the transmitter to calculate the optimum frequency based on ground impedance. The transmitter uses this information to optimize the active frequency. SideStep^{auto} helps to improve locate accuracy and extends battery life.

All models are compatible with the complete range of RD7000+ and RD8000 frequencies in both inductive and direct connect modes. The transmitters use 8 D-cell batteries and can be powered from a vehicle using a 12V cable plug (it is recommended that an approved Radiodetection isolation transformer is used).

As an additional feature, each model has a multimeter function providing measurement of output voltage, line voltage, current, impedance and power.

To support the extended RD8000 iLOC feature set, the Tx-3 and Tx-10 can be ordered with integrated iLOC.



Transmitter features

- Three power versions: 1 Watt, 3 Watt and 10 Watt
- 8KFF – locates faults from short circuit up to 2M Ω
- CDFF – for long distance fault finding
- 5 CD paired low frequencies
- Current delivered at 30V or high voltage mode (90V for high impedance operation)
- The transmitters have 256Hz to 200kHz active frequency range
- Selectable modes support RD7000+ and RD8000 specific model locator frequency ranges
- 8 induction frequencies
- iLOC™ (on Tx-3B and Tx-10B only)
- SideStepauto™
- Transient overvoltage protection
- Multimeter function
- 8 D-cell battery cassette (rechargeable battery pack option available)
- Accessory tray (for ground stake, direct connect leads and earth reel)
- Plug and play accessories (compatible with RD4000 transmitter accessories)
- External 12V DC operation (using Radiodetection isolation transformer)
- Click-touch splash-proof sealed keypad
- High contrast LCD



MODEL NO.	10/RDTX1	10/RDTX3	10/RDTX3B	10/RDTX10	10/RDTX10B
Power (Watt)	1	3	3	10	10
iLOC™			✓		✓
Active frequencies	15	15	15	15	15
Induction frequencies	8	8	8	8	8
Induction field strength	0.7	0.8	0.8	1	1
8KFF		✓	✓	✓	✓
CD				✓	✓
Frequency mode	Manual	Manual	iLOC	Manual	iLOC
Standby power mode			✓		✓



ROBUST

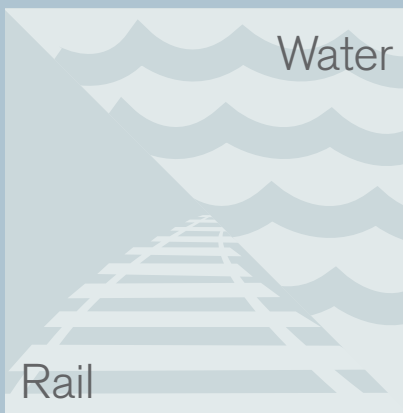
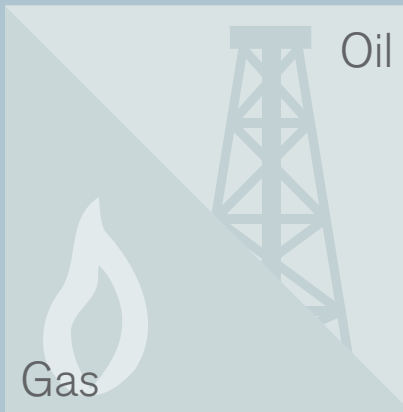
Constant current delivered from 256Hz to 200kHz meets the highest demands of reliability and performance.



OPTIONAL TRANSMITTER RECHARGEABLE BATTERY PACK KIT

A convenient and cost effective alternative to alkaline batteries.

An RD8000 to
address any utility...



TECHNICAL SPECIFICATIONS FOR LOCATOR AND TRANSMITTER	
Sensitivity	5μA at 1 meter (33kHz)
Dynamic range	140dB rms/√Hz
Selectivity	120dB/Hz
Depth accuracy [□]	Line: ± 5% tolerance 4" (0.1m) to 10ft (3m) Sonde: ± 5% tolerance 4" (0.1m) to 23ft (7m)
Maximum Depth*	Line: 20ft (6m) Sonde: 50ft (15m)
Locate accuracy	± 5%
CD Fault-Finding (CDFF)	5 CD pairs
Fault-Finding (FF)	Diagnose cable sheath faults from short circuit to 2MΩ using the A-frame
Batteries	Locator: 2 x D-cells (LR20) Transmitter: 8 x D-cells (LR20)
Battery life	Locator: 30 hours intermittent Transmitter: use dependent on signal conditions typically 15 hours
Warranty	36 Months upon registration
Dynamic overload protection	30dB (automatic)
Compliance / Approvals	FCC, RSS 310 RoHS, Weee, CE, Bluetooth®
Weight	Transmitter: 6lb (2.84kg) (including batteries) 9lb (4.2kg) (including accessories) Locator: 4lb (1.87kg) (including batteries)
Environment	IP54

[□] In good conditions. *RD8000 will locate to greater depths but with reduced accuracy.

Accessories



2" or 4" locator clamp

2" or 4" transmitter clamp

Submersible DD Antenna



CD transmitter clamp

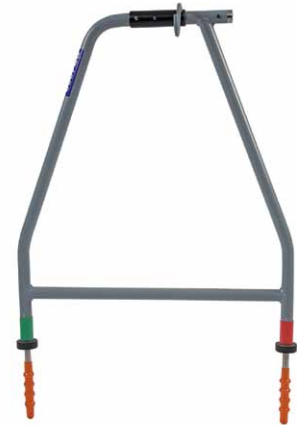
CD locator clamp



Soft carry bag



Hard case



A-frame



Transmitter rechargeable battery pack



Locator rechargeable battery pack



Headphones

Tx-121 Isolation Transformer

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The following are trademarks of Radiodetection: iLOC™, TruDepth™, SideStep™, SideStepauto™, SurveyCERT™, RD7000™, RD8000™, Centros™, eCAL™.

The Design of the RD7000+, RD8000 and transmitters has been registered. The Design of the 4 chevrons has been registered.

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RD8000

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CABLE AND PIPE LOCATOR



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