RADIODETECTION®

RD8100®

Precision locators – optimum precision for damage prevention



SPX®

Since Radiodetection launched the first commercial, twin antenna, cable and pipe locators over 40 years ago, we have pioneered many technologies that are used widely in the location industry today. Behind developments such as depth measurement, Strike*Alert*® and Current Direction® is a drive to protect utilities from damage, making excavation easier and safer.





RD8100, our most advanced precision locator range, is built on this pedigree for performance, quality and durability. Containing a unique arrangement of 5 antennas, it allows you to choose the optimum level of precision for the job in hand. Integrated GPS and usage-logging options automatically generate data for customer reports, or in-house quality and safety audits to promote best working practices.

High contrast screen provides clarity even in bright sunlight

Simultaneous display of depth and current gives more confidence you are following the target line

Light weight and ergonomic design for comfortable use

Custom Frequencies

Program up to 5 extra frequencies to customize the RD8100 to signals found on your network

High visibility reflective design helps protect operators and equipment

Survey Measurements with Bluetooth® Connectivity

Store up to 1000 records and send wirelessly to a mobile device or PC using Bluetooth

Optional integrated GPS adds positional data without requiring an external device



Built for on-site use – IP65

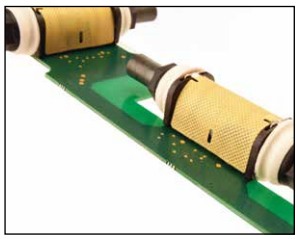
Shock resistant, ingress protected casing protects against knocks, drops, water and dust

Locate over longer distances

90V signal output and automatic impedance matching



iLOC™



Precision by design

A unique arrangement of five custom manufactured, precision ground antennas deliver locate accuracy and repeatability

4 kHz frequency with Current Direction for locating and tracing higher impedance cables over longer distances

Base tray for accessories

3 YEAR WARRANTY ON REGISTRATION AND A GLOBAL SERVICE NETWORK PROVIDE PEACE OF MIND

Upgrade to get more from your locator system:



Li-Ion Battery Pack

Lithium-Ion rechargeable battery options for both locator and transmitter provide extended runtime with reduced running costs.



GPS and Usage-Logging

Integrated GPS and automatic usage-logging allow managers to review locate history to ensure compliance with best practice.



iLOC

Save time on site by controlling your transmitter from distances of up to 1400 feet / 450 meters.

Simultaneous depth and current readout

Consistency of depth and current measurements gives confidence the correct line is being followed.



Dynamic Overload Protection

Filters out interference, enabling use in electrically noisy environments such as near substations or overhead power lines.



SideStep™ interference evasion

Adjusts frequency slightly enabling locates in areas prone to interference or where more than one operator is working.

Responsive by design

Sophisticated circuitry enables operators to detect and react to the weak signals associated with difficult to locate utilities.

Making complex locates simpler

With utility infrastructures becoming more complex, locate professionals require more powerful tools to simplify the task of distinguishing between and tracing different utilities.

CD (Current Direction)

Identify your target amongst a number of parallel utilities by applying a specialized CD signal from the Tx-10 transmitter. CD arrows displayed on the locator confirm you are tracing your target.

Trace high-impedance utilities with 4 kHz

The 4 kHz locate frequency enables lines such as twisted pair telecoms or street lighting to be traced over longer distances. Since such utilities are often found in areas of dense infrastructure, you can combine 4 kHz with CD to improve trace accuracy.

Use Power Filters™ to pinpoint and discriminate between power cables

When a signal transmitter can't be connected, tracing individual power lines through dense networks can be a real challenge. Conflicting or powerful signals confuse or combine to create a wash of signal.

A single key press uses the harmonic properties of power signals to establish if a signal comes from one source, or from multiple cables which you can then trace and mark.

Speed combined with accuracy – Peak+ Mode

Peak+ mode allows you to add either Guidance or Null locating to the accuracy of Peak mode.

- Adding Guidance gets you to the Peak position faster.
- Adding Null to Peak lets you check for the distortion caused by other utilities, spurs or interference.





Supporting your business

Every locating operation needs to meet the continuing challenges of delivering on-time, high quality work and increasing value to customers.

Automatic usage-logging with GPS positioning

When equipped with GPS, RD8100 locators automatically capture key locate parameters every second, providing a comprehensive picture of individual locates and allowing you to assess usage patterns over extended periods.

The data generated can be used to ensure adherence to best-practice, or to identify training needs before poor work habits develop.



Additionally, the information can be used for internal audits or shared with partners or clients to evidence task completion, or compliance to service requirements.

Usage data can be exported in multiple file formats – for example KML for Google Maps to confirm where and when work was performed.

eCert™ – Remote calibration without downtime

Verify and certify the calibration of your locator over the internet using the RD Manager™ PC software package without returning the unit to a service center. Have confidence that the RD8100 is ready for action whenever you are.

CALSafe™

Choose to automatically enforce maintenance or lease schedules by providing a 30 day countdown before the calibration certificate expires.

Support when you need it

The RD8100 is backed with an industry leading 3 year warranty on registration. Our global sales and service network delivers comprehensive technical support and training tailored to your needs.



Operator confidence on-site

Enhanced self-test

The integrity of the measurement system can be confirmed on-site. Self-test applies signals to the locating circuitry as well as checking display and power functions.



Strike*Alert*™ in active and passive locating modes

Visual and audio warnings of shallow cables reduces the risk of accidents.



TruDepth™

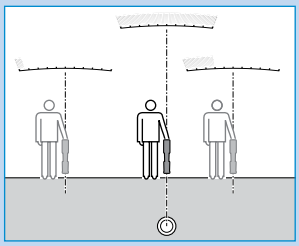
As depth readings are only given when the RD8100 is correctly oriented, you can be confident in the result.

High sensitivity

Sophisticated circuitry enables operators to detect and react to the weak signals associated with difficult to locate utilities.

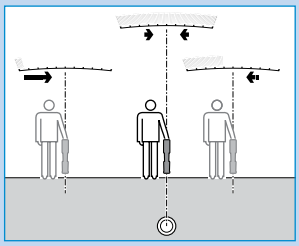
The RD8100 offers a choice of locate modes, each of which is optimized for specific tasks

Peak
Displays the strongest response when directly above a cable. Depth and current measurements are also shown.



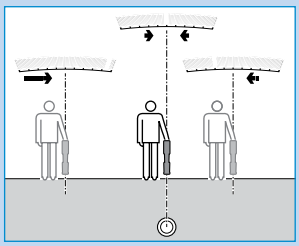
Use for: Precise locating prior to and during excavation. Many professionals have trained in this mode and appreciate the simplicity of the display.

Peak+
Add Guidance or Null modes to Peak and alternate between them.



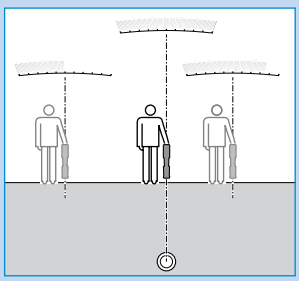
Use for: Finding Peak response quickly while checking for the presence of multiple lines or other features which may require extra vigilance.

Guidance
Proportional guidance arrows and differentiated audio tones indicate if utility is to left or right of user.



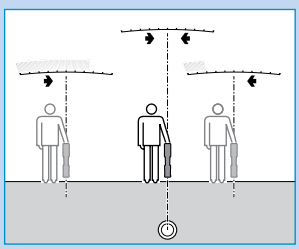
Use for: Checking general direction of utilities as part of a pre-locating sweep. Better for congested areas than null mode alone.

Broad Peak
Operating similarly to Peak mode but more suited to locating weaker signals.



Use for: Locating deep lines, or when weak signal levels or interference makes conventional peak locating difficult.

Null
Arrows and audio signals indicate where the cable is relative to the operator. A null response is displayed above the cable.



Use for: Long distance marking of single utilities in non-congested areas. Audio response allows users to rely on sound rather than the screen.

Getting more from your RD8100 system...

Customize the locator to your network frequencies

Up to 5 additional frequencies can be programmed into all RD8100 locators to match it to the signals found on your target telecoms networks.

Accurate surveying with integrated or external GPS

Save up to 1,000 survey measurements, capturing utility depth, and send to a mobile device using Bluetooth. Add positional data with the integrated GPS option, or combine with external GNSS device using the wireless Bluetooth link to get the accuracy that you need.

Fault Find

Combine the RD8100 locator with an accessory A-frame to identify and pinpoint insulation sheath faults to within 4" (10cm).



RD Manager PC software

Set-up, calibrate and update your locator from a PC. Download usage logging and survey measurement data for analysis.

Passive Avoidance

Rapidly check an area before excavation using simultaneous detection of the Passive Power and Radio signals carried on underground cables or pipes.



90V Transmitter output

More locate signal on high impedance target lines – detect deeper and further.

Multimeter function

Assess the target utility using your transmitter – quickly measure line voltage, current and impedance.

Choose the optimum mode for your locate

Our unique arrangement of 5 antennas allows you to optimize your RD8100 for different tasks. Each mode uses a different combination of antennas. At the heart of each of our locating antennas is a custom manufactured, precision-ground ferrite to ensure the accuracy and precision of our measurements.

iLOC

iLOC is an advanced Bluetooth link between the RD8100 locator and Bluetooth enabled transmitter, which allows you to control the locate signal's power and frequency from up to 1400' / 450m away. Spend less time walking and more time locating.

Accessories to optimize the system to your needs

Whether you are locating telephone cables in a bundle or underwater power cables, Radiodetection's accessory range extends the precision locate capabilities of the RD8100 and transmitters to your application.

Visit **www.radiodetection.com/accessories** for more information.

RD8100 range options:

RD8100 locators:	PXL	PXLG	PDL	PDLG	PTL	PTLG
Locate Frequencies	13	13	18	18	22	22
Sonde Frequencies	4	4	4	4	4	4
Passive Modes	2	2	5	5	5	5
On-board GPS		✔		✔		✔
Power Filters	✔	✔	✔	✔	✔	✔
Usage-Logging		✔		✔		✔
CALSafe™		■		■		■
4 kHz	✔	✔	4k+CD	4k+CD	4k+CD	4k+CD
Current Direction			✔	✔	✔	✔
Fault Find			✔	✔	✔	✔
Depth in Power			✔	✔	✔	✔
Passive Avoidance			✔	✔	✔	✔
iLOC	✔	✔	✔	✔	✔	✔
Lithium-Ion Battery	●	●	●	●	●	●
3 year warranty on registration*	✔	✔	✔	✔	✔	✔

Transmitters	Tx-1	Tx-5	Tx-5B	Tx-10	Tx-10B
Max. Output Power	1W	5W	5W	10W	10W
Active Frequencies	16	16	16	16	36
Induction frequencies	8	8	8	8	8
Current Direction Frequencies				6	14
iLOC remote control			✔		✔
Fault Find		✔	✔	✔	✔
Induction field strength	0.7	0.85	0.85	1	1
Eco Mode		■	■	■	■
Lithium-Ion Battery	●	●	●	●	●
3 year warranty on registration*	✔	✔	✔	✔	✔

*Locators and transmitters only. Does not include battery packs and accessories.

Other features described are standard on the RD8100 Locators and Tx transmitters unless otherwise noted.

✔ Available, enabled by default. ● Option. ■ Available, disabled by default.

Download the full Product Specifications at **www.radiodetection.com/RD8100**