

RD8100[™] Locator Specification





RD8100 Locator Specification

1. Product Summary

1.1 Product Descriptions:	Multi-purpose Precision Locator
	Cable and Pipe Locator
	Locate System Receiver
	Multi-function Precision Locator
1.2 Intended Use:	Locating the position / path of buried pipes and cables
	Detecting and pinpointing insulation faults on buried pipes and cables
	Creating survey records of buried pipes and cable locations
1.3 Standard Equipment:	Locator
	Quickstart guide
	Mini USB 2.0 compliant data cable

2. Performance

2.1 Sensitivity:	6E-15 Tesla 5μA at 1 meter (33kHz)			
2.2 Dynamic range:	l0dB rms/√Hz			
2.3 Selectivity:	120dB/Hz			
2.4 Depth measurement precision ¹ :	± 3%			
2.5 Locate accuracy:	± 5% of depth			
2.6 Active Locate filter bandwidth:	± 3 Hz, 0 < 1kHz			
2.7 Start-up time:	± 10 Hz, ≥ 1kHz			
2.8 Maximum depth readout ² :	Metric: Cable / Pipe: 30m Sonde: 19.5m Imperial: Cable / Pipe: 98' Sonde: 64'			

3. Locate Functions

3.1 Active Locate Modes:	Five: • Peak • Peak+ [™] (choice of combined Peak & Guidance or Peak & Null) • Guidance • Broad Peak [™] • Null
3.2 Gain control	Guidance Mode: Automatic Other modes: Manual gain using "+" or "-" with one touch to return to center (50% of Full Scale)
3.3 Custom locate frequencies	Up to 5 additional frequencies in the range 50Hz to 1kHz at 1Hz resolution

3.4 Active locate frequencies:

Up to 24:

RD8100 MODEL	PXL	PXLG	PDL	PDLG	PTL	PTLO
Custom frequencies	5	5	5	5	5	5
ELF (98/128Hz)			•	•	•	•
512Hz			•	•	•	•
570Hz			•	•	•	•
577Hz	٠	•	•	•	٠	•
640Hz	٠	•	•	•	٠	•
760Hz			•	•	•	•
870Hz	•	•	•	•	•	•
920Hz			•	•		
940Hz	•	•	•	•	•	•
1090Hz					•	•
1450Hz					٠	•
4kHz (4096Hz)	٠	•				
8kHz (8192Hz)	٠	•	•	٠	٠	•
8440Hz					•	•
9.8kHz (9820Hz)			•	•	•	•
33kHz (32768Hz)	٠	•	•	•	•	•
65kHz (65536Hz)	٠	•	•	•	•	•
82kHz (82000Hz)					•	•
83kHz (83077Hz)	٠	•	•	•	•	•
131kHz (131072Hz)	•	•	•	•	•	•
200kHz (200000Hz)	•	•	•	•	٠	•
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz)						
All models: Four • 512Hz • 640Hz			s to 10cm / 4	" accuracy us	ing the acces	sory
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheat			s to 10cm / 4 PDL	" accuracy us PDLG	ing the acces PTL	
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheat A-Frame and a compati	ible transmitt	er				
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheat A-Frame and a compate RD8100 MODEL	ible transmitt	er				
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheat A-Frame and a compate RD8100 MODEL 8kHz Fault Find	ible transmitt PXL	PXLG	PDL •	PDLG •	PTL •	PTL
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheats A-Frame and a compate RD8100 MODEL 8kHz Fault Find CD Fault Find	ible transmitt PXL	PXLG	PDL •	PDLG •	PTL •	PTL • • nsmitter
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheat A-Frame and a compate RD8100 MODEL 8kHz Fault Find CD Fault Find Confirm operator is follow RD8100 MODEL	ible transmitt PXL owing the tar	er PXLG get pipe or cal	PDL • • ble with CD a	PDLG • • • •	PTL • • ompatible tra	PTL • nsmitter PTL
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheats A-Frame and a compate RD8100 MODEL 8kHz Fault Find CD Fault Find Confirm operator is follow RD8100 MODEL 219.9Hz / 439.8Hz	ible transmitt PXL owing the tar	er PXLG get pipe or cal	PDL • ole with CD a PDL	PDLG • rrows and a c PDLG	PTL • ompatible tra PTL •	PTL • • nsmitter
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheat A-Frame and a compating RD8100 MODEL 8kHz Fault Find CD Fault Find CD Fault Find Confirm operator is follow RD8100 MODEL 219.9Hz / 439.8Hz 256Hz / 512Hz	ible transmitt PXL owing the tar	er PXLG get pipe or cal	PDL • • ble with CD a	PDLG • • • •	PTL • ompatible tra PTL	PTL • nsmitter PTL
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheats A-Frame and a compate RD8100 MODEL 8kHz Fault Find CD Fault Find CD Fault Find Confirm operator is follow RD8100 MODEL 219.9Hz / 439.8Hz 256Hz / 512Hz 280Hz / 560Hz	ible transmitt PXL owing the tar	er PXLG get pipe or cal	PDL • ole with CD a PDL	PDLG • rrows and a c PDLG	PTL • ompatible tra PTL •	PTL • nsmitter PTL
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheats A-Frame and a compate RD8100 MODEL 8kHz Fault Find CD Fault Find CD Fault Find CD Fault Find 219.9Hz / 439.8Hz 256Hz / 512Hz 280Hz / 560Hz 285Hz / 570Hz	ible transmitt PXL owing the tar	er PXLG get pipe or cal	PDL	PDLG • rrows and a c PDLG	PTL • ompatible tra PTL •	PTL • nsmitter PTL
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheat <i>A-Frame and a compate</i> RD8100 MODEL 8kHz Fault Find CD Fault Find CD Fault Find CD Fault Find Confirm operator is follow RD8100 MODEL 219.9Hz / 439.8Hz 256Hz / 512Hz 280Hz / 560Hz 285Hz / 570Hz 320Hz / 640Hz	ible transmitt PXL owing the tar	er PXLG get pipe or cal	PDL • ole with CD a PDL	PDLG • rrows and a c PDLG •	PTL Ompatible trained PTL Ompatible trained PTL	PTLI o nsmitter PTLI o o o o
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheats A-Frame and a compate RD8100 MODEL 8kHz Fault Find CD Fault Find CD Fault Find Confirm operator is follow RD8100 MODEL 219.9Hz / 439.8Hz 256Hz / 512Hz 280Hz / 560Hz 285Hz / 570Hz 320Hz / 640Hz 380Hz / 760Hz	ible transmitt PXL owing the tar	er PXLG get pipe or cal	PDL	PDLG • rrows and a c PDLG •	PTL Ompatible trained PTL Ompatible trained PTL	PTL o nsmitter PTL o o o o
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheats A-Frame and a compate RD8100 MODEL 8kHz Fault Find CD Fault Find CD Fault Find CD Fault Find CD Fault Find 219.9Hz / 439.8Hz 256Hz / 512Hz 280Hz / 560Hz 285Hz / 570Hz 320Hz / 640Hz 380Hz / 760Hz 460Hz / 920Hz	ible transmitt PXL owing the tar	er PXLG get pipe or cal	PDL	PDLG • rrows and a c PDLG •	PTL Ompatible trained PTL Ompatible trained PTL PTL PTL PTL PTL PTL PTL PTL	PTLI o nsmitter PTLI o o o o
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheats <i>A-Frame and a compate</i> RD8100 MODEL 8kHz Fault Find CD Fault Find CD Fault Find CD Fault Find Confirm operator is follow RD8100 MODEL 219.9Hz / 439.8Hz 256Hz / 512Hz 280Hz / 560Hz 285Hz / 570Hz 320Hz / 640Hz 380Hz / 760Hz 460Hz / 920Hz 680Hz / 340Hz	ible transmitt PXL owing the tar	er PXLG get pipe or cal	PDL	PDLG • rrows and a c PDLG •	PTL Ompatible trained PTL Ompatible trained PTL	PTL nsmitter PTL
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheats A-Frame and a compate RD8100 MODEL 8kHz Fault Find CD Fault Find CD Fault Find Confirm operator is follow RD8100 MODEL 219.9Hz / 439.8Hz 256Hz / 512Hz 280Hz / 560Hz 285Hz / 570Hz 320Hz / 640Hz 380Hz / 760Hz 460Hz / 920Hz 680Hz / 340Hz 800Hz / 400Hz	ible transmitt PXL owing the tar	er PXLG get pipe or cal	PDL	PDLG • rrows and a c PDLG •	PTL Ompatible trained PTL Ompatible trained PTL PTL PTL PTL PTL PTL PTL PTL	PTL nsmitter PTL
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheats A-Frame and a compate RD8100 MODEL 8kHz Fault Find CD Fault Find CD Fault Find CD Fault Find CD Fault Find 219.9Hz / 439.8Hz 256Hz / 512Hz 280Hz / 560Hz 285Hz / 570Hz 320Hz / 640Hz 380Hz / 760Hz 680Hz / 340Hz 800Hz / 400Hz 920Hz / 460Hz	ible transmitt PXL owing the tar	er PXLG get pipe or cal	PDL	PDLG • rrows and a c PDLG •	PTL Ompatible trained PTL Omega O	PTL nsmitter PTL
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheats A-Frame and a compate RD8100 MODEL 8kHz Fault Find CD Fault Find CD Fault Find CD Fault Find Confirm operator is follow RD8100 MODEL 219.9Hz / 439.8Hz 256Hz / 512Hz 280Hz / 560Hz 285Hz / 570Hz 320Hz / 640Hz 380Hz / 760Hz 460Hz / 920Hz 680Hz / 340Hz 800Hz / 400Hz 920Hz / 460Hz 920Hz / 484Hz	ible transmitt PXL owing the tar	er PXLG get pipe or cal	PDL	PDLG • rrows and a c PDLG •	PTL Ompatible trained PTL Omega O	PTLC • nsmitter PTLC • • • • • • • • • • • • •
All models: Four • 512Hz • 640Hz • 8kHz (8192Hz) • 33kHz (32768Hz) Locate insulation sheats A-Frame and a compate RD8100 MODEL 8kHz Fault Find CD Fault Find CD Fault Find CD Fault Find CD Fault Find 219.9Hz / 439.8Hz 256Hz / 512Hz 280Hz / 560Hz 285Hz / 570Hz 320Hz / 640Hz 380Hz / 760Hz 680Hz / 340Hz 800Hz / 400Hz 920Hz / 460Hz	ible transmitt PXL owing the tar	er PXLG get pipe or cal	PDL	PDLG • rrows and a c PDLG •	PTL Ompatible trained PTL Omega O	PTLC • nsmitter PTLC • • • • • • • • • • • • •

3.7 Current Direction[™]

3.5 Sonde Frequencies:

(CD) Signal Pairs:

3.6 Fault Find:

3.8 Passive Locate Modes:	RD8100 MODEL	PXL	PXLG	PDL	PDLG	PTL	PTLG	
	Power	•	•	•	•	•	•	
	Radio	•	•	•	•	•	•	
	CPS (Cathodic Protection System)			•	•	•	•	
	CATV (Cable TV)			•	•	•	•	
	Passive Avoidance (Combined Power + Radio)			•	•	•	•	
3.9 Power Filters [™] function:	Switch out of sensitive	Power Mode	e to locate on a	iny of 5 indiv	idual mains ha	rmonic frequ	iencies:	
	HARMONIC	HARMONIC 50 Hz regions				60 Hz regions		
	Primary	Primary 50 Hz						
	3rd	1	150 Hz		180 Hz			
	5th	2	250 Hz		300 Hz			
	7th	:	350 Hz		420 Hz			
	9th	4	450 Hz		540 Hz			
	 Line or Sonde locate type Proportional left/right indication Compass: full 360° line direction indicator Accessories in use indication Accessory specific custom screen Depth and current readout (Line location) Depth readout (Sonde location) Gain level (in dB) Frequency selected Battery condition Speaker volume Operating frequency Bluetooth status GPS satellites in view (where fitted) Gorfiguration menu and submenus Software version Last calibration date Survey measurement counter Current Direction mode indicator Current Direction arrows Fault Find mode indicator Transmitter communication status StrikeAlert[*] warning Overload warning 							
3.11 Audio output tones:	Power / Passive Avoid Real Sound [™] derived fro Peak / Peak+ modes Synthesized audio tone Guidance mode:	om detected and CPS / C	electromagnet	-				
	Continuous tone when Null mode: Synthesized Audio tone of target StrikeAlert audio warr Audio feedback for men	e proportiona	al to signal stre			-	-	
3.12 Accessory locate functions:	Null mode: Synthesized Audio tone of target StrikeAlert audio warr	e proportiona ning: nu navigation to identify in o identify ind	al to signal stre n ndividual targe ividual target c	ength. Low pi t cable(s) in	tch to left of ta a bundle or ca	rget, high pi binet using s	tch to right signal	

4. Locate Function Enhancements

4.1 Strike <i>Alert</i> :	Audio and visual warning when a cable or pipe less than 30cm deep is detected. Operates in Active and Passive locating modes
4.2 Dynamic Overload Protection [™] :	40dB, automaticAutomatically manages the system gain to compensate for strong signals e.g. from mains power or substations, to enable accurate locating
4.3 Current Direction [™] (CD):	 Measures the direction of current flowing in buried pipes or cables to ensure that an operator is able to identify and follow the target utility Provides operator with arrows indicating the direction of current flowing in the located pipe or cable to confirm that they are following the target utility
4.4 iLOC [™] :	Metric:Remote transmitter control from up to 450m away³Imperial:Remote transmitter control from up to 1400' away³Control transmitter frequency, power level and SideStep
4.5 SideStep [™] :	Enables locating where other signals are interfering, and without compromising the optimum locate frequency
4.6 Simultaneous depth and current readout:	Remotely shifts the locate and transmitter frequency by several Hz, out of the bandwidth of other locate signals that may be interfering with the locate
4.7 Survey Measurements:	Both utility depth and locate signal current are displayed simultaneously, giving the operator more information to help them to follow the target utility
4.8 Fault Find:	Apply a Fault Find signal with a Tx-5 and Tx-10 transmitter, then use an accessory A-Frame to detect and pinpoint insulation faults Fault find accuracy: Metric: 100mm Imperial: 4"
4.9 4kHz locate frequency and 4kHz CD:	Designed for tracing higher impedance lines such as twisted pair telecoms or street lighting over distance Combine with Current Direction to help trace the target utility through dense or complex infrastructure
4.10 Peak+ mode:	Use the accurate Peak bargraph, and add either proportional Guidance arrows for faster locating, or Null arrows to check for the presence of distortion
4.11 Integrated GPS option:	Faster surveying using integrated GPS – no need for a separate hand-held device

5. Configurability

5.1 Option selection:	All options can be enabled or disabled on the locator or using the RD Manager PC software
5.2 Languages supported:	Fourteen: English, French, German, Dutch, Polish, Czech, Slovakian, Spanish, Portuguese, Swedish Italian, Turkish, Russian, Hungarian
5.3 Mains power network options:	50 Hz or 60 Hz
5.4 Mode selection:	All locate modes with the exception of Peak Mode can be individually enabled or disabled
5.5 Active frequency selection:	All active frequencies available can be individually enabled or disabled
5.6 Passive mode selection:	All passive modes can be individually enabled or disabled
5.7 StrikeAlert:	Enable / disable
5.8 Peak+ arrow selection:	Guidance arrows or Null arrows Selected using the locator menu or with a long press of the antenna key
5.9 GNSS ('GPS') settings:	Internal / External (connect over Bluetooth) / Off / Reset SBAS On / Off
5.10 Bluetooth:	On / Off
5.11 Data export protocols supported:	PPP / choice of 3 ASCII formats. Optionally append positional data
5.12 Time / date setting:	Correct or update locator real-time clock using the RD Manager PC software or GNSS signals
5.13 CD Reset:	Reset CD phase analysis with a single long press of the frequency key

6. Connectivity

6.1 Wireless connections:	Bluetooth class 1
6.2 iLOC [™] remote transmitter control range ³ :	Metric: Up to 450m Imperial: Up to 1400'
6.3 iLOC remote transmitter control functions:	Set transmitter frequency Set transmitter power output level Transmitter standby SideStep
6.4 Wired connections	 Mini-USB: Connect to a PC to configure and update locator, and to retrieve usage log and survey measurement data 3.5mm Stereo jack: Connect wired headphones Accessory port: Connect Radiodetection accessories

7. Data capabilities and GNSS ('GPS')

7.1 On-board GNSS ('GPS') module option:	GNSS data automatically added to Survey Measurements every time locate data is saved, and every second on usage-logging data Accurate to 3m CEP with SBAS enhancement available Links to GPS, GLONASS and Galileo networks				
		 WAAS – North America 			
	 EGNOS – Europe 				
	 MSAS – Japan 				
	 SBAS (satellite based augmentation s 	system)			
	SBAS can be enabled or disabled in loc	ator menu			
7.2 Link to external GNSS ('GPS'):	Over Bluetooth				
		d device to combine survey measurements with that device's			
	GNSS data on the external device				
7.3 External GNSS position read-in		device / PDA running the SurveyCert+ [™] app.			
to locator memory:	 Connect to an external GNSS device with the locator's survey measurement 	to read positional positioning from that device and combine It data on board the locator			
7.4 Survey measurement capacity:	Up to 1,000 data records				
	Standard data:	With Internal or External GNSS Fix:			
	Log #	GPS Mode			
	Survey Reference	GPS Date and Time			
	Antenna Mode	GPS Distance (m)			
	Depth	Latitude Angle (deg)			
	Current (mA)	Latitude Direction			
	Frequency in use (Hz)	Longitude Angle (deg)			
	Sonde/Line	Longitude Direction			
	Signal Strength (dBųV and %)	GPS Fix			
	Signal Strength (%)	Satellites in use			
	Gain Setting (dB)	Horizontal Dilution			
	Compass (deg)	Altitude Value (m)			
	Arrow readout	Altitude Units			
	CD Phase (deg)	Geoid Value (m) and Units			
	Accessory Type	DGPS Time			
	Battery level	DGPS ID			
	Volume	Time Reference			
	Overload Flag	GPS Mode			
	Usage-Logging Units:	GPS Date and Time			
	Date and Time	GPS Distance (m)			
		Latitude Angle (deg)			

7.6 Survey measurement export options:	Bluetooth – 'live,' per measurement Bluetooth – batch export USB – selectable / batch export							
7.7 Bluetooth survey measurement data protocol options:	PPP ASCII (choice of 3 formats) Optional GPS data appended							
7.8 Usage-logging and GNSS ('GPS'):	RD8100 MODEL	PXL	PXLG	PDL	PDLG	PTL	PTLG	
(473).	Usage-logging		•		•		•	
	On-board GNSS ('GPS')		•		•		•	
7.9 Usage-logging memory:	4 GB							
7.10 Usage-logging capacity:	Over 500 days, measure	d at 8 hour	s use per day					
7.11 Usage-logging capture rate:	1/ second							
7.12 Usage parameters logged:	Serial number Keys pressed				With a	With a GNSS fix:		
	Log reference and id Audio status				Latitud	le		
	Operating mode Volume				Longitude			
	Locate frequency		Menu in use			Altitude		
	Sonde/line		Battery status			GNSS mode		
	Signal strength		User warnings status			GNSS date and time		
	Gain setting		StrikeAlert status			Horizontal Dilution		
	Depth Current		Bluetooth status Fault find arrow					
	Accessory in use		Sidestep status			DGPS Time and ID Geoid Units		
	Accessory in use Antenna mode		Language			GNSS fix		
	Arrows readout		Depth units			Number of satellites		
	Compass angle		Power setting			Altitude units		
	CD phase		Compass setting			eference		
	Overload status		CD reset statu	s				
	Dynamic Overload Prote	ction	Logging Unit	s:				
	Status		Date and time					

8. Power options

8.1 Alkaline battery options:	2 × D-Cell (MN1300 / LR20) alkaline batteries (standard)				
8.2 Rechargeable battery options:		Custom Lithium-Ion (Li-Ion) battery pack 2 × D-Cell (MN1300 / LR20) Nickel Metal Hydride (NiMH) batteries			
8.3 Battery run-time (continuous)4:	Li-Ion pack: 2 × Alkaline D-Cells	35 hours 13 hours			
8.4 Battery chemistry identification:	Lithium-Ion pack: NiMH / Alkaline:	Automatic sensing Software switchable			
8.5 Charging options (Li-Ion pack):	Mains charger: Automotive charger:	100-250 Volts AC, 50/60 Hz 12-24V DC			
8.6 Charging time (Li-Ion pack):	3 hours to 80% from empty with maintenance trickle charging thereafter				

9. Physical Characteristics

9.1 Design:	Ergonomic, balanced and lightweight design for comfortable use during extended surveys
9.2 Construction:	Injection Molded ABS Plastic
9.3 Weight:	With Lithium-Ion battery pack fitted: Metric: 1.8kg Imperial: 4.0lb
	With D-cell alkaline batteries fitted: Metric: 1.9kg Imperial: 4.2lb

9.4 Ingress Protection rating:	IP65 Protected against dust ingress and jets of water5 applied from any direction
9.5 Display type:	High contrast custom made monochrome LCD
9.6 Audio options:	Built-in waterproofed speaker 3.5mm headphone socket
9.7 Operating temperature ⁶ :	Metric: -20 to 50°C Imperial: 14 to 122°F
9.8 Storage temperature:	-20 to 70°C
9.9 Unit dimensions:	Metric: 648mm × 286mm × 125mm Imperial: 25.5" × 11.3" × 4.9"
9.10 Shipping dimensions:	Metric: 700mm x 260mm × 330mm Imperial: 27.6" x 10.2" x 13"
9.11 Shipping weight (with batteries fitted):	Metric: 2.6kg Imperial: 5.7lb

10. RD Manager[™] Supporting PC Software

10.1 Operating System Compatibility:	Microsoft® Windows® XP, 7, 8, 8.1, 32 and 64-bit versions
10.2 Locator system compatibility:	Radiodetection RD8100 Precision Locators RD7000+ and RD8000 Cable, Pipe and Marker Locators
10.3 Functions:	 Locator configuration eCert[™] remote calibration certification Factory calibration certificate retrieval Usage-logging data collation and export Survey measurements data collation and export User account management CALSafe[™] maintenance schedule enforcement Product registration for extended warranty Locator software update Contact Radiodetection Book a service
10.4 Data export formats:	.kml for Google [®] Maps .csv for database and spreadsheet applications .xls / .xlsx for Microsoft [®] Excel [®]
10.5 KML data export options:	Filter usage-logging and survey measurement points on Google® maps. Select data to be tagged. Customize icon type / color, label type / color, line type / color

11. Warranty and Maintenance

11.1 Manufacturer's warranty duration:	3 years standard, on registration			
11.2 Recommended calibration and maintenance schedule:	Annual, or at the beginning / end of a lease period if earlier			
11.3 eCert remote calibration:	 Remote calibration certification using an internet connection to Radiodetection 			
	 Recommended schedule: annual, or at the beginning / end of a lease period 			
11.4 CALSafe [™] :	 Can be enabled to prevent the locator operating when beyond a defined calibration / maintenance schedule Disabled by default 			
	 30-day countdown to calibration due date 			
11.5 Enhanced Self-Test:	On-unit			
	Applies test signals to locate circuitry to confirm correct operation, as well as the typical tests for screen and DSP functions.			
	Recommended schedule: weekly, or before each use.			

11.6 Storage recommendation:	Store in a clean and dry environment.
	Ensure all terminals and connection sockets are clean, free of debris and corrosion and are undamaged
11.7 Cleaning:	Clean with a soft, moistened cloth.
	Do not use
	Abrasive materials or chemicals
	High pressure jets of water
	If using this equipment in foul water systems or other areas where biological hazards may be present, use an appropriate disinfectant.

12. Certification and Compliance

12.1	Standards:						
	Safety:	EN 61010-1:2010					
	EMC:	EN 61326-1:2013					
		EN 300 330-2 (V1.5.1)					
		EN 300 440-2 (V1.4.1)					
		EN 301 489-3 (V1.6.1)					
		EN 301 489-17 (V2.2.1)					
	Environmental:	EN 60529 1992 A2 2013					
		EN 60068-2-64:2008 Test Fh					
		ESTI EN 300 019-2-2:1999 (per table 6)					
		EN 60068-2-27:2009 (Test Ea)					
		ESTI EN 300 019-2-2:1999 (per table 6)					
12.2	European directives:	R&TTE Directive 1999/5/EC					
		Low Voltage Directive: 2006/95/EC					
		EMC Directive: 2004/108/EC					
		Declaration of conformity is available from www.radiodetection.com					
12.3	Radio:	FCC, IC					
12.4	Environmental:	WEEE compliant					
		ROHS compliant					
12.5	Manufacturing:	ISO 9001:2008					

13. Compatible Accessories

Accessory	Part description	Part number		
13.1 Lithium-Ion battery packs	Li-Ion rechargeable battery mains kit (Includes mains charger) Li-Ion rechargeable battery pack (no charger)	10/RX-MBATPACK-LION-K 10/RX-BATPACK-LION		
13.2 Lithium-Ion battery chargers	Li-Ion automotive charger Li-Ion mains charger	10/RX-ACHARGER-LION 10/RX-MCHARGER-LION		
13.3 Alkaline battery trays	2 × D Cell battery tray (MN1300 / LR20)	10/RX-2DCELL-TRAY		
13.4 Transportation and storage accessories – For combined locator and transmitter	Soft Carry Bag Wheeled Flight Case Hard Case	10/LOCATORBAG 10/RD7K8KCASE 10/RD7K8KCASE-USA		
13.5 Locator signal clamps – For identification and location of utilities	Metric:50mm Locator ClampImperial:2" Locator ClampMetric:100mm Locator ClampImperial:2" Locator ClampMetric:130mm Locator ClampImperial:5" Locator ClampCD and Current Measurement Clamp	10/RX-CLAMP-50 10/RX-CLAMP-2 10/RX-CLAMP-100 10/RX-CLAMP-4 10/RX-CLAMP-130 10/RX-CLAMP-5 10/RX-CD-CLAMP		

	Accessory	Part description						Part number
13.6	Signal stethoscopes – To locate and identify individual utilities e.g. within walls, congested areas or when cables/utilities are in close proximity to each other	High Gain Stethoscope Large Stethoscope Small Stethoscope CD Stethoscope						10/RX-STETHOSCOPE-HG 10/RX-STETHOSCOPE-L 10/RX-STETHOSCOPE-S 10/RX-CD-STETHOSCOPE
13.7	Sondes Battery powered signal transmitters for tracing or locating non-conductive utilities		Diameter		er Range		Freq	
			mm	In	m	Ft	(Hz)	
		S6 Microsonde	6	1/4	2	61⁄2	33k	10/SONDE-MICRO-33
		S9 Minisonde	9	3/8	4	13	33k	10/SONDE-MINI-33
		S13 Super Sma Sonde	13	1/2	2	61⁄2	33k	10/SONDE-S13-33
		S18 Small Sond	e 18	3/4	4	14	33k	10/SONDE-S18A-33
							33k	10/SONDE-STD-33
		Standard C-Sonde	39	1½	5	16½	8	10/SONDE-STD-8
							512	10/SONDE-STD-512
		Slim Sonde 22 7/8 3.5 111/2		11½	33k	10/SONDE-SLIM-33		
		Sewer Sonde	64	2 ½	8	26	33k	10/SONDE-SEWER-33
		Super Sonde	64	2 ½	15	50	33k	10/SONDE-SUPER-33
		Flexi Sonde	23	7/8	6	20	512	10/SONDE-BENDI-512
13.8	Submersible antennas:	640 / 512Hz Su 8kHz Submersil		10/RX-SUBANTENNA-640 10/RX-SUBANTENNA-8K				
13.9	Flexitrace™ – Use with a transmitter to trace small diameter pipes	FlexiTrace 50m / 165' FlexiTrace 80m / 260'				10/TRACE50-GB 10/TRACE80-GB		
13.10) Flexrods – Fibreglass rod used for	Length Diameter						
	propelling Radiodetection sondes through pipes to trace the path and locate blockages	m	Ft	m	m	In		
		50	160	4.5	4.5 3/10		6	10/FLEXRODF50-4.5
		80	260	4.5	5 3/16		6	10/FLEXRODF80-4.5
		50	160		7			10/FLEXRODF50-7
		100	320	20 7		1/4		10/FLEXRODF100-7
		150	485	7		1⁄4		10/FLEXRODF150-7
		60	195	9	9			10/FLEXRODF60-9
		120	390	9		3/8		10/FLEXRODF120-9
13.11	A-Frame – Used for locating sheath faults on cables and coating defects on pipelines	A-Frame (includes A-Frame Lead) A-Frame Bag						10/RX-AFRAME 10/RX-AFRAME-BAG
13.12	P. Headphones	Recommended for use in noisy environments Three sided folding warning sign					10/RX-HEADPHONES	
13.13	Warning Triangle						10/WARNING-TRIANGLE	
13.14	PDAs	GPS PDA with SurveyCERT™+					10/RX-PDA	
13.15	i Calibration Certificates	Locator Calibration Certificate, per unit (request with initial locator order)					97/RX-CALCERT	

All specification are measured in test conditions, at 21°C / 70°F, and fitted with 2 × good quality alkaline batteries unless otherwise noted.

¹ Based on volumetric testing at a known fixed depth. True depth accuracy depends on factors such as ground composition, utility characteristics and the locate frequency / signal strength employed. Always follow local safe digging guidelines.

² The RD8100 will locate to greater depths in the right conditions, but depth accuracy will be compromised. Depth measurement will not be displayed beyond these depths.

³ Tested with clear line-of-sight. Range is dependent on electrical environment and weather conditions. For optimum range, face the locator toward the transmitter and raise the transmitter 2' / 60cm from the ground.

⁴ To provide repeatable measurements, run-time is measured with GPS and Bluetooth functions switched to 'off'

⁵ Water projected by a nozzle at a pressure of 30kPa /0.3 bar / 4.4 psi in accordance with BS EN 60529 1992 A2 2013

⁶ At very low temperatures, battery life will be degraded and measurement precision may be reduced.

RD8100

SPX.

Global locations

USA

SPX Global Headquarters

13320 Ballantyne Corporate Place Charlotte, NC 28277, USA Tel: +1 704 752 4400 www.spx.com

Radiodetection

28 Tower Road, Raymond, Maine 04071, USA Tel: +1 (207) 655 8525 Toll Free: +1 (877) 247 3797 Fax: +1 (207) 655 8535 rd.sales.us@spx.com www.radiodetection.com

Pearpoint

39-740 Garand Lane, Unit B Palm Desert, CA 92211, USA Tel: +1 800 688 8094 Tel: +1 760 343 7350 Fax: +1 760 343 7351 pearpoint.sales.us@spx.com www.radiodetection.com

Radiodetection (Canada)

344 Edgeley Boulevard, Unit 34 Concord, Ontario L4K 4B7, Canada Tel: +1 (905) 660 9995 Toll Free: +1 (800) 665 7953 Fax: +1 (905) 660 9579 rd.sales.ca@spx.com www.radiodetection.com

EUROPE

Radiodetection Ltd. (UK)

Western Drive, Bristol BS14 0AF, UK Tel: +44 (0) 117 976 7776 Fax: +44 (0) 117 976 7775 rd.sales.uk@spx.com www.radiodetection.com

Radiodetection (France)

13 Grande Rue, 76220, Neuf Marché, France Tel: +33 (0) 2 32 89 93 60 Fax: +33 (0) 2 35 90 95 58 rd.sales.fr@spx.com http://fr.radiodetection.com

Radiodetection (Benelux)

Industriestraat 11 7041 GD 's-Heerenberg, Netherlands Tel: +31 (0) 314 66 47 00 Fax: +31 (0) 314 66 41 30 rd.sales.nl@spx.com http://nl.radiodetection.com

Radiodetection (Germany)

Groendahlscher Weg 118 46446 Emmerich am Rhein, Germany Tel: +49 (0) 28 51 92 37 20 Fax: +49 (0) 28 51 92 37 520 rd.sales.de@spx.com http://de.radiodetection.com

ASIA-PACIFIC

Radiodetection (Asia-Pacific)

Room 708, CC Wu Building 302-308 Hennessy Road, Wan Chai Hong Kong SAR, China Tel: +852 2110 8160 Fax: +852 2110 9681 rd.sales.asiapacific@spx.com www.radiodetection.com

Radiodetection (China)

Room 5-10, Workshop 4 No. 10 Zhenggezhuang Village Beiqijia Town, Changping District Beijing 102209, China Tel: +86 (0) 10 8178 5652 Fax: +86 (0) 10 8178 5662 rd.service.cn@spx.com http://cn.radiodetection.com

Radiodetection (Australia)

Unit H1, 101 Rookwood Road, Yagoona NSW 2199, Australia Tel: +61 (0) 2 9707 3222 Fax: +61 (0) 2 9707 3788 rd.sales.au@spx.com www.radiodetection.com

Radiodetection is a leading global developer and supplier of test equipment used by utility companies to help install, protect and maintain their infrastructure networks. Radiodetection is a unit of SPX (NYSE: SPW), a global multi-industry manufacturing company. With headquarters in Charlotte, N.C., SPX has 14,000 employees in more than 35 countries worldwide. Visit www.spx.com.

© 2015 Radiodetection Ltd. All rights reserved. Radiodetection is a subsidiary of SPX Corporation. SPX, the green ">" and "X" are trademarks of SPX Corporation, Inc. Radiodetection, and RD8100 are registered trademarks of Radiodetection in the United States and/or other countries. Trademarks and Notices. The following are trademarks of Radiodetection: RD8100, eCert, iLOC, TruDepth, SideStep, SideStep*auto*, RD Manager, Peak+, SurveyCERT, Strike*Alert*, CALSafe, Current Direction. The design of the RD8100 locators and transmitters has been registered. The design of the 4 chevrons has been registered. The Bluetooth word, mark and logos are registered trademarks of Bluetooth SIG, Inc. and any use of such trademarks by Radiodetection is under license. Due to a policy of continued development, we reserve the right to alter or amend any published specification without notice. This document may not be copied, reproduced, transmitted, modified or used, in whole or in part, without the prior written consent of Radiodetection Ltd.