

Radiodetection Pipeline Products

For efficient troubleshooting of cathodic protection systems on buried pipelines



Radiodetection

The Pipeline Range

Pipeline Products

Radiodetection is the world leader in the field of underground location and has developed a range of products for the pipeline and cable industry.

Smart Interrupter (SI)

SI

The SI enables the interruption of CP current, an essential part of coating evaluation, during routine maintenance of coated, cathodically protected pipelines.

In addition to the standard interrupter functionality, the SI can interrupt CP currents in a manner compatible with Radiodetection's Stray Current Mapper.

The SI has high current capability available in 50A or 100A versions. Housed in a impact structural foam case, it is robust and compact in size.

FEATURES/SPECIFICATION

- 50A and 100A units
- On/Off ranges between 0 to 100 seconds
- Reverse polarity protection
- 300 hours battery life, or can run continuously from CP supply
- Master/slave synchronisation as standard
- Full microprocessor controlled
- Generates unique signatures for compatibility with Radiodetection's Stray Current Mapper and Precision Pipeline Locator
- The GPS option permits synchronisation of any number of interrupters remote from each other, as well as permitting 24 hour timer operation



Stray Current Mapper (SCM)

SCM

The Stray Current Mapper (SCM) system is a safe and cost-effective method of undertaking stray current surveys on pipelines. These are caused by third party cathodic protection systems and D.C. electrified rail systems.

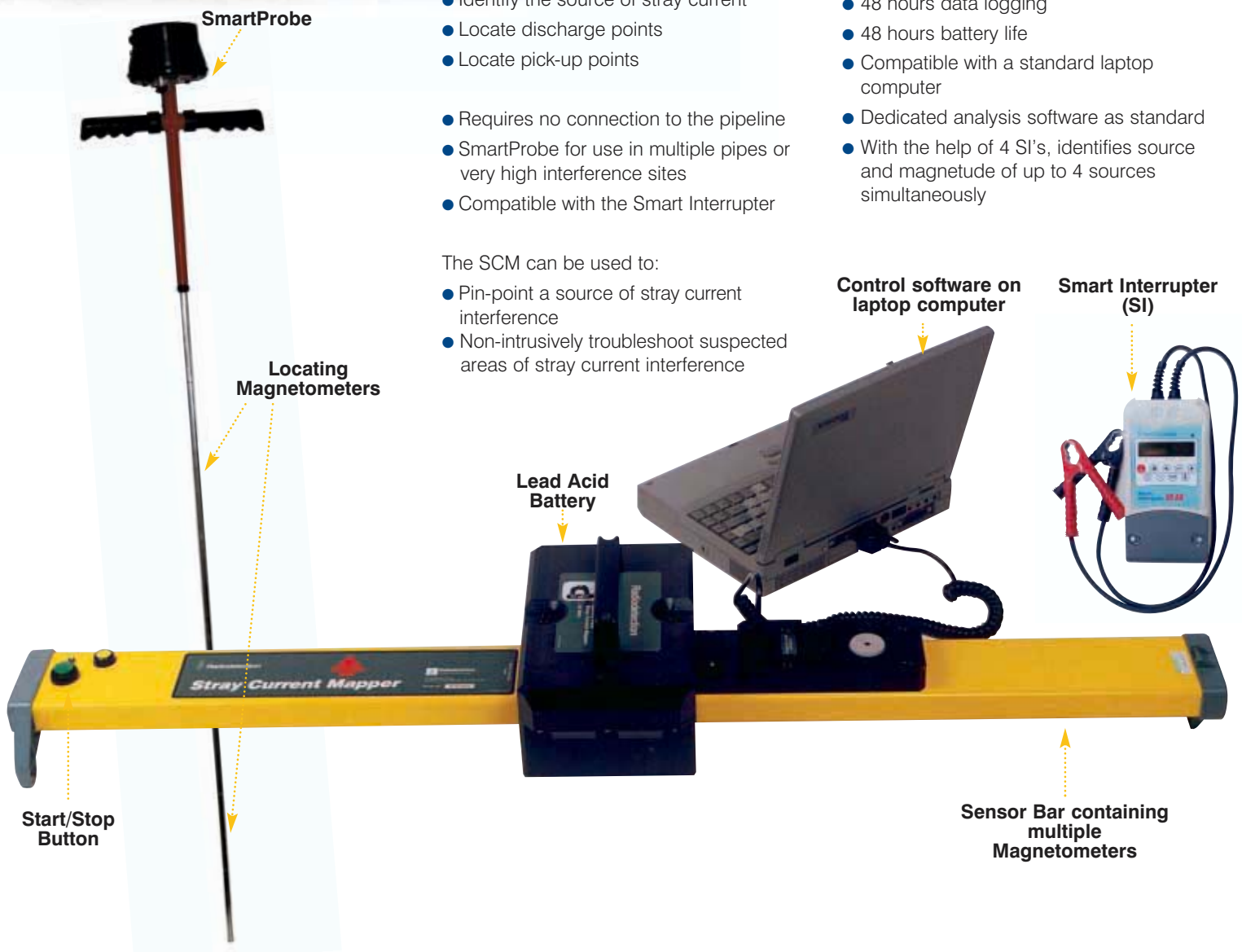
The SCM can also completely map the distribution of any CP source. This means areas where current discharge is taking place (usually coating defects) can be accurately pinpointed. It is also capable of data logging for 48 hours. This can be post processed to identify areas of possible interference as well as identifying the source of the interference.

FEATURES/SPECIFICATION

- Identify the source of stray current
- Locate discharge points
- Locate pick-up points
- Requires no connection to the pipeline
- SmartProbe for use in multiple pipes or very high interference sites
- Compatible with the Smart Interrupter
- Fully weatherproof housing
- Withstands 1m (3ft) drops onto concrete
- 48 hours data logging
- 48 hours battery life
- Compatible with a standard laptop computer
- Dedicated analysis software as standard
- With the help of 4 SI's, identifies source and magnitude of up to 4 sources simultaneously

The SCM can be used to:

- Pin-point a source of stray current interference
- Non-intrusively troubleshoot suspected areas of stray current interference



Pipeline Current Mapper (PCM)

PCM

Damaged coating of pipelines or shorts to other structures can render cathodic protection ineffective. Radiodetection's Pipeline Current Mapper has been specifically designed for surveying pipelines for these problems.

The PCM overcomes the shortcomings of existing techniques and provides engineers with an accurate, cost effective product that can be used in all weather and ground conditions.

PCM TRANSMITTER

The PCM Transmitter is a high-powered unit which makes long range signal detection possible up to 20 miles (32km). The flexible power requirements enable it to utilise the variety of supplies available at most transformer rectifier stations. This allows the transmitter to provide its full 150W of output power over prolonged periods, without costly battery replacements. Hookup is a simple four wire connection procedure. The transmitter is compatible with both distribution and transmission networks.

PCM RECEIVER

The PCM Receiver is a hand-held unit which is used firstly to locate the pipeline and provides the operator with a measurement of depth, current magnitude and direction of the near d.c signal as applied by the system's transmitter.

The receiver makes the required calculations and displays the results at a single button press. The measurement can be stored, with a further button press, in the integral datalog. This provides the operator with a method that quickly troubleshoots the CP system by pinpointing metallic contacts and locating areas of coating defects. Additional cable locate modes also allow the unit to be used as a traditional cable and pipe locator.

Data Analysis - the PCM has a simple to operate windows based upload software package.

PCM Accessory A-Frame Attachment - The addition of the optional A-Frame attachment enables the operator to pinpoint the fault to within a few inches.

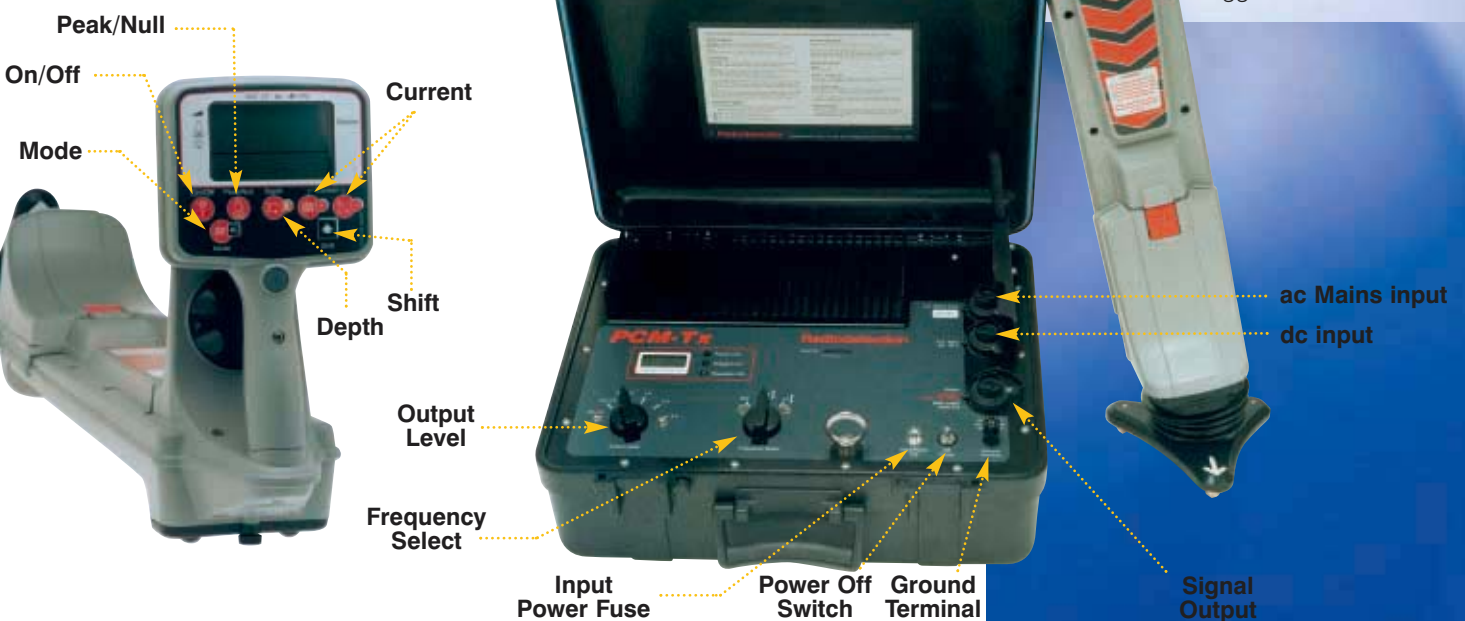
FEATURES/SPECIFICATION

PCM TRANSMITTER

- Withstands 0.5m drops onto concrete
- Weatherproof (with lid open)
- Operating modes: ELF, ELF with current direction, LF with current direction
- Complex signal containing multiple frequencies
- 150W output
- CP Transformer rectifier powered from station

PCM RECEIVER

- High impact thermoplastic all weatherproof
- Withstands 1m (3ft) drops onto concrete
 - Locating Modes: ELF, LF, 8K, Power and CPS
 - Two section Liquid Crystal Display
 - Data logging storage for upto 399 entries with log number, depth, current and direction
 - Facility to review logged data



Precision Pipeline Locator (PPL)

Mis-location of services results in significant and costly damage to pipelines. Radiodetection has designed a system based on its advanced, very low frequency signal processing technology. This enables a buried pipe to be reliably located and identified from the surface, providing a depth of cover reading without the need to pot hole or penetrate the ground.

Advanced digital signal processing techniques allow the system to compensate for interference, enabling it to be used in locations where previously it was not possible to use electronic locators. Where the interference is too great, the system will warn that the results are less accurate than normal. If this occurs more accurate information can be determined using the PPL SmartProbe. This is pushed into the ground until the tip is close to the pipe. The sensors in the probe which are now close to the pipe can reject any interference.



Handheld Data Viewer (HDV)

The locator comprises a sensor array and associated digital signal processing electronics within a portable housing. The PPL receives the signal radiated from the pipe. Sophisticated vector analysis software will determine the position of the pipe, relative to the unit, and then transmit this information to the HDV (via a short range radio link).

The locator is compatible with Radiodetection's PCM Transmitter or Smart Interrupter which generate locate signals for the PPL Sensor Bar and SmartProbe.

Pipeline Current Mapper (PCM)



SmartProbe

Smart Interrupter (SI)



Precision Pipeline Locator (PPL)



Radiodetection



Riser Bond



Bicotest



Pearpoint



Telespec



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