

# Pipeline Detector Pipe

## General information about Pipeline Detector and Cable Location AD-PD2082B

AD-PD2082 multi-purpose full-frequency pipeline detector is the ideal equipment specially detecting various kinds of pipelines for oil (gas) transportation, water supply, drainage, gas, heat, and industry, etc. and various cables for electricity and telecommunication, etc.

used by such underground pipeline design organizations as professional pipeline detection, pipeline management and maintenance, municipal administration planning and construction, power supply, building and construction. It's also the optimum replacement for traditional underground pipeline detectors.

### Characteristics:

- DSP processor used to provide a fast calculation speed and a high accuracy
- The orientation function to indicate the pipeline running direction, making location faster
- Adoption of the 10W broadband transmitter, applicable to various environments
- With the Lithium battery supplying power for both the receiver and the transmitter, being environmentally friendly
- The display is backlit, applicable to night emergency rescue
- Indication with left and right arrows, able to rapidly locate the pipeline
- Front and back arrows and dB values to indicate the location of the damaged points on coatings during detection of the damaged points on coatings.



### **Working Principles:**

**Pipeline location and depth investigation principle:**

multi-purpose full-frequency pipeline detector detects underground pipelines electromagnetically, which applies signals to metal pipelines through the transmitter, generates pipeline current in metal pipelines and secondary magnetic field around pipelines, and measures the secondary magnetic field of pipelines on ground through the receiver, in order to accurately determine the location, buried depth, running direction, route, and signal current intensity of pipelines.

**Leakage testing on anti-corrosive coatings principles** An electrical signal is sent to the underground metal pipeline through the transmitter. In case damaged points exist on the underground pipeline coating, they are short-circuited with the earth, generating creepage current radiating all around, with the most intensive radiation above the damaged points. Based on that, the damaged points on coatings are found.

## **Technical Parameters of the device:**

### **Transmitter:**

- **Function:** to apply the location signal of a certain frequency onto the pipeline
- **Output modes:** induction, direct link, clamping
- **Various frequencies:** 128Hz, 512Hz, 1KHz, 2KHz, 8KHz, 33KHz, 65KHz, 83KHz
- **Frequency configuration at various modes:**
- **Induction mode:** 65KHz, 83KHz
- **Direct link mode:** 128Hz, 512Hz, 1KHz, 2KHz, 8KHz, 33KHz, 65KHz, 83KHz
- **Clamping mode:** 33KHz
- **Maximum power output:** 10W
- **Maximum voltage output:** 60V
- **Maximum current output:** 1A
- **Power supply:** dual power, Lithium battery pack (energy-efficient and environmental-friendly)
- **Continuous working time:**
  - 1W-12 hours
  - 5W-8 hours
  - 10W-5 hours
- **Weight:** 2.6kg
- **Ambient temperature:** -20°C-50°C



### Receiver:

- Purpose: location of underground pipelines and cables (able to determine position, running direction, depth, and current of underground pipelines)

### Location modes:

- Peak mode: two horizontal coils are used
- Broad peak mode: one horizontal coil is used
- Valley mode: one vertical coil is used, having the function of left and right orientation
- Receive frequency: 50Hz, 100Hz, radio, 128Hz, 512Hz, 1KHz, 2KHz, 8KHz, 33KHz, 65KHz, and 83KHz
- Gain control: automatic gain, range of 0-100dB
- Location accuracy: 5% of depth (range of depth 0-3m)-10% of depth (range of depth > 3m)
- Measurement accuracy of currents:  $\leq 5\%$  of actual current
- Measuring range: 0-6m
- Power supply: Lithium battery pack (energy-efficient and environmental-friendly)
- Working time: an average of 8 hours
- Weight: 1.8kg
- Ambient temperature:  $-20^{\circ}\text{C}$ - $50^{\circ}\text{C}$

### Standard Configuration:

- 10W broadband large-power transmitter, full-frequency receiver, A-type bracket, clamp, direct link line, earthing bar, transmitter charger, receiver charger, packing box, and user's manual.

