

9

0751-2677088

**TECHNICAL SPECIFICATION FOR CABLE LOCATING SET SUITABLE FOR DETECTING BURIED SIGNALLING AND ELECTRICITY CABLES.**

**A / Technical Specifications of locator unit**

S.No	Mode / Feature	Bandwidth	Sensitivity	Detection depth
1	Power Mode	50-400 Hz	5mA	Upto 3 meters
2	Radio Mode	10000 – 30000Hz	25µA	Upto 2 meters
3	Generator Mode	Induced :32768 Hz Connected : 32768Hz & 131072Hz Combined frequency	5µA	Upto 5 meters
4	All Scan Mode	50 – 33 kHz	100µA	Upto 3 meters

**Controls:** Trigger style On/Off switch, Automatic battery test tone at each switch on,4 position function select switch for Power, Radio, Generator Mode & All Scan mode, Rotary Sensitivity Control. Automatic gain control is not acceptable, Push button for depth measurement.

**Audio Response:** Audio response must be an analogue derivative of the received signal with Extendable Loudspeaker, synthesized tones are not acceptable.

**Visual Response:** Multi segment Backlit Liquid Crystal Display (LCD) showing:- Continuous Battery condition display on screen, Received signal strength, Depth Measurement (when depth is activated in generator/ transmitter mode), LCD display to have automatic backlight that should activate automatically in low light conditions.

**Test Functions :** Automatic dally self test function & Dynamic swing sensor

**Depth Measurement:** Simple push button operation with continuous depth measurement., Range: 0.2 to 5.0 meters (line), Accuracy: better than ±5% of depth.

**Size & Weight (Maximum) :** 750mm x 300mm x 70mm.<= 2.75kgs (including batteries)

**Power supply:** Instrument should work on AA batteries

**Spare Battery:** Include 2 battery packs Integrated inside the unit (1 main + 1 spare). Separate Spare Battery pack is not acceptable. Rechargeable batteries are not acceptable.

**Case Sealing:** Case to be sealed to IP65 or higher. And impact proof (1m drop onto a hard surface).

**Wear Plate:** The unit must have a wear plate at its base that can be replaced in the field without the use of special tools.

**Antennae:** with two horizontal antennæs with an appropriate vertical separation to enhance rejection of unwanted overhead signals.

**B. SIGNAL GENERATOR UNIT**

**Output :** Frequency : Dual frequency 32768 Hz / 131kHz output, Carrier pulse frequency : <10 Hz (pulsed mode), Maximum power of 1 watt, unit should have variable power output, switchable through 4 levels. . Connected mode should be automatically selected when lead is plugged into socket.

**Controls:** On/Off, Increase or decrease Power setting(4 available power levels via Increase & Decrease buttons) Pulsed or continuous signal output setting (toggle between pulse or continuous output using - one push button),Audio mute facility

**Audio Response:** Audio response via an Integral loudspeaker having characteristics of Pitch that varies in response to output current (connected mode) or selected output power level (Induced mode), Signals low battery condition by interrupted audio & output signal.

**Visual Response:** Liquid Crystal Display showing; Output frequency, Pulse Mode, Continuous mode, Continuous display of battery condition, Output level selected (bargraph), Speaker mute

**Size and weight (Minimum):** 350mm x 160mm x 220mm and weight is <= 3.5kg (Including batteries and accessories)

**Power Supply:** 4 x "D" alkaline batteries

**Power output:** Four user selectable output levels upto 1 Watt.

**Case Sealing:** Case to be sealed to IP65 or higher.

**C. A signal clamp** of 2mt lead with a jaw size of 100 mt Dia must be provided to enable the Signal Generator signal to place its signal onto cables where a direct connection cannot be made. It should be Operate when immersed up to 1m deep in water without deterioration. (e.g. in a flooded manhole)

**STANDARD ACCESSORIES:** Direct connection lead and earth lead, Auxilliary earth lead of 10 metres length Earth stake of at least 250mm in length .

**D. RECALIBRATION :** Instrument should be FULLY DIGITAL and provided with certificate that NO ANNUAL RECALIBRATION required.

**E. CARRY BAG :** Equipment should be provided with suitable soft carry bag to allow easy transportation at site.

**F. Multi language user manual** should be provided in English with at least three additional Indian languages. In addition, Animated or video based user manual should be provided in CD.

*(Signature)*  
D. S. T. E. BHOPAL (W. C. BIR)