

# L1070 and L1071 Portable Locator



- **Multiple frequencies**
- **Transmits AF or RF signals or both simultaneously**
- **Peak and null detection**
- **Passive 60 Hz**
- **Measures current flow in buried conductors**
- **Transmitter variable output power levels**
- **Push-button depth measurement**

## DESCRIPTION

Unparalleled in capability, the L1070 Portable Locator locates buried cable and pipe in various situations. Capable of locating long or short ranges, inductive or conductive, active or passive, the L1070 delivers quick and accurate results with a user-friendly interface.

Operating the receiver at multiple frequencies optimizes performance for the specific needs of the user. Low frequency of 815 Hz provides longer range and reduced errors from adjacent cables, ideal for electric power services. High 82 kHz frequency will path locate past bad telephone bonds, locate underground stubs and permit inductive locating with either the optional flexible coupler or direct soil induction. A special design feature on the L1070 allows the user to select and compare receiver information on two frequencies simultaneously, without having to return to the transmitter. Excellent passive 50/60 Hz locating will pinpoint active power lines and other utilities where AC is present without the use of the transmitter.

## APPLICATIONS

Flexibility remains the key strength of reaching difficult, multi-point, grounded utility locating applications. Combining high power at low frequency virtually eliminates the false coupling into adjacent objects and allows the high transmitter power to burn a signal past several grounds and into multiple distributed grounds. Multi-grounded electrical distribution service, continuously grounded water pipes, multi-grounded telephone shield

wiring, highly capacitive, cathodically protected coated gas pipes and CATV systems all benefit from the flexibility of the L1070 and L1071.

Conductor current readout on the L1070 gives the user information on the amount of current flowing on the target conductor with correction for changes in depth. To trace the direction where the transmitter signal is divided or where it goes into the soil at an insulation ground fault, press the CURR button. This feature is useful in cathodically protected systems with ground faults.

An optional ground return probe allows ground fault detection on unshielded electric services or sheath faults on telephone services through the technique of voltage gradient.

## FEATURES AND BENEFITS

- Multiple output frequencies provide accurate long or short range locates.
- Push-button depth measurements up to 15 ft (4.6 m) quickly identify service depths prior to digging.
- Passive 60 Hz detection serves as an excellent safety feature for identifying live underground primary and secondary utility cables.
- AC circuits in common trench situations. Passive detection also allows convenient locating of energized electric services.
- High power at low frequency solves the difficult multi-point grounded utility locating problem.

**SPECIFICATIONS**

**Receiver**

**Operating Frequency**

815 Hz (AF), 82.315 kHz (RF), 50/60~(PASSIVE)

**Antenna Mode**

Null-responding vertical coil  
Peak-responding horizontal coil

**Audio Indication**

Variable pitch response on all frequencies

**Current Measurement**

Display indicated relative current simultaneously between any two selected cables for target cable verification in a multi-conductor environment

**Operating and Storage Temperature Range**

- 4° to +133° F (- 20° to +55° C)

**Battery Type**

Six 1.5 V C size alkaline

**Battery Life**

**Continuous:** 40 hours

**Intermittent:** 82 hours

Auto power shutoff after 10 minutes of nonuse

**Signal Strength**

Analog LCD Bargraph. Absolute Digital Signal Strength readout from 0 to 999

**Gain Control**

Up/Down button for automatic centering and manual control

**Accuracy**

**815Hz**

± (1 to 6)% under normal conditions  
≤ 5 ft (1.5 m)

**82.315 kHz**

± (5 to 12)% under normal conditions  
≤ 5 ft (1.5 m)

**Manual**

Bubble-level triangulation for verification of automatic readout in congested environments. **Note:** Accuracy is dependent on site conditions, nonconcentric conductor shape, number of nearby conductors, and soil return currents.

**Dynamic Range**

126 dB

**Depth Measurement**

**Automatic:** Push-button 3 digit readout to 15 ft in feet/inches, (optional meter/centimeters to 4.6 m)

**Dimensions**

9.4 H x 3.75 W x 30.3 L in.  
(23.8 W x 9.3 W x 76.9 L cm)

**Weight**

3 lb (1.36 kg)

**Transmitter**

**Operating Frequency**

82.315 kHz (RF), 815 Hz (AF), and BOTH Simultaneous

**Indicators**

AC Load Resistance Measurement, Low Bat Indicator, Low Bat warning modulated on output signal every 20 seconds

**Load Matching**

Automatic from 5Ω to 2000Ω

**Output Power**

**815 Hz (AF)**

Normal 0.6 W

High 2.0 W

**82.315 kHz (RF)**

Normal 0.2 W

High 1.0 W

**BOTH**

Normal 0.12 W (AF) + .06 W (RF)

HIGH 1.33 W (AF) + 0.67 W (RF)

**Battery Type**

**Disposable (Used in L1070)**

Eight 1.5 V D size alkaline

**Rechargeable (Used in L1071)**

12 V, 7 Amp-Hour maintenance free, sealed lead-acid includes 120 V ac wall-mount charger for overnight charging. Optional 12 V automotive power pack for fast charging, or powering unit from a vehicle cigarette lighter jack.

**Battery Life**

**Disposable**

**Continuous:** 8 to 15 hours depending on load, frequency and power setting

**Intermittent:** 40 to 60 hours depending on load, frequency and power setting. 25% duty cycle average.

**Rechargeable**

**Continuous:** 10 to 20 hours depending on load, frequency and power setting

**Intermittent:** 50 to 70 hours depending on load, frequency and power setting. 25% duty cycle average.

**Operating Temperature Range**

- 4° to +133° F (- 20° to +55° C)

**Dimensions**

6.5 H x 6.32 W x 16 L in.

(15.2 H x 12.7 W x 40.6 L cm)

**Weight**

8 lb (3.6 kg) with alkaline D cells

11.5 lb (5.2 kg) with rechargeable batteries

**ORDERING INFORMATION**

| Item (Qty)  | Cat. No. |
|---|----------|
| L1070 Portable Locator  | 651070   |
| L1071 Portable Locator  | 651071   |
| <b>Included Accessories:</b>  |          |
| L1070: Receiver, transmitter, red/black cord, batteries, ground rod, instruction manual and soft carrying case                          |          |
| L1071: Receiver, rechargeable transmitter, red/black cord, batteries, ground rod, AC charger, instruction manual and soft carrying case |          |
| <b>Optional Accessories</b>   |          |
| Folding ground return probe (grounded fault locator)  | 651075   |
| Flexible coupler (Inductive Coupler)  | 651076   |
| DC charger (automotive) used with 651071  | 651078   |

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**L1070\_L1071\_DS\_en\_V10**  
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