



METROTECH®

Pipe and Cable Locator, Model 480B

**Crystal Controlled Transmitter and Receiver—
Provides Operating Stability**

**Narrow Noise Bandwidth—Higher Sensitivity for
Improved Accuracy**

**Sharp Meter Response—Improved Compression
Circuit Makes Visual Identification of Trace
Objects Easier**

**50/60Hz Power Line Locating Capability—Dual
Coil Design Reduces Interference**

**Automatic Shut Off on Receiver—30 Minute
Cycle/Time Out Alert**

Automatic Battery Test



MODEL 480B



Metrotech Model 480B Pipe and Cable Locator is a technologically updated version of our time-proven, dependable Model 480. This versatile locating instrument is applicable to every industry in which underground pipe and cable locating is required. In addition to its inductive and conductive pipe and cable locating capabilities, it features a passive 50/60Hz operating mode for detecting the presence of underground energized power lines. Mounted on a Carrying Handle, it can be used to conduct blind searches, ground surveys or to locate underground metal masses. Depth measurement can be accomplished using the triangulation method.

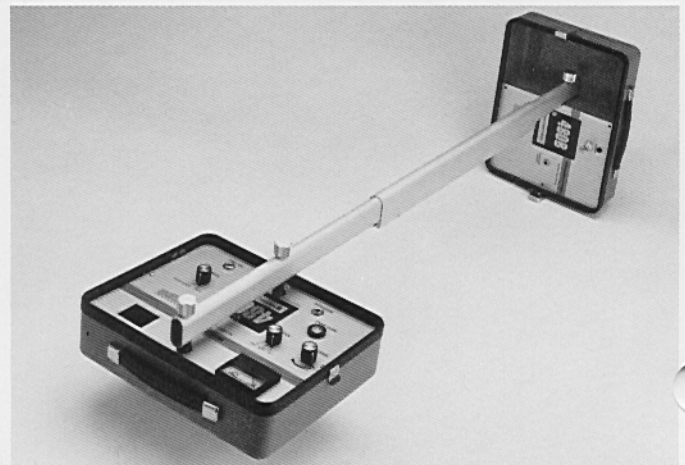
The crystal control design and narrow noise bandwidth of the Model 480B Transmitter gives a clean, no-drift response providing the operator with longer ranges and greater locating accuracy.

The 50/60Hz operating mode feature permits the operator to verify the location of energized power lines by tracing the electromagnetic field generated by these lines. The dual coil design enables the instrument to distinguish between underground and overhead power lines.

The automatic battery test feature measures the amount of voltage present in the batteries and automatically displays the value on the meter when you turn the 480B on. A battery conserving automatic shut off with a time-out alert feature (to alert the operator of imminent shut off) prevents the Receiver from being accidentally left on. The Transmitter will shut off when the cases are clipped together.

Conductor depth is determined by using the triangulation method, employing the bubble level for correct angle of the Receiver.

ACCESSORIES



METROTECH Pipe and Cable Locator **480B**

METROCLAMP 4820

The 4820 Metroclamp is available for inductive coupling use on conductors of 4 inches (10cm) or less in diameter. The 4820 Metroclamp is designed for application where it is not possible to make a direct connection, but you have access to and can position a clamp around the target conductor. Suitable for every utility, the 4820 Metroclamp consists of a clamp-on transformer coil encased in a rugged, waterproof housing. Completely insulated from the target conductor, it transfers a strong, inaudible signal onto the target conductor without interfering with the transmitting current of the conductor. To identify a specific conductor among multiple conductors, use two Metroclamps, connected to the Receiver and Transmitter respectively.

A threaded fitting on the clamp handle and a remote jaw actuator enables the use of an extension handle for long reach applications, such as manhole to manhole, service drop to junction, etc. The 4820 Metroclamp and a grounding cable come in a zipper pouch.

INDUCTIVE PROBE 4810

The 4810 Inductive Probe provides the operator with greater accuracy while maintaining a standing position. The lightweight, handheld probe plugs into the 480B Receiver and automatically replaces the standard loop antenna on the Receiver housing. The directional antenna in the tip of the probe increases receiver sensitivity and more accurately pinpoints target conductors in congested areas.

The configuration of the 4810 Inductive Probe permits easier tracing of target conductors around dense shrubbery, in shallow ponds, or in soft snow. Using the same triangulation method as with the 480B Receiver, conductor depth can be estimated with the 4810 Inductive Probe. The 4810 has its own sensitivity control for easy one handed operation.

CARRYING HANDLE

The three-section 480B Carrying Handle couples the 480B Receiver and Transmitter for one hand use for performing blind searches, ground surveys, or metal mass locates. The Carrying Handle positions the 480B Receiver exactly perpendicular to the Transmitter preventing air coupling of the transmitter signal output.

A "blind search" is carried out when the location of the pipe or cable is unknown and there is no obvious conductor origin (i.e. a gas or water meter). The handle-mounted 480B is operated in the Inductive Mode and, using a systematic grid approach, the operator traverses the search area, marking the points at which there is a strong signal indication on the Receiver. The operator can then trace the exact route of a conductor using the traditional split box operation mode.

Looking for a "metal mass," such as a manhole cover or steel drum is the same as a blind search except that the search paths need to be closer together to ensure that the metal mass is not missed.

TECHNICAL SPECIFICATIONS

TRANSMITTER

Nominal Output Power	
Inductive Mode	100mW average (6.2V p-p across loop)
Conductive Mode	250 mW nominal (65V p-p across 2.7K ohms)
Output Frequency	83kHz CW
Battery Type	Six size C Alkaline Cells
Battery Life	400 hours, average
Dimensions	11.63"L x 9"H x 3.13"D (29.5cm x 23cm x 8cm)
Weight	3.5 lbs (1.6 kg)

RECEIVER

Active Operating Mode

Nominal Sensitivity at loop for 50% meter deflection

Normal Range 30 microvolts p-p

Hi Range 2 microvolts p-p

Sensitivity at AUX INPUT (increase over loop)

With 4810 Inductive Probe 20%

With 4820 Metroclamp 375%

50/60 Power Line Locating Mode

Frequency 50/60Hz

Antenna Mode Peak responding gradiometer

Sensitivity @3 ft. for 50% meter deflection

Normal 500ma

Hi 45ma

Battery Type Six size C Alkaline Cells

Battery Life 250 hrs average

Battery Check Automatic power-on

Headphone Impedance 2K ohms (usable at 100 ohms and up)

Dimensions 11.63"L x 9"H x 3.13"D (29.5cm x 23cm x 8cm)

Weight 4.5 lbs (1.9 kg)

TRANSMITTER AND RECEIVER

Operation Temperature	-20°C (-4°F) to 50°C (122°F)
Shipping Weight	14 lbs (6 kg)
Shipping Dimensions	19"L x 14"H x 9.5"D (48cm x 35.6cm x 24cm)

Specifications subject to change without prior notice.



STANDARD EQUIPMENT

The standard Metrotech Model 480B consists of a Transmitter, Receiver, Conductive Attachment, and Operating Manual.

OPTIONAL ACCESSORIES

Optional Model 480B accessories include the 4820 Metroclamp, 4810 Inductive Probe, Carrying Handle, Headphone, and rugged ABS Carrying Case.

WARRANTY

One year warranty on parts and labor.

TECHNICAL SUPPORT/ORDERING INFORMATION

For technical support, ordering information, and dealer referral, please contact Metrotech Corporation, Telephone: 1 800/446-3392, 408/734-1400, Fax 408/734-1415, Email: Sales@metrotech.com.

Or visit our internet site: www.metrotech.com.

SERVICE CENTERS

For locator service or repair contact:

Metrotech West Coast Service Center

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Sunnyvale, CA 94089
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