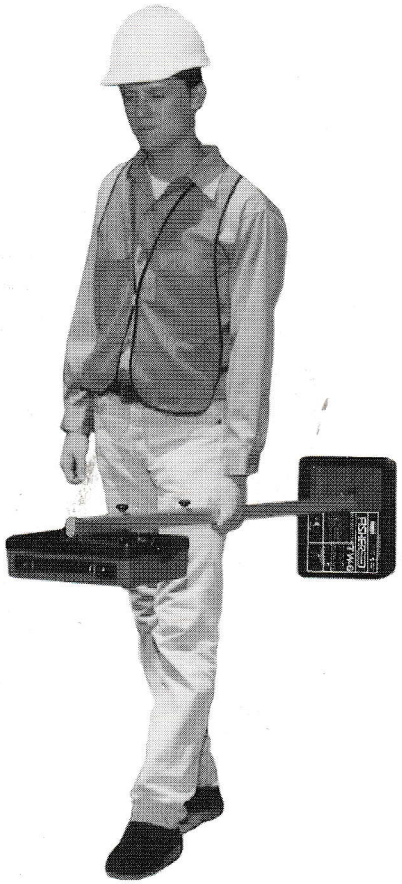
FISHER m-SCOPE®
Model TW-6

Pipe and Cable Locator



Features

- Crystal controlled frequency in both transmitter and receiver increases tracing distance 50-100 percent over earlier two-box detectors.
- Unlike other units that use a separate transmitter and receiver, the TW-6, when mounted on the handle, can conduct "blind" searches of an area to locate an underground pipe or cable when the starting point is unknown.
- VCO (Voltage Controlled Oscillator) gives a wider range of audio signal to indicate the presence of metal. Even after the meter pegs, the audio signal goes much higher in pitch and volume.
- Noise cancelling circuitry eliminates power line interference.
- Powered by 16 standard AA (penlight) batteries: eight in the transmitter and eight in the receiver.
- Weighs only 5 1/2 pounds.

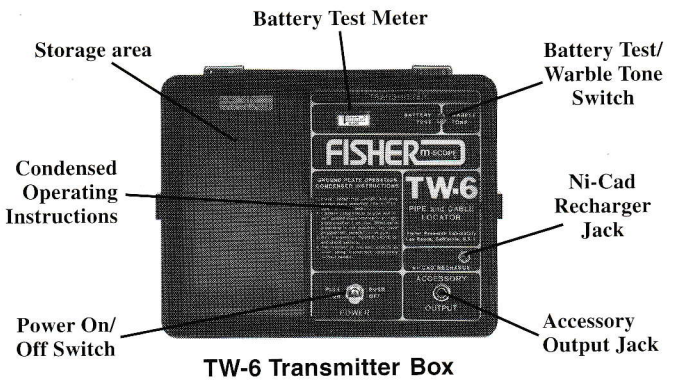
Description

The Model TW-6 "Two-Box" metal detector finds underground pipes, cables, manhole covers, vaults, valve boxes and other metallic objects. Like earlier models, the TW-6 is used primarily by water departments, telephone companies, power companies, gas companies and petroleum pipeline companies when making repairs and rearranging lines. The TW-6 shows where to dig, as well as where NOT to dig, an important consideration when working near gas lines.

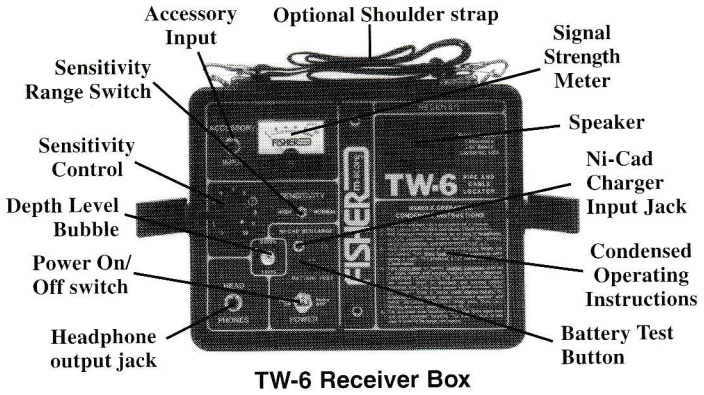
To increase the instrument's sensitivity, Fisher engineers removed all unnecessary metallic parts on the TW-6, replacing them with durable ABS molded plastic. Newly designed coil windings, completely upgraded electronics and nonmetallic parts have boosted the tracing distance of the TW-6 by 50-100 percent.

With the TW-6, longer tracing distances, which used to require expensive high-powered fault locator/tracers, can now be accomplished economically.

The TW-6 instrument set



TW-6 Transmitter Box

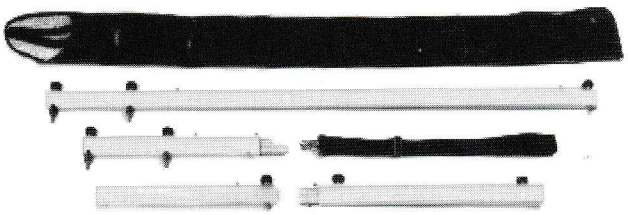


TW-6 Receiver Box

The Ground Plate Assembly makes a connection for Conductive Tracing.

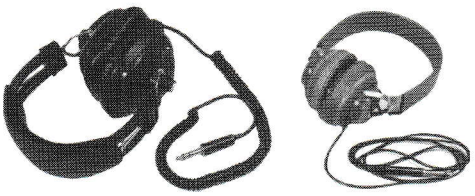
TW-6 Optional Accessories

A hard-shell, foam-lined Case (#201802) holds accessories, such as Headphones, Coupling Clamp and Mini-probe as well as a can of spray paint or chalk for marking.

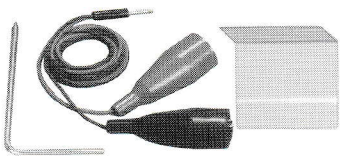


The 1-piece handle (#202728) and 3-piece handle (#202727) come with a Shoulder Strap and Carrying Bag. Also available is an extra-long 30" Center Section (#202321) for deeper Inductive Locating.

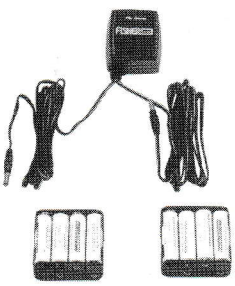
The TW-6 Inductive Coupling Clamp (#203400) is used in place of the Ground Plate Assembly to inductively energize and trace a wire, cable or insulated pipe.



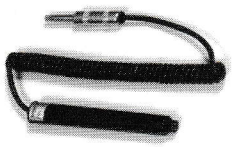
Stereo Headphones (left) with separate volume controls for each ear (#972095) or Monaural Headphones (#972094) are needed only in noisy areas.



The Ground Plate/Ground Rod Assembly (#202259) makes a direct physical hookup with a pipe or non-energized cable for Conductive Tracing. The plate may be pushed into soft ground or placed in a puddle of water on pavement.

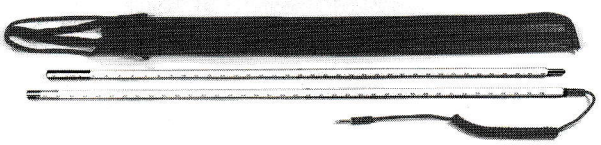


The Ni-Cad battery Recharge Kit (#202248) charges eight AA Ni-Cad batteries for use in the TW-6.



The Mini Probe (#202855) is a much smaller version of the tracer probe. It identifies a particular strand of wire from a bundle and plugs into the TW-6 receiver the same way as the Tracer Probe.

The Tracer Probe, cord assembly and vinyl carrying case (#202295) is the most useful accessory of all for Inductive or Conductive tracing. It makes the job less backbreaking, determines the depth of the pipe or cable and is more accurate for the trace.

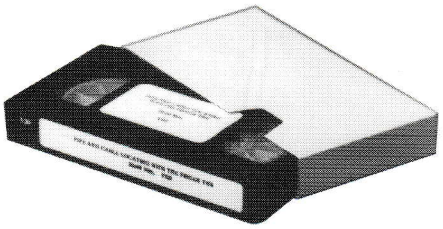


The Depth Finder Probe with vinyl bag and cord assembly (#202856) precisely determines the depth of a pipe or cable. The probe is lowered into a core hole drilled adjacent to the located line.

The TW-6 performs three different searches

Blind searches are no problem for the TW-6

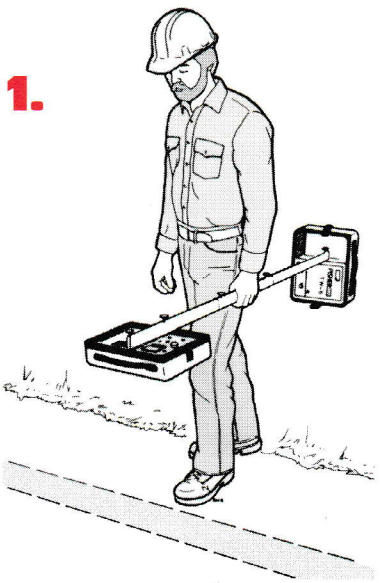
Many underground locators can only trace an underground pipe or cable from a known starting point, such as an exposed line, hydrant or water faucet (conductive trace). However, the "two-box" M-Scope metal detector invented by Dr. Gerhard Fisher in 1931 can locate and trace an underground pipe or cable when no starting point is known (inductive trace). Today's TW-6 is a direct descendant of that first M-Scope metal detector invented by Dr. Fisher and is capable of conducting a "blind" search of an area for an underground pipe or cable that has no known starting point. Nonmetallic pipes may be located inductively or conductively if tracer tape or wire is placed in the trench above the line.



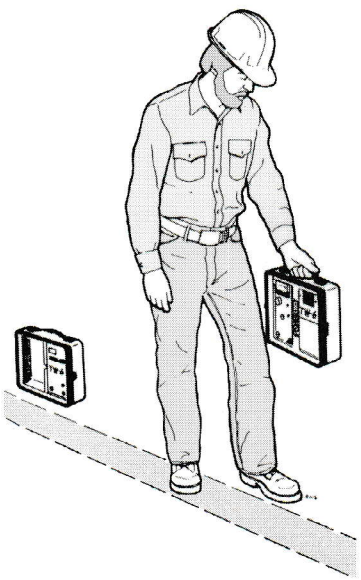
The three methods of underground tracing with the TW-6 are described in an optional 30-minute color video. Available in VHS, BETA, PAL and SECAM.

Inductive Locating

1.



Using a 4-foot handle, position the Transmitter Box behind while the Receiver Box is ahead. Walk a grid pattern to discover the location of buried metallic objects. Watch the meter on the TW-6 Transmitter Box and listen for the signal tone to discover the location of a metallic object, such as a pipe, cable or vault box. Mark the pavement with chalk for each signal location. Soon a pattern will emerge that shows the location of underground linear objects, such as pipes and cables, or nonlinear items, such as a buried manhole cover.



2.

Inductive Tracing

When one point of an underground linear conductor (such as a pipe or cable) is known, place the Transmitter Box of the TW-6 over it and trace in either direction. Walk out the path of the line and swing the TW-6 Receiver Box left and right over the line while listening for the audio signal tone. As you walk away from the Transmitter Box, tracing farther down the line, the Transmitter signal will become faint, but the Transmitter Box can be moved closer to you so that tracing can continue to the end of the line.

Conductive Tracing

3.

This is the preferred method for tracing because the Transmitter makes a direct physical hookup with the line to be traced. Plug the TW-6 Ground Plate Assembly into the Transmitter with one wire going to an alligator clamp that is attached to the pipe, non-energized wire or conduit. This concentrates the signal on the known line to be traced, and there is less chance of the signal being induced to a nearby or adjacent line. Tracing distances are increased 25-50 percent over the Inductive method. Nonmetallic pipes may be traced Conductively if the Ground Plate Assembly is attached to a plumber's "snake" or electrician's "fish tape" running inside the pipe.

TW-6 Specifications

	Transmitter	Receiver
Operating Frequency	81.92 kHz + .005%	81.92 kHz + .005%
Batteries	8 each, AA (NEDA 15)	8 each, AA (NEDA 15)
Weight	2 1/2 lbs. (1.1 kg)	3 lbs. (1.36 kg)
Sensitivity	N/A	Normal: 400 uV typical High: 8 uV typical
Signal-to-noise ratio	N/A	110 dB
Headset Impedance	N/A	600 ohms (mono)
	N/A	8 ohms (stereo)
Dimensions	11 1/2" x 9" x 3"	11 1/2" x 9" x 3"
	(29 x 23 x 7.6 cm)	(29 x 23 x 7.6 cm)
Operating Temperature	-10°F to +120°, (-23°C to +48°C) depending on batteries used.	
Total Weight	5 1/2 lbs. (2.5 kg) - (without handle of accessories, ground plate assembly or operating manual).	
Total Shipping Weight	6 3/4 lbs. (3 kg) - (including only ground plate assembly and operating manual.)	
Total Shipping Volume	.69 cu. ft. (19.5 liters)	

Putting a signal on a telephone cable with the TW-6 and Coupling Clamp.

Deeper searching with the TW-6 when lowered on the Carrying Strap.

Using the Tracer Probe makes your tracing job easier and more accurate.

Fisher Research Laboratory, Inc. manufactures a wide range of electronic detection instruments designed to meet the needs of the utility industry. These instruments include pipe and cable locators, valve and box locators, AC potential detectors, sound and leak detectors and water level indicators. Ever since the company began operations in 1931, high quality design and advanced production techniques have solidified the Fisher tradition as foremost in the industry. For applications assistance or additional information on the TW-6 Pipe and Cable Locator, contact the Fisher Marketing Department. Fisher Research Laboratory does not warrant suitability to specific use. Fisher Research Laboratory shall in no event be liable for any direct, incidental, consequential or indirect damages.

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