

BOWDENS

Tel: 01306 743355
www.bowden-bros.com
enquiries@springltd.co

LEE VAUGHAN CABLE IDENTIFIER MKV

The Lee Vaughan Cable Identifier MKV is a brand new instrument that is complimentary to the highly successful MKIV, which is still available, but the MKV offers new features that will make it easier to use, and quicker to identify cables that might have presented a problem in the past.

New features:

- Selectable Power Output gives four times the power compared with MKIV.
- Additional roving coil allows access to tightly bunched cables.
- Modulated (1.6KHz) or continuous tone option.
- Improved 'noise' suppression to minimise induced pick up in adjacent cables leading to easier detection of the 'lay' of the target cable.
- Powered by four AA standard alkaline batteries - Battery status test.

A cable identifier for use by Electricity Distribution Engineers is an essential part of their equipment when reliable high voltage cable identification is required.

Overview

It consists of a sturdy plastic carrying case foam-fitted to house the transmitter, receiver, and headset. The transmitter is in a strong plastic case with spring loaded output connection terminals. Power for several hours use is by four AA cells (HP7) that are readily available and easily fitted. The transmitter emits an interrupted signal that when fed into the cable can be picked up by the receiver at the identification point. When the unit is in operation a red LED flashes at the interrupt frequency. The receiver is housed in a similar case to the transmitter and requires the same type of battery. It contains a coil for signal pickup and an amplifier with gain control for the meter and headset. To help to conserve battery life an interlock is arranged to disconnect the battery when the headset plug is removed from its socket.

Operation

The Lee Vaughan Cable Identifier MKV consists of a transmitter and receiver, earphones, connecting cable with clips and a remote roving coil.

WARNING: THE CABLE TO BE IDENTIFIED MUST BE UNENERGISED AND DISCHARGED

Transmitter set up

Two cores of the cable at the remote end must be shorted together and the transmitter connected to the same two cores at the supply end using the cable connectors supplied. When the transmitter is turned on using the rotary selector switch, the first position performs a battery test. The battery condition is shown on the LED. Follow the instructions in the case but if in doubt, change the batteries.

BOWDENS

Tel: 01306 743355
www.bowden-bros.com
sales@bowden-bros.com

Transmitter power options

The operator can now select the power output and tone requirement to suit the cable length, and application. On short cable lengths, low power should be selected to minimise any noise induced in adjacent cables. Normal power is the equivalent to the output of the MKIV instrument. For long cables (10Km) maximum power should be used to give a clear signal at the point of identification. All of these power settings have a modulated signal at 1.6KHz frequency. The final position on the selector switch gives a continuous tone, but because of the increased demand on the battery, this option automatically selects the normal power option. Although the battery life is improved by a factor of three when compared to the MKIV on the same power output, because the power output has increased by a factor of four times, when the MKV is used on maximum power or on continuous tone, the battery life will be much shorter. Typically a new set of batteries will give 10 hours continuous use on either of these settings.

Receiver

At the point of identification, adjust the volume control to maximise signal reception. Hold the receiver at a right angle to the cable, traversing the cable up and down over a length of approximately 1 metre, and listen to the rise and fall of the signal due to the 'lay' effect of the cores which are twisted over each other. The effect can also be observed on the receiver meter. If the target cable is tightly bunched with other cables in a trench, the remote roving coil can be used, by plugging the jack plug into the side of the receiver. This coil allows easy access around the cable.

For a positive identification of the target cable, the rise and fall **MUST** be experienced. Some induced pick up may appear in adjacent cables, but although detectable it will not exhibit the rise and fall characteristics. Following identification, when the headphones jack plug is removed, the receiver is automatically switched off. The transmitter must be turned off before storing back in the case.

Specification

Transmitter

Power output:	At 1Ω impedance 0.5W High. At 10Ω impedance 0.09W High
Current Consumption (max power):	At short circuit 60 mA. At 10Ω 12 mA
Typical cable lengths:	Low power up to 1Km (depending upon impedance). Mid power up to 5 Km (depending upon impedance). High power >10 Km (depending upon impedance)

Receiver

Pick up coil:	Fixed within body of receiver
Headphones:	Mono 64Ω with jack plug.
Auto-power down:	On removal of headphones.
Ancillary shorting cable:	0.4m with heavy duty crocodile clips