

CRT 8**Cable Route Tracer****Reliable and cost-effective route tracing system**

Route tracing system is an essential item in the kit for fault location of underground power or telecom cable network. CRT 8 is a powerful audio frequency system that can be effectively used for various functions.

It offers unique functions such as route tracing of any type of cable for more than 10 km or depth measurement up to 6 meters.

The system comprises of audio transmitter AFG 8, receiver unit AFR 4, search coil SC 4 and other accessories. Complete system is offered in a robust molded carrying case.

Route Tracing

The success of locating exact fault point on the underground cable depends on the search carried out on the lay of the cable. This requires accurate location of the cable under test. Three crystal controlled frequencies, wide range of impedance matching, galvanic and inductive couplings in the transmitter AFG8 offer complete flexibility to get the right function performed accurately

Depth Measurement

The depth of the cable under test is carried out by triangulation method. This method is found to give more accurate results in presence of other metallic utilities in close proximity.

Cable Identification

The system can accurately identify the wanted telecom cable in the bunch of cables.

Pin-Pointing of fault

A contact nature fault cannot be pin-pointed by acoustic method using surge wave system. CRT 8 system can effectively pin-point such faults.

Route Tracing live cables (active mode)

The transmitter AFG 8 can be coupled to any live cable (any working voltage) by inductive devices such as transmitter coil/tong to induce the signal in it. The cable is traced by the receiver unit and search coil in the normal manner.

Route Tracing live loaded cables (passive mode)

Route tracing of live loaded cables can be carried out by using only receiver unit AFR 4 and search coil in passive mode.

Ground Survey

The system can be effectively used to carry out ground survey. Transmitter AFG 8 coupled with transmitter coil is kept on the ground surface to induce the signal in all the underground utilities. Search is carried out by the receiver and search coil for a definite area. The direction of the transmitter coil is rotated in steps and the search is carried out to locate all the underground utilities such as cables, pipes and metallic objects.

Customer Service

All instruments have been designed based on safety, capability, field application, ruggedness and ease of operations. We try to offer the best possible solutions for the job. We not only offer our after sales services to the customers through our branches / authorized agents, but also offer training to the working staff of the customer under specialized training programs.

Principle of Route location

The system consists of a Audio Frequency Generator AFG 8, TAudio Frequency Receiver AFR 4, Universal Search Coil SC 4, Transmitter Coil TC 8, Cable Identification Probe CIP 3 and Headphones AH.

The Generator injects an A.F. signal into the cable which generates an electromagnetic field around it. This field is concentric to the cable & is present over the entire length. The presence of this field (in turn the cable) is detected by a highly selective and sensitive receiver with a search coil.

Availability of three frequencies 480Hz, 1450Hz and 9820Hz enables to use correct frequency depending on cable length, depth and external interference. Use of 9820Hz on inductive coupling permits operation on a working cable as the frequency does not interfere with normal operations. Using the maximum or minimum of the injected signal, routes can be traced for cables up to a depth of 5 meter. Bends, loops and tee branches also can be identified. Route of cable running in a bunch of cables and then branching off can be determined.

CRT 8**Depth Determination**

Depth of the cable under test can be determined by triangulation method. This helps to avoid damage to the cable at the time of excavation

Cable Identification

The signal is injected in to a pair shorted at the other end. This helps in Minimum induction of the signal on the neighboring cables. Cable identification probe registers a signal only on the wanted cable.

Specifications

CRT 8

Audio Frequency Generator AFG 8

Output	: 1 - 2 - 4 - 8 Watts selectable.
Output Frequencies	: 480 Hz - 1450 Hz - 9820 Hz selectable. (All frequencies quartz-controlled)
Matching	: Matching of the Output impedance of the connected cable is carried out in the range 0.5...1000 Ohms.
Indication	: Meter Indication of relative transmitted power and charge condition of the accumulators.
Current Supply	: Mains connection 220-240V 10% AC 50 Hz, or 12 V DC (e.g. car battery) or from internal accumulators with built-in charger.
Operation Time	: a. Internal accumulators 2.5 hrs. (8W) continuous operation. b. Mains supply no time limit.
Working Temperature	: 0 deg C to 55 deg C
Storage Temperature	: -10 deg C to +55 deg C
Dimensions (mm)	: 250 (L) x 120 (H) x 255 (D)
Weight	: 4.9 Kg.

Audio Frequency Receiver AFR 4

Receiving Frequencies	: A. Passive : 50 or 60 Hz b. Active : 480 Hz, 1450 Hz, 9820 Hz.
Gain	: 100...7000 Hz greater than 90 dB
Indication	: LCD bar - graph display with scale illumination for : a. Signal strength b. Battery status.
Working Temperature	: 0 deg C to 55 deg C
Storage Temperature	: -10 deg C to +55 deg C
Dimensions(mm)	: 240 (L) x 110 (H) x 155 (D)
Weight	: 1.43 Kg with batteries.

Universal Search Coil SC 4

Receiving Frequencies	: 50 Hz - 480 Hz - 1450 Hz - 9820 Hz selectable
Axis of coil	: Can be swivelled 45 deg. / 90 deg.
Working Temperature	: 0 deg C to 55 deg C
Storage Temperature	: -10 deg C to +55 deg C
Dimensions(mm)	: 470 x 80 x 207
Weight	: 0.85 Kg (approx)

Accessories

Standard

Search coil	- To detect electromagnetic field
Headphones	- For audio tone
Earth spikes	- Provides separate earthing for effective route tracing
Transmitter coil	- For inductive coupling of signal
Carrying case	- Special carrying case provides ease of storage and handling

Optional

Transmitter tongs	- For inductive coupling to particular cable
Cable identification probe	- To identify a wanted cable from bunch of cables in telecom cables.
Separation filter	- To inject the signal directly in 240V live cables

Other models from CRT series

MODEL	POWER OUTPUT
CRT 50	5, 10, 25, 50 Watts
CRT 200	5, 25, 50, 100, 200 Watts
CRT 500	5, 50, 100, 250, 500 Watts

Above models are specifically used for Pin-pointing contact nature faults.

Marketed by

Aplab Limited

APLAB House, A-5, Wagle Industrial Estate,
Thane - 400604.
Tel. : +91-22-25821861-2-3, 25820319, 25321019
Fax : +91-22-25823137, 25824456, 25831128
Email : cfl@aplab.com
www.aplab.com



18, Electronic Sadan II, MIDC, Bhosari,
Pune 411026, Maharashtra, India.
Tel. : +91-20-27120784 / 27123176
Fax : +91-20-27121787
Email : telemtrx@vsnl.net