MRT-700

Underground Cable and Pipe Locator

MRT-700 Underground Cable and Pipe Locator maps quickly, easily and accurately in the **distribution networks:**

- **Energized**
- **De-energized**
- **Medium Voltage**
- **Low Voltage**

Specially designed for Utilities to trace **lines** and **pipes** in their distribution networks.

Compatible with **GridGIS Map Creator** app, for mapping the cable network (*develop by Ariadna Grid*).

MAIN FEATURES

- **7 Sensors,** strategically distributed
- **10W** of power, user-adjustable
- High Precision (<5% in all axis)
- Detects 4 active and 2 passive frequencies
- **Virtual Cable representation** in TFT LCD Color Display
- Measurement of the **depth** and **current amplitude**
- Correct performance > **10 km in length**
- Up to **10 mts depth** (factory configurable for higher values)
- Depth measurement (5 % precision)
- **+12h** operation time
- Rechargeable **internal battery**

ADVANCED FUNCTIONALITIES

(*) Optional

- **De-energized cable identification** functionality *
- **Internal GPS** (accuracy <1m) and **datalogger** (Data transfer via **Bluetooth**) *
- **App for mapping the cable network**, GridGIS Map Creator *
- Tracing and detection of probes in **non-metallic pipes**
- **Fault Pinpointing Functionality** *

MRT-700 TX / Transmitter

Versatility: Injects different active tracing frequencies by three different and optional way:

- **Direct connection** with alligator clamps
  De-energized electric cables, telephone cables, water and gas metallic pipes, etc.
- **Induced** with a **Clamp**
  Energized / De-energized MV and LV cables, telephone cables, etc.
- **Induced Built-in Antenna**
  In case user, cannot reached cable, or its position is unknown, induction can be made from the earth surface using a built-in antenna

Accuracy: Measures loop impedance, making it possible to choose the best working frequency for each case.

MRT-700 TX / Receiver

Virtual cable representation in TFT LCD color display with complete information to trace underground cables in an easy drive and light receiver.

Versatility: Detects different active/passive frequencies (sent by MRT-700 TX)

Easy to use: Its built-in antenna configuration automatically calculates the target position with a digitally processed Algorithm.

Intuitive Performance: Indicates distance and angle to the cable or pipe to be located by a very intuitive graphical representation in a large display.

Continuous depth: It measures automatically cable's and pipe's depth with high accuracy in real time.

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Fault Pinpointing Functionality*

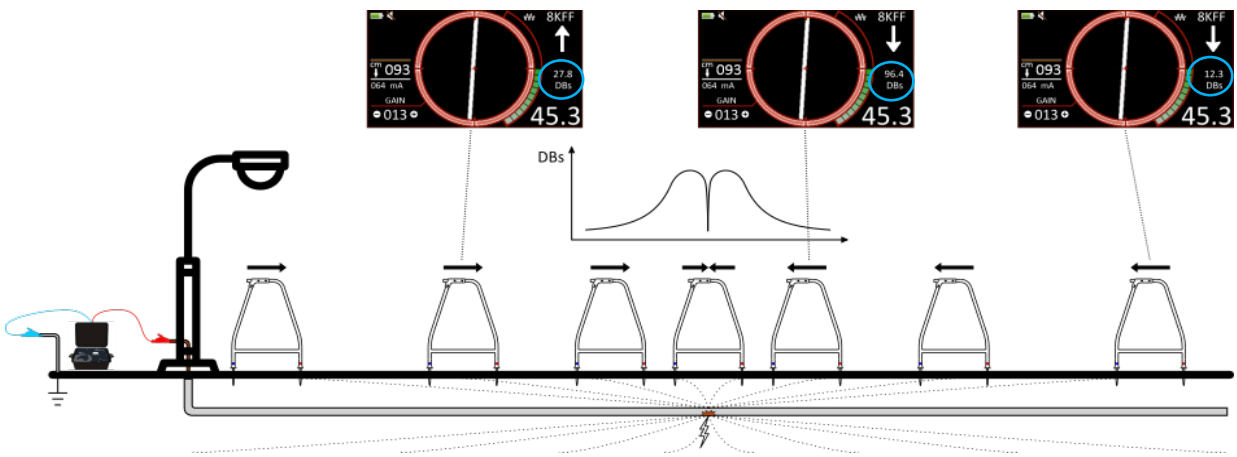
MRT-700 (*) is able to detect ground faults on pipes and cables, with **high precision** withing 5 cm. These faults are caused by the deterioration of the coating on pipes and damages in the isolation of the cables, therefore the metallic part of them may make contact with the ground.

In order to perform fault location works it is necessary to use a **special frequency - 8KFF -** (fault locating frequency), and an **external accessory - A-Frame -** connected to the receiver.

MRT-700 allows to cable route trace and fault pinpointing, at one time.

(*) *MRT-700 must be requested with location functionality*

Working diagram – Locating process



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Technical features

MRT-700 TX

MRT-700 RX

Size	315x255x150 mm	Size	790x370x230 mm
Weight	2.5 kg	Weight	2.2 Kg
Protection	IP65	Protection	IP54
Active signal frequency	640 Hz 8 kHz 32 kHz 8 KFF (*) CPS	Active signal frequency	640 Hz 8 kHz 32 kHz 8 KFF (*) CPS
--	--	Passive signal frequency	50/60 Hz 8/33 kHz (sondes) 14/27 kHz (radio)
Max. output power	10W	--	--
Max. output current	500mA	--	--
Operating temperature	-20 /+ 60ºC	Operating temperature	-20 /+ 60ºC
Rechargeable interna battery	7.4 V 6.6Ah Li-ion	Rechargeable interna battery	7.4 V 7.2Ah Li-ion
Battery power supply input	100-240Vac 50/60Hz 0.55A	Battery power supply input	100-240Vac 50/60Hz 0.3A
Battery power supply output	12VDC 2A	Battery power supply output	12VDC 2A

Safety standards:
IEC 61010-1:2011 / UNE-EN 61010-1:2011

EMC standards:
IEC 61326-1:2012/ UNE EN 61326-1:2013

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IEC 61010-1:2011 / UNE-EN 61010-1:2011

EMC standards:
IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11

(*) MRT-700 with location functionality

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Power cable identification and location solutions