

Ferrolux® Systematic line and fault location system



- Plan view of the target line location
- Excellent results, even when cables are bunched
- Location of joints
- Modular sensor design (plug and play)
- Multifunctional system combines the most effective pinpointing methods in one device

DESCRIPTION

The Ferrolux® Rx audio frequency receiver with IFS tracing sensor locates lines and cable faults with a high level of precision as it combines several functions in one device. These include the SuperMax and SignalSelect (signal flow direction identification) locating functions, plus tried-and-tested audio frequency functions.

This means that the highly precise receiver is still able to deliver clear results in areas with lines that are routed closely together.

Longer tasks are still easy as the device weighs very little and provides a systematic and intuitive display of the measurement results.

Combined with the audio frequency generators in the Ferrolux® FLG series, even joints and cable faults (e.g. short circuits in wires) can be located with precision.



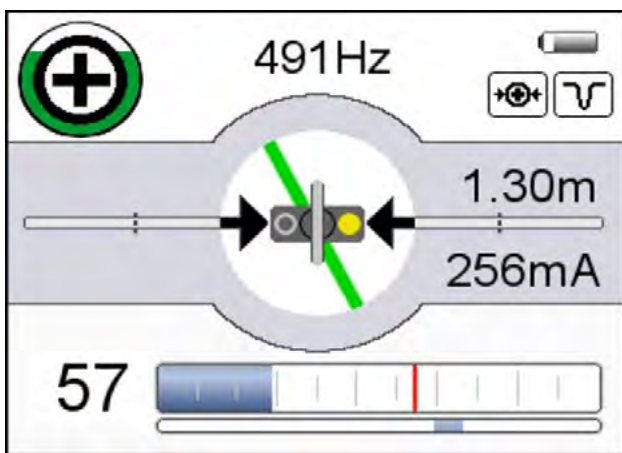
SPECIAL FEATURES

- Plan view of the target line location
- Continuous display of the installation depth and current strength
- Detects the current direction and signal quality
- Frequency scanning
- Programmable function keys
- Sensor weighs just 900g
- Rapid menu navigation with **easyGO** →
- Probe location mode

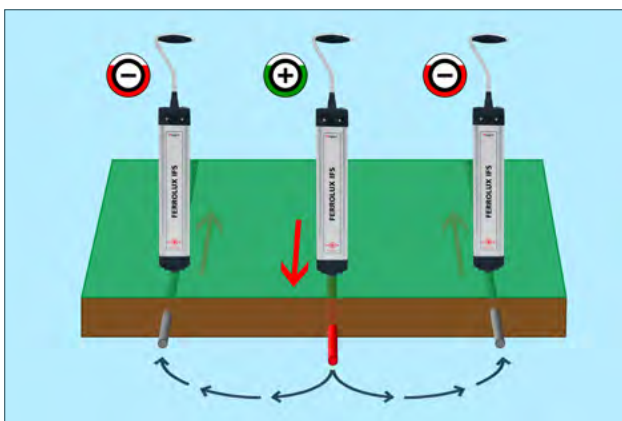
This is all possible thanks to a continuous display of the installation depth and the signal current as well as automatic supporting functions (e.g. minimum turbidity).

The device can be tailored to suit personal working habits thanks to the programmable F1/F2 function keys. The user can switch between frequencies, modes or speaker settings very quickly. This is also the simplest way to save a data point or waypoint.

GPS coordinates can be added via a Bluetooth® interface. All measurement data can be displayed graphically on the display, which is still legible even in bright sunlight, or on a computer.



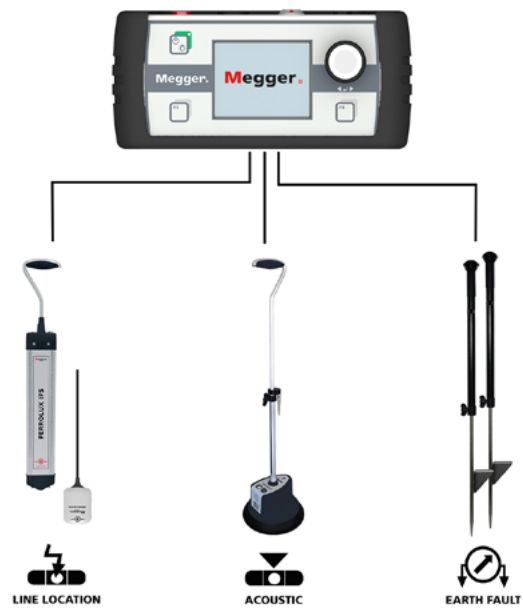
Along with the tracking signal, the new measurement screen provides a clear overview of all relevant information that can be useful in locating the cable or probe.



If there are several lines (cables, pipes) located next to each other, it is often difficult to determine which the correct one is. Sometimes the signal from the generator can flow through both lines, but the signal in the lines may be flowing in different directions. With the SignalSelect function, the generator applies a signal that contains direction information. When the device is positioned over the correct cable, a "+" symbol is displayed to facilitate precise identification.

Ferrolux® - the multi-functional platform

The modular, multi-functional pinpointing system is based on the Ferrolux® Rx audio frequency receiver with universal control unit. It is easy to connect additional sensors to the Ferrolux® MLE set using plug and play.



In addition to tracing and fault location, with audio frequency, it enables the user to acoustically pinpoint cable faults with great precision and accurately locate cable sheath faults using the voltage gradient method.

The set Ferrolux® MLE is equipped with a surge wave receiver type digiPHONE+ enabling the user to acoustically pinpoint flashover faults in cables that are routed in the ground. Excellent acoustic characteristics, background noise reduction, automatic headphone cut-off and an 84 dB volume limit ensure that the fault can be located efficiently using the proven coincidence method.

The Ferrolux® MLE can even locate faults in the cable sheath, which always have a direct influence on the service life and quality of cables. Once two earth probes have been connected, the control unit switches to the voltage gradient method. A signal generator then creates a potential gradient at the fault location.

The device is so sensitive, it even displays voltage differences in the μV range. The device features automatic interference signal filtering and parameter adjustment, so no manual adjustment is required during use. A fault can be located in minutes.

TECHNICAL DATA

Ferrolux® Rx — audio frequency receiver

Incoming frequencies	50 Hz, 60 Hz, 100 Hz, 120 Hz, 491 Hz, 512 Hz, 640 Hz, 982 Hz, 1090 Hz, 8440 Hz, 9820 Hz, radio (15 kHz to 23 kHz), 32,768 Hz
Dynamic range	120 dB
Sensitivity	5 µA @ 1 m (33 kHz)
Depth measurement at active frequencies	0.1 to 7 m
Depth measurement accuracy	5% @ 1 m
Current strength measurement at active frequencies	1 mA to 400 A
Current measurement accuracy	10%
Current direction (SignalSelect)	For all active frequencies
Measurement data memory	99 measurements with 99 measuring points
Display	TFT 3.5" graphic, measured values displayed as a bar graph and numerically
Power supply	6x LR6 (AA)
Operating time	> 15 h
Display unit dimensions (L x W x H)	100 x 220 x 80 mm
Weight	< 1 kg (control unit and tracing sensor)
Sensor unit dimensions (L x W x H)	730 x 100 x 45 mm
Operating temperature	-20 to +55°C
Storage temperature	-30 to +70°C
Degree of protection	IP 54
Interfaces	Bluetooth for pairing with GPS receiver, headphones, connection points for an IFS sensor to locate lines or digiPHONE+ 4 mm connection sockets for connecting the soil probes
Location methods	Normal minimum, normal maximum, super maximum (precision location), minimum turbidity (of cable joints location)
Suitable generators	FLG 12, FLG 50, FLG 200

Ferrolux® IFA — readout antenna (optional)

Incoming frequencies	As for Ferrolux® Rx
Dynamic range	120 dB
Current direction detection (SignalSelect)	For all active frequencies
Weight	Approx. 125 g
Dimensions (L x W x H)	40 mm x 60 mm x 30 mm

Surge wave receiver, (type digiPHONE+)

Safety amplification	Acoustic limit of 84 dB (A) > 120 dB
Dimensions	Diameter 230 mm, height 140 mm
Handle length	450 to 750 mm, adjustable
Weight	2.2 kg (including handle)
Dynamic range	Acoustic channel > 110 dB
Frequency range	100 to 1500 Hz
Filter stages	Off 100 to 1500 Hz, low-pass 100 to 400 Hz, band-pass 150 to 600 Hz, High-pass 200 to 60 Hz
Degree of protection	IP 65

Voltage gradient location with earth probes

Sensitivity	5 µV to 200 V
Interference suppression	50/60 Hz, 16 2/3 Hz, KKS, DC
Zero-point adjustment	Automatic
Cycle detection	Automatic
Length of probes	1 m (separable and insulated)
Weight of probes	0.8 kg each
Length of connecting cable	2 m

ORDERING INFORMATION

Product	Order no.
Ferrolux [®] Rx audio frequency receiver, including connecting cable and carry case	1011692
Ferrolux [®] MLE pinpointing system consisting of Ferrolux [®] Rx, "acoustic" sensor set and "earth fault" sensor set Including connecting cables, carry cases, measuring tips 18 mm/75 mm, tripod, base plate, headphones, contact sponge	1012140
OPTIONS:	
Ferrolux [®] IFA readout antenna for cable identification	1011682
"Acoustic" sensor set for Ferrolux [®] Rx, including connecting cable, carry case, test probes, headphones, surge wave receiver	1011721
"Earth fault" sensor set for Ferrolux [®] Rx, including earth probes, connecting cables, contact sponge	1011722
Holux GPS receiver	118307212
Headphones for Ferrolux [®] Rx	2010525
300 mm measuring tip for ground microphone	890026254
130 mm measuring tip for ground microphone	899006926
Recommended signal generators	
Ferrolux [®] FLG 12, 12 W audio frequency generator	1012522
Ferrolux [®] FLG 50, 50 W audio frequency generator	810670
Ferrolux [®] FLG 200, 200 W audio frequency generator	820000072



Ferrolux[®] Rx



"Acoustic" sensor set



"earth fault" sensor set



Ferrolux[®] IFA



Ferrolux[®] FLG 12

SALES OFFICES

Megger Limited
Archcliffe Road Dover
CT17 9EN England
T +44 (0) 1304 502101
E UKsales@megger.com

Seba Dynatronic
Mess- und Ortungstechnik GmbH
Dr.-Herbert-lann-Str. 6
96148 Baunach
Germany
T +49 9544 68-0
E team.international@megger.de

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www.megger.com
ISO 9001

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Ferrolux® FLG12

Audio Frequency Generator



- **Precise location, even above a bunch of cables, with SignalSelect**
- **Multi-frequency operation prevents manual switching**
- **Durable operation**
- **Automatic impedance matching**
- **Intuitive EasyGO operation system**



DESCRIPTION

The Ferrolux® measuring system provides solutions to a wide variety of problems for operators of power and telecommunication cable systems as well as public utility companies for gas and water supply. The Ferrolux® FLG12 audio frequency generator can be used for cable tracing, cable selection, location of cable faults or the location of metallic pipelines.

The Ferrolux® FLG12 can transmit all available frequencies simultaneously. It eliminates the need to switch frequencies manually on the transmitter while tracing the line. Together with the Audio Frequency Receiver Ferrolux® Rx, proven location methods like SuperMax and SignalSelect for identification of the direction of signal current are available. It guarantees precise tracing, even above a bunch of cables. Furthermore, a pulsed signal allows for clear identification of the transmitter signal in a noisy environment.

The new Ferrolux® FLG12 transmitter has an integrated antenna for inductive coupling of the signal. A large colour display and the proven EasyGo menu allows and easy intuitive operation.

The instrument measures and displays the loop impedance of the test object, output voltage and current, and phase angle. Continuous operation when feeding capacitive loads (insulated gas pipes) or inductive loads (shorted cables) does not cause any overheating problems.

FEATURES

- Automatically matching the impedance
- Automatic or manual selection of frequencies
- Multi-frequency operation
- Pulsed signal operation
- Indication of output voltage which is dangerous to touch
- Protected against external voltage
- In-built antenna for inductive coupling
- Quick and easy operation via EasyGo
- Vehicle charging

TECHNICAL DATA*

Output Power	0 - 12 W
Output frequencies	491 Hz, 512 Hz, 640 Hz, 982 Hz, 1090 Hz, 8440 Hz, 9820 Hz, 32768 Hz
Impedance matching	Automatic from 0.5 ... 1024 Ω
Distortion	<3% for all frequencies in relation to the output voltage
Signal pulse	Continual signal or pulsed signal (4:3, 4:1, 6:1)
Output sockets	4 mm safety sockets protected against contact
Display	TFT colour display with 320 x 240 pixels
Internal rechargeable battery	Li-ion rechargeable battery 7,2 V
operating time	>2,5 hours at 12 W
Input voltage range of generator	12 V DC
Input voltage range for mains power supply unit	100 V ... 240 V, 50 / 60 Hz
Storage temperature	-40°C ... 70°C
Operating temperature	-20°C ... 55°C
Operating humidity	max. relative humidity 93% at 30°C
Weight	2.4 kg
Dimensions (W x H x D)	250 mm x 170 mm x 120 mm
IP protection class (in accordance with IEC 60529 (DIN VDE 0470-1))	IP 54



Reel with earthing load



Flexible clamp 150 mm



Induction clamp 100 mm and connection cable



Induction clamp 50 mm



Separation filter

ORDER INFORMATION

Product	Oder Nr.
FLG12 Audio frequency generator 12 W	
Scope of supply: Generator, carrying strap, mains charging adapter, test leads, earth spike	1012522
Optional Accessoires:	
Reel with earthing lead 25 m lead (contact proof)	810002785
Reel with earthing lead 100 m lead (contact proof)	810002784
Live cable connection (max. 420 V, 480 Hz...10 kHz/max. 10 W)	820008823
Induction clamp 50 mm	810000093
Induction clamp 100 mm	810003540
Connection cable for induction clamp 100 mm	810002164
Induction clamp flexible 150 mm	810003542
Installation support for flexible induction clamp	810668
Vehicle charging lead	810000019

*We reserve the right to make technical changes

SALES OFFICE

Megger Limited
Archcliffe Road Dover
CT17 9EN England
T +44 (0) 1304 502101
E UKsales@megger.com

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www.megger.com
ISO 9001

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