

## VLF emitters (very low frequency)

### General Description

VLF is the shortcut for "Very Low Frequency"; which is a low wave frequency range. Usual VLF (Emitter) devices use a frequency in this range to send out a alternating magnetic field in the ground, which can be disturbed by a metallic target. This disturbance of the magnetic field can be analysed in detail and so it is possible to make a conclusion to targets situated under the ground.



### Advantages of the usage with FS Future Series®

VLF emitters are optional components which can be used to optimise a measurement with FS Future Series instruments. VLF emitters send out very low frequencies to reinforce the magnetic field of buried objects. Because of this amplification anomalies of the underground like metallic targets (gold, silver, copper etc.) becomes better visible.

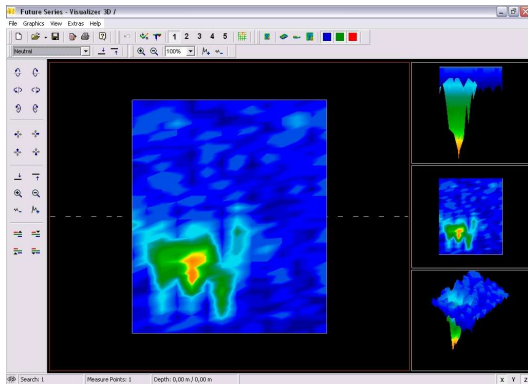
The 3d image of the underground becomes more clearly than without using the VLF emitters. So you can better recognize the shape and structure of buried metals.

### Usage

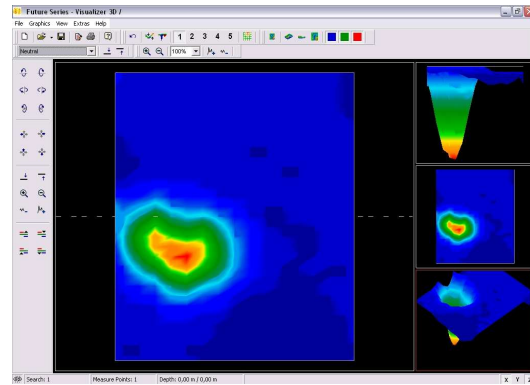
One set VLF emitters consists of 4 units which have to be placed on the ground, in every corner of your measuring area. Remove the antenna of every VLF emitter and place it on the ground in a distance of about 50 cm from the main unit. Adjust every emitter to your current ground conditions and power it on. Now measure your area with a FS Future Series device in operating mode *Ground Scan* like usual.



## Comparison of a measurement with and without vlf emitters



The figure on the left side shows a located metallic target without using VLF emitters. The structure of the object is destroyed and not very accurate.



The figure on the right side shows the same measurement while using VLF emitters. The shape of the located target looks much clearer, also the background is straightened.

## Technical specification

The following technical indications are medial values. During operation small variations are quite possible.

### VLF sender (1 piece)

Dimensions (H x W x D)	25cm x 22cm x 17cm
Weight	7,4kg
Air Humidity	5% – 75%
Waterproof	No
Frequency Range	7 kHz – 60 kHz
Amplified Output Power	10 W
Internal Battery	24 V
Operating Time (full charged battery)	About 3 hours
Charging Time	About 10 hours
Maximal Sphere of Action	About 10 meters
Operating Temperature	0°C – 50°C