

Falsing

"Falsing" is a broad term used where your detector generates "good" signals, and generally there is no target.

External Sources

External factors that can result in falsing are EMI and Mineralization.

1 presence of EMI (Electromagnetic Interference), harmonics of your detector's operating frequency will be received by the detector and will be processed as signal return. This noise can be repeating, such as 60 Hz from a power transformer, or spurious, as in the case of a VLF radio burst. This type of falsing is best controlled by changing operating frequency, filters, reducing RXG, and coil selection.

2. In the presence of high strength mineralization - either ferrous (iron content) or conductive (wet salt sand), your detector will see "the ground as a target". The intensity of the falsing will be based on the strength of the mineralization, your ground balance and your AutoTrac speed. Changing AutoTrac speed, operating frequency, filters and your coil can help reduce this type of falsing. DD coils work best in high ferrous mineralization, and concentric coils perform better in a high conductive medium such as wet salt sand.

Internal Sources

There are numerous internal factors" that contribute to falsing. The NUMBER ONE issue is failure to achieve a good ground balance. Without that "the ground is a target".

- a) Running the machine at sensitivity settings too high for the environment.
- b) Running the machine with too fast or too slow AutoTrac setting.
- c) Deploying the machine with the improper Frequency Mode / Ground Selection. Run Normal 3F / Normal Soil in ferrous ground, and Salt Comp / Salt soil at the beach.
- d) Improper coil selection. DD coil for high ferrous mineralization, concentric coil for high conductive mineralization.
- e) A faulty coil.
- f) A faulty battery pack. DC cells can generate noise. The diode in a rechargeable pack can oscillate.
- g) An internal failure of the machine. If items a thru f fail to correct the issue, it is possible that you have an internal failure. Return the unit for repair.

Rob (IL) Finds Treasure Forum