The Ground Probe

This feature is activated by selecting the Ground Tracking Live Control and pressing the ZOOM button. It will remove the system / coil offsets and enable the user to achieve a more accurate reading of the ground. The VDI reading at the top of the screen is converted from the phase into VDI units like you'd see for normal targets (VDI = 19 = nickel.

Once you zero the machine and lower it to the ground, or read your target, your phase angles should come in between 0 and +180). A ferrite bead will come in very close to 180 degrees (-95 VDI) which is close to where most normal ground comes in and pure conductors will come in around 0 degrees (+95 VDI).
In air, when you zero the detector, you will see phases of both positive and negative values - those are just noise and don't pay attention to them. If you are getting a negative phase for any of the frequencies when you lower the loop to the ground however, you probably have an overload problem. Most ground that we see is 178 (-94) to 165 degrees except salt which falls close to 90 degrees (VDI 0). Nonferrous targets (coins and such) are VDI 0 - +95

The VDI reading is converted from the ground phase normalized to standard VDI units. It's either going to be from the strongest signal if the detector is running best data, or the average of the two strongest signals if correlate is selected. If you have ground coming in at -94(VDI) with a signal strength of 2% and another ground coming in at -91 with a signal strength of 7%, it would seem to me that the ground coming in at -91 is more mineralized even though it is a less negative VDI. 0-10%=low mineralization, 11-25%=moderate and 25% on up = high/very high. Try to keep it at 20% or less. The lower the mineralization, the slower one should sweep - which may mean a lower filter should be selected. The phase tells you composition (between purely ferrous and purely salt), while the signal strength tells you the concentration (more mineralized).

To get the phase of your target, put the coil on the ground away from the target and press the zero button - that captures the ground for separating its effects from the target. Then put your coil over the target. That should get you pretty close to the phase of the target. The VDI number at the top is the normalized reading. The numbers for each of the 3 frequencies are the phases that each frequency sees for the target. In the ground probe, the phase angles are not normalized, just the VDI. It was intended to be used to just check out the phase of the ground, but, it can also be used this way to check out a target if desired.

Rob (IL) Finds Treasure Forum