

HOW TO SUPER TUNE & GROUND BALANCE THE MINELAB MUSKETEER-STERLING-TRIBUNE

By Keith Southern

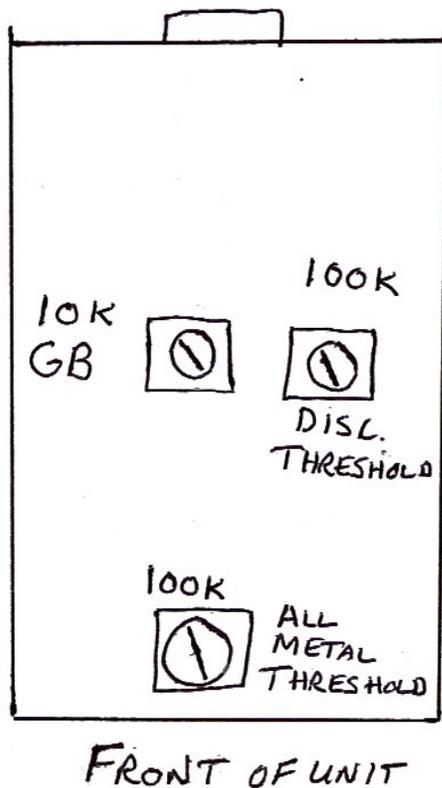
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These vintage detectors are definitely a hot machine and can keep up with some of the best made today. Originally these detectors that arrived in the US were not tuned for the various soils. Hence many Treasure Hunters had the opinion these were not deep seeking machines. After making a few adjustments, you will see a large improvement in depth and more pronounced audio on deeper targets. The metal boxed Sterling, Tribune, Musky X have better audio compared to the newer plastic boxed Musky. That also really talks to you when searching in iron infested areas.

Keith's how to will open up your eyes on how to adjust factory tuning presets. You will see an increase in depth and sensitivity. For those of you who would like to add external pot controls to your Sterling, indicated on the diagram are the pot values.

There are three internal rim pots on the circuit board:

- ALL METAL THRESHOLD 100k trim pot towards the front by the controls
- DISCRIMINATION THRESHOLD 100k trim pot
- GROUND BALANCE 10K trim pot



The two Threshold pots are very touchy when adjusting.

First off find yourself a spot outdoors away from any electrical interferences. Set your self up a wooden table etc. to rest the detector on.

Adjusting Sensitivity

- 1) Turn the external sensitivity control up all the way, max.
- 2) Adjust the internal Disc. Threshold pot clockwise until it just starts to chatter and whiz. If you go too far, the sound will get too loud. Do not overdrive it or it will do more harm than good. It is a critical adjustment to get the threshold to just barely break in with the sensitivity control turned all the way to max. Going any higher with the threshold will not give you more depth, you will actually loose deeper weaker signals.
- 3) Back off on the external sensitivity control a little to make the machine run smooth. You always want a little noise-chatter. This will give you max. depth. About a 4" increase should be expected unless, your unit already has been super tuned.

Adjusting Ground Balance

Switch toggle to Pinpoint (all metal mode)

Reset is basically a all metal Re-tune Control

- 1) For the most part leave All Metal Threshold pot alone. It should be fine where it is. Adjusting the pot is super touchy. If you want to give it a try, make sure the searchcoil is off the ground. Adjust for a slight sound.
- 2) Drop the searchcoil to within 4" of the ground, bob up and down, notice the sound. You want the sound to be the same. If the sound decreases, turn the GB pot clockwise until it sounds the same. Then adjust the pot ever so slightly to give you a slightly positive GB setting. If the sound increases while bobbing, adjust the pot counterclockwise until the sound is the same. Then adjust slightly positive.
- 3) If you have many Hot Rocks in your area that are causing you problems. Ground balance your detector to the hot rock until they do not make a sound when passing under the searchcoil.

Take note the factory GB preset of the pot is around the 11 O'clock position.

Hot Rocks will be cancelled out at around 11 o'clock. By adjusting to 12 O'clock the machine will become too noisy in mineralized ground and you may not be able to hunt. But you will see a depth increase.

You can hunt in the Pinpoint All Metal mode, you will need to retune with the reset switch if the sound starts breaking up. Your best bet is to always hunt in Disc. Mode which is deeper than hunting in All Metal mode.

So these are the basics to get your detector to perform.

If you really get down to fine tuning, I Sven was going to mod my Sterling and add an external GB 10 turn pot, single turn Disc. and All Metal threshold pots. And thought about switching out the reset pot for a push button. I have recently sold my Sterling to Keith who will take good care of it.