

Sovereign GT

Field Test Report



When news first trickled down that Minelab was introducing another Sovereign model I was very interested having been a dedicated Sovereign user for many years. It is apparent that Minelab listens to their customers because the new Sovereign GT model has some new features and a few older ones from the past that have made a welcome return in this latest 2005 model. The new Sovereign GT is now a very attractive color blue and the controls are all clearly marked in white lettering. I was eager to acquire and try out the newest machine in the Sovereign's lineage and what follows is a short report of some of the time spent with it. For the purpose of this test I have dispensed with some of the usual stuff as I figure nearly everyone will already be familiar with one or other of the models by now. Well, where should I start as it is all new really! The new features and re-designed digital meter go to demonstrate that this is a really much improved model. Besides improvements in balance and to the circuitry some very good and useful features have been built into the GT. Some of the new features were actually on the very first Sovereign model, but in this day of now dealing with what can be potentially worked out sites and lots of competition from other searchers, anything at all that will help to increase in-ground depths are very welcome. The GT now has the ability to outclass all other existing Sovereign's. How can it do this? Let's take a closer look and find out more about the new Sovereign GT.



Iron Mask On/Off

A fundamental problem for most conventional detectors is the inability to recognize a valuable target when it is located near a ferrous item. This is a particular problem in heavy trash areas. The Sovereign GT using Iron Mask/On is particularly good at making the distinction between a non-ferrous target and iron trash, recognizing the non-ferrous target and providing a signal. With it on the search depth can be a little greater and non-ferrous targets may be located more reliably amongst ferrous trash. However, with Iron Mask/On, the detector may give the occasional 'beep' on large ferrous targets and the threshold may not be stable. For this reason beginners with the GT may prefer to detect with the Iron Mask/Off. Also, when discriminating in mineralized soils, Iron Mask/Off may be the preferred mode.

Silent Search/Threshold

When in the discriminate mode, the Sovereign GT will vary the tone of an audio signal depending on the conductivity of the target; i.e. a highly conductive target will produce a high pitched tone, while a less conductive item such as a worn and thin hammered coin or piece of low-grade foil will produce a lower pitched tone. The advantage of the GT over other detectors is that the tone of the threshold will also change. After the target signal is heard, the threshold "hum" will return in a pitch similar to the pitch of the signal. When the target signal is nulled (goes silent momentarily) due to discrimination or notching, the threshold will again return in the higher or lower pitch of the target's conductivity.



This can be a useful feature as not only will you know when you pass over iron trash but you will also be able to hear the returning threshold tones of the higher non-ferrous items you have chosen to discriminate against and can estimate the conductivity that they have.

Another advantage of the threshold based discriminate mode is that on occasion the only thing that may alert you to the presence of a very deep target is a change in threshold pitch. This is more common than you may think especially on junky sites.

For new users of the GT and BBS technology this may initially be a bit confusing so, to simplify things a little Minelab has added a Silent Search discriminate option to the Sovereign GT. In this mode targets will still produce different tones based on conductivity but, you will not hear the changes in threshold tone or, the nulling (silencing) of discriminated targets. A slightly faster sweep speed is also possible which makes the Silent Search mode ideal in areas of low target concentrations such as the wet sand areas of beaches where ground coverage is just as important as recovering the really deep targets. To operate in the Silent Search mode you need to start with the switch in Threshold position and, using the threshold control lower the level until it is just audible. Once you are at this low audio level flick the switch to Silent Search and the threshold will disappear.

Ground Balance Switch (Track/Fix/Pinpoint)

The most important addition and perhaps the really big difference between it and the previous Sovereign's is the inclusion of a Ground Balance switch - Track/Fix/Pinpoint. When to use the various settings is explained here but this brief explanation should be taken as a general rule and could be subject to altering and working in different settings as conditions change in the field.

- **All-Metal** - operating in All-Metals the new Accu-Track automatic ground balancing system is operating to overcome the variable effects of mineralized soils. This means that the Sovereign GT can now be used for successful gold nugget searching, as well as coin shooting in parks and beaches.
- **Disc Mode** - in this mode the GT uses digital filtering to compensate for ground effect and the Track/Pinpoint function is disabled.
- **Track** - track position continuously analyses the ground and resets the ground balance to compensate for changes in the mineral content. This position is ideal for areas where the ground compensation is changing rapidly.
- **Fixed** - the fixed position holds the ground balance at the last setting found while in Track and is suited to areas where the ground conditions are more constant. Fixed position will often give more depth than Track.

To ground balance in mineralized soils



In the All-Metal mode place the switch into Track and raise and lower the coil between 2 - 15cm above the ground. As the detector compensates for the ground minerals that are present the threshold will begin to stabilize producing a steady tone after a few pumps of the coil. This procedure might take a bit longer if the ground is heavily mineralized. Once you have achieved ground balance switch into Fixed and start detecting. From time to time check to see if you may need to re-ground balance. In highly variable ground it is better to stay in Track. Note: Be aware that if searching in Track it is possible with repeated sweeps across a target to tune out a weak signal. So, always switch to Pinpoint or Fixed to recover a target.

To ground balance in non-mineralized soils

Searching in All-Metal on saltwater beaches is a great way to maximize depth. Begin with the Sensitivity in Auto and select the Track position. Detect as normal for about thirty feet or so and then switch into the Fixed position. If the detector remains stable you can change from Auto into Manual and this is how to get the best depth and then check your signals in Discrimination.

Pinpoint - is a specialized position for precise location of targets as it gives a short signal (compared to that of the signal in Disc Mode) over targets helping the searcher to zero in exactly on the target for quick recoveries and to minimize ground disturbance. Do NOT search in Pinpoint as the ground balance is disabled and the detector can become erratic.

New "DigiSearch" DTI meter (Digital Target Identification)

A digital target meter for your Sovereign GT is available as an accessory. What this does is it provides a digital display of the target ID tones produced by your Sovereign GT detector. This means literally the meter relates a number usually in either three or two digits which relates directly to the specific conductivity of any particular target. The meter has no negative effects on the operation of the detector and does not need an additional power source. It is worked from the detector's battery. Be aware that some similar targets may vary in readings because of changes in composition. For example, gold rings will produce different readings depending on the purity of the gold and the size of the band. Also, similar coins minted in different years may also produce different readings. The meter also shows a low battery warning.

The meter for the GT has been re-designed not only in a nice new light blue color but has also been modified to actually produce less numbers than its predecessors. This was done to make it easier to see the fine changes in readouts between similar targets.

At the Beach



A trip to the beach was in order and the GT was found to be just as good as previous Sovereign's over salty wet sand, a particular area that does not suit a lot of other detectors. With the added bonus of "Accu-Trak" it is now possible to work in the All-Metal mode the entire time as it is so easy to set up as I outlined earlier in

the Silent Search/Threshold paragraph. For most of these tests I worked in discrimination but pinpointed and located all signals in all-metal. Working along close to the low water line, some very small and thin targets were found and sensitivity was very good. A beautiful round mellow tone produced an ordinary looking 9ct gold signet ring from about the ten inch level. One loud signal in disc produced another decent all-metal signal and at the five inch level a copper rivet from a pair of denim jeans was found. It would have been found had it been deeper still. Next day saw me back again and in another area of the beach about a dozen coins came up mixed in with a few aluminum tabs. One really loud signal gave up a 45gram lead weight from about a foot and a half and several different types of fishing hooks were found. At a different beach on another day saw me mark out a small experimental proposed search area and was first scanned over with another "top of the line" model. Several targets were dug and then silence. I turned on and ground balanced the GT to the salt wet sand and located two more targets that had been missed. One was an older ring pull. The other was a low-grade modern coin.

On the Land

It was becoming clear to me that the GT appeared to have the edge over other Sovereign models and from a series of tests on the land, in the woods and regular pasture fields I was definitely coming around to that frame of mind. A buddy, Dave McVeigh accompanied me on this search, a riverbank site which leads away into old woodland. I hadn't been to this place for years due to the finds drying up and far as I could remember never got real depth in the ground conditions found there. I must admit that I wasn't expecting much here and in a small clearing I ground balanced and began to scan the ground. Boom..... Immediately a loud signal and switching to pinpoint it was there but fainter. Carefully digging down into the soft black soil I met some thin but tough roots. Taking out about six inches of earth I again passed the coil over the hole in pinpoint mode and still the feint sound remained. I was now down to about eight inches and not wanting to really disturb the ground I continued to prise the digging tool down at the edge of the hole and carefully extracted more soil. I then saw a green coin fall over to the side as the soil was dislodged. It was an old English coin. Boy was I surprised for here was real tangible evidence that the new GT does indeed go deep. ***That extremely corroded coin was at ten inches deep in very acidic soil - it had been there a long time entwined in the roots.***



Just a few moments later another English copper coin from 1825 came up from about the seven inch level. So, I knew I was onto something good here as in the past these coins had been completely missed. Before digging any more targets I carefully searched the area between the trees and marked promising signals. Dave then switched on his Elite and I turned off my GT even though we had Noise Cancel on both detectors I just didn't want any fluttering of the threshold or any interference for this experiment.

Dave began to scan the area and we listened very carefully to the responses. I had written down the number of targets heard. Dave found them all bar two, one of which was very strange. We then dug the targets to see what they were and one was what looked like a tiny BB at a depth of about six inches which the GT gave a good response on, even in all-metal and a slight whimper on the Elite. The other signal, which the Elite responded to in a half-hearted manner and which the GT signaled loudly was a small, flattened gold colored aluminum square showing, the month of August. These had been popular way back with people who attached them to their watchstraps. Come to think of it I had never ever found one of them before now. We both agreed the GT has a more distinct and faster responding audio signal than the Elite does.

Some more time was spent here and more pre-decimal coinage was recovered. While unremarkable really in that pre-decimal coppers do not normally merit a second glance, what did excite was the fact the GT found them at great depths and were just flatly not found previously. In the shadow of a large old tree a few signals merged together. Switching to pinpoint I was able to isolate them really well and smoothly. I zeroed in on the separate targets. One of them caused a heart skip moment as I saw the flash of gold slide towards me. The target turned out to be a small 5 franc French coin and I had been fooled by them on a few occasions previously.



The following Sunday saw me at a new site that showed promise. The location had been scouted several weeks prior to my visit and permission to search had also been granted. I didn't know what to expect. On arrival it was rough ploughed. After a while I was being driven mad by iron sounds so I experimented with the Silent Search setting. Ahhh..... Gone were the sounds of the fluctuating threshold which today, caused some annoyance. It is sometimes difficult to work to a comfortable level over rough plough as the threshold can become choppy due to changing conditions so I chose to set the GT to the Track position. It remained stable with these settings for the few hours. One soft signal which sounded like a small deep target proved a bit elusive to pinpoint properly and I discovered a fantastic new

way to get it right. Instead of switching into All-Metal and Pinpoint like I normally do, I found that by switching to Fixed and then switching into all-metal the GT makes sounds unlike any other Sovereign I have used before. It sounds like a mixture of a rasp and a croak and usually happens after the coil's hot spot is just clearing the center of the target. After a few minutes of digging a bit deeper, a tiny silver Venetian Soldino came up which must have been either on edge or a steep angle, a wonderful coin to find.

Summing Up

How do you beat a Sovereign? With another Sovereign is the answer. But the GT is not another Sovereign. It's more than that, dare I say it, a perfect Sovereign! How is it so much better than an Elite or the XS-2 series which I must admit remains one of my all-time favorites? I have pondered that question for a while and can only surmise that with those detectors the ground balance is automatically set to handle average conditions found in various locations and there is little that we can change about it. However, with the introduction of the new Sovereign GT with Automatic Ground Balance and the ability to manually ground balance to the optimum setting on every site, including salt water beaches it is possible to override the balanced factory setting to enable a searcher to get the best balance that could possibly be achieved at a chosen site, either beach, a grass field or plow and now with ACCU-TRAK, in the gold fields.



Manually ground balancing definitely has the edge over a fixed setting or one imbedded into the electronics at the factory. This explains why when searching with Dave the signals were, so much better and more cleanly pronounced with the GT than his Elite as I had been able to ground balance precisely to the slight mineralized content of the acidic soil at that location. He relied on his Elite to do the bulk of his work for him including finding a suitable setting at which to work but as we saw the balance achieved had not been as suitable to the ground conditions as my GT was able to be manually adapted to. Of course all this is just my opinion based on what I saw and heard over the few weeks I spent testing the new machine on a variety of soils. But I think it is a valid argument. With the addition of the new meter with reduced numeric readouts it is also a clear step ahead and in the right direction to ably assist the searcher and reduce the amount of 'head-scratching' time spent in the field pondering to dig or not dig a

target? The balance of the machine has also been improved with the newly designed shafts and the ability to mount the control box at the back is a considerable weight saving. Of course, the optional accessory hip-mount bag would lessen the load again. In fact, that was the way I chose to hunt with the machine as it is just so comfortable.



All the older popular Sovereign features are still there such as the Disc and Notch controls and you may be wondering why I didn't use them? Well, I know they are there but it's just that the GT gives a lot of information about targets before digging them that I prefer to maximize my chances of finding those sometimes iffy targets that could be lost with the use of either discrimination or notch. Would I recommend the GT to my friends? No I wouldn't because, I don't want them re-work all our old sites and outclass me to make more finds at depths that are simply mind-boggling. But joking aside, the detector is extremely good and it really surprised me at times for the simple reason I didn't think it was going to! Not only is the GT faster responding than previous models the tones emitted are cleaner sounding as well. Minelab have certainly backed a winner here and it is my belief that the Sovereign GT is probably the best Sovereign ever.

Frank O'Shea, March 2005
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