Detector
Field Test

Minelab Musketeer Advantage

First Impressions

Everyone looks forward to the release of a new detector, and the obvious thoughts that run through the minds of prospective buyers are: "If I buy this new machine will it do a better job, will it go deeper, will I find more?" The truth is that sometimes, yes it can; sometimes a detector comes along that fulfils all those wishes. But whatever the detector, experience, luck, the choice of sites and the search style of the individual will in the end make all the difference.

The new Minelab Musketeer Advantage is a detector that has recently been introduced to the market, replacing the older XS and Colt models. The control box is completely new although the controls are positioned exactly as they were on the previous models. This will help those who are upgrading to get to grips with the new detector faster. In looks the Advantage is a very attractive detector with a mix of bright vibrant blue colour interspersed with white graphics.

The new detector differs in a number of ways from the older models. It has improved sensitivity, lighter coils, and a much improved battery system with a NiMH pack available. The eight penlight (AA) cells are easily installed into a new compact compartment, and this in turn slots into the underneath of the new control box (a great improvement over the older models). The new slim line coils are 25% lighter and much thinner than the older ones, and this too is a welcome improvement. In the past the battery access area and coil weight were the most frequently criticised areas of the Minelab model range.

A new shaft system is also on offer, enabling the control box to be removed for hip mounting or replaced in just a few seconds. So this detector is radically different from previous models. A standard quarter inch stereo headphone socket is fitted as well as an internal speaker.

The Controls

All of the controls and their functions are clearly marked on the control panel. However, there is a major difference in the discrimination adjustment. Instead of saying "Discriminate", it is now identified as the "Level Adjust". Some time spent indoors varying this control while conducting air tests would be advisable.

Sensitivity is combined with the On/Off knob and should be turned as far clockwise as it can go until the detector begins to chatter. This might vary from site to site, but in the main you will find this detector extremely quiet until it finds a target.

Ground Adjust is a rotary control which most of the time can remain in the "Fix" position. If the ground is bad this control enables the user to combat ground effect. But, in the "Fix" position ground cancelling is taken care of automatically.

Threshold Reset/Pinpoint/Ground Adjust Enable is a multi-purpose switch and helps in the final recovery of a target by narrowing the signal. The Ground Adjust Enable position is used in conjunction with the Ground Adjust control to compensate for changes in mineralisation. But all of this is all covered within the 27 pages of the very well-written instruction manual.

I would like to make one comment though, referring to the "Threshold". This detector does not have a threshold as such, and the manual refers instead to extraneous electrical noise that may occasionally be heard in general searching, or while carrying out a manual ground balance procedure. The trick is to reach a final point where the detector will remain quiet while ground balancing and there will not be any change in audio while the coil is being lowered or raised.

All Metals/Discriminate is a search mode selection, and to get the best out of this detector it is advisable to always search in Discriminate. On this type of single fixed frequency detector the discrimination mode will usually search the deepest and also takes care of the junk items you might choose to ignore.

Test 1

This was carried out on boarding school lawns with the unit hip mounted. I knew from previous experience that the soil had a light mineral content.

This was a known and old test area for me. However, I had not searched it for over a year and it had become very overgrown with long and now wet grass. Conditions were very mild; there was no wind and the site is very close to the centre of the city. No interference was noted.

The ground here is lightly mineralised with sporadic iron junk. This was

recognisable with the spitting signal associated with this model. I set up and ground balanced, but chose to work in "Fixed" mode, with Sensitivity set at 3-4 as there was some mild chatter.

My first find was a decimal coin. I was surprised to get such a sharp signal from this, as the coil was way off the ground due to the grass being so high. Fortunately, as the grass was wet, it tilted over and stayed put once swept over. Some other signals were heard but the detector indicated they were iron; however, I dug these just to check.

One signal fooled me and when dug, revealed a large L-shaped piece of iron. Another surprise came in the form of a 1943 brass threepenny bit from about 7in. The very next signal gave up another threepenny, dated 1942 and from roughly the same depth as the first. This surprised me for two reasons: firstly the length of the grass made it impossible to get close to the surface; and secondly. I had cleared this area a year ago….or so I thought (see Fig.1.).

Fig.1.

Another very loud and clear signal gave up two Victorian coppers buried together at a depth of about 8in., and then came another one, and another one, and another two after that. I found this amazing. How had I previously missed something as large as these coins?

While digging up one of the coppers I came across a broken fragment of an 18th century clay pipe bowl. This was unusual but not a total surprise, as I had found some Georgian items here before.

Then, at a depth of 10in, I recovered a fairly large copper alloy ring. I would say that this item is probably medieval, as I have found similar items in medieval contexts in the past. While recovering this ring - and at the same depth that it was found - I also came across the remnants of some oyster shells. These are usually evidence of ancient habitation, and meant that the area could be much older than I had originally thought.

Next to fall to my new detector were several silver coins ranging from the now hard to find threepenny bits ("Joeys") to the old sixpences ("tanners"). These were recovered from depths of about 7in or so from what were very tight clean and crisp signals (Fig.2.). Some other bits of broken buckles and assorted metallic items were recovered, some from quite decent depths. I left the grounds after about three hours with numerous finds. I was astounded, to say the least, as I had put a lot of work into this site previously. I put the success rate from this search partly down to good soil moisture content, which helps to enhance signals.

Fig.2.

Fig.3.

Test 2

During my second test, on an old fair site, I used the detector shaft mounted. The soil appeared to be patchy, with some parts normal and others slightly mineralised. The day was mild but windy. Search permission was secured from a very pleasant elderly man who lived next to the field. The field was ploughed, which made walking difficult in my Wellingtons.

This site turned out to be very iron-laced indeed. There were literally dozens of iron signals. In fairness to the detector it identified nearly 90% of them by the classic "spit" signal responses. However, I dug up about 10 ferrous targets, which still managed to break through with good responses even after I had turned the Level Adjust up to full. Once out of the ground these iron objects refused to give a signal, which is rather typical of what we detectorists have to deal with.

Just when I was thinking that I was probably in the wrong location, I heard a nice rounded signal and knew by its tight response that it was going to be a coin. It was, a small silver sixpence and I could make out the familiar face and crown of Elizabeth I (Fig.3.) I carefully put this into a small plastic bag and carried on.

A while later, another signal was

Fig.4.

heard and - just for the sake of it - I turned up the Level Adjust to see where the signal would drop off. It didn't and I cracked open a sod to reveal a very nice silver half groat of Edward IV (Fig.4.). A while later a nice thimble was recovered. It was lying on the top so not a great challenge for my detector, but it was nevertheless a nice find. Another few thimbles came up later, but just why I am unable to say as yet.

The field was very strange to work as I would suddenly come across patches of mineralisation, and this would manifest itself in sudden chatter or false signals. I had again chosen to work in "Fixed" mode but, due to the patches of mineralisation, I re-adjusted to a manual level where there were no false signals. This meant I had to reduce Sensitivity to about 3 o'clock but I was more than happy with my finds.

At this point it began to rain and as I had chosen to wear only a light jacket I made my way back to the car, which was some distance away.

Test 3

My third test was carried out on some old army grounds and here I chose to use the detector hip-mounted, as I knew that I was in for a long search. On this site the soil is moderately mineralised but you do occasionally come across patches of heavy iron contamination.

This test was to be an eye-opener from the quantity of non-ferrous items recovered, some of which are shown in Fig.5.

In the past I have made frequent visits to this area due to the sheer variety of finds it has produced over many years. But the finds rate on this occasion was beyond what I had come to expect from here. Sometimes in the past I had left the fields with just one item or perhaps none at all. On this current search I left the fields with about 30 collectable non-ferrous items, all found in more or less the same areas that I had been searching a few weeks previously. It is a large land area and it is true that I could not have possibly covered every square foot. But it still leads me to believe that this new machine is very good and some other machines can leave finds behind, at least in the type of rough stubble I was searching.

I put this down to probably being due to the way different detectors handle the information coming back from the coil. The fixed-frequency of the Musketeer reacts quickly and will probably not miss a target if down a bit or buried at an angle. Other detectors are perhaps too complicated and are doing too many things at once; this means that they will perhaps null out just for a moment near a junk target. There are plenty of iron targets to be found here, and this I feel is possibly why on this search the Advantage found a great many targets in amongst the iron and mineralisation.

Fig.5.

The first target of the day gave a soft, but clear, two-way signal that turned out to be an old fly button probably from the early 1900s. My second find was a musket ball, resulting from a loud clear signal. Next, having dug to a depth of about 7in in response to a loud signal, I saw the familiar green patina of a long buried and beautifully preserved Victorian halfpenny (dated 1861). This was a nice find due to its admirable condition.

While I was making these finds the detector was indicating the presence of iron, but all the signals were obviously ferrous. There was one iron signal, however, that did have me fooled, as it gave a good response from different sweep angles. It turned out to be a large bolt with the rounded top and washer permanently welded together with rust. I think this was why it gave a "good signal" as the rounded top created a good eddy current area.

Another, very similar signal, also had me guessing as it sounded like it was either another bolt or a shallow coin on edge. It gave several signal responses as the coil was swept over it, which I thought was probably due to the double-D configuration of the wide scan coil. I was going to pass it up, but as this was a test I bent to dig it and it was indeed a coin on edge. It turned out to be a Georgian copper halfpenny, which was buried just a few inches down.

I was then approached by somebody and I had to stop for a while to explain what I was doing. He was not the landowner (I obviously had search permission) but a neighbour who had observed me from a distance. He took a keen interest in my explanation and imparted some local history of more fields nearby which I will look at soon. Meanwhile, his dog took a liking to the search coil as every time I moved it the dog tried to bite it, making us both laugh.

The search resumed and continued along in the usual manner of ignored iron signals interspersed with non-ferrous targets. I was now really beginning to feel confident that I knew what the machine was telling me. One very loud signal gave up a huge musket ball, which had impacted on something and was duly flattened. This was a deep recovery from probably 10in or so. Any large pieces of non-ferrous dross or scrap items were placed into my trash bag to be discarded later, as I had no intention of digging up the same items on my next visit. That was why I found the day to be so unusual; there were far more recoveries made than is normal for this site. The last find of the day was a tiny buckle from the Tudor period, with much of its silver gilding remaining.

Industrial River Foreshore

I felt that no test would be complete without a visit to an industrial river foreshore. As we all know, these areas can be very lucrative but also difficult to work due to the very large amounts of iron junk sometimes present. The area I chose was no exception but the larger iron pieces were conveniently well spaced apart. This made my job

that bit easier and I avoided the usual ear bashing.

On the first day I was joined by a friend who spends most of his detecting time here on the mud. He was using the older Musketeer and showed great interest in my new version. No cross talk was heard from the two detectors but I did have to listen to his signals, as he never wears headphones.

I chose to work in Fixed mode, with half sensitivity and just a slight increase in Level Adjust to take care of some small nails. When digging this kind of muddy river area massive depth is not necessary, as smaller finds tend to be fairly shallow and are sometimes brought in or revealed by the previous tide.

The first sharp signal revealed a shiny disc, which I first thought was gold but then decided it was probably a Dutch or French jetton as I could see a fleur de lis on one side. Then came a few small black musket balls, and a few buttons - some very ornate and probably 17th century. A loud signal then gave up a lead bag seal that is possibly Russian. Other finds included two whole buckles along with some broken fragments. Copper nails exist in abundance on this part of the foreshore, but most are not a problem as they are on, or just under, the surface.

I am sure most foreshore hunters have found a Hans Krauwinkel jetton, and one turned up during this search. It would have been a beautiful example but appears to have had a piece cut out.

The last signal of the afternoon produced a heavy silver coin with a cross on one side and a shield on the reverse (Fig.6.) that I believe might be Dutch.

Fig.6.

For the most part no iron was dug. Lead items, however, were plentiful and I eventually almost grew tired of recovering them. But, to set the detector to reject lead would have been an awful mistake. I was fooled by cut off bits of copper piping as they always sounded like large deep coins; but that is exactly what they might have been. The truth is, on a river foreshore that has seen plenty of activity you just never know what will turn up. For that reason to use high discrimination would not have been a good idea. Fig.7. shows some of my foreshore finds.

I would like to add just a quick note regarding beach use. I visited a beach area on which I usually spend a great of time during the summer months. I was curious to see how the new machine and different coils would handle the wet sand. This was unfortunately a very quick test lasting probably no more than 15 minutes or so, as the heavens opened up and drove me back to my car. Turning the unit on (with the 10in coil fitted) I began to walk down the sloping sands towards the low water line. I actually thought for a while that the machine was not on at all, as I heard absolutely nothing until I was just a few feet from the water's edge. It then began to chatter (albeit mildly) so I tried new settings. I adjusted the ground balance control, reduced sensitivity, increased discrimination slightly and the chatter was gone. Walking back up the beach my detector gave a loud signal and I scooped out a fair bit of wet sand to retrieve an old teaspoon. Another normal signal gave up a decimal 2p.

As short as my search had been, it indicated that the Advantage would work on a beach. I would imagine that the detector would be very good indeed on dry sand, as up by the wall area I walked the entire length of the beach back to my car without any chatter or ill effects at all.

On summer beaches it is not necessary to use powerful machines to find recently lost coins and rings. You will certainly find enough cash to pay for your batteries - and perhaps even pay for the machine itself - if you hit the right beaches.

Fig.7.

Test Impressions

I found the Advantage very easy to use, and personally preferred searching with it in the new hip-mount bag available as an accessory. Battery life was very good with the NiMH pack, again available as an accessory.

The familiar positioning of the controls was helpful and I was able to get along with the new unit much quicker because of this. I did notice it appeared to be more sensitive than the older XS model, and the pinpoint ability was razor accurate even in Disc Mode. This might be due, in part, to the newer "Slim Line" coils used, as being a lower profile coil it was possible to get closer to the ground and the targets themselves.

Signal responses were clear and definite, with a sharper and more distinct signal response, and it was easy to identify the iron. I had been fooled a few times by ferrous but the pieces I dug were usually abnormal in size or rounded (such as the bolt mentioned above).

Overall, this unit worked well beyond my pre-conceived notions of what it was going to be like. Having used the older Musketeer for many years on many different sites and soil types, I have to say the new Advantage appears to be a better smoother machine. It certainly produced more for me than my old machine on many of the sites I revisited during the completion of this very enjoyable series of tests.

Conclusion

The Advantage appeared to have the edge on the deeper targets. This may be due to tighter coil windings and increased sensitivity, added to the fact that the thinner coil is now lower to the ground so it is actually closer to the target - resulting in a definite in-ground advantage.

The new Advantage is available from stockists nationwide. There are some choices to be made however, as a Value Pack and a Pro Pack are offered. Depending on which accessories you want to have will determine the price you pay. Check with your dealer for more information.

You can also write, fax or E-mail Minelab International for additional information at:

Minelab International, Laragh Industrial Estate, Bandon, Co Cork, Ireland. Telephone 00-353-23-52101. Fax 00-353-23-52106. E-mail minelab@minelab.ie

In-Ground Tests
Old Musketeer XS Pro & New Advantage

These were carried out on a stubble field. The Advantage tested in conjunction with the old Musketeer with its 10in TS coil. The targets had been buried for a considerable time (approximately one year ago).

	Disc Off	Disc On 5	Target
XS Pro Advantage	iffy signal positive	no signal positive	Ointment Tube same target
XS Pro Advantage	spit spit	none none	Iron Nail same target
XS Pro Advantage	spit spit	none none	Iron Fragment same target
XS Pro Advantage	good loud	weak positive	Farthing At Six Inches same target
XS Pro Advantage	no signal positive	no signal weak	10p Buried At Eight Inches same target