

FIELD TEST



Minelab X-terra 50

Minelab X-Terra 50 Spec sheet

Operating modes	Silent search discrimination meter ID Silent search all metal meter ID
Frequency	7.5 KHz (with standard coil)
Standard Search coil	9" Concentric 'spider'
Weight	1.3kg (2.9lbs)
Battery type/ life	4 X 'AA' /approx 25hrs
Accessory search heads	Yes, currently 18.75 KHz 9" concentric.*

Search 'Ed

It cannot be disputed that, in recent years Minelab have become market leaders with their multi-frequency detectors and have earned a reputation as innovators and industry drivers. So with that in mind I was a little surprised to see that their two latest detectors, the X-Terra 50 and X-Terra 30, are single frequency units. What is less surprising is that Minelab were not satisfied with producing mere single frequency units! They have taken single frequency a step further developing a new technology named 'V-Flex' for their latest offerings. They say in their sales literature that this is a mix of digital and analogue circuitry which enables better stability and sensitivity. Given that they claim this technology has been made possible because of developments in the mobile phone and audio equipment industries (which is advancing at a lightning pace) it sounds promising and would seem to be a step forward. Another clever feature of the X-terra 50 is that it is the search-head that dictates the operating frequency, so by changing search heads the frequency and thus the detection characteristics are changed (higher frequencies offer greater sensitivity on very small targets whereas lower frequencies will achieve more depth). This potentially makes for a very versatile detector.

But because we are a cynical lot, and because we are brand loyal only in as much as we are loyal to the detector that is deemed to be the best at the time, we need to know if 'it does what it says on the tin'? Is this new technology any good?

About five minutes after receiving the X-Terra 50 for test I had it assembled, everything slotting together quickly and easily. The detector looks good and is well made. The control box is neat and compact, measuring only 13.5 x 11 x 5cm. This incorporates the control panel, external speaker, head-phone socket and battery compartment which incidentally requires only 4 x AA batteries.

Another nice touch with the control box is that it simply clips into the end of the hand grip and is fitted (or un-fitted) in a second, ideal for packing for transport etc.

The standard search coil is a 9" open or 'spider' concentric coil with a frequency of 7.5 KHz which is about mid range as far as general purpose detectors are concerned.

(At the time of writing a 9" 18.75 KHz coil has just been released but unfortunately not in time for this test. But should improve performance on small hammered silver and the like.)

The first thing you notice on assembly is the weight of the thing. There was clearly a conscious decision to produce a light machine and light it is. I cannot see anyone having difficulty swinging this!

Controls

The first 'control' is really the instruction manual. This is pocket size so it can be taken into the field and is straight forward and easily understood.

All controls are the touch pad type and are as follows. (See fig 1)



Figure 1: The Control Panel of the X-terra 50

1. Power button: Switches the unit on & off.
2. Patterns: Each press of this button switches the detector back & forth between two Discrimination patterns -1 & 2. Each pattern can be individually customised enabling a pattern for your two favourite sites or even use them back to back on the same site for a higher level of Discrimination accuracy.
3. All metal: Switches off the Discrimination to provide an all metal/meter ID search style.
4. Menu: Accesses 3 adjustments - Sensitivity, Audio volume and Noise cancel.
5. Plus & minus cursors: used in conjunction with a selected function from the menu to increase or decrease levels.
6. Pinpoint: Has two functions. A, selects the pinpoint mode enabling the operator to accurately 'zero in' on a target. B, exits the menu and returns the detector to search mode.

7. Accept/Reject. Individually activates & de-activates the discrimination segments to set up and adjust discrimination patterns (used in conjunction with plus & minus cursors).
8. Ground Balance: enables user to accurately cancel the effects of ground minerals (used in conjunction with plus & minus cursors).

Meter

The meter measures 7.5 x 3.5cm and has big bold ID/menu level numbers dominating the left hand side of the screen ensuring they are easily seen. In the search mode the screen displays important information such as selected Discrimination segments, ID number and depth indication. When in menu, current settings are displayed.

Getting Started

When the detector is turned on three rising tones are heard and by the time these are done it is ready to detect. Although in practice the detector does need to be set to your own desired settings. This is very straight forward and all but the ground cancel was set without the instruction manual.

My initial settings were:

Sensitivity	16
Volume	19
Noise cancel	0 (factory preset)
Discrimination	
Reject	9 to -3
Accept	+3 to +45

Before moving on I will explain a little more about the Discrimination/notch set up.

At the bottom of the screen the Discrimination display is divided into 18 segments each being the equivalent to 3 ID numbers. Each segment can be rejected (LCD block showing) or accepted (no LCD block) by moving the cursor over a segment (segment flashes) and pressing the accept/reject button.

With a system such as this objects of different conductivity levels can be accepted or rejected depending on a user's personal preferences. For instance if a park site is littered with ring pulls they can be individually rejected or 'notched' out to avoid wasting time digging them. Similarly if only one find type is desired, let's say £1 coins, all segments can be set to reject except for the one that the £1 falls into.

A note of caution here: Do not set the detector to reject any type of non-ferrous object unless it is absolutely necessary – other objects of equivalent conductivity WILL be rejected! In the UK we have such a wide variety of metal targets with such varying conductivity levels that rejecting anything other than iron is bad practice.

Rejecting a ring pull for instance means some hammered silver will also be rejected!

Bench Testing

In air with sensitivity set at 16 (max is 20) the detector achieved predictable depths on

a variety of targets. The point of this exercise though, was to test the meter and recovery speed. As targets were passed over the coil meter readings were noted. The exercise was then repeated with the same objects at 'difficult' angles to compare results. For example a small 'Lizzy' hammered gave a reading of 18 on the meter when presented flat at about 18cm and when on edge a clear signal was heard at 17cm with a meter reading of 15 demonstrating that readings were not adversely affected. The detector 'saw' the object as roughly the same no matter how it was presented to the coil. A trivial test maybe but I have seen other detectors produce wildly different meter readings and depths with this test.

The recovery speed (the time taken from the detector to 'retune' itself after detecting one target and being ready for the next) is very fast, so fast in fact that I could not wave a coin back and forth across the coil fast enough for it not to be detected. This is another good sign – a good recovery speed is needed for those junky roman sites!

So far my tests were promising and I was keen to get the machine outdoors.

The first venture was to an ancient pasture field that is only a stones-throw from my house. This visit was not really planned, it was forced upon me as the weather was so bad and the site I had planned to visit was ten miles away. This was near enough to home to grab 20 minutes or so between showers!

My search of the field began in the north east corner where there appears to be traces of a large enclosure running along side a muddy stream. Though boggy in places, this looked like the best place to begin.

The X-Terra was switched on set up. My initial set up was: Sensitivity at 19, Discrimination at -3 and noise cancel left at 0. The noise cancel is often called frequency adjust on other detectors and is used to minimise interference from electrical sources such as other detectors or pylons etc. Ground Balance was set as per the instructions. Simply bob the coil up and down and alter the control until both high and low tones 'null', in this case at 9. I began to search and almost immediately was the first signal with an ID number of 25. This turned out to be a small copper-alloy fragment folded in two and dug from a depth of 7cm. This was encouraging as it has a medieval look to it. The next signal was a quieter but solid signal. This turned out to be a lead object measuring 60mm diameter. See fig 2 (this does not seem to be a weight and looks like a lid but has a convex underside. Any ideas?) from a depth of around 30cm. This impressed me and I began to feel this detector was a serious piece of kit. I wandered up and down the 'enclosure' enjoying a steady finds rate though only a few are worthy of note. Early on I found a small aluminium-alloy



Figure 2: Lead 'lid' yet to be positively identified. Any Ideas?

fragment, this was the first of many, as the whole site seems to be littered with these bits at various depths. I have no idea why this should be but from our point of view it was a useful test as I soon got to know them from their ID readings of between 29 and 33 apart from a couple of larger shallow pieces which gave a meter readings of 39 & 41.



Figure 3: Nice 18th Century shoe buckle.

A nice shoe buckle was dug from about 18cm (Fig 3). The ID of this was 31. Another interesting, though not a nice find (fig 4) was a jetton so poor it is hard to see that is what it is! This was not deep and the meter happily locked on at 24.



Figure 4: Very poor condition medieval Jetton.

Some signals were iffy, having two tones and a 'jumpy' meter but I found this could be addressed by pinpointing the target exactly and sweeping again to get a better signal. On a couple of occasions when I did this, the signal was gone but pressing the All Metal, confirmed the object was iron and that the detector had rejected it once it could 'see' it properly. Iron rejection was in fact very impressive and during that search (about 3 hours) the only iron dug were two rings (fig 5). At one point I even tried the detector in all metal mode just to see if any iron was present, there was plenty

FIELD TEST



Figure 5: The two iron rings that fooled the X-terra 50 ID system.

but the X-Terra 50 was doing a good job of rejecting it. Massive lumps of iron gave a good signal and locked the meter on at 45. Again this is a problem for most detectors and the only way is dig, but the large area pinpointed is usually a giveaway.

This first outing with the X-Terra 50 was encouraging with plenty of finds produced. I just needed a drier day to get to my next site to put it through its paces on arable land.

A week later saw me on my original intended site, a field called 'Mill Field' which has in the past thrown up coins and artefacts from roman to victorian (fig 6). I have detected here many times over the years and am usually guaranteed some interesting finds and even hammered silver turns up now and again.



Figure 6: Pre-Decimal coins from the pasture field.

I had not visited this field since harvest and was pleased to see it had been left to the weather which made it much easier going.

Beginning at the southern end of the field, I Ground Balanced the 'Terra' and made my



Figure 7: First three finds from the Mill field: Lead button, Charles II farthing & Antoninianus.

way steadily north. A few metres in produced the first signal (fig 7), a nice little late medieval lead button from about 12cm

depth. This was quickly followed by a Charles II farthing. This was a solid signal with a meter reading of 41, though from a depth of only 4cm. No more than 4 'swings' later a fainter signal required the need for pinpoint. After 'X'ing the spot I dug to about 12cm and unearthed a roman Antoninianus. This is quite worn and I could not positively identify the Emperor. This was a good start! Three signals and three keepers! This promised to be a good day. The X-Terra 50 was performing well though I'm not sure I can claim my whirlwind start was down to the detector as crossing the field to the other side produced mainly non ferrous junk targets, a musket ball being the only decent find.

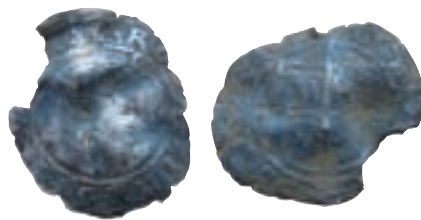


Figure 8: Elizabeth I Halfgroat the poor but only hammered of the test.

The rest of the morning was spent steadily detecting back and forth across Mill Field. A few roman coins were found though all a little tired looking. About halfway through the morning a signal with a reading of 9 produced what was to be the only hammered silver of the day, a rather worn, battered and clipped half groat of Elizabeth I (fig 8), but hammered silver never the less! This was dug from around 12cm, which is not bad for a coin of this size.

A spindle whorl (fig 9) was the only other interesting find. Again, a good signal and deep at around 20cm.



Figure 9: Spindle whorl.

Summary

I tested X-terra 50 on typical inland sites because that is what most of us do! On sites like this, you could argue, do not really need a meter as any good audio signal is worth digging but it did prove its worth on the pasture site by ID-ing the scrap aluminium alloy (though I must admit I was never brave enough not to dig!) and does highlight how an accurate ID system such as this would be a valuable asset on park or beach site. Iron rejection is also very good and I was not really troubled with it on either site although it was present, as using in all – metal mode confirmed, particularly on the pasture land.

Conclusion

The X-terra 50 is a very good metal detector and a pleasure to use. In terms of depth I cannot say it is any better than its competitors (though certainly as good as) but the fact that it has a well thought out, big, bold and accurate meter ID system must make it one of the best buys in its price range. The fact that it is lightweight will also add appeal to anyone looking for a midrange detector.

The X-Terra 50 is available from all UK Minelab dealers. Priced £499.

TEST RESULTS

User Features – (Scores out of ten)

Ergonomics (weight/balance)	9
Simplicity/user friendly	8
Build quality	9
Accessory search coil compatibility	10 <i>This detector is unique in that changing coils changes the detecting frequency*</i>
Arable land use	7
Pasture land use	7
Park land use	8
Dry beach use	8**
Wet salt beach use	7**

* A range of search heads is promised by Minelab

** Not tested by Search Ed. Based on feedback from dealers etc.

SEARCHER RATING

SEARCHER RATING 9/10 (This would have been an eight but the unique concept of changing coils to change frequencies, adds versatility and pushes this to a 9!)