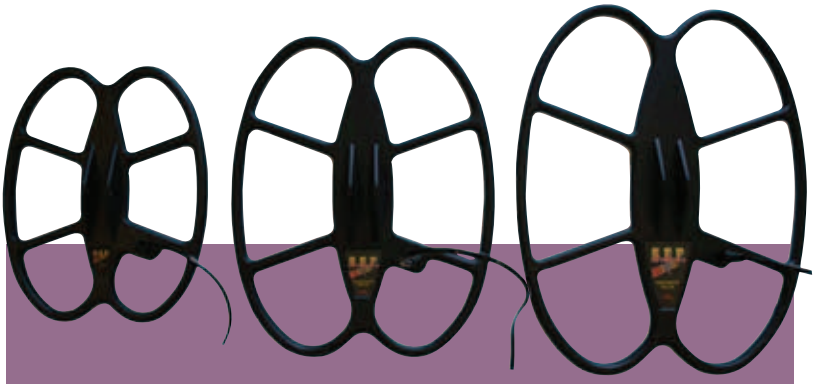
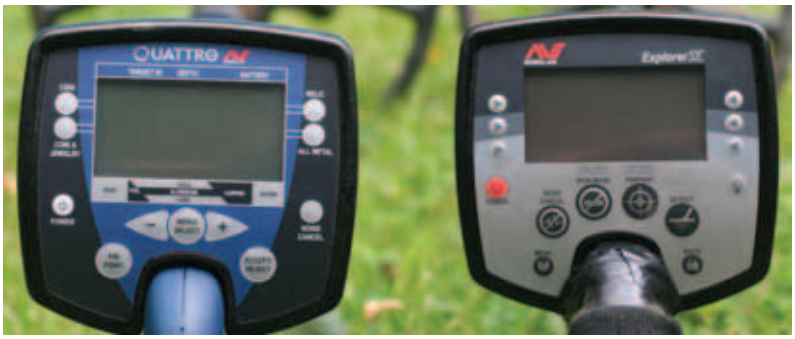
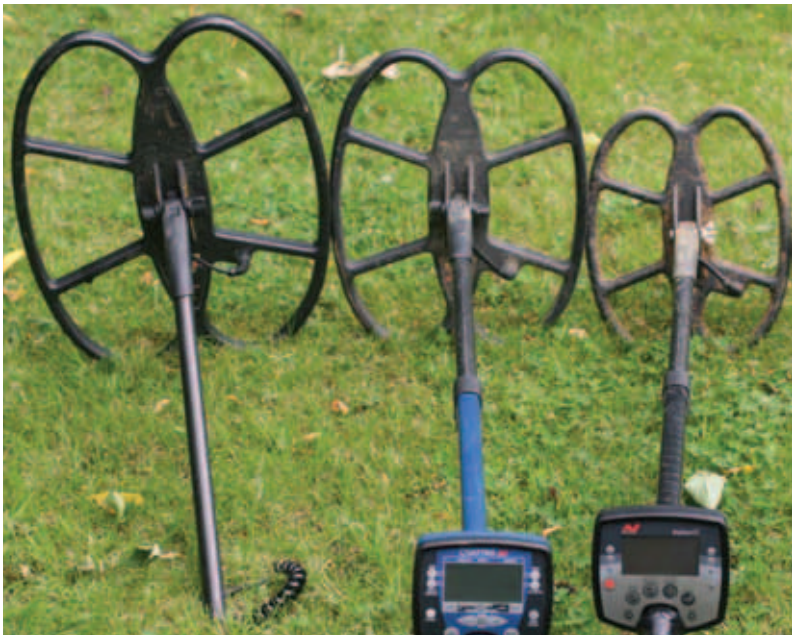
FIELD TEST



SEF Coil Test

Spec sheet	
Manufacturer:	Detech
Technology:	'Symmetrical Electromagnetic Field' (SEF)
Coil sizes:	12x10, 15x12, 18x15 and 21x17
Detector platform:	Minelab Explorer/Quattro/Sovereign. Whites DFX, MXT & M6. Fisher F75 (15x12" only)
Prices:	£139 (12x10), £149 (15x12), £159 (18x15) and £189 (21x17)





Introduction

If you own a Minelab Explorer, Quattro, Sovereign, Whites DFX, MXT, M6 or Fisher F75 then the new range of Detech coils will probably be of interest to you. They incorporate a new patented technology called *Symmetrical Electromagnetic Field* (SEF) and have taken three years of research and development to produce and manufacture. The coils are supplied in four sizes and I will be field testing all but the largest.

Coil Size

All the SEF coils are larger than the standard coil supplied with the new Explorer and Quattro. A larger coil may give better ground coverage and potentially better depth, but 'bigger' is not always best! The saying 'the larger the coil the deeper it can detect' is not always the case. A tiny hammered cut quarter penny will normally be detectable deeper by a 10" coil than that, of say, an 18" coil, whereas a Victorian penny would be detectable a lot deeper by the 18" coil. So, your intended target should be a prime influence in your eventual choice of coil size.

Another place you don't want to use larger coils is on highly mineralised or iron contaminated sites. In such situations you will get better depths and target separation with a smaller coil. Where large coils really come into there own is on pasture, parks and beaches or anywhere with low mineralization or iron contamination.

12 x 10" SEF

The 12 x 10 coil is not what I would categorize as 'large'. It is in fact only slightly bigger than the standard slim-line coil. It is also very well balanced with the mounting point at the centre. My test coil weighed-in at 648g, which is slightly more than the standard version. In use it was noticeably quieter than the standard coil allowing higher sensitivity settings, and of course, deeper and clearer target responses.

On my test bed I found this coil had improved depths on all targets compared to the standard slim-line coil. It could detect a cut quarter 10% deeper and a 5p piece an impressive 12% deeper. I also noticed falsing from iron was greatly reduced and pinpointing was more accurate. So in every way (except weight) this coil was an improvement to the standard Minelab slim-line coil supplied with the Explorer and Quattro.

TEST RESULTS

12 x 10 Test Results – (Scores out of ten based on price category)	
Ergonomics (weight/balance)	8
Build quality	9
Stability	9
Overall detection Performance	9
Value for money (£139)	9
SEARCHER RATING	

15 x 12" SEF

The 15 x 12 coil is what I would classify as 'large' and weighs in at 840g, which is more than 25% heavier than the standard slim-line coil. Again like the 12 x 10 version, it shares the same shaft mounting point. The stability of this coil is awesome and thus allows higher sensitivity settings! On my test bed it matched the standard coil's depth on the cut quarter penny. It was also 12% deeper on the 5p closely matching the performance of the 12 X 10. This coil really showed its strength when tested on a crotal bell, detecting it 20% (2.5") deeper than the standard coil and an inch deeper than the 12 x 10 SEF.

TEST RESULTS

15 x 12 Test Results – (Scores out of ten based on price category)	
Ergonomics (weight/balance)	6
Build quality	9
Stability	9
Overall detection Performance	9
Value for money (£149)	8
SEARCHER RATING	

18 x 15" SEF

This is in the class of 'Monster coil' and weighs in at an arm dropping 1.34Kg. On my test bed it could detect a crotal bell 30% deeper than the stock coil making this one of the deepest Explorer coils I have ever used. I must warn that it is not the coil to use if you want to find deep small stuff. For example, the standard coil could hit a cut quarter an inch deeper than this particular coil could achieve. The stability of this coil was very impressive, rarely falsing on any iron trash or changes in ground mineralization.

The only problem I had was that the coil cover fell off the first time out in the field and had to be taped back on. This was not a problem with the other SEF coils.

TEST RESULTS

18 x 15 Test Results – (Scores out of ten based on price category)	
Ergonomics (weight/balance)	5
Build quality	8
Stability	9
Overall detection Performance	9
Value for money (£159)	7
SEARCHER RATING	

Depth Tests

The following depth tests were attained on disturbed medium to high mineralised soil with the detectors adjusted to maximum performance while remaining stable.

Explorer SE	Cut quarter penny	5p decimal coin	Crotal bell
Standard slim-line coil	5.5"	8"	13"
12 x 10" S.E.F Detech	6"	9"	15"
15 x 12" S.E.F Detech	5.5"	9"	15.5"
18 x 15" S.E.F Detech	4.5"	8.5"	17"

I also tested the coils on the Quattro, a detector I've had little experience in using.

Quattro	Cut quarter penny	5p decimal coin	Crotal bell
Standard slim-line coil	4"	6.5"	11.5"
12 x 10" S.E.F Detech	5"	8"	13"
15 x 12" S.E.F Detech	4"	8"	14"
18 x 15" S.E.F Detech	3"	7"	15.5"

When I did the same test on pasture land, which had lower soil mineralization, I found I was getting about 20% extra depth on all test objects for each coil.

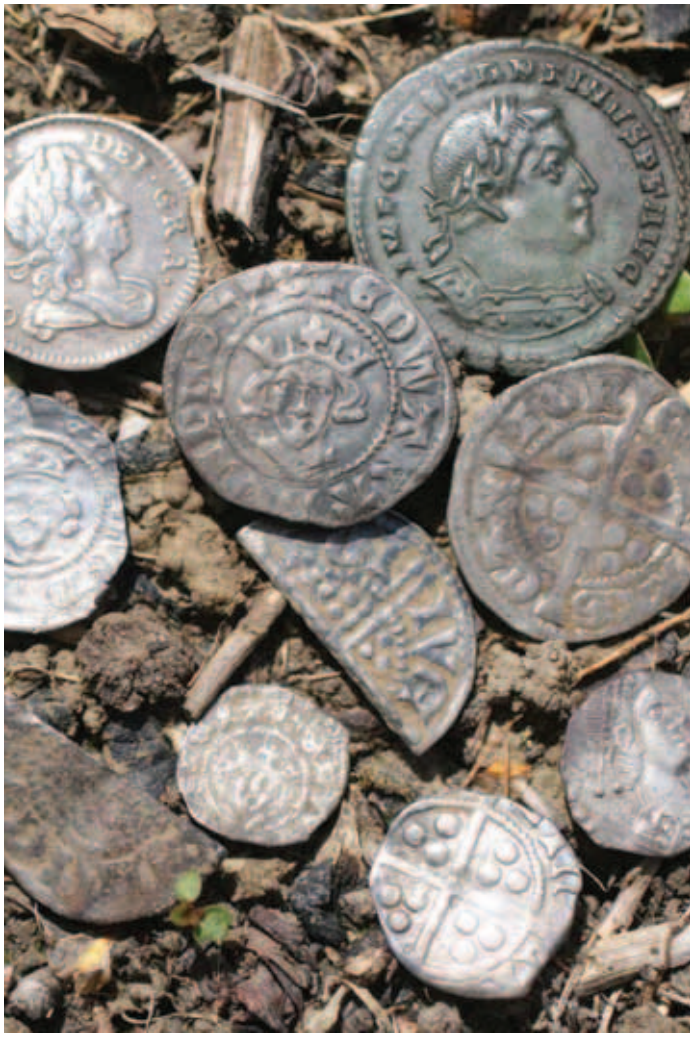
Note: In real detecting situations depths attained here may differ from that obtainable in the field. It's one thing to detect over targets you know are in the ground, but quite different to find them when you don't! So these tests should be used as guidance only and to illustrate the differences of each coils capability.

In the Field

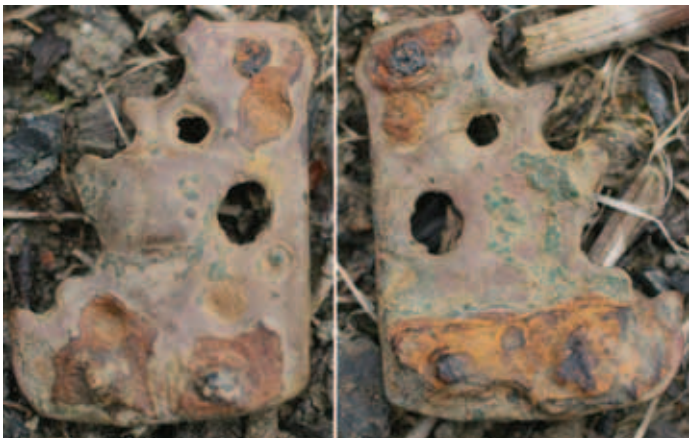
In the field these coils are really impressive – they are so damn quiet!

The high pitch iron falsing and popping sounds that I used to get from my slim-line coil disappeared as soon as an SEF coil was bolted in its place! Straight away I noticed improved performance, not just in extra depth, but through not having to sieve through all the extra noise to pick out any faint (and sometimes loud) good signals.

While testing these coils I found that the 12 x 10 was very successful at pulling out small coins on difficult sites. It became a real wrench for me when it came necessary to test one of the other coils, especially as this was the coil that best suited my preferred quarry, the small hammered coin. (Fig 1)



But it was while using the 15 x 12 I dug up the deepest of all finds found during this field test period. I received an unmissable smooth purr of a non-ferrous signal - and sure enough, digging down to a depth of just over 12", I recovered a broken Saxon stirrup mount. (Fig 2) It was such a good signal considering the amount iron still attached to it. I know that this isn't the greatest of finds in that condition, but this was detected on an area of the field I must have walked over (and missed) a hundred times so is worthy of comment.



Saxon stirrup mount

Conclusion

I was very impressed with the performance of all these coils. I particularly liked the smallest of the three, the 12x10 which rarely falsed on iron and maintained its stability in every situation. On paper the 15 x 12 is probably the better all round coil, still giving reasonable depths on small hammered coins while increasing depths attained on larger coins compared to the standard slim-line coil. The 18 x 15 is the deepest of the three on larger coins; however it's a bit too big if your quarry is deep small hammered as you will be better off switching back to the standard coil or the 12 x 10.

After testing the SEF range, I am inclined to say they are the best aftermarket coils ever made. However, although some may find the two larger coils just a little too heavy. Although the 12 x 10 SEF weighs 648g, (48g more than the Minelab standard slim-line coil) it is still acceptable because the performance far outweighs any additional discomfort and I know that some have adopted it as their standard coil.

But, for me, the weight of the 15 x 12 wasn't comfortable. It weighs in at 840g, which is 240g more the standard slim-line coil. I found at the end of a full day detecting, my wrist, shoulder and back ached. I'm a wimp! However, a bungee harness would in fact greatly lengthen the time you could detect with this coil.

Then there's the larger 18 x 15 coil, which is a real bruiser weighing in at 1034g, a staggering 434g (70%) heavier than the standard slim-line coil - it had me dusting off my old bungee-harness to help swing it. I personally couldn't and wouldn't use that beast all day, so rate it as a specialist coil for short detecting sessions only but still a useful tool in the armoury of any serious detectorist.

I note with interest that there is a 21 x 17 SEF coil awaiting release . . . I am looking forward to that and would love to try it out . . . wonder what that weighs!

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