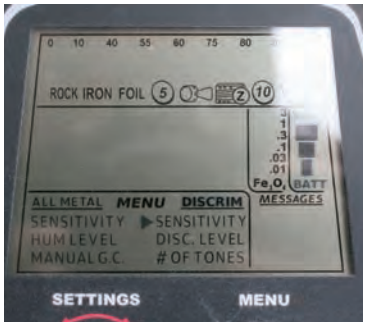
T2 Black Special Edition

Spec sheet	
Operating Principle:	VLF induction balance
Operating modes:	Motion All Metal & Discrimination
Frequency:	13 KHz
Search coils:	Waterproof 11" (28cm) open-frame elliptical Double-D & 5" coil.
Weight:	1.6kg (3.5lbs)
Battery type/life:	4 X 'AA' /approx 40hrs
RRP:	£895.00



In this field test I looked at the NEW Teknetics T2 Special Black Edition (T2SBE) and put it through its paces. The original T2 has been out for over five years, and I must admit I didn't get the pleasure of testing that detector the first time round. So this test is going to be based solely on the latest version.

Many of my friends own the original T2 and rave about its performance, so I was very eager to unpack the new machine and get out in the field to see what all the fuss was about.

Assembly couldn't be simpler, you just click together the three-piece stem, bolt the coil to one end and wind the lead up the stem and connect it to the control box. It's then just a matter of loading the batteries in the pod under the arm cup and it was ready to use. All in all this can be accomplished in well under five minutes.

Controls

There are four controls that operate the T2. The first of these is found on the side of the battery pod under the arm cup (fig 1). Twist it clockwise to switch on the detector, and then continue turning until you reach a comfortable volume for the external speaker or headphones.

Figure 1

The remaining controls are located on the control panel (fig 2). A trigger switch is fitted under this panel in easy reach of your index finger and behind the handgrip (fig 3). This is used for three functions; to operate the pinpoint mode when pulled back, to engage the 'Fastgrab' ground balance when pushed forward and also (when used in conjunction with the grey button) to operate the seven-channel frequency shifter. The latter feature is used to limit interference from external radio signals and other detectors that may be working nearby.

Figure 2

Figure 3

Along the top of the visual display you are given a '0 to 100' conductivity scale. When a target is located, an arrow icon points up to the corresponding conductivity. This then changes to a solid pyramid icon, which stays for about three seconds or until the next target is detected. Below the icon are a series of visual target icons representing typical targets including common 'American' coins, a feature I don't like seeing in detectors being sold in the UK.

Just below the conductivity scale is an area of the screen where the TARGET I.D. of a detected object is displayed, and also where menu settings adjustments are made. This section of display is the most prominent, incorporating the largest display fonts.

To the right of this are a battery charge level indicator and a useful ground meter (FE_3O_4). This displays the amount of ground mineralization under the coil.

At the bottom of the display are the MENU and MESSAGES panels.

Search modes

The T2 has two search modes; All Metal and Discrimination. Each of these have just three setting adjustments within the menu system, making this detector very easy to use. When using in All-Metal, users can adjust the detectors SENSITIVITY, Threshold (HUM LEVEL) and Manual Ground balance (MANUAL G.C.).

Using the discrimination mode, you can adjust SENSITIVITY, discrimination level (DISC. LEVEL) and search programs (confusingly labelled # OF TONES).

NOTE: It's worth noting that each search mode (all-metal and discrimination) have independent sensitivity controls. If you adjust the sensitivity of one of them, the setting will not be the same if you switch to the other.

Programs

When using the T2 SE in the discrimination mode, it becomes a program-based detector. You have a choice of nine factory-preset programs which can be selected by scrolling through the # OF TONES menu setting. The detector has two ways of processing target information; continuous and sampling. Continuous continually processes the target information throughout the coil sweep, whereas the sample takes a snapshot of the signals strongest response.

The following programs use one or both of these processing methods, depending on which one you choose.

1 (single tone): Non-discriminated targets give medium-pitched responses.

1+ (variable pitch): Non-discriminated targets give varying-pitched responses based on target intensity. Shallow targets will often give high-tone squeals, while deeper signals are usually medium-toned.

2+ (two tone): Similar to 1+, but iron trash now gives low-tone response, while all non-ferrous object sound with a higher audio pitch. This is by far my favourite program, giving excellent target separation.

3 (three tones): Iron produces low tone sound, whereas non-ferrous targets produce medium or high tone depending on their conductivity level.

3b (bottle cap mode): Similar to the last program, but modified to break up the audio responses from bottle caps (which can give good high tone responses in other programs).

4 (four audio tones): This program is like program '3' with another non-ferrous tone for targets in the 73-79 range.

dp (delta pitch): This program produces a audio pitch corresponding to the targets conductivity. The higher the visual ID number in the screen, the higher the tone.

bp (boost): This is just like the 2+ program, but with a lot more punch! It is one of the deepest programs on this detector, however there is a trade off in the recovery rate, so it is important to slow down you sweep speed in trashy areas.

CL (cache locating): This program is also based on the 2+ program, and is even deeper than boost. Although the deepest, it is also has the slowest recovery rate.

Note: When either Bp or CL are selected, the characteristics of the ALL-METAL mode changes, making it quieter and slightly slower to respond. So when selecting these programs remember to slow down your sweep speed.

Test bed

Out on my test bed I tried each program in turn, making the following observations.

1 – This gives a single tone on all un-discriminated targets, so I first had to increase the discrimination to a level that quietened the iron trash. I settled on a level of 20, blanking most iron and reducing the audio responses on the remaining to short clicks. Using these settings this program found all the shallow targets really well, but struggled on the deepest ones.

1+ – Using the same discrimination levels as before, this program give a better audio response to the non-discriminated targets, making them stand out from any false signals. The results were very similar to the last program, still not locating the deepest targets.

2+ – The joy of this program is that you can lower the discrimination level and in doing so increase performance. I first ran it at zero, finding all targets in my test bed. I did get a middle tone warble, which I think was due to rapidly change mineralisation. Increasing the discrimination level to 4 silenced this noise and performance with deeper signals remained virtually unchanged.

3 – This program also preformed very well on my test bed, and the audio responses were very distinctive, making the deepest of targets stand out more. High pitch falsing did increase, although this tended to be one-way or un-repeatable.

3b – I didn't like this program as the positive responses seemed to become shorter while the iron low tone target seemed to sound louder. I struggled to hear the deepest targets. This is an American bottle cap discrimination program, so it might not be a relevant program for our fields.

4 – This program worked well, finding all targets in my test bed. This might be just my imagination, but the high tone seemed higher in this program, and wasn't to my personal liking.

dp – Using low discrimination levels this program reminded me of Rolf Harris's xylophone! Once I increased the level to 20, it quietened the iron and I managed to find all but the deepest targets in my test bed.

bp – This proved to be the best program on my test bed, easily finding all targets. It squealed on the shallow targets, making the audio separation from iron even more pronounced. Although the recovery is supposed to be slower, this wasn't evident to me in my test.

CL – This managed to find all buried targets. Unlike the last program, the slower recovery rate was very noticeable as some of the target responses from shallow targets lying close to iron became very messy (mixed toned and erratic).

In the field

The field-testing of the T2BSE coincided with spring ploughing, so I had plenty of freshly ploughed land to try it on. The first site I chose was in Cambridgeshire, a 40 acre field that had previously produced Roman coins over a 20 years period. These had come from the centre of the field, but more coins in the plough soil were hard to find

these days. In recent years I had concentrated my efforts on the junk infested village side of the field.

I started searching in 2+program, 90 sensitivity and discrimination level of 4. Good signals really stood out from the iron low-tones, and I dug everything giving me a higher tone. After two hours I had nearly filled my finds pouch with the usual non-ferrous junk, when I got a short repeatable medium toned signal. Digging down a full spade depth and out came a very worn Edwardian penny **(Fig 4)**. I continued to search this area finding a small medieval buckle with buckle-plate.

Figure 4

I then got a target response exactly the same as the hammered signal. I said to myself, *"That's another hammered"*, and digging down revealed my second hammered penny for the day. **(Fig 5)**.

Figure 5

I have to say this first search really impressed me, as I seemed to click with this detector. I stopped looking at the VDI scale, and became confident digging every medium to high signal. The iron low-tones were completely different to the positive targets, and the audio separation between iron and everything else was spectacular.

The following week I was invited back to a good Roman site in Lincolnshire. I had detected this site a few times, but hadn't had much luck other than a hand full of corroded Roman coins. The field had been ploughed and harrowed, but because of the unusually dry spring weather the ground was still quite rough. I walked to the top of the field and started searching the hot spot close to a pond. I soon had a few Roman grots, so decided to work my way back down the field, zig-zagging back and forth as I went. I selected the boost (bp) program, sensitivity level of 80 and adjusted the discrimination to zero. I was about a quarter way down the field when I received a clear two-way high pitch target response. Digging down a few inches I could see a round grey disc in the spoil. On closer inspection I could make out a Roman bust, so I knew this was a 1st century silver denarius. **(Fig 6)** This was by far the best thing I had ever found in this field so I decided to grid the area in the expectation of more finds. About a metre away I received a strong squeal of a signal,

Figure 6

indicating a large or shallow target response. Boot scraping the soil, I could see something large and bronze sticking out a clump of soil. Breaking open this clay lump revealed a large Roman brooch of a type I haven't found before **(Fig 7)**.

Figure 7

I revisited this site after it had been sown with what looked like rapeseed, and found several more brooches and a lot more Roman grots. I tried several of the other programs, but kept coming back to bp and 2+, which both seemed perfect for the conditions.

Conclusion

The T2BSE is yet another top pro detector to hit the British market. I really love the target separation (ferrous to non-ferrous) of this detector when used in the '2+' based programs. It's light and well balanced, and the display is very easy to see in most light conditions.

I find it slightly odd the settings are lost when switching this detector off, necessitating them to be reloaded each time you switch on. Although this was initially an issue for me I soon got over it, as this detector is ridiculously easy to use. You just switch it on, adjust sensitivity, discrim' level and choose a program, ground balance and start swinging. You can do all that almost as quickly as some top machines take to start up!

Throughout this field test I used the standard 11" coil, which I found ideal for the sites I searched. When you purchase the T2BSE you get a second smaller 5" coil. This is useful for areas with high iron contamination, as its small size allows you to move amongst the iron better. A small coil can winkle-out desirable targets, invisible to a larger coil. The T2 Black Special Edition is a first class machine that I would be proud to have as my main metal detector.

TEST RESULTS

Test Results T2 Black Special Edition (Scores out of ten based on price category)	
Ergonomics (weight/balance)	9
Simplicity/user friendliness	9
Build quality	9
Weather resistance	9
Discrimination Performance	9
Overall detection Performance	9
Value for money £895	9
SEARCHER RATING	

Competition: This machine could be yours!

First Texas manufacturers of the Teknetics range of detectors and Regtons, have been extremely generous and have given us this machine to give away! It is worth £895.00 and all you have to do is fill in the coupon (no photocopies allowed) answering this question: **What two coils are supplied with the T2 Black Special Edition?** Then send it to us at T2BSE Competition, ***The Searcher***, 17 Down Road, Merrow, Guildford, Surrey. GU1 2PX by 3rd August together with your name, address and contact number. Good luck!

Please enter me in the draw for the T2BSE competition:

What two coils are supplied with the T2 Black Special Edition?

.....

Name .....

Address.....

.....

.....Postcode.....

Tel number.....

WIN! WIN! WIN!

Competition Rules:

This competition is open to all citizens of the UK except employees of ***The Searcher*** (which includes all regular contributors and their families) and our printers and distributors: Warners Group PLC. Only one entry is permitted per person. Entries will be accepted by POST only addressed to: ***The Searcher* – T2 Black Special Edition Competition, 17 Down Road, Merrow, Guildford, Surrey. GU1 2PX**. To be valid, entries need to be received on or before **3rd August 2011**. The draw will take place soon after and the winners will be notified by telephone (if possible).

There is no cash or other alternative to the prizes stated and the prizes is not transferable and no part or parts of the prize may be substituted for other benefits, items or additions. The judges decision is final and binding. No correspondence will be entered into. No responsibility can be accepted for entries lost, delayed or damaged in the post.