

# Detector Field Test

## Black Knight 1

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The end of 2003 saw the emergence of a new breed of metal detector that started to get tongues wagging in treasure hunting circles. This was the “cheap and cheerful” but nevertheless effective machines being imported from China, known as the Black Knight range and having a price tag ranging from a very modest £49.99 to £179.

The main importer of this range is Detecnicks Ltd, but they are also obtainable from other dealers such as Coinshooter Detectors, Maz Detector Supplies, and Lockdales.

Black Knight detectors are somewhat unique in construction, and some staunch detectorists might dismiss them on looks alone. But appearances can be deceiving and I have owned and used a number of cheap detectors that - in the right circumstances - could outperform many of their more expensive rivals.

My interest in these machines was provoked by two field tests that appeared within this magazine.

One of them was written by Julian Evan-Hart; it appeared in the November 2003 issue and concerned the Maplins model 3010/GC-1010 (which I have been told is almost identical to the Black Knight ID). There was also a report by “Gary” in the October 2003 issue, concerning the Black Knight Pro. Both of these tests reported quite impressive results.

When talking on the phone to Derek Critoph of Coinshooter Detectors, he was enthusing about the amazing sensitivity and performance of which the Black Knight 1 was capable. He said that on trials it had managed to locate most of the objects in his test bed, some of which were buried quite deep. He also told me that a local factory had borrowed a Black Knight 1 to try to locate some small lost pin-tips. The detector had managed to do this quite easily, despite suffering interference from industrial machinery.

In this report I intend to relate how the Black Knight 1 coped on some of my local sites here in Scotland, including one or two particularly difficult areas. In a later report I would like to



share my findings on the cheapest machine in the Black Knight range, the Magpie, which retails at just £49.99.

### Assembly

The Black Knight 1 costs just under £70 to buy, and on receipt and opening the case I was quite surprised at the amount of features it offers for the money. It has a needle meter, five rotary controls and switch, and a push button on the end of its handle.

Putting the BK1 together is very straightforward. First connect the 8in coil to the lower stem. Slacken off the locking collar on the upper stem fitted to the main control box, and insert the lower stem. Wrap the coil lead around the stems and fit the plug into the control box, taking care to have the pins properly aligned. Adjust stems to required length, and then re-tighten the locking collar (being careful not to over-tighten). It is now just a case of adding the armrest attachment, which slots into place and is held in position by a thumbnut.

An immediate bonus with this detector is that, although cheap, its coil is not hard wired into the control box. This means that it can be broken down into its component parts for easy transportation, even in quite a small bag or rucksack.

The BK1 operates from two PP3 batteries, and as in most cases it is advisable to install good quality alkalines. The battery compartments are located on the underside of the control box and access is obtained by means of slide covers. There are no wire connectors to fiddle about with as the batteries just pop into place. Each compartment has a printed diagram to help ensure that the batteries are fitted to the correct polarity.

### Controls

The colour scheme of the BK1 is mainly black and silver: all the plastic parts are in black while the aluminium stems are of natural colour.

The control box consisting of the control panel, the needle meter and the handle are a single unit, although the meter sits elevated at an angle for

## FIELD TEST

easier viewing. There are five controls as well as a small LED that acts as a low battery warning.

The control box is of good design and much smaller than I had at first anticipated. The rotary controls are just the right size for the fingers, being neither too big nor too small. Ground balance is factory preset, and - being a motion detector - the BK1 does not require manual tuning.

There are five rotary controls on the main panel. The first of these is the largest and is positioned directly below the meter. This is the Mode Switch and provides three search settings as well as acting as the power on/off switch. The three mode settings are Disc, Tone, and All Metal, the function of which will be explained below.

The next two controls under the main mode switch are: Volume and Freq Adj (Frequency Adjustment). The latter should only be used if you are experiencing interference from other detectorists working close to you.

In between the above two controls is the LED warning light; this will come on when the batteries are low or near exhaustion.

Finally under the Volume and the Freq Adj controls is the Disc/Tone control which is basically the discrimination setting control, and the Sensitivity control. Both controls are laid out in graduations from 0 to 10.

The Disc/Tone control allows the user to set the desired amount of discrimination required for various detecting situations, and works in conjunction with the main Mode Switch when set on Disc or Tone.

If you prefer working with the mode switch set on Tone then the Black Knight 1 will give a differing tone sound for good or bad targets. For example, a good target will sound in a higher pitch tone while an undesirable target will have a lower dull tone.

If you work with the switch set on Disc then you will receive a normal two-way sounding signal for good targets or a "spluttery", broken sound for bad targets.

If you don't want to use any discrimination you can work in All Metal. This does just as the name suggests and will pick up any metal (including iron) within range. An alternative option is to work between modes. For example, on reasonable junk-free sites it is possible to work in All Metal, and when a signal is received flick the Mode switch to Tone or Disc to verify whether the likely target is worth digging.

The Sensitivity control allows the user to obtain best depth for the type of



Control box.

Finds from the first outing.



site or soil conditions being searched. In ideal conditions best results are obtained from high settings; however, if the site is mineralised or junk infested more targets will be located at a lower sensitivity setting.

At the end of the hand grip of the Black Knight 1 is a large red button, acting as a pinpoint control. When pressed and held down this puts the detector in non-motion all metal mode. This allows you to stop dead above a target where the signal is strongest, aided by the needle on the meter that will swing furthest to the right.

Tucked away in a corner of the control box and under the handle is the headphone jackplug socket. This is only of the small eighth inch size as opposed to the standard quarter inch. Therefore, if like me, you have a preference for using good quality headphones, you will need to purchase an adapter.

## Bench Tests

The manual that comes with the Black Knight 1 has 11 pages and is pretty easy to understand. Detail is included about discrimination and tone sounds, matched up with the size of targets and the likely types of metals.

Setting up the BK1 for the first time was, for initial testing, at home. I only briefly glanced through the manual as I found it quite easy to understand which controls did which and how to set them.

I gave the detector a bench test

placing it on a table with the search coil sticking out over the side. I tilted this at an angle so as to be able to wave metal objects in front of it and to check the performance of the discrimination settings.

The initial results proved interesting. The discrimination seemed to be working well and the detector gave easily-identifiable tone soundings when set to that mode.

I kept sensitivity set down to "5" as I was carrying out the tests indoors, with many possible interference sources. Test pieces incorporated a variety of targets, including coins and iron objects. In each case discrimination was accurate with the smaller iron targets being rejected easily.

In air depth was impressive with the large pre-decimal pennies being registered at 7in-8in, and a decimal 1p at 5in-6in.

### Field Tests

When I took the BK1 out for the first time, just two weeks before Christmas, the plan had been to search a stubble field some miles from home. However, the friends I had arranged to go with bowed to family pressures and went Christmas shopping instead. Therefore on a bitterly cold Sunday, and having no transport but my own two feet, I had to make a rapid change of plan.

I packed my gear - including the BK1 and a hot flask of tea - into my rucksack and prepared myself for a long walk.

When I eventually arrived at the intended destination I received something of a shock. All the fields that I



*Finds from stubble search.*

had earmarked for testing with the BK1 were now under newly sown crops. On my previous sight of them - just a short time before - they had been in stubble, so the sowing must have been carried out just before my visit.

This was somewhat disheartening, as I had walked a long way and the wind was brewing up into a freezing cold gale. However, in the distance I spotted a strip of woodland on a hill, and felt that this could provide some shelter as well as a place to search.

It took me the best part of half an hour to reach my destination, as I had to make my way along an old road full of large puddles, and negotiate other obstacles such as freshly ploughed

fields and barbed wire fences.

At last reaching my destination, I found an ancient track running through the woods that was overgrown with gorse and scrub. Thankfully, however, there was plenty of clear ground between the trees where I could search. The wood was part of an old estate steeped in history, but my previous finds had been poor in terms of age and this search was no exception.

Having found a reasonable patch of open ground, I assembled the BK1 and set the controls. I turned the Disc/Tone to just a couple of notches before the "5" mark, and sensitivity to about 3 o'clock. Finally I left Freq Adj on low and placed volume to the 9 o'clock position. All I had to do now was turn the BK1 on via its mode switch to disc, and start searching.

Within a few sweeps I started to pick up targets with good, two-way bleeps. Prior to digging I switched the mode switch over to Tone, and once again the signals came through with a positive high pitch tone. The needle on the meter also swung hard to the right.

When I set about recovering the indicated finds, all of which proved to be quite deep, I was disappointed when they proved to be the bases of shotgun cartridges, some being of the older pin-fire type.

Unfortunately, no coins or artefacts made an appearance in between the cartridge ends. However, I did have the satisfaction of knowing that the BK1 would have been capable of picking them up if they had been there. Over



*Various pieces of bullets and shrapnel.*

the course of my search I found 70 shotgun cartridge caps, a couple of .22 bullets (at around 4in), and a lead seal (at roughly the same depth). Other finds included several large pieces of iron that came through as positive, but they were of the size and shape that would have fooled the discrimination capabilities of most detectors.

While I was following the course of an old drainage system the BK1 managed to find a long piece of rusty chain tangled in the roots of a tree. This took me about 20 minutes to recover, and it terminated in nothing more exciting than a large hook. During this operation, however, I also came across an old boundary stone engraved with the letter "E" (which I guess stands for "east", as in the eastern boundary of the estate). I thought this to be worth a photograph and went back to where I had left my bag to get my camera.

Other finds included the remains of a pram wheel (that crumbled to pieces as soon as I brought it to light), the head of a hammer, and a large horse-shoe (perhaps from a Clydesdale).

Although I had found nothing of value or interest on this particular search, I was more than pleased with what I had experienced of the detector's performance.

The following day I was up and out early heading for a stubble field that I knew to be available. I had picked this field in particular, as not only would the BK1 have to contend with the stubble, but also the electric pylons and a nearby Tetra mast.

The detector was happy enough in the short stubble - around 4in in height - but was somewhat hindered by the higher and thicker variety. Trying the various settings, I settled on working in All Metal (for maximum depth) and then checking targets in the Tone setting. My pockets were soon bulging with non-ferrous scrap and signals were certainly plentiful. The depths being achieved were once again very impressive.

The only downside - and this would apply to many detectors - is that when I was near the pylons the BK1 became unstable and a clicking sound came through my headphones. The needle of the meter also became somewhat "jumpy". However, this was not a problem as I had plenty of space to search on the field and I just moved away from the immediate area of the pylons.

Amongst the scrap I recovered an old halfpenny, a livery button, a flower patterned button, a pigeon ring, a lead seal, a buckle, and a 1980 metal tag from a pair of Wrangler jeans. Although



*Boundary stone.*

this haul of finds included nothing exceptional, it served to convince me that had I have been searching on one of my favourite Roman or medieval sites then more interesting finds would have been coming up.

### Beach Test

My next outing with the BK1 was two days after Christmas. I would have been out a lot sooner but Scotland had experienced a change in the weather and the icy conditions would have made it impossible to dig up finds. This trip, along with a couple of friends, was to a beach in Fife.

It was a fine sunny day but very cold. The ground was still brick hard and we had to watch the roads for the treacherous black ice.

Once we had parked and got kitted up we headed for the sand dunes. I decided to work with the Mode Switch set to All Metal and then check any signals in the Tone setting. During the summer the sand dunes on this beach

are very busy areas for sun worshippers, and the area is host to many picnics and barbecues. There is generally something to be found here even months after the summer.

The BK1 worked extremely well in the sand and it wasn't long before I had found a coin, soon to be followed by another. I had the Disc control set to just under "5" and Sensitivity set just over the "5" mark.

The detector's discrimination was as good as I expected it to be from my previous searches. One patch must have seen a barbecue as it was covered with fragments of burnt wood. The nails that came from the wood gave a "spluttery" signal in the Tone setting but in amongst these I recovered two small screws made from brass or copper.

After searching the same area for a couple of hours we moved further along the beach. I was really surprised to see the amount of people out and about for such a cold day. I guessed that they were either trying to walk off their big Christmas dinners or were just fed up with all the usual rubbish and repeats on the telly.

Continuing to move still further along the beach we came to a more peaceful area. Between us we had already found 10 coins, including a foreign example and a £1 piece. I was leading my friends up some dunes when my detector gave another good signal. Scraping away a layer of sand with my boot I saw two stainless steel blades sticking up from the sand. These proved to be part of a small utility knife that also had scissors, a screwdriver and a nail file built in. The knife appeared to have been lost only recently, and examining it closely I saw that it also had a built-in cigarette lighter! A key ring was attached to the knife with the name of the fashion company "Next" on it, so I guess that they had issued the knife as some kind



of free gift or promotion.

Before leaving for home we headed for an area of the beach that I knew had seen a lot of activity during the Second World War. On this patch in the past I had recovered loads of .303 rifle bullet cases and the remains of much larger shells as well. We hadn't quite reached the area when we came to a sandy depression resembling a golf bunker. We started to get signals everywhere and spent the best part of half an hour recovering bullet cases and pieces of brass and lead shrapnel.

When we finally reached the area I had in mind, our detectors went into overdrive with signals appearing everywhere. The Black Knight 1 was in its element, but I had to switch from All Metal to Tone discrimination just to cut down on the amount of targets being registered. However, the tone identification worked a treat and I recovered a great deal of brass in a short space of time. Not only that, the detector was picking up targets at depths ranging from 4in to 8in very easily.

### Summing Up

It's not everyday you come across a detector that's not only cheap to buy,



but also does everything you would wish a detector to do. With the Black Knight 1 you are getting quite a surprise package for the money, with its variable mode control and Tone ID. The detector has good discrimination and excellent sensitivity, which in turn produces very good depths.

I will be totally amazed if this detector doesn't produce the goods on areas where Roman and medieval coins and artefacts are found!

The build quality of the Black Knight 1 is what you'd expect for just under £70, but if you take care of the detector and are not too rough with it, it should provide years of pleasure and fun.

### Specifications

Model: Black Knight 1

Type: Motion Silent search as well as variable search discrimination modes and target tracking intensity meter.

Sole UK Importers: Detecnicks Ltd, 3 Orchard Crescent, Arundel Road, Fontwell, West Sussex BN18 OSD. (Tel: 01243 545060).

Recommended Retail Price (inc VAT): £69.99

Search Coil: 8in waterproof concentric type as standard (plug in).

Batteries: 2 x PP3 (alkalines recommended).

Battery Life: 10 to 20 hours.

Guarantee: One year parts and labour.