Field Test

C-Scope CS8SST

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I was quite pleased when Treasure Hunting asked me if I would like to do a Field Test on the C-Scope CS8SST. I had started out in the hobby with a C-Scope metal detector way back in the mid-1970s, and testing the CS8SST would give me the ideal opportunity to see just how much C-Scope technology had moved forward since the days of the "swan-necked" machines that I first cut my teeth on.

Another reason was that since my old C-Scope finally gave up the ghost in 1987, I replaced it with another machine that I have been using ever since. Although that machine is pretty basic, it has performed extremely well over the past 13 years. The only down side is that I seem to have unwittingly joined the breed of "techno-phobes" whose way of thinking is "If my present detector works well, then why change to something more sophisticated?"

However, when the CS8SST arrived I soon found that it had some pretty interesting features, which I began to wish I had on my machine. I couldn't wait to get out and test it.

As one of C-Scope's recent additions to their impressive range of detectors, the fully computerised CS8SST seems to fill the gap between the more basic machines and their top range Newforce R1.

The features to be found on the CS8SST include the following:-

1. A computerised control system.
2. SST intelligent ground tracking.
3. Smart Scan panel array.
4. A high-speed target analyser.
5. Target pinpoint.
6. Depth reading.
7. Overdrive-Large target indicator.
8. Anti-dust & moisture features.
9. 8-inch diameter search head.

The CS8SST's control panel consists of four control knobs, a pinpoint button, and an LED Bar Graph. In order the control knobs are: Power On/Sensitivity, Notch Select, Notch Width, and then Discriminate. The pinpoint button is set between the Notch Select and Notch Width, this also activates the CS8SST Smart Scan feature, which I'll go into later.

Control Features

LED Bar Graph. This provides target analysis and also depth reading (in inches). It also gives an indication that the SST Smart Scan is working.

Power/Sensitivity. This switches the machine on and sets the motion mode sensitivity. As with most types of machine this is set at maximum sensitivity when turned fully clockwise. It also provides the best detecting depth at this setting.

Discrimination. The Disc control eliminates items in the following sequence: iron, aluminium foil, new l0ps, old l0ps, bottle caps, and £1 coins. When turned fully counter-clockwise the C-Scope CS8SST operates in its all-metal motion mode with zero discrimination.

Notch Select/Notch Width. Both of these controls operate in conjunction with the Discrimination control and work together to notch-in or notch-out selected targets. Neither of these will operate if the discrimination control is set fully anti-clockwise.

By setting the Notch Select to a position just below that of the Disc control selected targets can be "notched-in". By setting it so that it is just above the Disc setting certain targets can be "notched-out"'. Simply by setting Disc to reject foil the Notch Select can then be set to reject pull-tabs. By using the Notch Width a whole band of targets from pull-tabs to bottle caps can be rejected.

Right: *Control panel of the CS8SST.*

Below: *Field testing*

SST Scan. The SST scan is a visual indication that the detector's ground scan facility is in operation. To enable this feature the pinpoint button should be pressed in for about one second when switching on the machine. The LED Bar Graph will light up and then illuminate consecutively across the graph backwards and forwards. The ground scan functions whether this facility is enabled or not. The pinpoint button should not be pressed for more than the recommended time when the power is switched on, or the machine may not function properly.

Overdrive (Large Target Indication). Sweeping the coil over a large target or a target that passes close to the coil can send the machine into overdrive and produce erroneous results on the bar graph. The detector will give a distinct "motorboat" signal to indicate when this happens. When it does, one simply has to raise the search coil and sweep the target once more to get a more accurate reading. The "motorboat" signal does not occur when the machine is in ID pinpoint mode.

Depth Reading. To obtain a depth reading simply move the search coil away from the target and, while holding the detector still, press the pinpoint button continuously while you sweep the target area again. A depth reading will show on the upper scale of the bar graph.

First Impressions

After assembling the CS8SST I was quite impressed by its design and light weight (approximately 1.7kg). It was comfortable to hold and use. I was also impressed by the headphone socket (situated on the battery compartment beneath the armrest). This has been fitted with a removable dust cover.

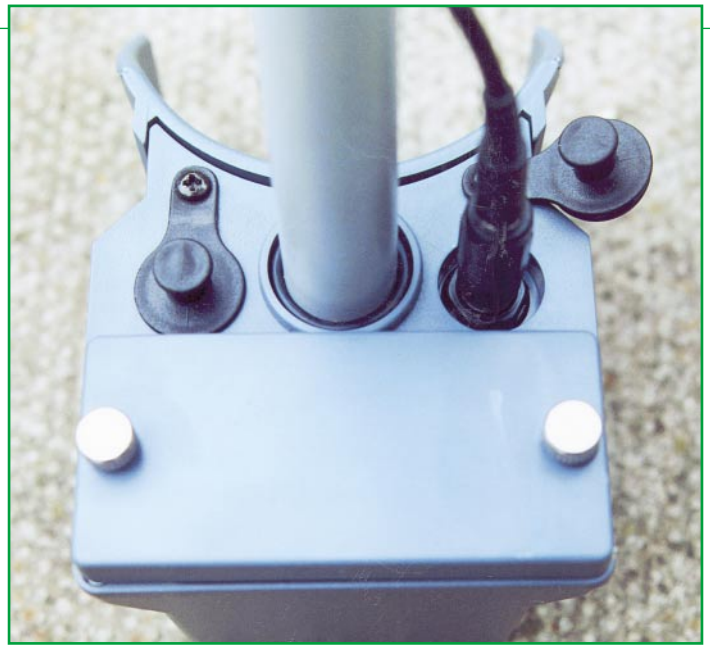
The CS8SST is powered by eight AA batteries or a rechargeable 12-volt pack (available from C-Scope). For the purpose of this test I used standard alkaline batteries.

To evaluate the detector before taking it out into the field, I first carried out some "in-air" tests. The results are given below:-

Iron horseshoe - 9in
Old pre-decimal 1d - 7in
New 1p - 5in
New 10p - 7in
Large silver ring - 5in
Medium sized crotal bell - 7in.

The test was carried out using maximum sensitivity and no discrimination. The results do seem to be comparable to many other types of machines on the market.

One of my particular likes about the CS8SST is the different audio signal it produces when indicating ferrous metal. Although most other detectors usually give some audio indication of iron (such as a "spitting" signal) the CS8SST gives a distinct "buzzing" sound.



Headphone and recharge plug sockets with removable covers.

On Test

When Treasure Hunting asked me to carry out this field test I did feel a bit of panic because the harvest hadn't yet begun, and the fields where we search were still full of crops. Where was I going to test it? I decided to try something different. In the company of my son Mathew, we took it to some woods close to where I live. I had never tried these woods before and a new housing development nearby meant that they would be pretty contaminated with modern junk and other undesirable items. But I did feel that this would be a good chance to try out the discrimination and notch facilities.

The audio sounds seemed strange compared to my own machine but I soon got used to them. The illuminated bar graph that gave a visual indication of what the machine was locating proved of great help, and was also pretty accurate. When it indicated "foil" I dug down and found exactly that. As expected, I found an abundance of ancient shotgun caps, which registered between (C) and (D) on the bar graph. To start with I chose not to use the notching facility so that I could get used to the machine's response to different kinds of targets.

As we worked our way along the main footpaths in the wood a whole range of objects appeared. One very strong signal proved to come from a large coin. The LED bar graph indicated the level (B). This item turned out to be a coin, which at first I thought was an old 2 shillings. It turned out to be a

Finds from the wood: Yugoslavian 10 dinars, gold St Christopher, 19th century lead bullet, and a livery button.

Two .50 calibre shells from a belt of ammunition.

Mangled fragments of a B17's stainless steel oxygen tank.

Yugoslavian 10 dinars! Fortunately, most of the targets were close to the surface and did not require a great deal of digging.

We dug at another signal, which registered (C) on the bar graph, and this appeared to be a piece of gold foil. Picking the object up, my son found that it was, in fact, a solid gold St. Christopher medallion! Needless to say, I was soon feeling pretty delighted with this machine. It was bringing me luck!

The amount of iron targets we encountered in the wood was considerable and the machine responded almost constantly with its distinct "buzzing" audio signal. I decided to increase the disc level in order to eliminate these targets.

Pull tabs and foil still remained a problem so I experimented with the notch facility so that these could be eliminated as well. Although it worked well enough I was worried that it would perform its function at the expense of the loss of some sensitivity.

I therefore returned home to carry out another in-air test to see just how much loss of sensitivity was incurred, if any. Using an old shilling and a piece of aluminium foil I first measured the detection 'depth' on the coin without using any discrimination. I found that the shilling was picked up at approximately 4.5 - 5in. I then increased the discrimination setting until the foil was rejected. Upon trying the shilling once more I found that it still picked up at around the same distance. Even when I set up the notch facility the detection "depth" hadn't been impaired to any distinguishable level. This may be different in the field where soil conditions can affect sensitivity, however.

During the summer weeks my team mates and I had busied ourselves searching for the scattered remains of two B17 Flying Fortresses which had collided in mid-air and plummeted into woods and fields near where we live. One of the planes crashed into a wood where one of its bombs exploded causing even greater devastation. Fragments of the aircraft were strewn all around the wood. It was a good opportunity to test the CS8SST in a search for any bits that we may have missed using our other machines.

Starting close to the enormous bomb crater, which is now a large pond, I slowly worked my way around the undergrowth and over towards an area of the wood which hadn't suffered badly from the catastrophe 56 years earlier.

Much of the debris we found consisted of fragments of the fuselage "skin", which was made of aluminium. The machine also gave an enormous amount of ferrous "buzzing" signals, which turned out to come from badly corroded steel fragments from the plane. Working my way along the far side of the wood I suddenly heard what I thought was a machine gun going off! This was the detector's "motorboat" response to a large target. When I dug this up I found that it was a large piece of stainless steel. My find was actually part of an oxygen tank from the B17.

Working my way back into the clearing where the plane came down I encountered one minor snag with the CS8SST. Bright sunlight striking the control panel made it rather difficult to see what was happening on the LED bar graph. In a similar way if sunlight strays onto your TV screen, it can obliterate the picture. I found that I had to change position to see the graph or put my hand over it to shield it from the sun.

Conclusion

I can honestly say that despite my initial fears that the CS8SST might be somewhat complicated, I actually found it very easy to operate. Once the controls had been mastered, which didn't take long, I even found it fun to use. The LED bar graph, as well as the various audio signals, certainly take away some of the guesswork when you've located a target. I wish I had these features on my current machine.

Although sunlight striking the control box caused a slight difficulty in reading the bar graph, I didn't find this to be a major problem. C-Scope also informed me that search heads aren't interchangeable with the CS8SST. You are restricted to its 8in search coil.

For any detectorist who currently uses a fairly basic metal detector and perhaps wishes to upgrade his machine to something rather more sophisticated (but not too complicated) I would certainly recommend he consider the C-Scope CS8SST as a suitable option. As a well-balanced and lightweight detector it can be used comfortably on most terrains and in most conditions. TH