

Field Test

The Nexus Coronado



Back in 2005, I wrote about a new detector for inland use - the "Nexus". The Nexus was the brainchild of Georgi ("George") Chaushev, a Bulgarian electronics engineer. George had developed a metal detector that seemed very different and it caught my attention for the great depths claimed to be achievable. I took a gamble on it and have found it to be a very effective detector for the serious and experienced user; it is now my machine of choice for much of my serious searching activity.

At the end of 2006, Georgi told me of his plans for a new detector, aimed to be suitable for any user. Recently, he delivered one of his new units, the Nexus Coronado, for me to use and test.

The Coronado is again entirely hand assembled and the standard of finish and construction is exceptional. George is a perfectionist and this shows in the care and attention he pays to all aspects of his detectors. The Coronado uses the unique "figure of eight" coil configuration George introduced with the Nexus, and comes with the twin 6in coil as standard (others can be supplied at extra cost). The stem is of tapered hollow glass fibre and has a simple slide-out to its maximum extension length. The Coronado is designed to be capable of use in a silent operation mode, but is perhaps best used with a slight continuous background tone; variations in this base tone provide strong target responses.

Description & Controls

There are two boxes on the detector, one mounted on the handgrip and the other underneath the arm cup at the end of the shaft. The latter holds the 10 AA batteries, which are accessible by removing four cross-head screws and the back-plate. This box is also where the 6mm headphone socket is situated.

The main control box has five rotary

control knobs, with an All-Metal/Discrimination Mode toggle switch and Tone Discrimination push button underneath. An external speaker is mounted in the control box (but as with all detecting, headphones are recommended to avoid distraction from background noises). The control knobs are labelled, from top left clockwise, On/Off Volume, Discrimination, Ground Balance, Sensitivity, and Threshold.

On/Off Volume

Adjustment for a comfortable volume level should be made using this knob, with any headphone volume control being set to maximum.

Discrimination

This knob sets the discrimination level desired with the highest number (10) being the maximum rejection setting. A setting of 4 will be optimal for most sites. The Coronado can be used in discrimination or all-metal modes or toggled between the two.

Ground Balance

Adjusting this in conjunction with the Sensitivity and Threshold knobs will set the detector to its optimum for the site.

Threshold

This is the most important adjustment for maximum depth and sensitivity in use. I have found that using the Coronado with a slight background tone, rather than silent, does increase the depth and sensitivity achievable.

Sensitivity

This is the level of sensitivity setting - the higher the setting, the better the

possible detecting result possible but, on some sites, it may be necessary to reduce this setting to avoid some false signals or "chatter".

All-Metal/Discrimination Mode Switch

Located under the control box, this switch toggles the detector between all-metal and discrimination audio modes.

Tone Discrimination Button

Located under the control box, this push button switches the Tone Discrimination Mode on and off. Technically, this is achieved from a Voltage Controlled Oscillator (VCO).

Users will immediately find that the Coronado is extremely light to use and very well balanced. Weighing in at only 1.3kg with batteries, this is a detector you can use for long periods with great comfort.

The Coronado is simple to set up and use and anyone should be able to get good results very quickly. The basic approach for best results is to search in All-Metal Mode and to toggle into Discrimination Mode to check signals.

The Coronado does have a further feature that can be very useful. When the Tone Discrimination Mode is engaged, all ferrous targets will produce a lower pitched tone response than that given for non-ferrous finds. This feature is especially useful when searching a large area



rapidly. The level of difference between the tone responses diminishes somewhat for very faint signals but is very marked on strong signals. For sites with a high proportion of small iron targets, searching in Discrimination Mode or Tone Discrimination Mode will speed up recovery rates for good targets.

Practice, as with all things, will enable a user to get the best from this detector. Those detectorists who are used to some of the silent running motion detectors (and who habitually detect in discrimination mode rather than in all-metal) available today may find the Coronado strange at first.

As with any detector, becoming familiar with its method of operation and settings is essential to get the maximum level of performance possible. However, with the Coronado even beginners should quickly reach depths that will surprise them. I have used the Nexus to great effect over a period of some two years and am now thoroughly confident of correctly interpreting the signals and in picking up the faintest of targets. I found the Coronado much simpler to use and with a faster sweep speed that I can use with the Nexus. I got good results immediately when searching my usual sites. I am finding that, with practice, I am able to differentiate between signals given by different metals and shapes of target. Pinpointing is simply by "X-ing" over the target and is generally reliable (although, as with most detectors, targets in the ground that are at an angle to the coil may give a slightly offset pinpoint position). A hand-held mini probe is a

very useful accessory, as well as a strong digging tool capable of going down to a good depth!

Although designed primarily for use on inland sites, I did experiment briefly in using the Coronado on my local beach. I found that simply lowering the Sensitivity setting and slightly raising the Discrimination (to about level 5) cancelled out the salt effect on wet sand and gave a stable threshold tone. The beach in my part of the country comprises sand and silt overlaying clay. Sand depth can vary from almost nothing to over 18in thick. On the sandier areas, I found targets at similar depths I would expect to achieve when using my C-Scope PI or the Minelab Excalibur. I will be extending my beach testing of the Coronado over the coming weeks and am looking forward to seeing how it performs over time.

In-Air Bench Test

The table lists the depths for each of the test targets in all-metal mode. The test was carried out in a single session in identical conditions, using the same set of headphones for all. The Coronado was fitted with a new set of batteries and was set up to achieve maximum possible depth performance levels and the depth was measured for the minimum clearly discernible signal response. Each item was tested in all-metal and then in discrimination mode. It was noted that there was no significant depth reduction when using discrimination mode (the discrimination level was set to reject an iron nail). The depths are given in

Coronado 6in coil	
Test Target	
Bronze Age socketed axe	23in
Durotriges base silver stater	12.5
Celtic fibula	6.5
Small Roman Bronze Coin	6
Carausius antonianus	14
Vespasian denarius	13
Vespasian sesterius	16
Roman bronze ring	15.5
Roman silver ring	13
Saxon silver sceat	8.5
Saxon Gold Tremissis	11
bronze strap end	13.5
Round Hammered Farthing	9
Edward I silver penny	12
Elizabeth I silver 6d	15
Nuremburg bronze jeton	13
large bronze strapend buckle	19
silver ring	14
lead seal matrix	13.4
lead spindle whorl	15.5
1869 bronze farthing	14.5
1707 silver sixpence	14
1921 bronze penny	17
1889 silver crown	16
silver fork	17
4-hole brass trouser button	12
.303 brass cartridge case	12.5

Field Test

Chris Wren



inches, to the nearest half-inch. All of the test items used are shown in the photographs and they are dug artefacts and coins of various periods, metals and sizes that might be commonly found anywhere in the UK. I tried to select things I consider to be both "easy" and "hard" to find.

I personally checked each signal. Each test records the greatest depth when the

limit at which a clear and unambiguous positive signal was reached. Obviously there must be an element of subjectivity in any test of this type. What one user would accept as being a "clear" signal may not satisfy another. When looking at the results of any bench air test, it should be obvious that results "in the ground" will be less impressive. However, what can be said with certainty is that, if a

detector is unable to detect something in air at a certain depth, it will not do so in soil.

The retail price for a Coronado supplied with one 6in coil and including a pair of stereo headphones will be £549 and this compares very favourably with better quality mass-produced detectors available today.

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