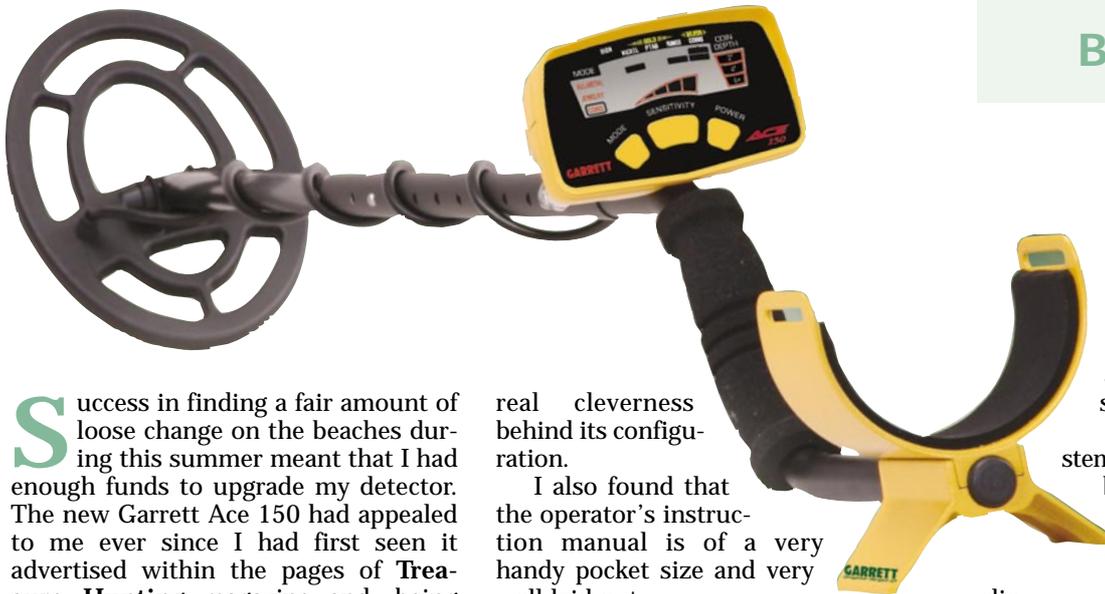


Detector Field Test

Garrett Ace 150

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Part 1



Success in finding a fair amount of loose change on the beaches during this summer meant that I had enough funds to upgrade my detector. The new Garrett Ace 150 had appealed to me ever since I had first seen it advertised within the pages of **Treasure Hunting** magazine and, being moderately priced, I felt it could just be the machine that I was looking for.

Naturally, before making the purchase I did a fair amount of checking out on the Internet to see what I could find out from user response about this detector. In total I found four reports, two American and two British. However, all of these seemed to be somewhat vague and did not provide the information I would look for in a field test. For example, they included very little detail on how the Ace 150's Graphic Target ID performed, or how the audio multi-tone discrimination reacted to various targets.

Despite the lack of the information I was looking for the Garrett Ace 150 seemed to provide good value within my price range, and I eventually made the decision to purchase one.

For those in a similar position, I hope that this field test (to be published in two parts) will provide the facts and details that you are looking for.

First Impressions

When the detector was delivered the first thing I noticed was the small size of the packing case. On opening the box I was again surprised by the compact nature of the detector itself showing a colourful bright yellow control box and armrest/stand.

The Elliptical PROformance search coil that comes with the detector - although 6.5in x 9in - also deceives the eye as it looks much smaller than it is. It wasn't until I took a measuring tape out to check the size that I could see the

real cleverness behind its configuration.

I also found that the operator's instruction manual is of a very handy pocket size and very well laid out.

Assembly

The assembly of the Ace 150 is very straightforward. The tough yellow plastic control box is already attached to the upper stem, which has a rubber foam handgrip and yellow padded arm cup (combined with stand) to the rear.

The middle stem is already contained within the lower stem, and it is just a case of sliding it out via the spring clips.

The lower stem already has a set of washers provided where the search coil is attached. It is therefore just a case of fitting the lower stem by gently squeezing it between the PROformance coil's lugs and lining up the holes. Once this is done you fit the provided threaded bolt through and then tighten via the two threaded finger knobs.

Once the search coil is assembled

to the lower stem you slide the middle stem into the lower one and click it into one of the many holes to adjust the height via the stem's spring clip.

The final piece - the upper stem with the attached control box - then slides into the top of the middle stem and should click into the allotted holes via its spring

clip.

All that remains to be done now is to wrap the search coil's cable around the stems snugly ensuring that enough slack is left so you can feed the cable plug into the pin plug socket on the control box. Make sure the plug is aligned properly and is pushed into the socket gently, then tighten via the threaded locking washer.

Control Box & Panel

The control box with its LCD screen and control panel is laid out with the minimum of fuss and is very simple to operate and understand.

Access to the battery compartment is achieved by sliding a cover off the top of the control box. There is a recessed indentation to do this and taking the cover off will give access to change the batteries when they are exhausted.

When you buy a Garrett model there should be a set of batteries already installed and the Ace 150 uses 4 AA cells.

Alkaline batteries are recommended and according to the manual (depending on the type of batteries) you can expect 20-40 hours from a fresh set.

A standard quarter inch headphone socket is located on the right rear underside of the control box, and directly opposite from the search coil cable plug.

The speaker is positioned on the underside of the control box, which keeps it free from the immediate effects of bad weather, dirt, and sand.

The Ace 150's control panel is laid out in a very user-friendly way with an



easy to understand LCD screen and three simple yellow rubberised push buttons.

Controls

Power - This control is the On/Off switch for the Ace 150. Gently push it to turn the detector on and gently push again to turn it off.

Sensitivity - To operate this control push the sensitivity button; this works in conjunction with a four segment bar immediately above the button. It gives you four levels of sensitivity shown to you constantly while the detector is switched on.

Setting sensitivity to one of the first two segments is ideal when search conditions are not favourable with too much junky ground or if you pick up interference from, say, an electrical source.

The higher settings are ideal if you are working in an area free of rubbish and mineralised ground; they will also give better depth and performance on smaller targets.

Mode - This button is used to select one of three search modes. The search mode you choose to use will be highlighted directly under the word "mode" until you either change it or the detector is switched off.

When the detector is switched back on it will be set on the search mode you had been working in previously.

1. All-Metal Mode - This will detect all metals on audio and through the

Jar lid with copper lining.



Graphic Target ID.

2. Jewelry Mode - Designed to find jewelry such as rings, bracelets, watches and necklaces, plus coins, while ignoring rubbish such as bottle caps and nails. It will give audio responses to selected items but no audio response to iron.

The Graphic Target ID will still react showing some of the junk without audio.

3. Coin Mode - This mode is designed to specifically pick up coins while ignoring junk such as pull-tabs, bottle caps and iron.

LCD Screen - At the very top on the LCD screen is the Target ID Legend where you have IRON, GOLD and SILVER laid out as well as NICKEL, PTAB,

RINGS, and COINS. This works as an indicator for the type of metals you may find.

When the detector is switched on and you receive a signal a block cursor with a tiny pointer will move to the likely metal you have detected as part of the Graphic Target ID.

Immediately below the Target ID Legend you have what is known as the "Upper Scale". This is the area where the block cursor appears with its pointer, and moves when a target is picked up against the Target ID Legend.

It should be noted that the cursor will only react when the detector is in motion and that the cursor indicating the metal will disappear after a few seconds if the motion or movement of the search coil ceases.

Below the Upper Scale is the "Lower Scale". This shows the Notch Discrimination Scale as a series of five blocks indicating the immediate discrimination pattern where the Ace will or will not produce an audible signal. This depends on the search mode you are in at the time as the scale changes for each search mode.

Basically, if you are in a mode where, for instance, the block for iron is



Head of a small bearded man.



Trash items from woodland search.



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switched off you will no longer receive an audible tone for it although you may still see the cursor pointing to iron.

Coin Depth - will show you the approximate depth of a detected coin-sized target and will display it on a coin depth scale which is marked out as 2 inch, 4 inch and 6+ inch.

Tone ID - As well as the Graphic Target ID using the LCD screen, Garrett has also incorporated their clever Tone ID feature, which produces distinct tones for types of metals. This can be very useful as a discrimination aid as well.

High conductivity metals will produce a distinct bell tone signal, so this is very handy for items made of silver.

Medium conductivity metals such as pre-decimal coinage and gold rings, will produce a standard-pitched tone (in other words a normal tone).

Low conductivity metals such as iron and nails will produce a very dull low tone, which is very distinctive from the others.

Low Battery Indicator According to the operator's manual there is a Low Battery Indicator that will come on screen when the batteries are weak or near exhaustion. However, this may not be the case as in one of the brief Internet reports I have read it stated there was no battery indicator.

All-Metal Search Mode

Pre-Decimal Coins	ID Legend	Tone Type
Farthing	Coins	Bell Tone
Halfpenny	Rings	Medium Tone
Penny	Coins	Bell Tone
Threepenny	Coins	Bell Tone
Silver Threepenny	Coins	Bell Tone
Sixpence	Coins	Bell Tone
Shilling	Coins	Bell Tone
Some Earlier Examples		
George II Sixpence	Coins	Bell Tone
Edward I Penny	Nickel and Ptab	Medium Tone
Henry III Cut Penny	Nickel	Medium Tone
Roman Silver	Rings	Medium Tone
Small Roman Bronze	Ptab	Medium Tone
Modern Examples		
Two Pound Coin	Coins	Bell Tone
One Pound Coin	Coins	Bell Tone
All "Silver" other than 5p	Ptab	Medium Tone
Five Pence	Nickel	Medium Tone
Pennies and Twos	Iron	Low Tone
Junk		
Old Ring-Pull	Ptab	Broken Medium Tone
Square Pull-Tab	Ptab	Medium Tone
Crown Cap	Iron	Low Tone
Iron Ring	Iron	Flat Bell Tone
Iron Nail	Iron	Low Tone
Horse Shoe	Iron	Low Tone
Piece of Coke	Iron	Medium Tone

Jewelry Search Mode

Pre-Decimal Coins	ID Legend	Tone
Same As All-Metal	Ditto	Ditto
Some Earlier Examples		
Same As All-Metal	Ditto	Ditto
Modern Examples		
Two Pound Coin	Coins	Bell Tone
One Pound Coin	Coins	Bell Tone
All "Silver" other than 5p	Ptab	Medium Tone
Five Pence	Nickel	Medium Tone
Pennies and Twos	Iron	No Audible Tones
Junk		
Old Ring-Pull	Ptab	Medium Tone
Square Pull-Tab	Ptab	Medium Tone
Crown Cap	Iron	Medium to Bell Tone
Iron Ring	Rings	Bell Tone
Iron Nail	Iron	No Audible Tone
Horse Shoe	Iron	No Audible Tone
Piece of Coke	Iron	No Audible Tone

Hopefully, by the time I have put together the next part of my own report I can confirm whether there is a battery indicator or not!

Bench Testing

In the reports I had read about the Garrett Ace 150 on the Internet I hadn't seen anything along the lines of a bench test.

Anyone buying a new detector should try to familiarise themselves with its controls and with its sounds just to see if the performance will suit the user.

Obviously another form of testing is to have a garden test bed where you have coins planted at various depths and where you can swing your detector about and note the results.

For the bench test in the home you need an area free of metal and electrical sources, and some space in which to conduct your tests.

I tested the detector by placing it on a coffee table. I then waved various coins and junk items in front of the search coil, while the machine was set on each of its three search modes. The results are given here.

I believe that my findings have shown that when in the field you may have to watch what setting you are on for specific targets you are looking for. But it should also be remembered that you discriminate in two ways: by watching the LCD screen and by listening to the audible tones; it is therefore quite feasible to stick to one search mode.

For example, if you stick to working in the All-Metal search mode for field searching you can still see and hear clearly good and bad targets and still not have to dig up too much junk.

Where this may falter is on an area where there is a lot of present day junk such as tin cans, tin foil, and the odd ring-pull.

All the coins and objects used in the bench test showed up clearly on the depth scale, as well as the preset depths. It also showed that small coins such as Roman bronzes and cut hammered pennies will be found at better than average depths if ground conditions allow.

In the next part of this field test I will be putting the Garrett Ace 150 to work over various fields and beaches and look forward to being able to report my findings.

Coins Search Mode

Pre-Decimal Coins	ID Legend	Tone
Same As All-Metal	Ditto	Ditto
Some Earlier Examples		
William III Sixpence	Coins	Bell Tone
Edward I Penny	Nickel	Medium Tone
Henry III Cut Penny	Nickel	Medium Tone
Roman Silver Coin	Rings	Medium Tone
Small Roman Bronze	Ptab	No Audible Tone
Modern Examples		
Two Pound Coin	Coins	Bell Tone
One Pound Coin	Coins	Bell Tone
All Silver other than 5p	Ptab	No Audible Tone
Five Pence	Nickel	Medium Tone
Pennies and Two's	Iron	No Audible Tone
Junk		
Ring-Pull	Ptab	No Audible Tone
Square Pull-Tab	Ptab	No Audible Tone
Crown Cap	Iron	No Audible Tone
Iron Ring	Iron	Bell Tone
Iron Nail	Iron	No Audible Tone
Horse Shoe	Iron	No Audible Tone
Piece of Coke	No ID	No Audible Tone