FIELD TEST

Garrett AT PRO International

Spec sheet	
Operating Principle:	VLF 15kHz
Search Coil:	28 x 22cm Double D
Weight:	1.4Kg
Battery type:	4 AA batteries
Warranty:	2 years
RRP:	£595

Hot on the heels of the EuroACE, Garrett has released a new mid-priced 15Khz detector called the AT PRO International (PRO). This detector has fired my imagination because it's claimed to be waterproof and submersible to three metres. There are very few true waterproof VLF detectors on the scene, so this machine could be very popular in this niche market.

Out of the box, the PRO looks similar to the Garrett ACE range of detectors, with one glaringly obvious difference; it's totally black and not the usual yellow. On the front panel of the control box, the display graphics are crisp and give all the information of the detector's key features. The target legend printed above the target scales gives a nice visual reference point. To the right you have a coin depth indicator graduated in increments of 5cm blocks, and to the left the mode indicator.

Assembly of the detector was pretty straightforward; the only tricky bit was ensuring the correct location of the 'O' rings where the headphone and coil leads connect to the control box. Doing up the knurled locking nuts are also a bit fiddly if, like me, you have fingers any larger than chop-sticks.

The detector is powered by four AA batteries, which are loaded into a holder and dropped into the back of the control box. The battery cover with its greased 'O' ring is then pushed snugly home, and twisting the catch 90 degrees locks the cover in place.

Controls

The control layout is very good (**fig 1**) with rubberised button cover switches giving reassuring positive click actions. They are marked out into three groups, with the centre group enclosed by the printed line graphic of the frequency adjust (FREQ ADJ). To the left are the IRON DISC group containing the ON/OFF/MODE and IRON AUDIO buttons. The middle group are for SENSITIVITY and PINPOINT and finally on the right is the NOTCH DISC group, which includes the ground balance (GND BAL) and ELIM buttons. All detector controls are accessible via these buttons and as there's no menu system, so proves to be a very simple detector to understand and operate.

Preset modes

The PRO is two detectors in one. If used in one of the 'standard' modes, it reacts very similarly to the EuroACE. Each target response gives a solid 'beep', giving no reliable indication of size or depth of the detected target. This will be a welcome mode for any user who is upgrading from the ACE family of detectors and will ensure a gentle learning curve to the additional PRO features lurking just a few clicks away. Although the standard modes react like an ACE, there are some features incorporated in the PRO not present on those detectors. The most useful addition is the digital target identification meter, which gives a numerical value for a target's conductivity (1 to 99). This is displayed prominently in the middle of the screen, and labelled TARGET ID.

The PRO also has a frequency shifter, which can be used to minimise electrical interference (EMI). This feature is reached by holding down the pinpoint button, and then toggling between the four channels (F1–F4), using the sensitivity keypad.

The real power of the AT PRO is reached by accessing one of the pro modes (preset programs). In these modes the detector stops being a 'beep' detector, changing into something completely new. In a PRO mode you can hear a lot more information, giving you enough to calculate a target's size and depth. The machine will also react quicker between target responses (has a faster recovery rate). Because the detector isn't over processing the signals, you are taking on the responsibility for final interpretation of the target responses… that's why Garrett call them PRO MODES.

Three Tones

The machine has a well thought-out three tone system, giving good separation. The low tone (between 0-39) encompasses the iron range. The middle tone range covers the smallest section of discrimination, between 40-50, covering thin section targets including foil. The largest section of the discrimination range is between 50-99, giving high tones to non-ferrous targets.

The ACE family of detectors discriminate using a notch type system throughout the whole discrimination range. The PRO is not the same, utilising a split discrimination system to control the different tone areas of the discrimination range.

It has a 12-segment notch system in the high region of the range, controlling high tone target discrimination. It also has a traditional progressive discrimination system running through the low and medium tone range (1 to 40), where you can increase discrimination from '1', blanking out targets that fall lower than the chosen setting.

The last discrimination feature is the IRON AUDIO button. When pushed all targets below the progressive discrimination setting become audible and low toned. All targets above the setting become medium toned. So when using the IRON DISC and IRON AUDIO buttons it's possible to alter the low and medium tone range. The IRON AUDIO button is also very useful for sussing large iron (eg horse shoes) at great depths. When used, large iron gives a massive smooth low-tone response, which is very easy to identify… and then ignore.

Test bed

On my test bed the PRO managed to detect all of my buried coins. In the standard ZERO mode I received strong bell tone responses from all the shallow targets and medium tones to the deeper ones. Some of the deepest targets, although detected, wouldn't have been dug in a real detecting situation as the responses were mixed, scratchy or low toned.

Once switched to PRO zero mode, even the deepest targets – those giving a high pitch element to all audio responses – would have been dug.

So, first impressions were good, the PRO detected deeper than I'd expected for a machine in its price range. The only negative was some of the target responses were a little messy, being mixed with high and low tone elements. I was eager to see how this would effect deep iron identification on a real detecting field.

In the field

To say the timing of this field test wasn't ideal is an understatement! First snow… then floods…and then fields of deep soft mud. A good stubble field seemed my first best bet.

The first site I chose was a mile down a concrete drive of a large local farm. On arriving I was greeted with nice well-rotted stubble on a high lying well-drained field. After first auto ground balancing, I started detecting the field and it wasn't long before I began digging small lead blobs which this field seems to always produce.

In previous years Roman coins had been found close to the most easterly hedge, so I slowly made my way across to this area. On reaching the hedge I noticed the next field had recently been ploughed, and the crop was only a couple of inches tall. This field had produced a lot of Roman coins before being sown to pasture five years previously. A mobile phone call to the farmer and I was soon swinging the coil digging freshly disturbed Roman coins on a very muddy field.

The target responses were all mixed toned and un-missable. I did get a few false signals off of large deep iron, but these responses tended to give a wider, more intense response. It soon became easy for me to distinguish the narrow coin audio tones from the iron. At the end of this first section I was buzzing, finding 23 small to medium sized Roman coins.

Roman coins

The second site I tried was a set-a-side field in Essex. This site had previously produced a few hammered coins on each turn of the plough. This area has low iron contamination, and the finds don't seem to concentrate in any particular areas, so it's a matter of covering large areas for any hope of success. Again I used the PRO in pro zero mode and maximum sensitivity, and soon started filling my finds pouch with the normal post medieval partefacts.

Mixture of finds

As I worked my way towards the village at the highest point of the field, I received a sharp high pitch signal. Boot-scraping the soft sandy soil revealed a complete Saxon pin. This was the first Saxon find from this field, so I decided to search this area of the field more carefully. By the end of this five hour session I had finds dating from Roman to modern day, with lots of nice Medieval bits including belt-studs, buckles and thimbles.

The PRO can be submersed to three meters in water so as the flood-water had now receded, it was time to take the plunge and put it to the test. I must admit I wasn't too enthused at the prospect of wading into cold water on a chilly January morning…but duty calls!

The section of river I chose was between two bridges on the River Ouse. The water was about three feet deep, with the occasional deeper five-foot troughs. I started searching in zero pro mode, just reducing the sensitivity. Ground balance was adjusted manually, as the iron contamination was so intense a clear area wasn't possible to find.

Control panel under water

I soon realised the iron was a big problem in the pro modes, so I switched to the standard zero mode and reduced the sensitivity further. This reduced all the iron falsing, and I started finding modern coinage thrown from the bridge.

This test was never going to be about the finds; it was to see how stable it could be in deep water. Although the iron was bad, the PRO managed to keep stable and coped really well with the winter conditions….which is more than I can say about myself!

Conclusion

The new AT PRO is a welcome addition to the Garrett detector range. It will appeal to lots of detectorists who want a mid-price machine with excellent depth and good sensitivity. It will also score well with amphibious detectorists, who wade in fresh and salt water. I especially liked the in-water ergonomics; the whole detector has near zero buoyancy. My only disappointment with the testing was the atrocious weather conditions. I would have loved to be able to use this detector more in the water on some deeper rivers I know.

The headphones supplied with the test unit were ideal for wading, although the earpieces are not waterproof, so are not recommended for diving. Garrett has an optional set available that are fully submersible, they also have a small accessory adaptor to allow any conventional headphones to be used on the AT Pro International, SeaHunter Mk2 and also Infinium LS.

The whole look, feel and balance of the detector are great. The standard 28cm semi-elliptical Double D coil is ideal for most situations, where good depth and sensitivity in mineralised soils is needed. This is the same design PROformance™ coil used on the EuroACE although the balance feels a lot better when fitted on the PRO.

Garrett also has a couple of smaller accessory coils available, including a smaller 23cm concentric coil, which would be ideal for less mineralised soils.

I love the solid construction of this machine plus the control structure is very intuitive. The split discrimination system is also very novel, and not something I recall seeing on any other detector. The IRON AUDIO button is also useful, and with more experience I'm sure this feature could prove very powerful.

The only thing I didn't like were the mixed tone responses to a lot of the detected targets. But this is more down to my personal reference, and because the depth is so impressive I guess I could learn to live with them.

All in all the PRO is going to be a very popular detector for those upgrading from the Garrett ACE, as well as those wanting a top performance detector with a medium price tag. Then there's the reason why I would own one…it's waterproof!

TEST RESULTS

Test Results for AT PRO International (Scores out of ten based on price category)	
Ergonomics (weight/balance)	8
Simplicity/user friendliness	8
Build quality	9
Weather resistance	10
Performance	8
Value for money (£595.00)	9
SEARCHER RATING	