Field Test Report
Rutus Alter 71

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Earlier this year, I got an unexpected telephone call from Detecnicks, asking if I would like to give the latest Rutus metal detector a go. I naturally expressed a real interest here, seeing as this new model the Alter 71, was a make I hadn't had any previous exposure to. Yes, it is rather a funny name I agree.

The manufacturer is Polish and 'Alter' is a medieval Latin word meaning 'to make other' and the reference is to the changeable frequencies this detector is capable of. The Rutus Alter 71 can be manually tuned across a very broad spectrum of frequencies from 4.4 kHz to 18.4 kHz with incremental steps of 0.2kHz.

So the user can choose one of 71 available frequencies to operate with.

It's also a machine that allows both motion and non-motion searching, which certainly does relate back to the good old days of early detectors.

Their previous offering, the Jupiter model, was very popular with the 'Pro' set as its love for low to mid conductive targets was excellent. Unusually, however, it didn't set any sales records as it was an unknown name and faced stiff competition from the other more established brands. However, don't make the mistake of underestimating this and several other Eastern European manufacturers. Rutus, Nexus, Signum and others are clearly ahead of the posse when it comes to understanding the search requirements that are required in their specific geographic territories.

In such territories it is very popular these days to search for large munitions caches and other military equipment from the more recent wars that ravaged Eastern Europe. This is evident in the program selection of the Rutus Alter 71 where it incorporates two Deep modes to search for deeply buried weaponry and vehicles and five other more general coin hunting scenarios from a Basic mode to an Ultra-Fast mode.

Assembly and Build Quality

The Alter 71 was supplied with two coils: (a) 8 inch x 9 inch concentric mildly elliptical shape; and (b) 11 inch Double D round (this might be a limited offer so please do check with the dealer).

No coil covers are offered. Assembly was quick with a black plastic lower rod, and grey metal S-bend mid stem, slotting into the main control box part. The coil cables are extremely long, at 64 inches in length.

To assemble slot the plastic bolt and washers through the lower rod to attach the coil. The coil pins are tiny but there's a 'notch mark' on the plug so there's little danger of bending or breaking the pins. It screws in tightly by way of a twisting collar and there's a really solid feel to this movement. Once assembled the Alter 71 is the most solid and tightest feeling detector I have yet handled. No squeaks or rattles come from it, even when shaken vigorously. It is a credit to the manufacturer who must build it in small but well supervised quantities.

It's rather like a Volvo, not in weight of course, but certainly in its overall robust feel.

I had to really look around to find the battery compartment. It's located underneath the forearm area and uses 6 AAs in a slide out holder. This is very novel, and the speaker is housed behind the battery compartment in another solid compartment and acts as the rear stand. When you change batteries, hang onto the door clip. It's small and easy to lose.

The quarter inch headphone socket is at the rear of the speaker compartment. Speaking of headphones, the Alter 71 has a built-in wireless digital data transmitter which can work on one of two available radio frequencies. There is now a dedicated Rutus wireless system, but at time of writing this was unavailable.

Two protective covers were supplied with one to go over the meter area, and the other to wrap-around the battery compartment and rear. However, you will have to remove the arm rest to fit this, which isn't a problem. You will also have to undo the middle section of the fabric cover when making a battery change, but not remove it entirely.

With the covers attached, the built-in audio without headphones can muffle the sound, so be sure to use them.

The control box section is a really solid piece of work, and while appearing basic in form and has a bare hard plastic hand grip attached by five screws, I would defy anyone to find any looseness in it. The screen area is small but is perfectly suitable, and up to the job of showing the menu choices available. It is backlit and is adjustable from 0-29; I kept mine set to 10 for the entire test duration. There isn't any real logic to the menu in how the numbering is laid out. We are used to recent models displaying a 0-99 scale for Target ID, Volume, Disc, Sens ranges etc.

The Alter 71 has dispensed with all that and its numbering system in the menu and option choices are all over

The Rutus Alter 71 battery compartment (left) and control box trigger (below).

Menu choices.

Soil conditions.

Large iron ID graph.

ID graph can show angle of nails.

the place! This is a common factor with Eastern European and Russian detecting systems but mild confusion can occur when experienced for the first time.

The Instruction Manual

This is really quite good considering it was probably originally translated from the Polish language. It has 31 pages and while not showing many images it is adequate to show the main features while most other functions are described in short passages.

There are four pages at the back for the owner to note down changes they might make to the seven available programs and all settings are listed individually for each of these. It does speak of 'aluminium canteens' (Page 14) and thinking it might refer to soft drink and beer cans, I decided to double check with the manufacturer. It actually means the type of water canteens that were army issue. I had the feeling this would be the case as the Eastern European hunters do like to search for old army equipment no matter what the form.

Program Selection

The detector has seven programs designed for various types of objects and search scenarios.

Ultra-Deep a program to search for very large objects in a classic non-motion mode.
Deep a program for smaller but deeper items – dual mode.
Big Silver optimised to seek out large silver and copper coins – dual mode
Basic a universal program. If you are not sure which program to choose; this is a good program to start with.
Coins for general coinshooting.
Fast for use in moderate iron contamination.
Ultra-Fast for use in heavy iron contamination.

Nail ID graph.

Modes of Operation

It is important to state at the outset this is not a true multi-frequency detector because two or more frequencies are not operating at the same time. Instead, it's a detector that can be programmed to provide 71 frequency settings.

If you are not sure which one to use, then I would suggest choosing 8kHz. No matter which frequency chosen, you won't find the Rutus lacking towards any particular metals. Bear in mind if you decide to go Low the detector searches deeper and is less affected by iron. If you go High, then it's shallower with the likelihood for more iron to sound 'good', but should still bring in thin items such as coins.

The Alter 71 offers different methods and several modes of operation and these are:-

Motion Mode with Discrimination.
All Metal Non-Motion.
All Metal Motion.

Dual Mode: this is the most interesting feature as it combines the Motion mode with Discrimination and the All Metal mode. This combination provides the advantages of both modes – identification coming from the Motion channel and the maximum range of the All Metal channel. Programs that use 'Dual Mode' are, Deep and Big Silver.

What gives the Alter 71 the edge at its price over more expensive competitors, is the range of audio adjustments. It has seven and that makes a lot of difference to how the detector works and sounds. Three of the more important ones are, Th Sens and Audio Gain. When a Th Sens setting of 0 is used the detector becomes 'motion'. For Th Sens settings above 10, the detector switches to Dual Mode. The Audio Gain adjustment changes how detected objects are signalled.

Tones has nine sound profiles in the

Trash target ID graph.

Motion channel divided into three groups: Coins (1, 2 and 3): Relics (1, 2, and 3) and User (1, 2 and 3).

Essentially, best operation with this detector can be determined by where you set (1) Program, (2) Frequency, (3) Masking and Reaction, and (4) ID Type. So the Alter 71 has an ID Type feature than can help in this regard. It can calculate the standard IDs for two frequencies: 6 kHz or 12 kHz or to present the Real ID.

With the Alter 71, you have 'multi-frequency' capability from just a single coil. This is the first ever detector to offer so many frequency choices from just one coil (two coils actually, a Double D and Concentric).

Because target IDs can change from frequency to frequency, the Manual suggests it's best used set to calculate IDs at 12kHz when using high frequencies, and that Real ID is for more experienced users; for more general searching it's best to calculate in 6kHz.

This option is found in the screen settings. The meter display is divided into three separate setting arrangements and these are: Engine, Audio, and Screen.

Each of the seven programs can be manually adjusted to change the settings in the three groups of Engine, Audio, and Screen.

The Alter 71 can show target ID values from 1-120 which I found very unusual being used to 99 which is the highest TID produced on many different brands.

Bench Testing

This is one detector I would strongly advise anyone, no matter their skill level, to spend time getting to know by bench testing in its various programs, and frequency choices; also to program its audio to the way you want it to sound. This is one of the best aspects of the Alter 71 – it's totally programmable to your own Custom Audio settings for your favourite targets. Creating your own custom sounds is not the easiest thing to do, but once you get the hang of it then it becomes easier – just be sure to Copy.


Non-ferrous finds.

First Use

My first test site was old farmland (from the late 1800s) and a regular test site. I therefore know what to expect with ground conditions, amount of rubbish sounds etc. The ground contains broken bits of agricultural equipment both ferrous and non-ferrous, coke, foil, ring pulls and many rusted nails. Good targets are scarce and it is hard to hear anything of merit, but on occasion the site does throw up an occasional surprise.

After turn-on, the detector won't go any further until you perform a ground balance. It will display this message 'Put search coil up then pull trigger'.

Then it shows 'Preparing Data' and '5', which is quickly replaced with an image of the coil with arrows above and below it. You lower and raise the coil five times, until it shows the message: 'Detector ready pull trigger'.

It then displays the Soil Conditions and off you go. It is the only method of ground balancing and has to be completed otherwise you won't be going anywhere.

Setting up in Coins 8.2kHz, achieved a ground phase value of -85.7.

The Instruction Manual states that: "Most soil types give a phase reading of around -87.0."

Coin ID graph.

Hammered coin ID graph.

Buckle ID graph.

A second GB procedure later on showed -83.1, and readings of -75.0 can indicate metal objects are present in the GB area. (NB: the Manual appears to indicate that a reading of -75 is higher than a reading of 83.)

A good set up for here was:-
The 8 x 9 inch concentric coil.
Program Selection: Fast.
Frequency: 8.2kHz.
ID Type: Real.
Audio Tones: Relics 3.
Reaction: 4.
Masking: 3.

It soon became clear that this is not your average detector and it won't be for everyone. You'll have to work with this one to get to know it and to get the best from it. I didn't use it in all 71 frequency choices. That would take months. My beach time was limited to just two excursions (more on beach work later).

The Rutus Alter 71 is for those who like to 'tweak' and want to understand how best to drive it. If you fall into this category you will be very happy indeed because there are loads of adjustments. Its Audio layout is very similar to what you might have seen in other machines (e.g. Minelab Explorer and XP Deus etc.).

The 'sound' it produces is a 'mix' of several machines while at the same time unlike anything else because some 'signalling' is unique to only it. To use a cliché – it really hits hard on targets! It runs quiet in iron and the signals can be 'tweaked' to be long or short, by making adjustments to both Reaction and Masking.

Similarly, signals can be speeded up by working in Ultra Fast and a shallow target can produce eight distinct beeps on two sweeps across the target. Fast mode was also very quick and sounder louder. Basic mode and Coins mode produced the more typical single beeps. However, I would caution the use of Ultra Fast as it could cause some deeper signals to be missed as it processes so quickly. Use this setting in heavy iron contamination only.

Program Selection has Ultra Deep and, Deep, and Big Silver – both Deep and Big Silver combine the Motion Mode with Discrimination and the All Metal Mode. It is done by setting both the Th Sens and Audio Gain above 0 (zero).

I found these worked very well when used together, especially on open farmland. It's essential that a ground balance is done to ensure stable operation and to avoid 'bellowing' ground noises than can occur as you switch programs.

No 'Overload' occurred (there is specific audio and screen warning to lift the coil) and this was the same site that overloaded the Racers the entire time.

Beach

For the second series of tests I brought the RA71 to the beach. I won't dwell on beach use too long but at the time of testing there was a question on the Internet asking "Was it suited to beach work?"

Much to everyone's surprise, it is.

On a series of 'dig and drop' coins into holes dug on the transition area (mix of dry and wet sand) it consistently signalled the two coins being used even deeper than the original holes dug at sensitivity levels between 50-60 so deeper holes were dug and the detector signalled them successfully.

Note:- deeper items might register lower on the ID Graph if a low sensitivity is used, so try to put up with some false signalling to maintain better target ID and be sure to use the larger 11 inch Double D coil. The 8 inch CC could be used around obstacles, for example groynes and beach walls.

A very good set up for the beach was:-

The 11 inch Double D coil.
Program Selection: Coins.
Frequency: 7.4kHz.
ID Type: 12 kHz.
Audio Tones: Coin 3.
Reaction: 4.
Masking: 4.

I changed frequency from 7 to 12 and up to 18 kHz and each time a ground balance procedure had to be done; these ranged from -17.1, to -9.77 to 2.89 over the wet sand.

The GB numbers were low, indicating the challenging conductive circumstances of salt wet sand. It was difficult to discern just which frequency produced the best 'hit' but I leaned towards 12kHz – this appeared to be good at hitting coins made up from two metals so bodes well for the new £1 coin.

I was even able to ground balance right over a rock pool and immersing the coil into cold salt water resulted in only minor chirp sounds, and when I related this information to the manufacturer he was pleasantly surprised also.

Woodland

Two searches were conducted in woodland that I have been visiting for many years. On the first day I used the 8 inch CC coil and the second day I used the bigger coil.

Silver coins (above) and medal from garden (below).

Mixed coins.

The interesting thing was I didn't find any coins deeper than I had found previously using mostly multi-frequency units with DD coils, but I did find shallow coins missed for years.

Several older pre decimal coins and shotgun caps came up from well-traversed pathways, none deeper than 5 inches, entangled in tough roots.

Various euro coins were found from a leafy open area that had a tyre suspended from a tree with a rope.

A TID of 70 produced a really nice old badge with traces of enamelling still visible. I researched this and traced it as a rare lapel badge c.1930 promoting a political party. I didn't know such a thing existed until uncovering this example.

On another area that was proving very trashy, the only way to work it was to create my own audio responses. I set TIDs to between 95-103 as 890Hz, and TIDs of 105 to 997Hz

I ignored everything else and concentrated on the modern euro coins. It was just too trashy to chase other signals. This was a pity as I know there are some nice old coins underneath. The Overload lit up regularly and was soon ignored after the first few cans revealed themselves buried just under the surface.

I'm hearing rumours about a small sniper coil, possibly 5 inches in diameter, being produced for this detector. Should this ever become available, it could prove invaluable for such areas.

Open Stubble Field with Overhead Pylons

I visited a particular field several times through the weeks as it had been good to me on prior tests for silver coins and other items of interest. It was all using the 11 inch Double D coil here and I used the entire range of Programs.

It's a sloping stubble field with some very large stalks remaining late in the season, so getting good clear sweeps wasn't always possible. There are power lines on wooden poles running through the field's middle with small steel towers hidden in the hedge boundaries, and as I approached and walked directly beneath them there was a definite increase in interference. This didn't bother me at first, but after a few days it did and as I worked through the programs it was evident the least prone to EMI were the Dual Modes, Deep and Big Silver.

I loved the way the Big Silver sounded but I would caution that you have to be very careful where you sweep because the coil has to come very close to the target otherwise it will be missed. The best thing about this program is you have all metal and discrimination together with active TIDs and the very innovative ID Graph (some refer to this as the hodograph). You hear the 'toneless' all metal sound that raises and lowers the Threshold as you get closer and leave the target area. It's quite a slow procedure that allows for decent signal investigation. There are a few tricks to it: if you don't get the ID graph to show 'lines', then turn off all discrimination with the exception of TID 1. Then the 'hodograph' appears as a straight line in the iron nail area and coin areas. The 'hodograph' can be a bit reluctant to show at times.

The other trick is to engage Deep to obtain the best TID, and I found this to be faultless and foolproof every time. The only downside was I found Deep very hard to listen to, and for that reason it was used for target verification only.

Information from the ID Graph is also better in Deep. A word about this is, that for the majority of time, coins will put up a straight line while items larger than coins can show curves; a buckle for example. Iron and other junk items can display a series of dots across the entire screen. So there is useful information to be had here but it takes time to understand it.

The most important 'caveat' is that the Big Silver program is considered a Low Frequency program (5000 kHz) and will put a draw on power. With just one bar of battery life remaining, I observed the target IDs cycling rapidly from low to high and back in a loop as the life was being sucked from the batteries. So make sure you carry spares in your pack.

It was easy to spot coins both copper and silver as the TIDs were high and anywhere from 94-115 in 12kHz screen ID Type. Depending on the size of it, iron displayed either as a straight line on the left side and put up TIDs from 1-18

A soil scraped Young Head Victoria shilling showed a TID of 111 with a large straight line on the ID graph. Not one but three silver threepences surfaced and produced TIDs of 102, 103 and 104 respectively. So the ID graph can show minute composite differences in individual same style coins. Not only that but, the ID Graph in the Basic Program can show nails and their orientation in the ground that may be either straight, north to south or angled. I found thus incredible.

On a different note, but also relating to TIDs, the Coins Program with low 5.4kHz produced the best separation of

Two-metal alloy coins.

Lapel badge.

Diamond shaped pin.

aluminium pull tabs and ring pulls in a trashy coinshooting area.

It wasn't all plain sailing because a few large square iron pieces put up TIDs of 114 fooling me on just two occasions. There was lots of small surface iron but these were easily identified by the 'splodging' of the ID Graph and at times visible left side straight line. Round pistol balls and other lead items displayed with a small ID graph as a line bent at the top mid screen usually with TIDs from the 70s to 90s.

Small low grade buttons displayed quarter ways in with curvy hodograph displays showing TIDs in the 40s.

Conclusion

Stylish, great to handle, equipped with a range of features that many rivals would find hard to match, the Rutus Alter 71 is one of the most spectacular new arrivals this tester has seen in terms of its immediate ability to compete. It is also interesting to note that the Alter 71 is priced considerably cheaper than the ubiquitous leaders of the moment and certainly has the class and the potential to make an impact if given the right marketing back-up. I tried the 'Promotional Pack' version that came equipped with two coils.

There are a few gripes, the S bend mid shaft needs more holed spaces to suit short users, but there are accessory short rods available. After changing Programs or Frequency the detector asks you to re-ground balance. This can become tedious if like me, you like to check out different signals in different programs. There isn't a depth indicator to view but while in the pinpoint mode you will see two parallel black bars filling the screen – the top one can be used to guesstimate coin depth.

However, those foibles aside, I still came away hugely impressed with this low cost feature packed detector.

Technical Specifications

Operating Principle: VLF.
Frequency: Variable 4.4kHz-18.4kHz.
Tones: Variable and manually adjustable.
Search Coil: 11 inch DD and 8 x 9 inch CC included in promotion pack, (no coil covers).
Weight: 3.6lbs.
Length: 54 inches full, 48.5 inches short.
Battery: 6AA cells (use good quality alkaline ones).
Headphone: quarter inch.
Wireless ready: Yes (accessory unit available cost not known at time of writing).
Warranty: Two years.
Cost: £595.00 (two coil promotional pack), £575.00 single coil (DD).

Detecnicks are the Sole Importer for Rutus detectors in the UK, 3 Orchard Crescent, Arundel Road, Fontwell, West Sussex BN18 OSD.
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To see some video footage from the testing of this detector check out my YouTube channel:
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