

Field Test Rutus Alter 71

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Introduction

The Rutus Alter 71 has been around for a couple of years now, but late last year Rutus announced the new V.2.0 software upgrade, based on feedback from its users. I was really keen to see if it would make an already capable machine even better.

I had heard many good things about the Alter 71 from both social media and within my detecting circles and was fortunate to try out the machine towards the end of last year, running the original 1.1 software which I was very impressed with.

Recently there has been a lot of discussion about the software upgrade, so I was very interested to see what all the fuss was about. It is certainly impressive, with Rutus being a relatively small company, to see that they have genuinely listened to their customers' feedback after the initial launch of the machine back in April 2017. As a result of this feedback, version 2.0 was launched in December 2018 and is now standard with all new Alter 71 machines. It is also available as an update from your nearest Rutus dealer simply for the cost of return postage.

Key Product Features

Operating Principle: VLF.

Frequency: Variable 4.4 kHz-18.4 kHz (manual increment adjustments of 0.2 kHz).

Tones: Variable and manually adjustable.

Search Coils: 11inch DD and 8x9inch CC.

Weight: 3.6lbs.

Length: 54 inches full, 48.5 inches short.

Battery: 6AA cells.

Headphone: 1/4inch.

Wireless Ready: Yes.

Extras: Finds bag, battery and control box cover.

Display: Back lit LCD display.

Warranty: Two years.



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Personal program.



ID Gain.



Iron Volume.



Start-up message for ground balancing.



Ground balance warning.



Ground balance OK.

So, What's New with the Version 2.0 Software?

Four Personal Programs

With the original 1.1 software you could only modify the original seven programs. Easy to do, but if you wanted to start over or go back to the original factory settings you lost the program you created. Now you can make four personal programs while still keeping the factory originals.

ID Gain

Original users found that some targets at an extreme depth did not give a VDI number but just a tone. With ID gain, you are now able to get a VDI number. Although I found this was not always as stable as the hodgepodge display.

VDI Numbers 1-120 or -90 to +90

The original 1.1 software only had the 1-120 range, which can take some getting used to, with most machines going to 100 and others much less. However, with the 1-120 range you really do get great separation of your targets.

I personally changed to -90 to +90 VDI scale for this test, but you can choose. I found the Alter 71 had one of the steadiest VDI's on targets I've ever seen. When I was detecting coins, these always came in at the same VDI number.

Iron Volume

Whatever you have discriminated out you can set the Alter 71 volume to your choice. With the Iron volume feature you can run your machine wide open and turn down the volume for what you would have discriminated out, making it much easier on your ears and also still letting you know precisely what's going on in the ground.

Ground Balance

When ground balancing the Alter 71, it will now indicate how confident it is on the reading from your original ground balance. If you ground balance over metal or poor soil conditions for example, the machine will suggest that you should ground balance again to optimise performance.

Unpacking

Upon opening the very compact packaging, I saw the Alter 71 with its two coils was very neatly packed and secured. Two coils is excellent, as I do like changing regularly out in the field and was interested to see how these would perform. In addition the machine came with a very well made finds pouch, control box and battery pack cover (needed as the machine control box and battery compartment is not waterproof). The instructions supplied were very informative and actually made enjoyable reading, with hints, tips and even an area to write and record your personal settings.

Build Quality

The build quality and balance of this machine is very good and I feel not often reflected in the photographs you see online or in magazines. It might be me, but the stem felt a slightly thicker gauge steel than I am used to on other detectors, plus the powder coating finish seemed to be of a more premium, tougher finish. The machine took less than 15 minutes to assemble and felt extremely strong.

A small thing I noticed whilst assembling the detector, which I have not seen before was the unique rubber locking straps used to retain the coil wire to the stem. This seems to be a nice little



11" DD and 8x9" CC search coils that come with the Rutus.



Battery housing for six AA batteries.

touch that someone has really thought about, and really did help in keeping the coil cable secure and neatly finished off the assembly. I would be interested to see how these perform with use, as we all know that Velcro can come loose over time.

The only little gripe I have is that the control box cover was a little tight in fitting but since using the machine I have realised this helps in not slipping and covering the backlit display when detecting. Another minor gripe I could possibly foresee concerned the plastic shaft lock: I can envisage that once sand enters this, it may cause slight issues to the thread over time.

First Impressions

Inserting the six AA batteries, I did find the opening of the battery cover a little fiddly but this may have been due to the machine being new. The Alter 71 was now ready to go. I turned the machine on to hear the tones and view the hodograph display which looked very interesting. Looking somewhat like a 'mad detectorist', I could not wait until the weekend.

Once turned on the machine displays 'Put search coil up then pull trigger' then the message 'Preparing Data and 5', which is quickly replaced with an image of the coil with arrows above and below I – you now need to lower and raise the coil five times, then you see 'Detector ready pull trigger'. Once complete you are given the 'Soil Conditions' and then you can begin detecting if okay. The Alter 71 does not offer ground balance tracking – this is the only method of ground balancing and has to be completed, otherwise you cannot start detecting accurately. The instructions state that most soil types

give a phase reading of around -87.0. The poor ground balance is displayed by the original message and warnings if an issue is found i.e.

-90 to -86 Correct ground balance.

-86 to -83 A possibility that ground balance has been completed over a metal object or the ground has other conductive properties (e.g. wet meadow).

-83 to -65 followed by one to four exclamation '!' marks This indicates the severity level of poor soil, either an increasing probability of metal objects in the ground or an increasingly higher conductivity of the ground because of the presence of high moisture levels.

Seven Factory Pre-Set Programs

The Alter 71 has seven very good factory pre-set search programs that I felt were well designed for various types of objects and search scenarios, especially for European and UK soil conditions. As well as the four personal modes available with the new version 2.0 software.

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 coin shooting. Fast for use in moderate iron contamination.

Ultra-Fast For use in heavy iron contamination. The Alter 71 is also able to run two channels at once to give the user maximum information in four possible modes:

Motion Mode with Discrimination
A conventional detector mode.

All Metal Static Ideal for searching large deep items, a non-motion mode.

All Metal Motion A mode that allows you to search for deep large items but still allows you to separate close targets better than in all metal.



Iron on the hodograph display.



Silver signal.



The 1943 dated sixpence located in my garden – my first attempt at using the Rutus Alter 71.

Out in the fields.



Dual Mode This combines the all metal channel with the motion discrimination channel. Once I got used to the machine, I found this mode to be the most informative.

Along with the VDI of up to 120 and now the option of -90 to +90 with version 2.0 and customizable tones, the Alter provides a hodograph plotting view of what the coil reads during its sweep. The more horizontal or parabolic the graph, the more likely the target is mixed metal. The more vertical, the more likely the target is of a single metal. As with all new machines I dug almost every target to learn how well this works and was very impressed on how the hodograph reads the target. Old, rusty bottle tops that gave a high tone always had a bad looking plot. Unfortunately, aluminium is a single metal and I was fooled by old aluminium drinks cans that gave a high tone, especially where they had been crushed vertically. However, using the hodograph with the VDI and the tone an object gives can provide the user with a lot of information to help to sort good targets from the bad. Of course, it takes some time to get used to it, but it saved me from digging a lot of trash.

Two Channels

The Alter 71 also works in two channels: a motion channel with object identification and discrimination and an all metal channel with adjustable

operation speed. The channels can be used individually or at the same time when using dual mode. The Ultra Deep is an all metal program, Deep and Big Silver are dual channel programs, Basic, Coin, Fast and Ultra-Fast are motion with discrimination programs by default. With Dual Mode it is important to set it correctly and understand what settings you have used. If you have a favourite motion program just change the settings to dual mode by adding threshold sensitivity from 20 to 30. A lot of users set it on 0 or 1 (this I found too noisy). Set the machine between 10 and 20 (depending on iron contamination) plus turning on VCO. The threshold I kept as quiet as possible so as to know when to reset non-motion mode.

First Attempts

Keen to get going with the new version 2.0 software on the Alter 71, I started with the standard coin mode and then created my own personal mode with the following slight adjustments:

Frequency to 8.8 kHz.

Sensitivity to 78.

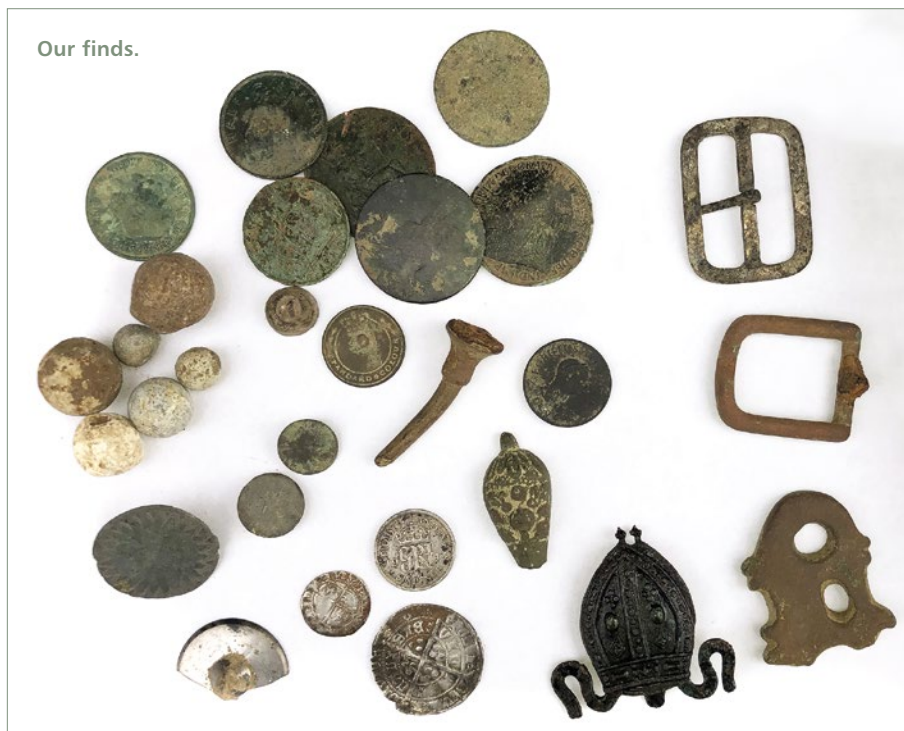
Discrimination to 30 taking out iron and just below foil.

VCO set to on (off as standard).

I then went out in the dark into my back garden. My first ground balance the display showed -79 which clearly indicated I had a metal object

in my lawn and to ground balance on a new area – a great feature in V.2. After ground balancing successfully, I swung the Alter 71 over my lawn using the variable illuminated back lit LCD display to check out the visual ID and hodograph, balance and weight. A nice clear and simple informative display with excellent balance I thought, plus great being able to adjust the brightness of the screen with up to 9 levels. Within a couple of minutes, I hit a solid signal reading at 48-53 and almost vertical line in the hodograph display. With it being dark, the dog constantly throwing its ball at me and my son asking “Why can’t you wait until the weekend? The neighbours are looking Dad and it’s embarrassing.” I ignored my son and marked the spot with a peg off the washing line and went in for tea.

That night and like any other detectorist I laid there wishing I had dug the signal there and then. I had rigorously gone over that part of my lawn with all my detectors in the past and would have dug a signal like that for sure. As soon as I got home from work the next evening, I said a quick “Hello” to everyone and then ventured straight out into the garden, followed by the dog. The peg was still marking the spot on my



Our finds.



Elizabeth I halfgroat found on the first field trip.

lawn, so I gathered my digging tool and pinpointer and dug down about five inches. I removed the very perfect plug – it was my lawn after all! Intrigued as to what I would find, I turned on my pinpointer on only to hear my wife shouting “You have your work trousers on, you will get them muddy.” Unfortunately, I suffer with selective hearing like many men in the UK over 40, so carried on.

Prodding the pinpointer around the soil I eventually located the target. Excited about what was there I cleared the corner wall of the hole to find a lovely 1943 silver sixpence! I ran into the house to show the ‘screenagers’ and my wife. “What’s it worth” my son said; “I told you to change your work trousers” my wife said. The dog managed what looked very like a smile, I think. This find revealed something that I would later discover about the Alter 71: it would find many coins and artefacts that apparently my other machines had not.

Saturday came and as usual and I had prepared my back pack with all the usual snacks for a long day ahead with the Alter 71. I picked up my mate James and relayed the story of the sixpence and we discussed why my other detectors had not picked this signal up. Was it the soil conditions, correct ground balance? Or purely just luck?

First Field Trip

It was a cold and damp morning with the vast majority of land being sodden and hard to walk on, let alone detect. Getting out of a warm car into the cold we both quickly put all our standard detectorist issue clothing on and headed onto the mid 1800s farmland at the end of a fenced off disused World War Two runway in Essex. Upon turning the machine on and carrying out the ground balance, the machine displayed a good reading of -87. We started detecting on an old footpath, shown on a map that we had used to research the permission.

I decided to start in Coin Mode for now. After an hour detecting it was clear a lot of trash had been dumped in this field over the years with many aluminium drinks cans and ring pulls. Watching my friend getting frustrated digging this trash, I began to understand and appreciate the signals on the Alter 71. The hodograph display and superbly clear tones easily determined a good from a bad signal. The hodograph display in my opinion is probably one of the best features on the Alter 71 – for identifying targets, it’s actually better than the sound. I have noticed that these kind of systems are the most accurate – if it says it’s a sixpence, it’s a sixpence, if it says its foil it is foil. It will never display a straight line for example on a trash target, and you get an idea

almost instantly if the target is trash or something worthwhile, which has saved me a lot of time digging rubbish. I also found it to be accurate at good depth, unlike some VDI systems.

After speaking with the farmer, he told us the cans were from the 80s when air shows had been held here. People had clearly picnicked in this area, hence the high levels of rubbish in the middle of a field. With this in mind we moved onto the far side of the field where the soil contained large amounts of broken flint and stone. Within minutes, I saw James look up at the electricity pylons and shrug his shoulders. I walked over whilst swinging to see how the Alter 71 would be with this interference and did notice a slight hum. I stopped and moved the frequency down by .200 kHz and it stopped. “Got a signal?” James said. “No just getting rid of the interference” I replied, feeling bad as he had to walk 100 feet away to get his machine into a usable state. Furthermore, he had also been near to some lovely old oak trees that looked a good place to detect.

After an hour I found six coins of varying dates from 1802-1944, 0.303 shells, a few lead weights, lots of musket balls and one small Elizabeth I halfgroat. The Alter 71 seemed to Hoover up musket balls in varying sizes from as far as 12 inches down. I was becoming very impressed with this machine, including the discrimination speed, the superb visual display and great standard tone sounds that you can also customise. Suddenly the weather turned so we both headed back to the car to discuss our finds and how I managed to detect where James couldn’t.

The Horse Meadow

For the last two searches with the Alter 71, I have been fortunate to try out the machine in an area now used for horses that was also regularly used for fairs at the turn of the century. This had a mix of high trash areas, combined with an

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Area of woodland we searched.

already acidic sandy soil site with plenty of ancient animal urine in the ground. I was rather intrigued too see if anything found would be too corroded to be of note.

On this site I was able to really have a play with all the settings on the Alter 71 and use the two coils that came with the machine: the 11-inch DD



Sunday school cap badge.

and 8x9-inch CC. I found the 11-inch DD coil gave excellent depth, was a really good all-rounder, well balanced for the machine and loved picking up coins. With the machine on the standard coin mode and playing with the frequencies, I managed to dig over 30 coins in two hours. These were mainly Victoria pennies, probably lost from fairs in the early to mid-1900s. It actually became tedious in the end and I sat down and had my lunch to let James search for the remainder.

I found the 8x9inch CC coil was ideal for a small wooded area close to where the horses were kept. Here I switched the Alter 71 to Ultra-Fast



The serviette ring at first thought to be a Roman bracelet.

mode as the area had lots of heavy iron contamination. After searching for half an hour and struggling with digging through the old tree roots, I had a great signal ranging from 67-78. Digging five inches down, I found what I thought was a bishop's badge of some kind. However, after a quick Google it was identified as being a Sunday school cap badge from the 1940s. I then turned the Alter 71 back to basic mode to see how the machine handled the wooded area. This turned out to be a great setting and anything but basic. I found another sixpence at just four inches down and many more musket balls. The thing that impressed me most was a faint signal flickering between 68-79 and an almost straight line on the hodograph display. "It must be deep," I thought as the VDI was disappearing off and on. Digging

The horse meadow.



down an impressive 12+ inches I found my first Roman bracelet! I shouted over to James, who wandered over looking gobsmacked. Cleaning off the clay and peat we both then felt the sturdiness and noted the poor-quality silvery coating. Once back home, James posted it online only to discover that it was possibly a modern serviette ring! Oh well, at least it looks good from a distance when people come round.

There really are so many settings to play with to over time if you wish to. I felt with this machine 'that once I know it' it would be a similar situation to how my wardrobe has evolved over the years: Comfy jogging bottoms for lounging around, ripped jeans for decorating, dinner suit for work events and baggy shorts for the summer – it really is that customisable.

Conclusion

As I began writing this review, I realised that it is impossible for it to be exhaus-

tive: the Alter 71 has so many features that you could probably write a book to encompass them all. I do feel though, that to make the right adjustments to get the most out of this machine, you do need to have some understanding of the basics of how a detector works. Being able to run two channels at once, to give maximum information in four possible modes could be somewhat overwhelming to a newcomer to this hobby. On the other hand, you can just turn it on and detect and it does the job. Or if you are up for a challenge and want a machine to grow and develop with you then I am confident it won't take long to get the grasp of it. This is a machine with which you can definitely see a difference after adjusting the settings once you learn them. When you make adjustments that are just right for the conditions, I found that you really do have a very powerful detector to work with and enjoy.

Would I get my machine upgraded to the Version 2.0 software? Yes, with-

out a doubt. Still a great machine with the original software but I really do feel the additional features are well worth the upgrade.

I found that the battery life was very impressive when using quality batteries. I obtained around 50 hours using varying frequencies (the higher using more power) with no noticeable difference to the machine when the power was on its last legs. I

did not have a chance to try out the wireless headphones option, although I do personally prefer wired headphones. I have yet to try the Alter 71 on the beach and feel that this would be very interesting based on the way it performs on land. Overall my only slight concern was that of the control box not being waterproof, but then again you can't have everything. For more information on the Alter 71 and users' thoughts visit the Rutus members Facebook page: Rutus Metal Detectors (U.K. users group)