

# Field Test

by Adrian Gayler

# Nokta / Makro Legend



Fig.1. Nokta / Makro Legend out fighting the stubble.

Nokta / Makro really doesn't rest on its laurels. It only seems a short while back that the Simplex+ entered the detecting world and has since proven to be a very popular and most capable machine. However, this has not stopped the company launching another new machine, the Legend, earlier this year (Fig.1).

Initially due in December 2021, the machine encountered a slight delay due to feedback from product field testers and was finally available to purchase in February 2022. Like others, I was keen to see how this new Simultaneous Multi-Frequency (SMF) machine would perform. The new SMF features a range from 4 kHz to 40 kHz detection frequencies, in order to give more advantages than your standard VLF frequency.

## Available in Two Packages

1. **The WHP pack** at £679.00 (machine on test).

### Contents

- Control box.
- Bluetooth aptX™ low latency headphones + case.
- USB charging and data cable.
- Waterproof DD search coil 28cm / 11".

2. **The Propack** at £789.00.

### Additional Contents to the WHP Pack

- Waterproof DD search coil 15cm / 6" (LG15) and cover.



Fig.2. The carbon fibre shaft and coil.

- Waterproof replaceable spare battery and charger.

## Legend Specifications

- Simultaneous multi-frequency (SMF) technology (4-40 kHz).
- 3 x multi frequencies (M1, M2 and M3).
- 4, 10, 15, 20 and 40 kHz selectable single frequencies.
- Length 63cm to 132cm (25 to 52") adjustable.
- Lower carbon fibre shaft.
- Weight 1.4 kg (3.0 lbs.) including the search coil.
- Ground balance (Auto, Manual and Tracking).
- Low Latency rechargeable Bluetooth headphones.

- Rechargeable fixed battery 5050mAh Lithium Polymer.
- Rear LED flashlight.
- Software updateable via PC and Mac.
- 60 points of target ID (10 ferrous and 50 non-ferrous for high-resolution ID).
- 1, 2, 6 and 60 tones.
- Adjustable tone volumes.
- Adjustable tone breaks.
- Ten levels of recovery speed.
- Threshold pitch and volume are adjustable in all modes.
- Vibration On / Off.
- Clock and usage time of the machine.
- 13 levels of frequency shift + auto noise cancel.
- IP68 waterproof up to 3 metres.
- 3 years warranty.

Based on the specifications alone, you can see that the Legend has many features, something that Nokta / Makro is very good at when it comes to offering value for money with their machines. All this and only 0.1kg heavier than the original Simplex and much lighter than the Anfibio.

## First Impressions

As I began assembling the Legend, I quickly saw that it had a well thought out design. The bottom shaft being





Fig.3. The solid lugs and bolts on the Legend coil are made to last.



Fig.4. Coil and charging connectors on the Legend and LED light.

carbon fibre was a pleasant surprise. However, the shaft's stability and solid feeling with no wobble gave me even more confidence in the build-quality (Fig.2). Secondly, I liked how easily the shaft came together with easy-to-use 'cam locks'. I found these much easier to take apart than the traditional spring locks or screw-up thread types. The spring lock buttons work well, but when they get covered in mud on a cold winter's day with gloves, they can be a pain and cause havoc with my highly manicured nails. The coil bolts and lugs (Fig.3) also felt extremely solid – if anything, over-engineered but that's not a bad thing.

## The Controls

The waterproof IP68 control box with its rubberised keypad seemed pleasant to the touch, and the buttons do not need to be depressed as firmly as you do on the Simplex. They are also easily reachable with your thumb whilst holding the machine, however I do have a minor issue with these buttons, which I will come back to later.

It was also nice to see that Nokta / Makro have kept the single LED behind the control box for those who need it when detecting in the dark, or to aid you back to your tent after a weekend rally! The vibration upon detecting a target is another nice feature for those with visual or hearing

based impairments and when detecting underwater.

To the rear of the control box, you have two male screw-in connectors (Fig.4), one for the coil and the other to charge the Legend via USB plug connection to the mains or via your PC. Nokta / Makro advises 3-4 hours full charge from a drained battery and when fully charged will offer 20-40 hours of detecting time, depending on settings used.

Upon turning on the Legend, the machine does a few self-checks with the letters LD (loading) on the screen (Fig.5) – after a few seconds you see the main menu (Fig.6). At first, this may look a little confusing to a beginner or someone moving to a VDI detector, but after a few minutes, I found it an absolute pleasure to find my way around and quickly too. The main programs are clearly displayed at the top of the machine and everything was quickly navigable via the icons at the bottom of the screen, without me having to read the handbook. I can see a lot of thought has been given to the design of this user interface.

The Legend screen has a backlight setting from 0 to 5 and A1 to A5. At 0 level, the backlight is off, and at 1-5 levels, it remains on at varying degrees of brightness. At A1-A5 levels, it lights up only for a short period when a target is detected or while navigating the menu and then goes off. The LCD screen was clear, the icons and text were clearly displayed and interpreted (even without my glasses). I also love the feature of how many hours you have been using the machine (Fig.7), as well as the usual clock to remind you to get home for dinner. My only bugbear was protecting the screen from scratches with a phone-style screen protector, as over the last few months, I have seen scratches starting to appear. However, upon writing this, I see these covers are available so would highly recommend using one.

## Coil(s)

The machine I was testing came with the standard (28 cm / 11") LG28 coil that felt well-balanced and was a nice size for the machine, albeit a little heavier than the Anfibio AF28 due to the extra windings for the multi-



Fig.5. Standard Legend control screen.



Fig.6. The settings menu which you need to learn.



Fig.7. No more 'used once' if not true. You can now see how many hours the Legend has been used to detect!



Fig.9. The coil cover does not quite protect against dirt and soil ingress.

frequency. You do also have the choice of a larger (35 x 31.5 cm / 13.5" x 12.5") LG35 coil and the smaller (15 cm / 6") LG15 coil (Fig.8). However, these coils will only work on the Legend with its simultaneous multi-frequency (SMF) and are not interchangeable with other Nokta / Makro machines, likewise with non-SMF coils. It will be interesting to see if any other coils become available from aftermarket manufacturers.

One thing I did notice when detecting in a wet, muddy field in March was the coil cover does not entirely cover three of the strengthening points on the coil (Fig.9). Not that it affects your detecting in any way, but after the Legend had been in the boot of my car, drying off, the mud created quite a mess over time as it fell out.

### First Time Out with the Legend

After a busy time in the last few months testing numerous machines, the Legend was last on the list – this wasn't a personal preference, it was simply the last new machine to be launched. Also, with Nokta / Makro renowned for listening to its users' feedback, I knew that it would get



Fig.8. The choice of multi-frequency coils available for the Legend.

a few software updates in the early months 'if' any problems arose with the new machine. As it was early in the year, I still had quite a few fields available before seeding and ideal for detecting. So, with the Legend all charged up, I headed out early one morning with another new piece of kit which I had recently acquired, my Border collie puppy Nellie (Fig.10).

Parking the car up in the field, the compactness of the Legend worked a treat whilst walking with the dog on a lead – my spade was the only thing not working ergonomically when walking. So I let Nellie off her lead and powered up the Legend. Both were behaving; the dog was not running away, and the Legend was not chatting and paired up with the very comfortable headphones within seconds. It appeared the dog had never seen headphones before and so barked constantly for the first five minutes. The field was lovely and flat but very stony and still dry after the not-so-wet winter we had just had. I used the standard field programme with auto ground balance and the M1 multi-frequency setting. The audio sounded good, not 'bitty', just a nice faint range and not over-modulated even when cranking up the sensitivity.

At the time of testing, the Legend had two multi-frequency options, M1

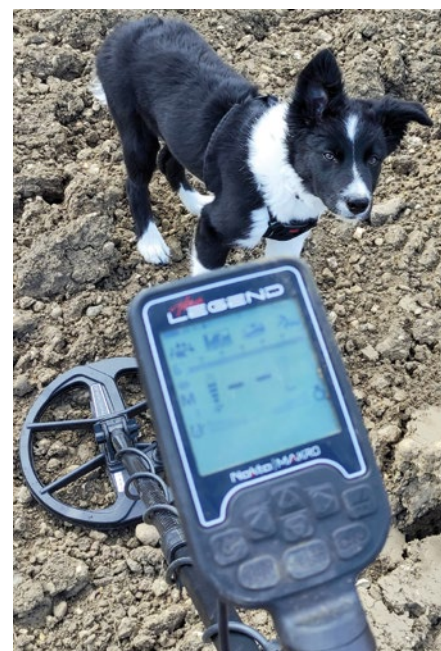


Fig.10. Learning the Legend and Nellie's first time seeing headphones.





Fig.11. A selection of finds found with the Legend on the first day out.

and M2. I found quite a bit of difference between them, with M2 having much lower conductor sensitivity and sharper tone overall – perfect for picking up small targets, especially silver. The field I was on has never brought much up, and I felt it would be a good test site for the Legend. Whilst swinging away, the Legend felt comfortable and solid – I extended the shaft to near its maximum and did feel if you were over six feet tall, you might wish for it to go just a little

more, but for me at being five feet ten, it was just right.

The sun came out above the hedge-rows; the dog was behaving, and the Legend had already produced a few buttons, one being a nice military example. I was enjoying the day so far and was happy finding my treasure (Fig.11). For the next few hours, I had a play with the M1 and M2 frequencies along with lowering the levels of standard discrimination for the field programme. I love the way you can change between the M1 and M2 frequencies with just the press of one button and not having to go deep into the menus. Moreover, changing the discrimination is also very easy. Simply pressing the discrimination button, you can select one of the four discrimination patterns, with three pre-set and one customisable.

### Ferrocheck

Nokta / Makro has also introduced 'Ferrocheck' on the Legend. This is a second type of target analysis from the standard target-ID or discrimination and works alongside your normal target-ID numbers. Within minutes of changing the settings, a high pitch from the tones came through, reading 22 on the screen (Target-ID's read 1-60, which took a little getting used to). Selecting the Legend's pin-point function, which had been okay so far, I sunk my spade into the stony ground.

Whilst lifting out the soil, my four-legged friend decided to help clear the hole. I laughed as she thoroughly enjoyed digging down and scattering stones and earth everywhere. After rummaging my pinpoint in the hole, I realised the target had gone. Oh no, clearly, the hound had gone and kicked it out into the field. I ran the Legend over the hole again, no signal. Swinging over and around the scattered earth whilst being pelted with stones, I finally found the target again and there it was, a hammered coin. A bit bent and worn but a hammered nonetheless (Fig.12).

Was it because I changed the discrimination and Multi-frequency mode? Possibly, though I do know that it was a very clear and nicely-toned signal, although not too deep down, probably only six inches or so max.

After getting home and sorting through my finds, I looked more into the Legend's settings. I really was liking the ease of use of the menu very much, but it had some areas I felt could be improved or were indeed missing. I began to list all these for when I would put this review together. However, as usual, Nokta / Makro were quick off the mark and have since addressed all these, no doubt after customers' feedback with multiple updates over the first few months.

One thing I did notice when the light started fading was a difficulty



Fig.12. Not the best example but a hammered nonetheless.

in identifying the keys in low light. Although I remembered what keys to press to navigate between the menus after time, the imprinted icons within each key were now hard to identify. Mud and dust from the field did not help, but I wonder if they were infilled with a colour, would that make it clearer to see what each button was?

### The Last Few Months

Since receiving the Legend, I have been in all types of weather with the machine, from wet weekends in March to 30-degree Saharan heat from our recent heatwave. The Legend coped well in both the heavily saturated wet pasture and rock-hard dry ground. There was initially some slight falsing in the extreme wet, which has dramatically improved since the last batch of updates. The target-ID was also a bit infrequent, which has now also been improved, along with the pin-pointing function. I also found playing around with the settings and saving my custom programs into one of the four slots enjoyable and effective. The Legend blew my ears off numerous times on silver, especially when I changed the tone breaks to suit – from the William III sixpence (Fig.13) (also shown in Figs.14a & b after cleaning), to the wonderful *denarius* of the Roman Emperor Hadrian, as shown in Figs.15a & b, it just loved silver.

The key selling point of the Legend, is the new Simultaneous Multi-Frequency (SMF). This is a big step from Nokta / Makro and I found it was very stable in both M1 and M2 frequencies and did not become unstable when around other machines. When detecting under power cables and noticing a minor interference, I used the frequency shift on the machine, which worked a treat. I also used a variety of pinpointers and only had interference from one brand but the ability to mute the Legend like the Simplex put a stop to that. Also not forgetting that you can run the Legend in the standard single VLF frequencies of 4, 10, 15, 20 and 40 kHz, which I also went through, especially in the hot weather when the ground was hard. Running at 10 kHz on the dry pasture, it still managed to pull out lead shot at around six inches which was very impressive.



Fig.13. William III sixpence fresh out the ground.



Figs.14a & b. Obverse and reverse of the William III sixpence once cleaned.

The true test for the multi-frequency in my opinion will be detecting in freshly ploughed and turned soil where, in the past, I have found that MF machines have struggled. We will see how it goes later on in the year.

### On the Beach

With beach detecting not being my forte, I only managed to take the Legend out for one day. I started out early one morning the night after we experienced extreme temperatures from the recent hot weather. Not sleeping well due to the heat, I decided to get up ridiculously early on a Saturday and headed off to my favourite beach location some half hour away. This beach is not overly populated and is therefore low on trash compared to your average beach, which is why I like it. The sand was bone dry along the top of the

beach with much evidence of picnics and the odd fire. "Great," I thought, "ring pulls, here we come!"

After selecting the beach mode and multi-dry setting (MD for dry sand and MW for wet sand and underwater), the Legend automatically goes into multi-frequency – single frequencies cannot be used in beach mode. I left the machine in its default settings and did not carry out a ground balance to see how it fared. Ten minutes in, and like most multi-frequency machines, the Legend was nice, quiet, and boding well. The sun began to rise, and the heat began beating down on my neck. Fortunately, with the Legend, you get a free hat which I quickly spun round, so the peak protected my neck. Apart from the odd dog walker, I enjoyed the fresh air, warmth and being out pretty much on my own.

After finding some modern coinage comprising of pound coins and a lovely big two pound coin, I decided to head down to meet the tide coming in. I selected the MW frequency and dipped the coil into the salty water. The machine remained silent apart from when I knocked the coil on some of the rocks partially submerged. I continued along the water's edge, sadly not finding any coins but mainly pieces of drinks cans and the dreaded ring pulls! Hoping for better results, I moved back to the dry sand and switched to the MD frequency. I continued to detect without ground balancing, and the Legend was still stable. Then it began, the English entourage started appearing, with the usual quotes we all get when out detecting, "Found much?" "Do you ever find anything?" "Ever found gold?" The beach became engulfed with tents, buckets, spades, and even a portable paddling pool?! I had found a total of £11.52, which more than paid for my petrol.

The Legend had no problem finding modern coinage, and, no doubt, would probably pay for itself over a year or so. In the short time I was there, it seemed a competent beach machine with some good depth and not chatter at all. I ran the machine in park mode for a while as well with no discrimination and continued to find coins. Obviously, beach conditions can vary immensely, and you have



the option of ground balancing and creating manual and automatic notch discriminations on the Legend where required.

## Software Updates

Over the following weeks / months, I continued applying the updates for the Legend from Nokta / Makro's website (three in total so far). Like with other manufacturers, this was just a matter of connecting the supplied lead to the connection under the control box by the coil connection and the USB port on your PC. It was also very nice to see this was also available for Apple Macs, quite often forgotten by other manufacturers. As I mentioned earlier, these fixed and improved a lot of my earlier niggles concerning the Legend, one being the pin-pointing function which I had noticed sometimes became very faint and broken on certain targets. Also, the sensitivity level is now shown in the target-ID section. These might only be little things, but they have been impressively addressed in such a short time since the Legend's release.

Another nice new feature in the latest update V1.09, is that if the ground response is too weak or there is metal when you are trying to ground balance, the Legend will automatically drop the ground balance value to 0. This is ideal



Figs.15a & b. Obverse and reverse of a silver denarius of the Roman Emperor Hadrian.

for beginners and when carrying out a manual ground balance. There are many default values on the machine, which have also been improved, but the one where I noticed a considerable difference is the addition of the iron filter (IF) and stability settings. They really are too good to ignore adjusting on the Legend. They are like a coarse / fine adjustment.

A simple experiment I carried out after the update was with a small hammered coin with iron nails and bolts around it. Some were positioned above and some underneath, with several even touching the coin. I found that adjusting these settings, which range from 1-8 (8 being the default) and dropping the IF down significantly increased the Legend's ability to draw out the hammered from between the iron. Furthermore, being able to 'tweak' the stability (ST) setting gives you even more fine-tuning. I am yet to

try this in the field properly, but I can see this being a significant improvement on the machine.

In addition, another new multi-frequency (M3) has been added to the Park and Field modes designed for wet and conductive soils. You will naturally get glitches with any new detector, but the Legend's updates have had these quickly resolved, along

with adding many new features, especially in the last update (V1.09). For the beginner / intermediate user, these may never get touched, but I highly recommend they learn and use them as it is a game changer on the machine.

I am so pleased I held back from completing my review of the Legend and that I got to know the machine after all these updates / fixes. In my opinion the machine had a few issues when it first came out. However, the subsequent software updates have transformed the Legend into a very competitive machine for the price tag, especially when you understand what settings suit the land you detect on (Fig.16). If you are looking to upgrade from the Simplex or thinking of buying a new beach / land detector, you will not go wrong with the Legend, especially if Nokta / Makro continue developing the machine with new features and updates.



Fig.16. Me having a play with the Legend settings in the field.

