Explorer SE Pro

Field Test Report

There's nothing better for a new detector model owner than to have a crowd of onlookers gather around to ogle your new purchase and ask about its performance and abilities while admiring its sleek appearance and asking for "a quick burn" around the field to try it out.

To achieve such a crowd-pulling feat these days requires either a prestige badge or an eye-catching appeal. This year's crowd-puller has both and appears to be the new all black Minelab Explorer SE.
Such was the interest recently in this new model at a one-day event it had to be handed around on a ten minute loan basis as so many wanted to take a closer look. The entire build of the new detector is made up entirely of all black plastics which accentuate the striking sharp lines. This is truly a high-tech and high-spec machine and one which will continue to dominate in the "serious detecting" arena.

Improvements & Features

"3rd generation" Software features include:

- New "logical" Main Menu format, re-arranged "selections" to make browsing easier with one hand.
- Now displays two separate screens, Smartfind and Digital - Learn and Edit screens now accessed through Main Menu.
- New pin point -VCO type rising sound with improved volume on deeper targets.
- New Iron Mask scale - now displays Ferrous range from 0 - 31 and AM = All Metal.
- Fast turn on, quieter/faster turn off.
- Audio 1, 2 & 3 are now Long, Smooth & Pitch Hold respectively. Pitch Hold similar to the BBS series of detectors.
- Faster loading of User settings.
- Factory preset Gain now set to 8 (used be 5)
- Stabilized Threshold in high-trash environments.
- New larger fonts.
- New updated detection results on Fer and Cond in Pin Point mode.
- Improved behaviour of the Depth indicator during detection and pin pointing.

Hardware changes include:

- New colour, style and appearance.
- New thinner, lighter coil with better balance (weight reduction 60grms)
- New front keypad decal
- Current consumption reduced by 8% approx. prolonging battery life increasing run time by 1 - 2 hrs.

<u>Focus on New Features</u>

The most important software changes are listed above however there are some more that are not. An example of one would be in the Digital display whilst using the large zoom screen, the icons which showed in the previous Explorer models as coins, rings and tabs do now not show on Explorer SE. Instead, the entire pixel space is given over to four huge and very tall numbers for Fer and Cond to enable easy viewing of the numeric values assigned to every detected target.

The major changes will be discussed in more detail here and they include the new RESPONSE sounds although Normal, Audio 1 and Audio 2 have not changed but instead have been re-named as Long (Audio 1), Smooth (Audio 2) and Pitch Hold (Audio 3). Normal response remains the same and no changes to it have occurred. The big change is to Pitch Hold which is, an exciting new innovative audio choice method for Explorer SE users and a lot of information can be gleaned from it which will be described in greater detail below.

The Response option allows you to select the way targets sound upon detection. These are described below. Each Response sound may work better in different scenarios and you should quickly develop your own personal preferences.

1. Normal - when the target signal drops the audio blanks, giving a crisp end to the target response. Normal allows the greatest differentiation between the ground and a target, but has the potential to miss small targets in areas littered with objects producing a target response.

2. Long - long audio lasts until the end of detection. There is no blanking at the end of the target response. Long allows less differentiation between the ground and a target.

3. Smooth - as opposed to the sudden change in audio response in Normal and Long, Smooth offers a more gradual change/rise in audio response from ground to target detection.

4. Pitch Hold - is identical to the normal response during detection. After blanking, the threshold will return to the same pitch of the peak target signal. The pitch of the threshold will not change until a new detection is made. The Minelab Sovereign series of detectors varies the pitch of an audio signal depending on the conductivity of the target: i.e. a highly conductive target produces a high-pitched tone, while a less conductive target item produces a lower-pitched tone. The advantage of the Sovereign's threshold tonal reproductive range is that the tone of the threshold also changes. After the target signal is heard, the threshold "hum," returns in a pitch similar to the pitch of the signal. When the target signal is blanked (or nulls out) due to some positive discrimination, the threshold returns again in the higher or lower pitch of the target's conductivity. The advantages of Pitch Hold should become apparent in ground that is considered fairly clean and also works very smoothly over salt wet sand.
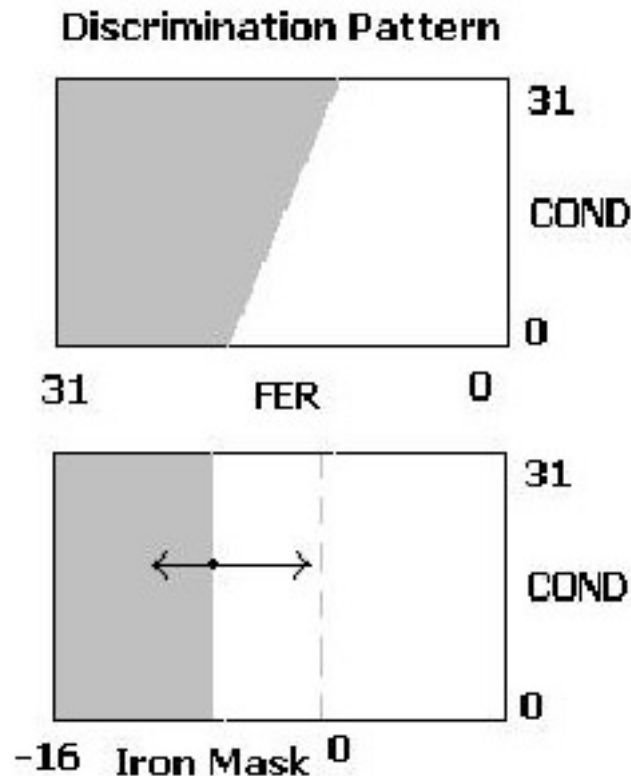
The **Iron Mask** feature is an overall ferrous discrimination control, which can be adjusted to reject a large amount of ferrous targets at one time. An increased level

of Iron Mask will reject more ferrous targets while a reduced level will accept more ferrous targets - ideal for relic hunting.

Some improved Iron Mask functions have been implemented:

1. The new Iron mask has values in 0 - 31 range to match the range of Ferrous numbers.

2. The Iron mask screen has been modified to show "FER" inside the slider and to show "AM" when the All Metal is enabled.

In Figure 1 (below) the new numbered Iron mask is seen while the old system is shown directly beneath it.

Discrimination Pattern

All Metal - is the term used to describe a clear discrimination pattern - that is accepting ALL targets whether ferrous or non-ferrous. To select All Metal press the shift button next to the AM icon to reduce Iron Mask and clear the discrimination pattern. Bear in mind that A.M. might be "noisy" on certain soils that might have high levels of mineralization in them.

Gain - the Factory preset has been changed to 8, a higher setting from which it used to be set at in both former Explorer models (used to be 5). This might become noticeable right away as certain signals might be more pronounced with better, faster, louder and sharper signals when compared to an older Explorer ll model. Gain actually controls the amplification of target responses in respect to the strength of the original signal. The theory is, with a high setting (8) even weak target responses will initially be, easier to hear which could equate to more finds, especially small low-conductive ones at the end of a day's detecting or increased deeper finds from sites considered to be "worked out". On a modern site such as a concert field looking for recent losses one could use a lower Gain setting coupled

with a Low sensitivity setting to deliberately look for surface/shallow finds as one would not require the extra sensitivity to search for losses from a day or so ago.

Sensitivity - following along from an increased Factory Gain setting there is also a noticeable increase to the Factory preset Sensitivity level - this is now set to 22 - an increase of six sensitivity increments from a lower sixteen. As a result of these two changes of (i) an increased sensitivity and (ii) gain setting it will appear the Explorer SE is more powerful on turn-on compared to the older models. These Settings have been increased at the factory and those settings were always present and adjustable. There might be a trade-off from using higher settings and this could result in unwanted noise and more ground signals. If this occurs simply lower the settings via the Main Menu. However, bear in mind that, Semi-Auto Sensitivity can be a good friend and will continuously monitor the environmental conditions and will automatically adjust the detector's sensitivity as close as possible to the last manually specified level of sensitivity - especially useful in those often difficult sites with ever-changing ground conditions. Manual Sensitivity on the other hand would be better suited to a trashy site or, where a very slow sweep is required or on a beach.

Depth Indication - is improved over that of Explorer ll and now updates visible information at the end of each detection and, updates in the new and improved Pinpoint Mode also.
The clear portion of the depth indicator represents the approximate distance of a target below the coil based on a single coin from 0 to 30cms. Try to think of the clear area as the amount of soil you will have to remove to get down to the target.

Digital Fer Cond - as per the depth indicator, Fer and Cond now display and update information on screen while in the Pinpoint Mode. Previously, this was not possible and is one of the most significant changes to the Explorer SE software.

The four numbers in the Digital screen display both the ferrous and conductive properties as perceived by the Explorer SE in magnetic response for ferrous and conductive response for non-ferrous.
Fer or Ferrous shows from 0 - 31 the ferrous resemblance of targets while Cond shows from 0 - 31 the non-ferrous conductivity properties of targets. So a display of Fer 07 Cond 25 would indicate Fer 07 as being of a low ferrous nature (non iron probability) and Cond 25 would show a high conductivity (copper/brass/silver) and the target might produce a U.K. copper ID. Displays of Fer 04 Cond 28 could indicate a U.S. dime while Fer 08 Cond 10 might indicate a gold coin.

Threshold - has been changed to a Factory Preset setting of 16. It has also been improved so that finer adjustments may be made to it, especially at the lower end so that one can set it to a very low level but that it shall still be audible whereas on the previous models it may have been too quiet or may have gone silent. A silent or non-existent threshold is not recommended as a small depth loss can actually occur as one may not hear a very small target, nor should it be too loud that one could not distinguish a false noise from a target response. As always, the threshold

will need to be adjusted when connecting and disconnecting headphones (also recommended for privacy and extending battery life).

A Familiar Feel

When one picks up the new Explorer SE one can instantly feel that familiar solid grip but with the new and lighter coil that feel is so much better and is very noticeable when sweeping the detector in a location such as a wood or a stubble field where there might be objects to be avoided - it handles very well. The unit is noticeably better balanced and feels better "in the hand" while also easier to just skim across the surface of the ground.

Performance - In The Lab

During development of the new "SE" many hundreds of hours were spent with the new unit putting it through countless bench tests in order to guarantee the full and authentic and by now legendary characteristic accuracy of target information to ensure the new SE was consistent with known performance parameters. Together with the added functional and performance related improvements, more subtle improvements were also incorporated into the SE such as the featuring of new and larger fonts designed to give a greater amount of pixel space to reproducing much larger numeric displays on the Digital screen. Explorer SE is now much easier to read even fully extended away from the body. Numeric consistency for all target values has been carried over to Explorer SE whilst maintaining the usual degree of perfect audio clarity of all appropriate conductive responses on hundreds of targets.

With the added improvements to increase start-up sensitivity the Factory setting does now sound sharper and crisper on targets.

Performance - Outside

Serious devotees of the Explorer detectors use it for absolute and extreme depth and the sheer amount of information it provides on targets both audibly and visually via the various detection screens. In this regard, Explorer SE does not disappoint! It continues that tradition of sheer usability everywhere and, does so with a level of electronic stability that has to be experienced to be appreciated. On wet salt water beaches, pastures, woodland and industrial river foreshore areas it excelled with such ease that it became almost second nature to use whilst providing critical information to the senses. The stability and reliability of the information provided proved foolproof and above all else, highly accurate. All the electronic functions worked in tandem, seamlessly providing reliable, dependable

audio-visual information - there was no second-guessing - it did what has been expected of such a high-calibre machine for years - providing an unsurpassed detecting experience and was pleasurable in doing so - as trustworthy as an old friend. With the new micro-processor especially designed for the new SE it is now much faster as well and this is instantly obvious even on start-up.

Tips & Tricks with the SE

As with any metal detector it takes time to get to know it really well. Explorer SE allows one to do this really quickly and it provides a wealth of information with just a few button pushes to glean extra information for some signals that you may not be quite sure about.

- **Pitch Hold** - The Pitch Hold mode, when combined with the updating of ID's in Pin-point is a powerful tool, and a great aid in isolating a good from a bad target. An advantage noted during the testing of the new SE was that Pitch Hold just suddenly "grabs onto" targets which were audibly quick, unmistakable and instantaneous signals.
- **Digital Screen** - should you have a signal you are undecided about, simply engage Digital and hit Pinpoint - pass over the unknown target a few times and it should reveal its identity very quickly by displaying four numbers e.g Fer 31 Cond 31 (large ferrous) and in the new detector a depth estimation as well all via the new VCO Pinpoint mode.

Conclusion

Originality is hard to come by in any format and it is Minelab, the company who gave us ground breaking and earth-shattering performance with the introduction of BBS technology many years ago who built on that solid foundation. Producing cult favourites such as the Excalibur and Explorer II they are still at the forefront of detector design today providing unparalleled performance to bring us the new Explorer SE, truly deserving of a place of honour in the long lineage of Explorer metal detector development.

Certainly Explorer SE is a lot of metal detector in a fantastically built package and everyone is catered for from absolute beginners to very experienced users who will customize it to obtain exacting results. Minelab's engineers deserve great credit for their ability to take a great product and make it better, smarter and faster.
This detector truly expands the reputation of the company and I am delighted to be able to report on such a classy machine. These people obviously know the meaning of the word "heritage" but they also know the meaning of the word "technology", and in this wonderful detector they have brought the two together.