Norfolk Wolf (John Lynn)

Field Test Report XP Deus

The French XP detector revolution continues and seems to have taken a giant step forward. But has the page-on old technology really been turned, and is this the start of a new chapter in detecting history?

Who says you really need to have religion to get god? Not according to XP with their new wire-free detector.

Its name – Déus (pronounced "Day-oose").

Translated to English it means deity, or "god".

Is this new offering from XP really a miracle machine, or not?

First Impressions & Some Background

On first sight, you can't help but be immediately impressed by the Déus and its radical futuristic design; when folded it bears an uncanny resemblance to the "Starship Enterprise". So beam me up Scotty and let's see if what that man Alain Loubet and his team of savants have to offer really is manna from heaven.

But to begin with, here is a little background on the man himself.

Not too many people are aware of the fact that not only is Alain the owner and manufacturer of XP detectors, but also that he is also an avid (and very accomplished!) detectorist. When time and business commitments permit he looks forward to throwing a tent, food and a detector into his canoe and going off into the wilderness for a weekend's "metalling". So the reality is that he is not just another faceless boffin, but somebody who actually experiences and understands the realities of detecting out in the field.

It might also be of some interest, and add to our understanding, if we can peek behind the scenes and delve into some of the history to find out just what it has taken to produce such a radically different and revolutionary world-class detector.

This definitely isn't one of those machines that have been rehashed using existing technology, quickly produced and then brought onto the market; either as a rival to a competing model from another manufacturer, or as a mark 3, 4 or 5 to a previous model.

Déus "Starship Enterprise".

No, the beginning of the Déus began to take place six years ago, way back in 2004. Firstly, as a series of thoughts formulating in Alain's head on, "What would be the ultimate and most desirable must haves, for a real kick-ass, user-friendly, detector?" (Bearing in mind that the Goldmaxx Power or any of the other mark 2 models in the XP range had yet to be produced at that time!) After lots of brain storming with his team, bouncing ideas off of each other, and then a lengthy feasibility study, by 2006 things really started moving into a higher gear. It's worth mentioning the small, but highly talented team of individuals who worked on the Déus project: Julien, electronics developer; Jean Louis, analogical/digital programmer; Cedric, information programmer; Regis, electronic developer; and Alain (only five people in all) who were involved in the designing.

An engineering team close to XP worked with them in the development of the wireless link, so every bit of the software and hardware for the Déus were fully developed in house by XP.

In the summer of 2008 I was invited over to Toulouse in southern France for the chance to meet up with some of the XP staff and try out one of the new Déus prototypes – talk about being impressed! There was an important caveat though; I gave my word not to talk about it back in England. No problem, I came off the internet detecting forums! The following year I was sent an updated version of the Déus prototype to use and familiarise myself with, so at the very least you will realise that I have had and used the detector long enough to formulate an informed and unbiased report.

After all, what good is it to the paying public to have somebody writing about up to the minute technology of a detector, if that individual hasn't had it long enough to understand the relative merits, complexities or even have a concept of why the detector is using that specific technology in the first place?

This happened with the original XP Goldmaxx. Even today there are some

that still haven't managed to grasp the thinking behind the original concept, and therefore under-rate the model because of their own failure to understand how to use it correctly. What chance would this or any other manufacturer's machine enhanced with the latest cutting-edge technology, stand with a person of such blinkered vision and limited abilities?

This is not a cheap detector, but then neither is a Rolls-Royce or a Ferrari a cheap vehicle; therefore it will not be in the financial reach of everyone. However, for those who aspire to use the latest technology not available in other detectors, and can afford to purchase top range machines, how big are the bangs you will be getting for your bucks? Background history over, let's look at the detector.

Straight from the Box

The first assembly of the Déus' lower shaft to the coil is straightforward enough when using XP's improved attachment system. The patented all new XP stem has the combined advantages of being not only S-shaped, but also has a straight telescopic shaft. By the use of the two cam-locks you can extend or retract the shafts in an instant.

The length of the lower shaft is determined by the use of the lower cam-lock, it is adjustable in millimetre increments to ensure maximum comfort when detecting. Changing different coils in the future will be a doddle. The upper shaft and cam-lock is an integral part of the handgrip/three position arm-cup support, and when the shaft is fully extended, the sculpted magnet (for attaching the remote control) on the end of the shaft butts up to the handgrip.

When both shafts are fully retracted for easy carrying purposes, the whole detector reduces to just 2 feet 2 inches; less than the length of an average foot assisted trowel! Now ally that to the fact that the Déus weighs in at just 875 grams making it just about the lightest detector (serious ones, not toys!) on the market today.

Charging the units.

How it all works, I will try to keep in a nutshell (hopefully!)

The coil, remote control and back phones each have their own small, high capacity rechargeable lithium battery and also their recharging points.

This is an important part of the design as it makes each unit independent for its power source.

Handgrip/arm-cup, cam-locks, and shafts.

Coil.

Starting with the coil, it is a 22.5cm widescan, which has a built-in ultra-miniature electronic circuit that digitises and analyses the signals. The data is then sent to the headphones and remote control in real time using a digital radio link. Using this method, the quality of the data you receive is greatly improved, as the signal is processed at source rather than it being sent using the normal coil cable to the control box and then from there via more wire to the headphone speakers.

Think about that for a minute, a battery, and electronic circuitry in the coil?

Remote control on magnetic head of shaft.

The remote control is encased in a robust plastic and rubberised case with two tiny protuberances at the top which are the antennae for the radio link with

the coil; overall it measures 11cm x 6cm x 1.5cm. Come on now, how can you possibly call something the size and thickness of a mobile phone a control box?! Now get this…. especially as you can use the detector without it! You can actually use just the headphones to switch on and make the major adjustments for detecting without any detriment to performance. Whoever heard of a detector working without its control box?

The remote control also has its own black leather and clear plastic case for belt-mounting with its innovative "flop down" magnetic flap to view the readings on the LCD screen. (For when it's raining?) Otherwise, without its case, the remote control "sticks" on the magnetic head of the top shaft. (It will soon be available with Velcro straps so as to be able to be worn on the sleeve or arm).

Remote with LCD activated.

This is the difficult bit to describe and harder to understand, but bear with me!

The liquid crystal display, measuring 500mm x 360mm, gives a whole host of easy to read information which includes:-

- Alternate displaying of battery condition of the coil and the remote
- The programme in use
- The time
- The analogue scale of the target's conductivity
- A graph indicating fast or slow and deep
- A digital readout of target's conductivity
- A constantly measured ground mineralisation index
- The current ground setting (this part of the display is also used when ground balancing)
- The frequency being used, (4, 8, 12, 18 kHz)
- At the bottom of the display the three indicated categories (Option, Menu, GB) denotes the main functions for the three multi-purpose touch pads situated immediately underneath the screen.

The first of these is an option that switches the detector on or off and is then used (firstly) for designating whether the speaker will operate from either the remote or headphones. This same button then deals with configuration (backlight contrast, clock etc), coil and accessing the installed programs. The option will allow use of the expert settings when menu is accessed.

The second or middle touchpad gives access to the menu where you can change the values of the discrimination, sensitivity, frequency, iron volume, reactivity, audio response and notch. This touchpad is also used to scroll through the settings in the menus.

The third touchpad is the validate or return button; it also gives access to manual ground balancing, pumping, beach and tracking.

The two touchpads on the second row are plus and minus buttons. These are not only used to increase or decrease values, but are also a quick method for changing detecting programmes without having to go into the menu.

The bottom button (with the red circle) is employed for non-motion mode and pinpointing.

At the rubberised base of the remote are two access points. One has a USB connection for charging the lithium battery or for updating the software via internet. The other is for corded headphones, or if you have a preference for a favourite set.

The above description of the remote control appears complicated in the written word, but in practice and by reading the manual it is very quickly understood. (As I will be explaining in greater detail later).

Both the remote control and the back phones (lightweight headphone) batteries are recharged by way of USB connections; the coil is different in that it has a butterfly clip connector that only works in one specific position.

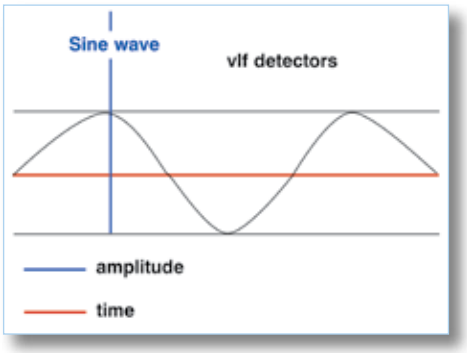
This is one area where it is possible to demonstrate a simplistic view to appreciate the original thought, the ensuing problems, and how the XP team not only found a solution, but will change the way we detect.

What do you think takes up the most space and is also the major weight factor in a control box? Yes, of course, the batteries. The accepted norm has been 12 volts and in the past it has been necessary not only for the power output, but also for the longevity of detecting hours. However, with technological strides made recently, would it be possible to use very compact, high-capacity lithium batteries? Yes, with an ultra miniature electronic circuitry. So now the remote, the coil and the headphones have their own identical power source. But how long will the batteries last? In the past it has generally been the practice of having to charge the batteries for at least an overnight period of time. Not looking so good? No, each of the three elements can also be charged separately if required. Another feature of lithium polymer batteries is that they can be quickly charged without developing a memory. Charging time for the remote and headphones is 2 hours when completely flat, the coil is just 90 minutes. Looking good, but how long do they last? Between 9 and 10

The author with the Déus on a cold day.

hours, or if flat out on TX level 3 about 8 hours. That's enough day's detecting for anyone. However, XP not only supply a home charger, but also an in-car charger and, wait for it, an emergency charger that runs off one AA battery! So if you do forget overnight, this will charge one of the elements in the time that it takes to pour a cup of tea and drink it! It will give you another three to four hours more detecting. Simple, but why hasn't it been implemented before? This could only have been thought of, I believe, by a detectorist that owns a detector manufacturing company.

Frequencies, Programmes & Controls – Accessing Them & Making Adjustments



Sine wave.

The Déus has four separate frequencies that work independently of each other; therefore each frequency operates as a single sine wave and not as a square wave, which would indicate that they were working together as multi-frequency. Each frequency has its own characteristics, values and drawbacks (hence the need for four of them).

The first, 4 kHz, has more of a sledgehammer effect (the effect of the electro-magnetic field). Powerful and deep on the bigger targets, it works well on relatively uncontaminated (free of nails and junk) sites; excels on the larger and thicker sectioned objects and coinage. It is most suitable for larger coils etc.

The second, 8 kHz, is a little more refined, say a lump hammer. More of an all-rounder in the lower end of the frequencies, it gives very good depths and the recovery speed is a little better; it likes silver coinage – especially the thicker and larger pieces.

The third, 12 kHz, is a little more refined still; we could liken this to a ball peen hammer. This is another good all-round frequency, this time at the higher end. Depth of search is very good and recovery speed is improved further; smaller, thinner sectioned items are easier to find.

Finally, 18 kHz, which is top of the refinement tree. This is more akin to a toffee hammer, and excels on contaminated sites. It is unparalleled in rooting out the tiny items amongst all the junk.

No one frequency can cover all eventualities and using them all together doesn't give you that surgical preciseness of a single frequency.

The Déus has factory pre-installed programmes that are accessed, either by the plus and minus touchpads or via options. Always exit using the Validate/ Return.

1. BASIC 1 (12 kHz). This is a good all-rounder for general use. Don't disregard this one.
2. GM POWER (18 kHz). Similar settings to the XP Gold Maxx Power detector, powerful and fast.
3. Déus FAST (18 kHz). Faster than the Gold Maxx Power excels with small targets on iron-infested ground.
4. PITCH (12 kHz). Responsive pitch that varies in frequency and amplitude according to the signal's strength; same speed as the Gold Maxx Power.
5. G-MAXX (8 kHz). Similar settings to those of the XP G-Maxx, medium speed, particularly effective for large masses and highly conductive coins.
6. RELIC (8 kHz). Slower than the G-Maxx, adapted for large, deep masses in relatively uncontaminated ground.
7. WET BEACH (18kHz). Employed for finding small gold (chains, rings etc). Tuned to operate more effectively on wet beaches, although adjustments will be needed for the ground effect, either by pumping or manually adjusting the GB mode.
8. ALL METAL (8kHz). Suitable for deep searching for all targets, an all metal motion mode.
9. BASIC 2 (8kHz). Ease of operation with settings that give greater stability; perfect for starting out and learning the Déus while avoiding false signals.

All programmes except the Wet Beach have a default, Ground Balance setting of 90 to ensure maximum stability under most conditions. Wet beach operates from 00 to 30 and is adjusted either manually or by pumping.

Screen settings.

Each programme has its own pre-installed settings and their values, which can be accessed using the menu touchpad. These consist of:-

- Disc. 00 to 99 allows a target to be rejected that has a lower conductive value than that of the setting being used.
- Sens. 00-99 Increases or decreases the detector's sensitivity to all signals including the unwanted ones
- Frequency. 4, 8, 12, 18kHz. Offers choice of alternatives to adapt to ground conditions and target characteristics.
- Iron vol. 0-5. controls the sound volume and tone denoting iron.
- Reactivity. 0-5. The speed to recover from the effects of one object to signal the next.
- Audio response. 0-5. Amplifies the volume of deeper signals.
- Notch. 00-99. Enables specific targets of certain conductive values to be rejected

All are fully adjustable via the plus and minus touchpads.

There are Expert settings that can be employed and adjusted when the Menu is accessed. However *don't* be in too much of a hurry to play around with these for at least a few months! However, if you are still with me we need to look at these expert settings. Oh, and that thing I wrote about trying to keep this section of the report in a nutshell? Forget it, I was joking!

Expert Settings

Screen in TX.

The manual states that "This section covers the advanced settings. You should ensure that you have studied all the basic parameters before moving on to this section". Believe me the manufacturers of XP are not kidding!

Press the menu pad, and the screen will display the settings for the particular programme which is currently in operation; options now become expert. Scroll down the settings until Sens, press Expert and the screen changes to show TX Power.

There are three levels which govern the strength of the electromagnetic field:-

Level 1. Is very good for mineralised "naily and fussy" sites. Depth is not an issue in these situations, but the high volume of ferrous objects overpowering the detector is; a lower TX level will definitely improve target recognition.

Level 2. Is the default setting; the performance is stable and more than enough for the vast majority of conditions.

Level 3. Over the right ground conditions there will be a subtle difference to pure performance. This one is not for the "meddlers" – if you think it is going to give you extra depth each time, don't touch it!

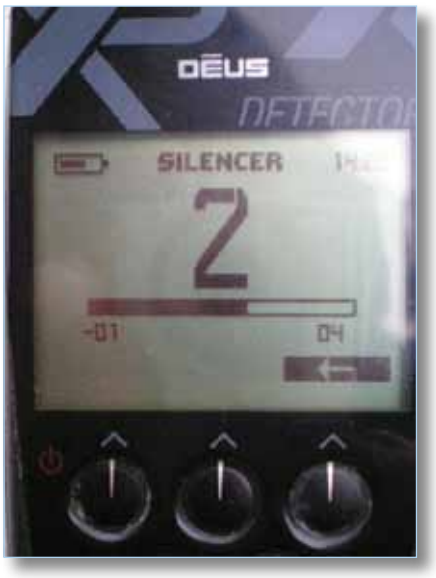
Make sure they are the right conditions, or you won't want to use it again in the future. It not only gives power but it also eats it too (in terms of battery level). Level 3 is the default setting of the 4kHz frequency, therefore expert is not available.

Screen frequency.

Scroll down to Frequency and then press Expert. The frequency can be shifted either slightly higher or lower to avoid occasional interference (from another detector).

The emitter coil is more closely attuned to the middle frequency so revert back to that when you can. The 4kHz frequency is fixed so therefore no expert settings are available. Obviously there is no Expert setting needed for iron volume.

Scroll down to Reactivity, press Expert, and 4 levels of Silencer are obtainable.



Screen silencer.

When you increase the value of the silencer you are applying a filter which eliminates the crackling caused by the residue of the odd piece of less than100% discriminated iron. The reactivity will always over-ride the silencer, therefore when the reactivity level is changed, this will also alter the Silencer level; otherwise it could alter the effectiveness of the reactivity.

Screen notch.

Scroll down to notch, and press expert. This now allows you to widen the notch 1 "window" and also bring in two more adjustable notch windows (n2 and n3).

Screen Disc.

Scroll down to Disc. Press Expert to choose multi tones. Chose 2, 3, 4 tones, or Pitch. The discrimination scale is from 00-99 and this system allows you to choose the width for each tone; for example, designate a low tone for 00-10, and this will cover iron. Then choose a low medium tone 11-30 for coke and larger or misshapen iron. The third will be a high medium tone which can be placed arbitrarily at 31-44 for what I call "no-man's land" (iffy signals). This covers thin tinfoil; however you are also starting to move into the area of tiny coins and objects and also poor quality coins (conductivity-wise). We are talking about the lower end of gold quarter stater conductivity readings, so care is required. The highest tone can be allocated to the numeric readings of 45-99.

Pitch is different – it is neither adjustable nor is it generated by the conductivity of the target. The strength of the signal generates an audio response that varies both in amplitude and pitch. For example a shallow (near surface) target will generate a strong high-pitched sound; however, a deeper target will record a weaker sound that is low pitched. Pitch can be used as a great aid to pinpointing.

The differing amounts of Expert user adjustable choices available aid you in making the right decisions and will definitely be appreciated by the discerning detectorist.

Backphones controls.

XP has been producing wireless backphones for a few years and now they are a common sight at rallies and weekend digs throughout the country; however, with the Deus they now have an integrated ultra-miniature "control unit" on the left-side phone pad.

It really is hard to believe that something so tiny can contain all the electronics necessary to detect and in the absence of the remote control they will take over and act as the "brain" for the settings and adjustments. The unit measures just 62mm in diameter and an incredible 18mm in depth. It is fitted on a sliding support and can be removed from the backphones with just a single click. The LCD screen measures 20mm by 10mm and has the menu, and plus and minus buttons beneath.

When using the backphones you can turn the Déus on and off (using the plus and minus buttons), select the nine factory programmes using the menu button (these are displayed as P1-P9) or those that have been configured by the user. The menu is also used to access the settings adjustments (e.g. Sens, Disc, GB, Tone, Frequency etc).

By the way, there is no loss in performance if you are just using the backphones.

So why would you want to use just the backphones? Well, just off the top of my head I can think of two good reasons; the first being a discharged battery on the remote control. The second is that you have made the adjustments to the detector for the field you are working, and it is now absolutely pouring it down with rain. There is mud everywhere but you need to lay the detector down to dig the signals; I think that I can safely say that we have all been there!

I have endeavoured to cover the more salient points, but obviously there are one or two minor omissions. Next month I will be writing about how the Déus performed after taking it out in the fields, on the beaches and well, generally throwing the kitchen sink at it! Also included, will be how each factory programme performs, including the incredible "Déus fast". (Believe me, it's going to blow your socks off!). TH