

## **UPEX® 740 MD**

### PI large-loop metal detection system

**NEW!**

- Improved performance, increased detection range
- New support frame design, improved productivity
- Modular design, improved signal display
- Soil compensation, interference management
- Data interface for digital surveys



Lao PDR: Area of released bombs

### Improved performance, increased detection range

In the course of our ongoing development efforts and due to the world wide success of the UPEX® 740 Large Loops the electronic circuitry underwent a substantial refinement. Based on our intellectual property rights and EBINGER patents the efficiency of this tool was noticeably increased.

The improved temperature range will be welcome when operating in hot climate and desert regions as the limits of electronic drift and function failure could be pushed much further. The locator electronics became also more stable when operating close to maximum sensitivity. This allows to explore the detector performance to a higher degree and operators appreciate the smooth characteristics of the latest type of electronics. Power consumption and battery consumption remained as economic as before.

### New support frame design

When using tools for a professional application the cost/value relation is of prime interest. This is defined by the investment to be made, the life cycle and life cycle cost of the tools and their productivity. Such considerations are focal points for EBINGER when designing search and location equipment.

The new support frame is more versatile than the forerunner version and can be better adapted to the working conditions in the field and to the munitions to be located. When looking for buried objects of small caliber ranging from 20mm to 86mm shells select the components to assemble the 1m x 1m wide support frame as this will be the most effective shape and size in relation to the target size. To allow for a 1m wide clearance lane we recommend to use the frame in a diagonal way to allow for a 20cm overlay at either edge of the search lane. Alternatively a hexagonal shaped frame can be assembled if on 6 frame elements are used.

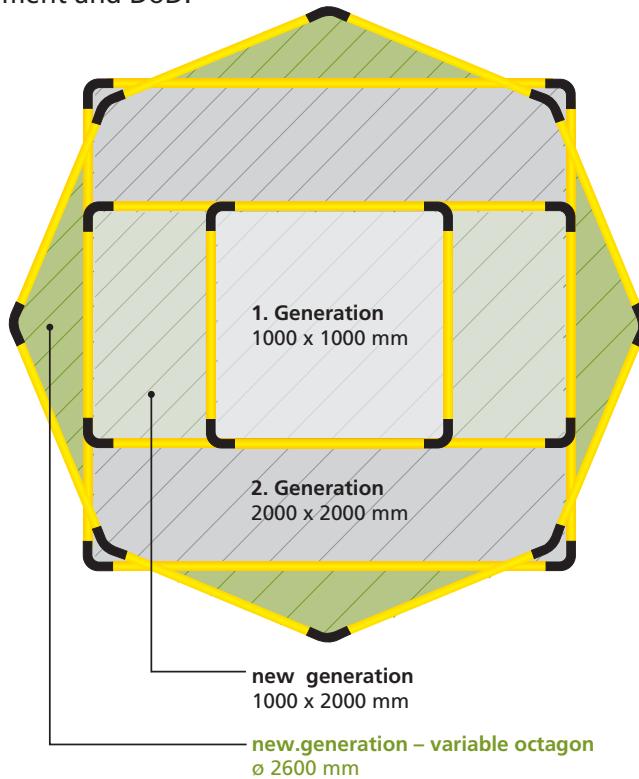
To survey areas which have been subject to bombing raids or shelling with large cal. The search lanes can be extended to 2m width. On such jobs the 2m x 1m support frame or the octagon shape are recommended. If the Octagon shape is used the searched lanes will benefit from an overlap of 0,2m on either side.



Golden West deep search on water using UPEX® components

## Improved productivity

The octagon shape was designed after recommendations of the US Golden West Foundation which runs a field research programme for the improvement of tools and procedures sponsored by the US government and DoD.

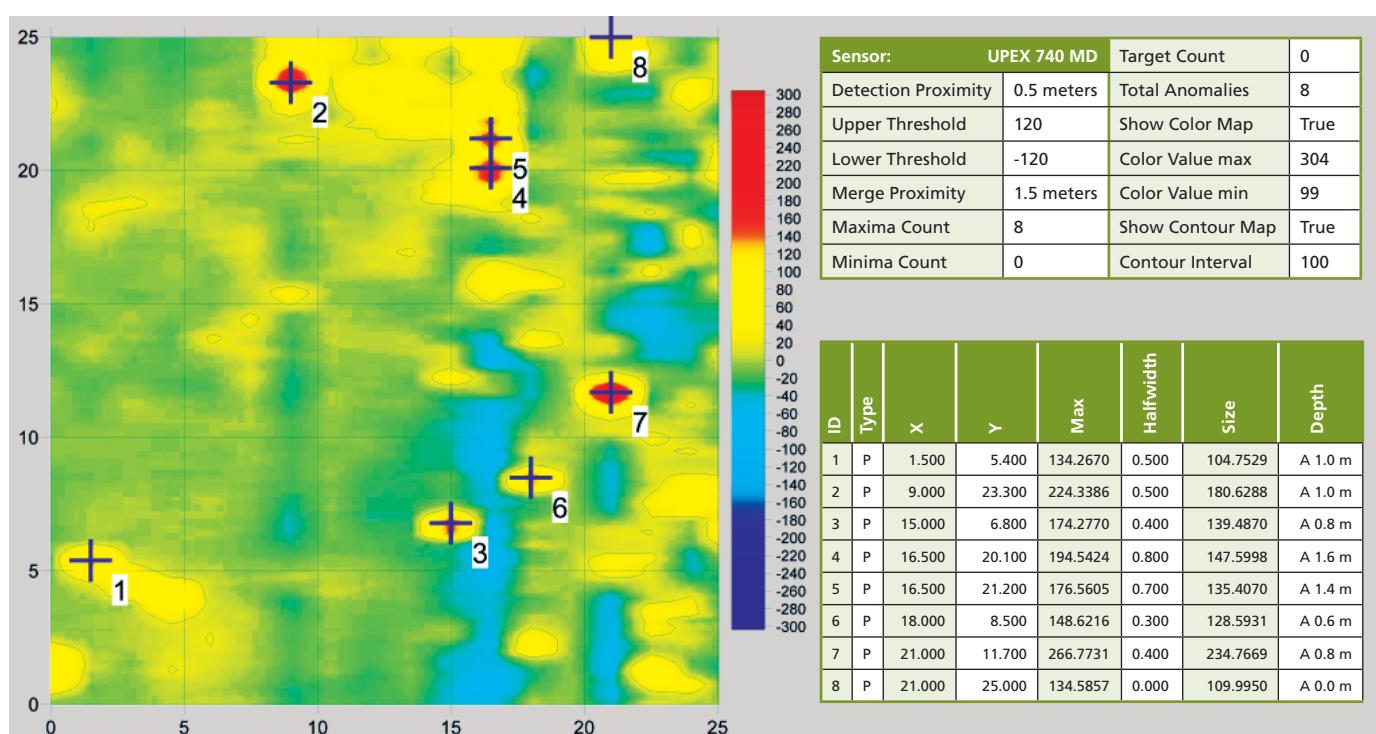


The configuration of the support frame / large Loop geometry can be optimized by using the UPEX® octagon shape\* as it noticeably improves the sensor footprint and detection range. At the same time the inspected lane is widened by 0,4m when compared to the rectangular frames. This gain will accumulate over the year and make a substantial difference in productivity.

\* utility patent pending

## Modular design

The modular construction of the frame allows to adapt the sensor to various search tasks and environmental conditions. Defective components can be easily exchanged within shortest time and be replaced by inexpensive spares from stock. This improves field availability of the search system. The following figure shows various frame configurations which can be assembled from the supplied components. Last not least the new frame can be used on water when using floats. Its components are water resistant.



EPAS®: detection data converted into map with targets and the digg sheet

### Improved signal display

UPEX 740M can be ordered now with an LED signal display which substitutes the previous galvanometer. The audio alarm system allows operators to watch their step when walking in rough terrain. Upon target acquisition and audio alarm the LED signal display helps to find the target position for marking when operating in a non digital way. For an estimation of the target's size and depth it is recommended to watch the signal's footprint and intensity. The LED signal display is mechanically by far more robust than the galvanometer. In addition it can be sealed much better against ingress of moisture and water during strong rainfalls.

### Soil compensation, interference management

When operating on strongly non co-operative soil the improved detection range allows to carry the Large Loop at increased ground clearance reducing unwanted signals from minerals or ground magnetic effects.



UXO search head 18" for UPEX® 740 M

### Data interface for digital surveys

Furthermore it has to be pointed out that the design philosophy of the new UPEX® can be explored much more if the device is used in a digital survey using a data logger with or without GPS module. The approach aims at a fast data collection with inexpensive labour in increased number.

The data is then evaluated by trained personnel to determine points of intervention while the sensors continue operation in the field. During data evaluation one can compensate interference, discriminate unwanted signals and correct operator mistake and compensate non cooperative soil effects wherever necessary. The resulting dig sheets for the field teams will show a noticeably reduced number of excavation points and thus increase work progress/productivity.

The increased avoidance of digging for scrap, the possibility to plan the use of assets



LED signal display for UPEX® 740 M Large Loop



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Competenza  
ed entusiasmo per  
soluzioni tecniche

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