

# Quickstarter

## UXO PIDD® 2

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### 1. General

The UXO PIDD® 2 is a new metal detector based on the proven EBINGER pulse induction principle. The device was designed especially for the UXO detection. The detector has a good soil compensation as well as a good detection range on munitions buried at shallow depth with reduced sensitivity to small pieces of scrap metal.

### 2. Mode of operation

The UXO PIDD® 2 has two operation modes:

- dynamic detection mode (1): which automatically zeroes the detector and continuously adapts to local background interference. The detector has to be moved relative to a target object to generate audio alarms!
- static mode (2): indicates objects by a steady signal even if there is no relative movement between the detector and the target. The static mode offers highest sensitivity and largest detection range.

The dynamic step offers a fast UXO search for shallow buried objects. The static mode offers largest detection range.

### 3. Operation

For operation switch the selector clockwise from „0“ to „1“, so that it zeroes after short time. The detection can take place immediately without any further adjustments! In case of deep buried UXO's the static mode 2 is recommended. The audio alarm offers a dynamic extension in such a way that in case of approaching metal objects, the audio signal changes from continuous tone to an intermittent tone modulation. This feature can help to better assess the distance and the object depth.



### 4. Battery test

The battery condition is indicated by the frequency of the confidence clicks. A charged battery gives one click every three seconds. Dropping voltage is indicated by one click every second. Recharge battery if click rate increases to approx. 50 hertz (continuous alarm tone).

## 5. Connecting loudspeaker

Standardwise the loudspeaker is used for alarm signal indication. A single sided headset is available as optional accessory. Proceed as follows:

1. Locate socket for external loudspeaker or headset at the cross section of the electronic cylinder.
2. Gently push the plug of the loudspeaker/headset cable against the socket and rotate until you feel that components have engaged.
3. Rotate curled locking ring in clockwise sense to lock the connection.



The rechargeable battery pack has to be unscrewed for this reason. The internal programming switch has 6 steps that can be activated by turning clockwise as follows:

- Step 1 approx. 20  $\mu$ s: max. detection range for small metal objects, no saltwater!
- Step 2 approx. 40  $\mu$ s: small objects with good conductivity will be detected.
- Step 3 approx. 60  $\mu$ s: low conductivity will be suppressed, saltwater compatible!
- Step 4 approx. 80  $\mu$ s: small scrap suppression, detection of medium sized metal objects.
- Step 5 approx. 100  $\mu$ s: higher interference suppression, detection of compact metal objects.
- Step 6 approx. 120  $\mu$ s: max. scrap suppression, detection of large metal objects.



Increasing delay time causes to lower ground disturbing effects! For certain tasks resp. application fields customer-specific delay times can be made.

## 6. Selection of sampling delay times

The UXO PIDD® 2 is based on the electromagnetic echo. The detector transmits short electromagnetic pulses through its search loop. This induces eddy currents and a secondary electromagnetic field into conductive targets. Each metal object has its typical signature in the so-called decay time. Small objects cause a shorter and large objects a corresponding longer decay time. The sampling delay times can be changed by an internal programming switch, that can be accessed by unscrewing the rcovre near the battery container.



## 7. Ground suppression

In case of highly magnetized soils the ground can be adapted by holding the probe approx. 3 cm over the ground. Select mode 1 to activate soil suppression. In this position switch to static mode to maintain this operation point! Keep the detector away from metal.

## 8. Sensitivity test

Execute sensitivity test by waving the 40x40 mm aluminium test piece parallel over the search head. The test piece has to be detected at 20 or 40  $\mu$ s (step 1 or 2) in static operation mode at the end of search head joint.