

OPERATING INSTRUCTIONS LORENZ LPX2

Applications:

The LORENZ LPX 2 Metal Detector is a very sensitive and stable working measuring instrument.

It is based on the Pulse Induction principle which allows the detection of Metal objects at great depths. Big metal objects will be detected at several meters while using large search coils. LORENZ Metal Detectors are very versatile and are constructed to locate both large and small metal objects in the ground. The specially developed electronics circuit and search coils give extra depth to non ferrous metals and reduce the effects of mineralised soils or conducting salt water.

All metals will give an audible response with the LPX 2. Small non ferrous plates and coins will respond very sensitively with the available 14" and 18" inches coils, which work in conjunction with the telescopic S-rod handle with armrest. The electronics will automatically tune to the coils connected.

Safety information:

Please understand that the manufacturer of the LPX 2 can not be made liable for any kind of damage caused by or in conjunction with its products. Please do read these operating instructions first and avoid digging up mines, bombs or other dangerous objects.

Controls and Connectors:

- The power source of the LPX 2 is located on the bottom of the control box. Please make sure that 10 x AA cells are put in the battery holder. To open the unit simply press both knobs at the side of the control box simultaneously. Please do never connect a charger unit to the LPX2 while having non rechargeable batteries in the battery compartment. Please do read the instructions of the manufacturer of the recharging unit first!
- While connecting the search coil connector to the electronics unit and putting the **AUDIO** – control from the OFF- Position to the marked position, the LPX 2 is turned ON. The Power source will be disconnected automatically when the search coil – connector is disconnected from the electronics unit.
- **AUDIO**- control changes the ticking rate from silent to a low frequency audio tone of the LPX 2 and also acts as a sensitivity control.
- **ZERO** – pushbutton retunes the electronics to the set AUDIO- response while pressing it for about two seconds before starting to search. While pressing this control no metal should be in the near of the search coil.
- **FREQ.** – Frequency control changes the operation frequency of the LPX 2 and should only be altered when power lines ore radio transmitters interfere with the LPX2.
- **HEADPHONES** - jack ...Any stereo headphones with ¼ inch (6,35mm) plugs can be connected to this jack. The built – in loudspeaker will be automatically turned off when headphones are connected.
- **CHARGER** – jack...Please do only connect a charger (10 cell AA – type) when rechargeable batteries are applied to the LPX 2 to avoid explosions!
- **AUDIO** – Beep sound ...will give an audible alarm when the batteries are discharged.

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The LPX 2 will be turned on after having connected the search coil connector to the COIL-jack and having turned the AUDIO – control to the right. The AUDIO – control can be turned to the marked position.

Please make sure that there is no metal in the near of the field of the coil, and that the distance of the electronics unit to the search coil is at least one meter to avoid a response from the unit itself. While using self made frame constructions please do never use any metal in the construction. The Universal cable coil can be laid to different coils namely : 70cm x 70cm / 1m x 1m / 2m x 2m or to a compensated 1m x 2m in the figure of the shape of an 8 and afterwards mounted with tape to a self made PVC- water pipe frame for example. A very user friendly 1m x1m PVC – frame coil with cables inside the tubes is also available with the LPX 2.

In average conditions the bigger the size of the connected search coils are, the higher the sensitivity of the detector will be for large metal objects. Small coils are mainly useable for smaller metal objects like coins for example.

To avoid a response from mineralised soils please do always maintain a distance of about 30 to 50 cm between the large frame mounted search coils and the ground and simultaneously press the ZERO – pushbutton for about 2 or 3 seconds to tune the electronics to the previously set AUDIO – ticking tone. To achieve the highest sensitivity of the LPX 2 a ticking tone of one tick every second can be chosen by the AUDIO –control.

In the case of false signals from the ground the following adjustments will help to distinguish between metal and soil – signals:

- Simply increase the distance between the coil and the ground until the audio is more stable. Even at distances of about 10 – 50 cm between the search coil and the ground the sensitivity to bigger metal objects will still be sufficient.
- Reducing the sensitivity by altering the AUDIO – control to the left will also result in a more stable operation of the LPX 2 detecting system.
- The search coil could also be hold at constant height over the ground while retuning the LPX 2 with the ZERO – pushbutton to the formerly set AUDIO – ticking tone.

It is also possible to combine these three different adjustments to minimise the effects of magnetic soils. Please do always avoid any metal in the near of the coil while pressing the ZERO – button to tune the unit accurately. To cancel out false signals from power lines or radio transmitters, simply use the Universal cable coil which is laid to the figure of an 8.

Small Metal pieces located close to the surface will give a very strong but short response while large metal objects will give a different response with a slowly increase and decrease in frequency and a much longer duration. In some cases nails will give a double signal near both edges of the coils. In most cases the middle of the coil is the most sensitive area and therefore gives the strongest response.

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