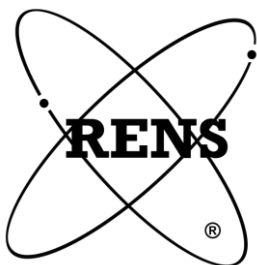




Portable Metal Detectors By:



MODEL P-4000 PORTABLE METAL DETECTOR



MODEL P-4000 MANUAL



PORTABLE



Portable Metal Detectors By:



- **All solid state circuitry.**
- **Factory direct repair service.**
- **Two year warranty**

RENS Metal Detectors reserves the right to make changes in specifications and prices at any time without prior notice

Spare Fuse



9525 SW Commerce Circle, Wilsonville, OR 97070

Phone: 503.222.9992 / 800.367.9992

Fax: 503.222.0073

Email: RENS@cnxsind.com

www.cnxsind.com



Portable Metal Detectors By:



INTRODUCTION

Congratulations! You're the owner or operator of a P-4000 Portable Metal Detector. Please read this manual carefully and completely. If you have any questions please feel free to contact our Sales or Service Department at 800-367-9992.

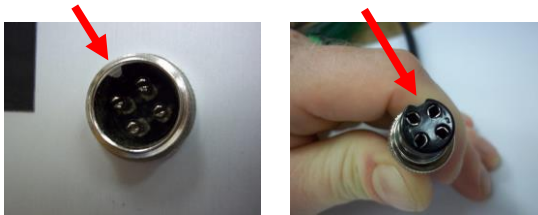
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I. ASSEMBLY

1. Assemble the 3 piece adjustable handle; make sure the button snaps into one of the holes. To change length, depress the button and twist handle. Snap button into new hole.
2. Connect coil lead to control box. It is extremely important this is done correctly: the "female" coil connector has a channel that must match up with the ridge on the "male" connector on the control box.



3. Adjust D-Handle and Control Box to comfortable position.

NOTE: The large loop in the search coil lead (Shown in Picture) must be maintained. This minimizes damage to the cable during frequent adjustments of the search head position.





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II. BATTERY CHECK

The unit was checked out and completely operational when sent from the factory. Transit time and storage may degrade the battery charge. If this is the case, the battery should be topped off before use.

To check battery charge: turn **MODE** switch to **BATT** position. If the needle on the meter is high in the **GREEN** area battery is charged; when the needle drops close to or is in the red area, it needs to be recharged.



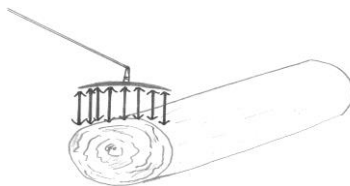
Directions to recharge the battery are in section V (MAINTENANCE / SERVICE, paragraph A).



III. OPERATION OF UNIT

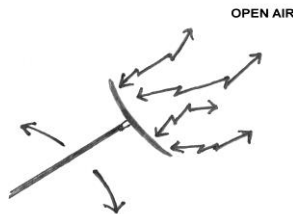
After the satisfactory battery check:

- a. Turn **MODE** switch from **BATT** to **RUN**
- b. Position detector in start position so magnetic field can align itself correctly.



- c. The meter needle will move to midscale after two full scale deflections within about 4-6 seconds.
- d. The unit will sound for a few seconds as it warms up and creates a magnetic field.
- e. The **POWER** lamp will switch from **RED** to **GREEN** and the sound will stop*
- f. The unit will be ready to operate in about 2-3 more seconds.

*Under some extreme temperature change conditions the sound may continue as intermittent "grunts" for another minute or two.



NOTE: Random movement of metal detector will cause the detector's magnetic field to scramble causing the unit to "trip."

If the unit is false "tripping" due to a scrambled magnetic field, turn it off and begin start-up process as stated previously.



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ENVIRONMENT



SCAN IN A “METAL FREE” ENVIRONMENT

Remember that a metal detector will not only detect metal in the log, or lumber, but in the surrounding area as well. **DO NOT** place logs on reinforced concrete pad or on ground surfaces containing buried metal such as pipes. Using the P-4000, scan the area for buried or hidden metal. Once you know the area is clear of metal, begin scanning the material.



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INDICATIONS OF METAL DETECTION

- A. If metal is being detected a sound will be heard – a small piece of metal will produce a small movement of the needle and a short chirp of sound.
- B. Detection of a large or particularly dense metal object may be indicated by the power indicator light turning **RED**, meter needle movement to the **FAR RIGHT** and a **CONSTANT ALARM** sound.

HOWEVER: Check that this is not a “false” indication. Turn unit away from scanning area. If unit settles down and resets itself, scan area again. If the metal detector acts in the same manner, a large metal object is being detected – this is a normal reaction for the Metal Detector. If unit does not settle down, **RESET** by turning unit off and going through start up procedures as stated previously.

TO RESET THE UNIT

To **RESET**, turn **MODE** switch to **OFF**, wait 1 to 2 seconds, then turn **MODE** switch to **RUN**.

NOTE: If the detector is set on a metal floor or near any other large piece of metal for a time while the system is in **RUN** mode, it will be necessary to perform a **RESET** action to remove the large error voltage that develops. If a **RESET** is not performed it will take upwards of two minutes for the unit to restore itself to proper operation.



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DAILY OPERATION SETUP

1. Turn **MODE** switch to **BATT** position to observe battery charge level.
2. Adjust sound volume to comfortable level.
3. Turn **MODE** switch to **RUN** position. When **LED** Lamp indicates **GREEN**, and sound is silent, unit is ready to operate.
4. Adjust sound **VOLUME** as needed.

OPERATION IN A NOISY ENVIRONMENT

Sound level is adjustable from 0-100db. When using the unit in a noisy environment, it may be advantageous to use the supplied earphones.

CAUTION: To prevent ear damage when using earphones make sure **VOLUME** control is fully counter-clockwise before switching unit to **RUN**. After unit is active, turn **VOLUME** control to a comfortable sound level.

TEMPERATURE CHANGES

The unit will automatically compensate for any long-term drift due to temperature changes. To minimize the effect of drastic fast temperature changes, store unit in a location with similar temperature as working environment.

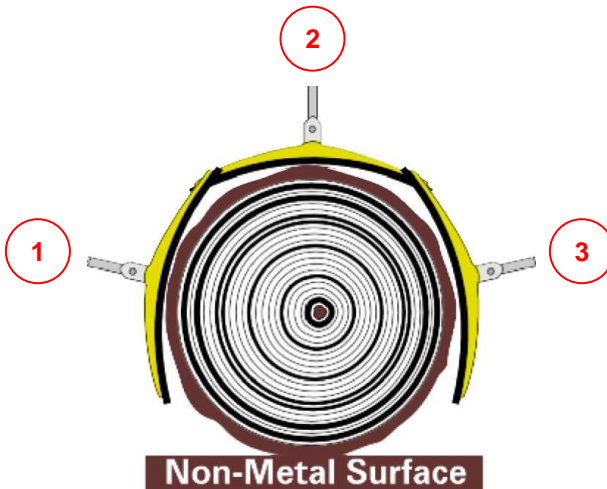


SUGGESTED METHOD FOR SCANNING LOGS

NOTE: In most cases scanning of a log cannot be done in one pass. Please follow suggested scanning method below and consult sensitivity chart in Section IV (Specifications).

1. Place search head close to the log surface and scan the entire length of the log as shown in diagram.
2. Move to other side of the log and repeat step 1.
3. Roll log over as required to expose unscanned surfaces. Scan the rest of the circumference of the log covering the **complete** surface of the log.

This procedure will ensure that the metal detector scans the entire surface of the log





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SCANNING STANDING TIMBER

Search Head position is easily adjustable. To rotate the Search Head for vertical scanning, hold firmly and rotate D-Handle and Control to desired position.



COMMON USER PROBLEM

The **MODE** switch is sensitive to over-torqueing. The switch wiring configuration does not allow for extra room to move in either direction beyond the three designed spots: **OFF**, **BATT**, **RUN**. Twisting too far will damage the unit, making it necessary to repair.



NOTE: Obvious excessive torque damage to the switch wiring constitutes operator damage, and is not covered under Warranty.



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IV. SPECIFICATIONS

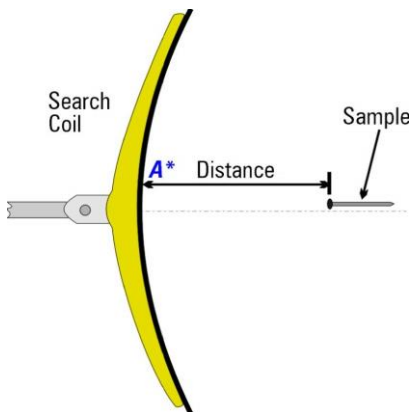
| | |
|---------------|---|
| WEIGHT | With Battery Pack, approximately 7.5 lbs (3.4 kg) |
| LENGTH | 51.5" – 57" (1.31m – 1.45m) Adjustable in 3 positions |
| POWER | 17.5 Volt rechargeable Battery Pack. Unit is protected with one (1) type 3 AG 3/10 Amp Slo-Blo fuse located in battery compartment. New fully charged Battery Pack will provide approximately 10 hours of continuous use. Time to completely recharge a fully discharged Battery Pack is approximately 14 hours. |



SENSITIVITY

All detection distances measured from point A*

| Metal Type | Distance |
|------------------|---------------|
| 5D Nail (finish) | 9" (229mm) |
| 8d Nail | 12" (305mm) |
| 10d Nail | 12.5" (318mm) |
| 16d Nail | 13.5" (343mm) |
| 40d Nail | 15" (381mm) |
| 50d Nail | 16.5" (419mm) |
| 60d Nail | 16.5" (419mm) |
| 8" Spike | 18" (457mm) |
| Fence Staple | 12" (305mm) |



The above items **CAN NOT BE DETECTED** farther away than shown in the above chart.



V. MAINTENANCE / SERVICE (In House)

A. RECHARGING THE BATTERY

Plug charger into 120 V wall socket. Insert charger connector into the receptacle on the rear of the P-4000 control box marked **CHARGER**.

If the battery is fully discharged, it will take 14 or more hours to fully recharge.

Unit may be left on the charger continuously when not in use. The **LED** light becomes **BRIGHTEST** when the battery is **LOW**. When the unit is fully charged the **LED** light will become **DIM**.

B. BATTERY PACK REPLACEMENT

To replace the battery pack, loosen the two screws securing the battery compartment access door located at the rear of the control instrument. Grasp battery, push on battery and lift, then pull to remove. Unplug old battery pack. Install new battery pack and close compartment door.

CAUTION: Handle battery pack with caution. In the unlikely event a short develops or the battery pack is damaged it could cause excessive internal heat buildup.

NOTE: Use only a **RENS** supplied battery charger for the rechargeable battery pack.

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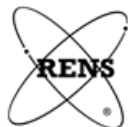
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SPROCKETS

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CURVE
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INDUSTRIES INC



9525 SW Commerce Circle, Wilsonville, OR 97070

Phone: 503.222.9992 / 800.367.9992

Fax: 503.222.0073

Email: RENS@cnxsind.com

www.cnxsind.com

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