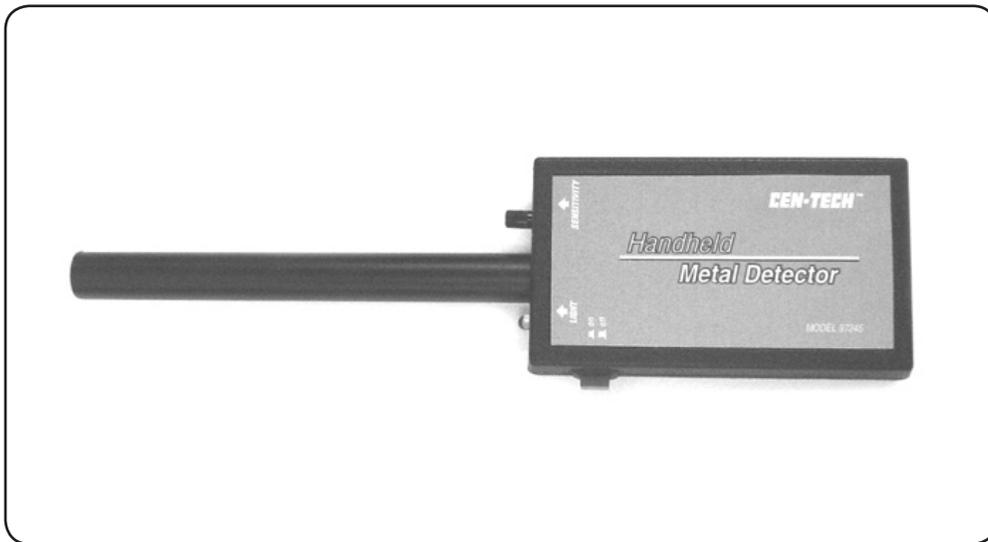


# **CEN-TECH™**

## **HAND HELD METAL DETECTOR**

### **Model 97245**

### **SET UP AND OPERATING INSTRUCTIONS**



Diagrams within this manual may not be drawn proportionally.

Due to continuing improvements, actual product may differ slightly from the product described herein.

**Distributed exclusively by Harbor Freight Tools®**

3491 Mission Oaks Blvd., Camarillo, CA 93011

Visit our website at: <http://www.harborfreight.com>



**Read this material before using this product.  
Failure to do so can result in serious injury.  
SAVE THIS MANUAL.**

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**For technical questions or replacement parts, please call 1-800-444-3353.**

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## SAVE THIS MANUAL

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Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

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## IMPORTANT SAFETY INFORMATION

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In this manual, on the labeling, and all other information provided with this product:



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

### **DANGER**

**DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.

### **WARNING**

**WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

### **CAUTION**

**CAUTION**, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

### **NOTICE**

**NOTICE** is used to address practices not related to personal injury.

### **CAUTION**

**CAUTION**, without the safety alert symbol, is used to address practices not related to personal injury.

## GENERAL SAFETY RULES



### **WARNING! Read all instructions**

**Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury.** The term “battery powered tool” in all of the warnings listed below refers to your line-operated (corded) battery powered tool or battery-operated (cordless) battery powered tool.

### SAVE THESE INSTRUCTIONS

1. **Work area safety**
  - a. Keep work area clean and well lit. *Cluttered or dark areas invite accidents.*
  - b. Do not operate battery powered tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. *Battery powered tools create may sparks which may ignite the dust or fumes.*
  - c. **Keep children and bystanders away while operating a battery powered tool. *Distractions can cause you to lose control.***
2. **Electrical safety**
  - a. Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. *There is an increased risk of electric shock if your body is grounded.*
  - b. **Do not expose battery powered tools to rain or wet conditions. *Water entering a battery powered tool will increase the risk of electric shock.***
3. **Personal safety**
  - a. Stay alert, watch what you are doing and use common sense when operating a battery powered tool. Do not use a battery powered tool while you are tired or under the influence of drugs, alcohol or medication. *A moment of inattention while operating battery powered tools may result in serious personal injury.*
  - b. **Use safety equipment. Always wear eye protection. *Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.***
  - c. Avoid accidental starting. *Carrying battery powered tools with your finger on the switch invites accidents.*
  - d. Remove any adjusting key or wrench before turning the battery powered tool on. *A wrench or a key left attached to a rotating part of the battery powered tool may result in personal injury.*
  - e. Do not overreach. Keep proper footing and balance at all times. *This enables better control of the battery powered tool in unexpected situations.*

- f. Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. *Loose clothes, jewelry or long hair can be caught in moving parts.*
- g. If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. *Use of these devices can reduce dust-related hazards.*

#### 4. **Battery powered tool use and care**

- a. Do not force the battery powered tool. Use the correct battery powered tool for your application. *The correct battery powered tool will do the job better and safer at the rate for which it was designed.*
- b. Do not use the battery powered tool if the switch does not turn it on and off. *Any battery powered tool that cannot be controlled with the switch is dangerous and must be repaired.*
- c. **Disconnect the battery pack from the battery powered tool before making any adjustments, changing accessories, or storing battery powered tools. *Such preventive safety measures reduce the risk of starting the battery powered tool accidentally.***
- d. **Store idle battery powered tools out of the reach of children and do not allow persons unfamiliar with the battery powered tool or these instructions to operate the battery powered tool. *Battery powered tools are dangerous in the hands of untrained users.***
- e. Maintain battery powered tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the battery powered tool's operation. If damaged, have the battery powered tool repaired before use. *Many accidents are caused by poorly maintained battery powered tools.*
- f. Keep cutting tools sharp and clean. *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*
- g. Use the battery powered tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of battery powered tool, taking into account the working conditions and the work to be performed. *Use of the battery powered tool for operations different from those intended could result in a hazardous situation.*

#### 5. **Service**

- a. Have your battery powered tool serviced by a qualified repair person using only identical replacement parts. *This will ensure that the safety of the battery powered tool is maintained.*

## **SPECIFIC SAFETY RULES**

1. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
2. Avoid unintentional starting. Prepare to begin work before turning on the tool.
3. When using a handheld battery-powered tool, maintain a firm grip on the tool.
4. Do not leave the tool unattended. Store the tool properly before leaving the work area.
5. This product is not a toy. Keep it out of reach of children.
6. People with pacemakers should consult their physician(s) before use. Electro-magnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. In addition, people with pacemakers should:
  - Avoid operating alone.
  - Do not use with power switch locked on.
  - Properly maintain and inspect to avoid electrical shock.
  - Any power cord must be properly grounded. Ground Fault Circuit Interrupter (GFCI) should also be implemented – it prevents sustained electrical shock.
7. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.



**SAVE THESE INSTRUCTIONS.**

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## SPECIFICATIONS

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Battery Requirements	Standard 9VDC "radio" battery
Sensitivity	Adjustable using rotary switch
Display	Audible warning
Power Switch	Push/Release Button
Feature	Bright White LED Spotlight
Operating Temperature	-15° to 129° F Relative Humidity less than 80%

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## UNPACKING

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When unpacking, make sure item is intact and undamaged. If parts are missing or broken, call Harbor Freight Tools at the number shown on the cover of this manual.

### List of contents

Description	Q'ty
Hand Held Metal Detector	1
9VDC Battery	1
Carrying Case	1

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## SET UP INSTRUCTIONS

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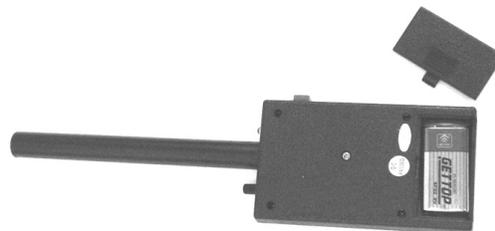


**Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.**

**Note:** For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

### Battery Installation

1. This item is shipped with the battery installed.
2. To replace battery, slide open battery compartment cover on back of tool.
3. Remove battery terminal connector and remove dead battery.
4. Replace battery being sure to correctly align battery leads with battery polarity markings.
5. Replace battery compartment cover
6. Properly dispose of all used batteries.



## Functions

1. This tool is useful for detecting metal embedded in nonmetallic materials. For example, you can detect nails in wood prior to running a board through a planer, jointer or shaper. This will help protect expensive knives and blades from damage.
2. This tool will detect metal at a range of approximately 1-1/4" to 2-1/2" depending on materials being tested and the sensitivity setting used.

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## **OPERATING INSTRUCTIONS**

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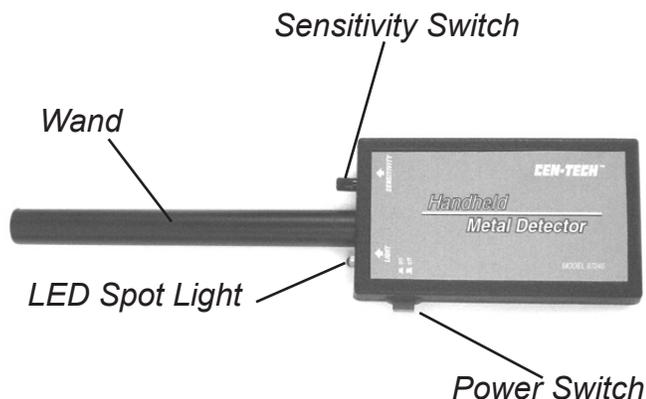
Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

### Tool Set Up

1. To increase accuracy, it is useful to test this detector on a sample piece prior to actual use. This provides the chance to adjust sensitivity prior to critical work. A clockwise rotation will increase the sensitivity.

### General Operating Instructions

1. Press and hold the Power Switch into the ON position.
2. With the power switch in the ON position, the LED light will illuminate the detection area or scanned area.  
**Please note:** Brightness may vary due to workplace lighting.
3. Move the wand portion of the tool over the work material. When metal is detected, the alarm will sound.
4. When work is completed, release the Power Switch button to turn off the tool. Clean, then store the tool in its carrying pouch, indoors, and out of children's reach after use.



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## MAINTENANCE AND SERVICING

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### **⚠️ WARNING**

Release the Power Switch to turn it off and remove battery before performing any inspection, maintenance, or cleaning procedures.

Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

### Cleaning, maintenance, and lubrication

1. **BEFORE EACH USE**, inspect the general condition of the tool. Check for loose screws, cracked or broken parts, and any other condition that may affect its safe operation.
2. **AFTER USE**, wipe external surfaces of the tool with clean, moist cloth.

### Troubleshooting

<b>Problem</b>	<b>Possible Causes</b>	<b>Probable Solutions</b>
Tool will not operate.	<ol style="list-style-type: none"><li>1. Battery discharged or damaged.</li><li>2. Battery leads or connection damaged.</li></ol>	<ol style="list-style-type: none"><li>1. Check battery for charge or damage.</li><li>2. Check battery leads and connections.</li><li>3. Install new batteries.</li></ol>
Erratic Warning Alarm	<ol style="list-style-type: none"><li>1. Tool settings may be corrupted</li><li>2. Sensitivity is set too high.</li></ol>	<ol style="list-style-type: none"><li>1. Install fresh battery.</li><li>2. Turn down sensitivity using rotary switch.</li></ol>

**PLEASE READ THE FOLLOWING CAREFULLY**

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

**PARTS LIST**

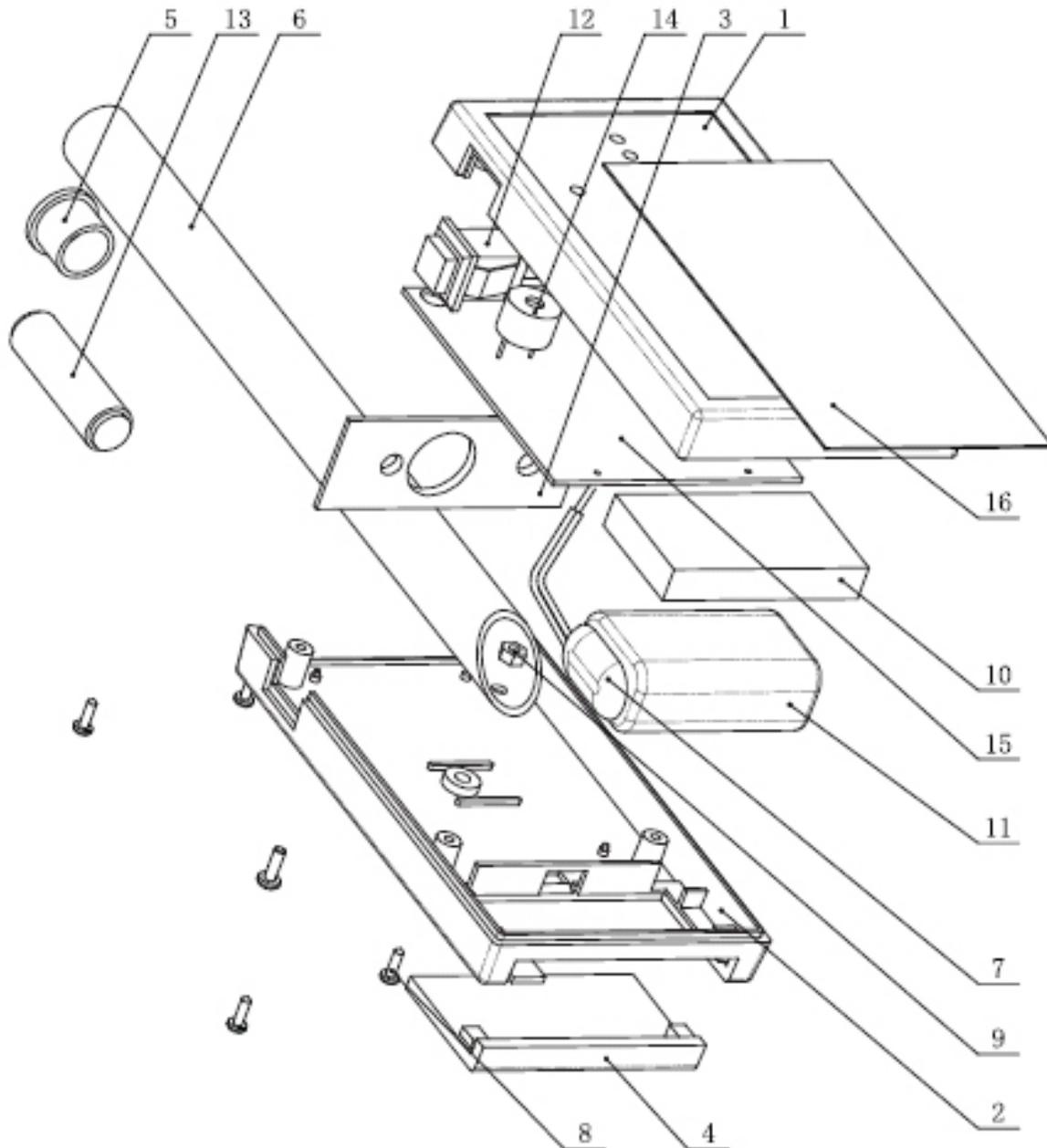
<b>Part</b>	<b>Description</b>	<b>Q'ty</b>
1	Case Top	1
2	Case Bottom	1
3	Front Plate	1
4	Battery Compartment Cover	1
5	Wand End Plug	1
6	Wand	1
7	Battery Connector Assembly	1
8	Screw	5

<b>Part</b>	<b>Description</b>	<b>Q'ty</b>
9	Nut	1
10	Battery Support Pad	1
11	Battery 9 VDC	1
12	Power Switch	1
13	Magnetic Set	1
14	Buzzer Alarm	1
15	Printed Circuit Board	1
16	Panel	1

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## ASSEMBLY DIAGRAM

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**Record Product's Serial Number Here:** \_\_\_\_\_

**Note:** If product has no serial number, record month and year of purchase instead.

**Note:** Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

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## LIMITED 90 DAY WARRANTY

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Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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