

TEKNETICS™


4000

METAL DETECTOR



OWNER'S MANUAL

If you do not have prior experience with a metal detector, we strongly recommend that you:

- 1) Adjust the Sensitivity to a low setting in the event of false signals.** Always begin use at a reduced sensitivity level. Expect chatter or internal noise at high sensitivity.
- 2) Do not use indoors.** This detector is for outdoor use only. Many household appliances emit electromagnetic energy, which can interfere with the detector. If conducting an indoor demonstration, turn the sensitivity down and keep the searchcoil away from appliances such as computers, televisions and microwave ovens. If your detector beeps erratically, turn off appliances and lights.

Also keep the searchcoil away from objects containing metal, such as floors and walls.

- 3) Use a 9-volt ALKALINE battery only.** Do not use Heavy Duty Batteries.



Also available
with 11"DD coil
(Item# DELTA-11DD)

TERMINOLOGY

The following terms are used throughout the manual, and are standard terminology among detectorists.

ELIMINATION

Reference to a metal being "eliminated" means that the detector will not emit a tone, nor light up an indicator, when a specified object passes through the coil's detection field.

DISCRIMINATION

When the detector emits different tones for different types of metals, and when the detector "eliminates" certain metals, we refer to this as the detector "discriminating" among different types of metals.

Discrimination is an important feature of professional metal detectors. Discrimination allows the user to ignore trash and otherwise undesirable objects.

RELIC

A relic is an object of interest by reason of its age or its association with the past. Many relics are made of iron, but can also be made of bronze or precious metals.

IRON

Iron is a common, low-grade metal that is an undesirable target in certain metal detecting applications. Examples of undesirable iron objects are old cans, pipes, bolts and nails.

Sometimes, the desired target is made of iron. Property markers, for instance, contain iron. Valuable relics can also be composed of iron; cannon balls, old armaments, and parts of old structures and vehicles can also be composed of iron.

FERROUS

Metals which are made of, or contain, iron.

PINPOINTING

Pinpointing is the process of finding the exact location of a buried object. Long-buried metals can appear exactly like the surrounding soil, and can therefore be very hard to isolate from the soil.

PULL-TABS

Discarded pull-tabs from beverage containers are the most bothersome trash items for treasure hunters. They come in many different shapes and sizes. Pull-tabs can be eliminated from detection, but some other valuable objects can have a magnetic signature similar to pull-tabs, and will also be eliminated when discriminating out pull-tabs.

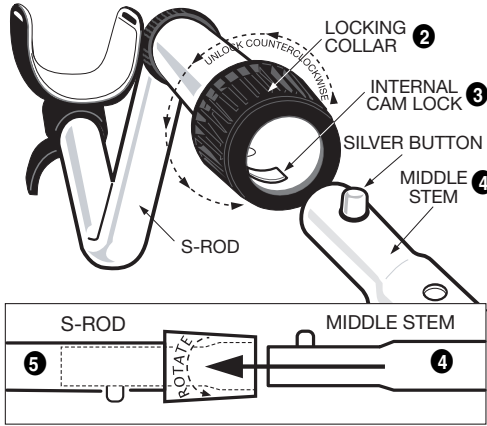
GROUND BALANCE

Ground Balancing is the ability of the detector to ignore, or "see through," the earth's naturally occurring minerals, and only sound a tone when a metal object is detected. This detector incorporates proprietary circuitry to eliminate false signals from severe ground conditions.

ASSEMBLY (continued)

Caution: Forcing in MIDDLE STEM with CAM LOCK raised may form a burr on cam lock. If this happens, remove burr with knife to allow insertion.

- 1 Position S-Rod upright.
- 2 Rotate the LOCKING COLLAR fully in the counterclockwise direction.
- 3 Insert your finger inside the tube and make sure the INTERNAL CAM LOCK is flush with the inside of the tube.

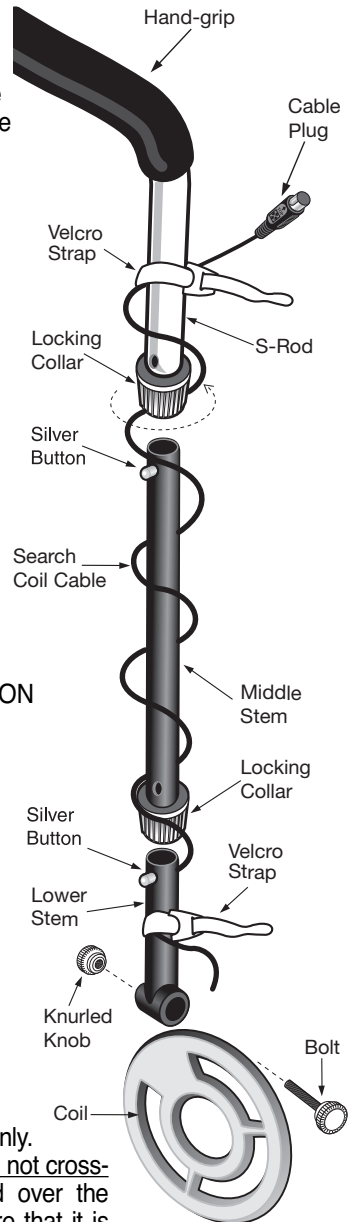


- 4 Insert the MIDDLE STEM into the S-ROD, with the SILVER BUTTON pointed upward
- 5 Rotate the MIDDLE STEM until the SILVER BUTTON locates in the hole.
- 6 Twist the LOCKING COLLAR fully in the clockwise direction until it locks.
- 7 Repeat this process on the LOWER STEM.
- 8 Using the BOLT and KNURLED KNOB, attach the SEARCHCOIL to the LOWER STEM.
- 9 Adjust the LOWER STEM to a length that lets you maintain a comfortable upright posture, with your arm relaxed at your side, and the SEARCHCOIL parallel to the ground in front of you.
- 10 Wind the CABLE securely around the STEMS, leaving slack at the bottom.

- 11 Connect CABLE PLUG to housing. Do not twist the Cable or Plug. Turn Locking Ring only. Use minimal finger pressure to start the threads. Do not cross-thread. When the Locking Ring is fully engaged over the threaded connector, give it a firm turn to make sure that it is very tight. When the Locking Ring is fully engaged over the threaded connector, it may not cover all of the threads.

- 12 Tighten both LOCKING COLLARS.

* Note: Very tall users can purchase the optional Extended Lower Stem (TUBE5X), for extended reach.



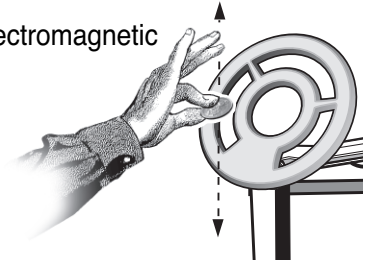
QUICK-START DEMONSTRATION

I. Supplies Needed


- a Nail
- a Zinc Penny (dated after 1982)
- a Nickel
- a Quarter

II. Position the Detector

- Place the detector on a table, with the searchcoil hanging over the edge. Or better, have a friend hold the detector, with the searchcoil off the ground.
- Keep the searchcoil away from walls, floors and metal objects.
- Remove watches, rings and jewelry.
- Turn off lights or appliances, whose electromagnetic emissions may cause interference.
- Pivot the searchcoil back.



III. Power Up

Press .

IV. Wave each object over the searchcoil

- Notice a different tone for each object:
 - No Tone:** Nail (in default setting iron is not detected)
 - Medium Tone:** Zinc Penny & Nickel
 - High Tone:** Quarter
- Motion is required.
Objects must be in motion over the searchcoil to be detected in this mode.

V. Press once to enter the DISC. LEVEL program

Then press  four times.

VI. Wave the Nickel and Zinc penny

- Neither coin is detected.

VII. Press the to toggle down to NOTCH. Then press three times

- “5¢” reappears on the display

VIII. Wave the Nickel

- The Nickel is now again detected.
- The Nickel has been “notched in.”

IX. Press to toggle down to ALL METAL

X. Pass the Quarter over the searchcoil.

- Move the Quarter closer to and farther away from the searchcoil. Notice the change in pitch and volume.

XI. Press and hold

- Hold the Quarter motionless over the searchcoil.
- Notice that motion is NOT required.
- Move the Quarter closer, then farther away from the coil. Notice the changing depth reading.

THE BASICS OF METAL DETECTING (continued)

5. EMI (Electromagnetic Interference)

The searchcoil produces a magnetic field and then detects changes in that magnetic field caused by the presence of metal objects. This magnetic field that the detector creates is also susceptible to the electromagnetic energy produced by other electronic devices. Power lines, microwave ovens, lighting fixtures, TVs, computers, motors, etc.... all produce EMI which can interfere with the detector and cause it to beep when no metal is present, and sometimes to beep erratically.

The SENSITIVITY control lets you reduce the strength of this magnetic field, and therefore lessen its susceptibility to EMI. You may want to operate at maximum strength, but the presence of EMI may make this impossible, so if you experience erratic behavior or “false” signals, **reduce the sensitivity.**

HEADPHONE JACKS

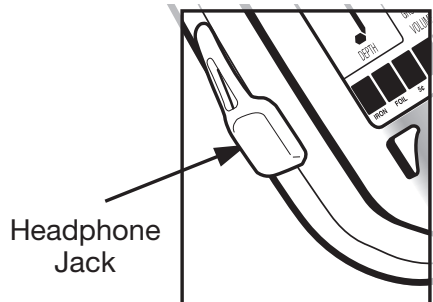
The detector has a 1/4” headphone jack on the left side of the housing.

When the headphone jack is connected, speaker audio is disabled.

USING HEADPHONES



Using a detector with headphones facilitates detection of the weakest signals and also extends the battery life.

It also allows you to hear subtle changes in the sound more clearly, particularly if searching in a noisy location. For safety reasons, do not use headphones near traffic or where other dangers are present. This device is to be used with interconnecting cables/headphone cables shorter than three meters.



MENU SELECTIONS

1. SENSITIVITY

Use  and  to increase or decrease sensitivity while the SENSITIVITY line is highlighted.

Maximum sensitivity setting is 12.

Minimum sensitivity setting is 4.

If the detector beeps erratically or beeps when there are no metal objects being detected, **reduce the sensitivity.**

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HOW DEEP WILL IT GO?

The Delta Metal Detector will detect a coin-sized object, like a quarter, to a distance of about 11" from the searchcoil at maximum sensitivity. Large metal objects can be detected to a depth of several feet. Detectability is directly related to the size of the metal object -- the larger the object, the deeper it can be detected.

Accuracy of target identification is also related to distance from the coil. Beyond a distance of 8", the accuracy of target identification begins to diminish.

Discrimination and All Metal Modes have independent sensitivity settings. First highlight the mode, then adjust the sensitivity level for that mode.

OPERATION and CONTROLS (continued)

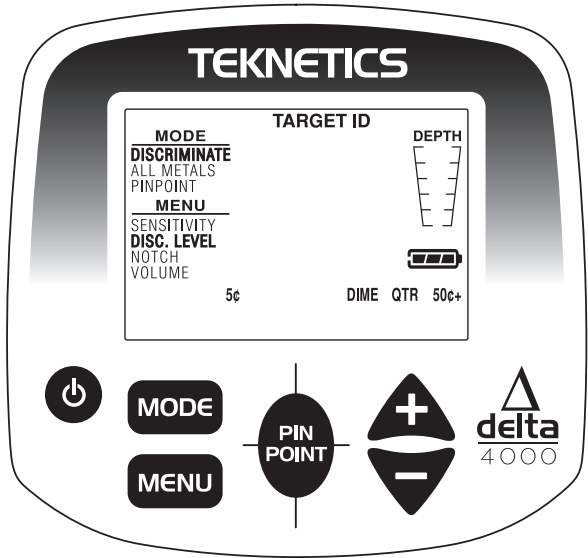
MENU SELECTIONS (cont.)

NOTCH (cont.)



At any time, the display screen indicates the current category notches or discrimination settings. Any category whose description is not visible will not be detected.

For example, the following settings tell us that:

- The nickel, dime, quarter and 50¢ categories will be detected.
- All other categories of targets (iron, foil, alum and zinc) will not be detected.



4. VOLUME

While the VOLUME line is highlighted, use  and  to change the speaker volume.

The default volume setting is 8. Maximum is 10.



Minimum is 0 (volume off). At levels 1, 2 and 3, high tones will be inaudible or barely audible.

The speaker volume will diminish as battery voltage drops. For maximum speaker volume, use 1 or 2 tones, as the low and bass tones generate the loudest sounds.

Volume can be set while in either the DISCRIMINATION or ALL METAL Modes, but only one setting applies to both modes. Volume in the two modes cannot be set independently.


MODE SELECTIONS (cont.)

3. PINPOINT


Enter PINPOINT from either Disc or All Metal Mode. Press and hold  to activate pinpoint. Pinpoint detection is only active for as long as you keep  depressed.

Pinpoint is used to find the exact location of a target which was previously located and identified using the Discrimination Mode. As this mode does not require motion over the target, the user can move the coil more slowly and then narrow the detection field when near the target.

How to Pinpoint

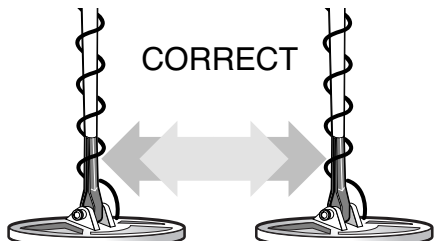
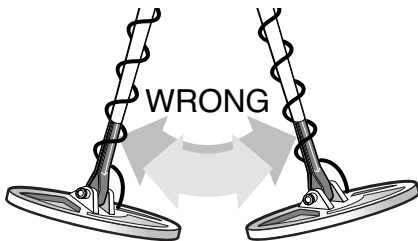
Position the searchcoil an inch or two (2.5-5cm) above the ground, and to the side of the target. Then press and hold . Now move the searchcoil slowly across the target, and the sound will communicate the target's location. As you sweep from side to side, and hear no sound at the ends of the sweep, the target is located in the middle of that zone, where the sound is loudest. If the sound is loud over a wide area, the buried object is large. Use Pinpoint to trace an outline of such large objects.

Narrow It Down

To further narrow the field of detection, position the searchcoil near the center of the response pattern (but not at the exact center), release , and then quickly press-and-hold it again. Now you will only hear a response when the searchcoil is right over the top of the target. Repeat this procedure to narrow the zone even further. Each time you repeat the procedure, the field of detection will narrow further.

Consider Purchasing a Pinpointer

When you kneel down to unearth an object, you may find it frustrating as the object can appear exactly like the surrounding soil. You may hold the object in your hand, and find it necessary to pass a handful of dirt over the searchcoil to see if it contains metal. An easier way is to use a handheld pinpointer. It is a probe-like device which is poked into the ground, making close up pinpointing a snap, reducing digging time, and minimizing the size of the holes you will dig. Teknetics offers a robust and inexpensive pinpointer designed for this purpose.



DEPTH AND TARGET DISPLAY

Please refer to the display on your detector and reference the TARGET-ID categories below applicable to your model (not all detectors include all of these categories).

READING THE DISPLAY

The Liquid Crystal Display (LCD) shows the PROBABLE identification of the targeted metal, as well as the PROBABLE depth of the target.

The detector will register a consistent target identification, upon each sweep of the coil, when a buried target has been located and identified. If, upon repeated passes over the same spot, the target identification reads inconsistently, the target is probably a trash item, or oxidized metal. With practice, you will learn to unearth only the repeatable signals.

The segment identifications are highly accurate, when detecting the objects described on the label. However, if an object registers in a given category for an unknown buried object, you could be detecting a metallic object other than the object described on the label, but with the same metallic signature. Also, the greater the distance between the target and the coil, the less accurate the target identification.

GOLD TARGETS Gold objects will register toward the middle or left-of-center on the LCD scale.

Gold flakes may register under iron.

Small gold items may register under foil or 5¢.

Large gold items will register toward the center of the scale.

SILVER TARGETS: Silver objects will register to the right of the scale, under dime or higher.

IRON: All sizes of iron objects will register on the far-left side of the scale. This could indicate a worthless item such as a nail, or a more valuable historic iron relic.

FOIL: Aluminum foil, such as a gum wrapper, will register as foil. A small broken piece of pull tab may also register here.

5¢: Most newer pull-tabs from beverage cans, the type intended to stay attached to the can, will register here. Many gold rings will also register here.

ALUM: Older pull-tabs, which always detached completely from the can, register here. Many medium size gold ring also register here.

PT (pull-tabs): Pull-tabs from older beverage cans will register here. Few newer pull-tabs will also register here. Many gold rings will

also register here.

S-CAP: Older screw caps from glass bottles will register here. Large gold rings, like a class ring, could also register here. Some non-U.S. coins of recent vintage will also register here.

Zinc: Medium conductivity objects and many non-U.S. coins of recent vintage are classified here.

The Target Identification Categories to the right of the display, such as copper coins, 10¢, DIME, 25¢, Quarter, 50¢, \$1 accurately identify these U.S. coins. When used in areas outside the U.S., these categories identify coins or metal objects of high relative conductivity (such as silver coins or relics), or large objects made of any type of metal.

Caution: The target indications are visual references. Many other types of metal can fall under any one of these categories. While the detector will eliminate or indicate the presence of most common trash items, it is impossible to accurately classify ALL buried objects.

5-SEGMENT DEPTH INDICATOR:

The Depth Indicator is accurate for coin-sized objects. It indicates the depth of the target, in inches as follows:

Segments Illuminated

Top Segment	=	0 to 2" deep.
Top 2 Segments	=	2" to 3" deep.
Top 3 Segments	=	4" to 5" deep.
Top 4 Segments	=	6" to 7" deep.
All Segments	=	8"+ deep.



Large and irregularly-shaped objects will yield less reliable depth readings

When passing over an object, the indicators will light up and stay illuminated for three seconds. If the depth indication varies with each sweep, try sweeping at different angles; there may be more than one target present. With practice, you will learn the difference between accurate readings, multiple targets, and highly erratic readings which evidence trash or irregularly shaped objects.

TREASURE HUNTER'S CODE OF ETHICS:

- Always check Federal, State, County and local laws before searching.
- Respect private property and do not enter private property without the owner's permission.
- Take care to refill all holes and leave no damage.
- Remove and dispose of any and all trash and litter found.
- Appreciate and protect our inheritance of natural resources, wildlife and private property.
- Act as an ambassador for the hobby, use thoughtfulness, consideration and courtesy at all times.
- Never destroy historical or archaeological treasures.
- All treasure hunters may be judged by the example you set; always conduct yourself with courtesy and consideration of others

5-YEAR LIMITED WARRANTY

Register your warranty on-line for a chance to win a
FREE DETECTOR.

For details, visit www.tekneticst2.com

The **Delta** metal detector is warranted against defects in materials and workmanship under normal use for five years from the date of purchase to the original owner.

Damage due to neglect, accidental damage, or misuse of this product is not covered under this warranty. Decisions regarding abuse or misuse of the detector are made solely at the discretion of the manufacturer.

Proof of Purchase is required to make a claim under this warranty.

Liability under this Warranty is limited to replacing or repairing, at our option, the metal detector returned, shipping cost prepaid to First Texas Products. Shipping cost to First Texas Products is the responsibility of the consumer.

To return your detector for service, please first contact First Texas for a Return Authorization (RA) Number. Reference the RA number on your package and return the detector within 15 days of calling to:

First Texas Products L.L.C.

1465 Henry Brennan Dr.
El Paso, TX 79936
Phone: 915-633-8354

NOTE TO CUSTOMERS OUTSIDE THE U.S.A.

This warranty may vary in other countries, check with your distributor for details.
Warranty does not cover shipping costs.

According to FCC part 15.21 Changes or Modifications made to this device not expressly approved by the party responsible for compliance could void the users authority to operate this equipment.

This device complies with FCC Part 15 Subpart B Section 15.109 Class B.

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TEKNETICS®

1465 Henry Brennan • El Paso, TX 79936 • (915) 633-8354

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