



Owner's Manual



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ASSEMBLY

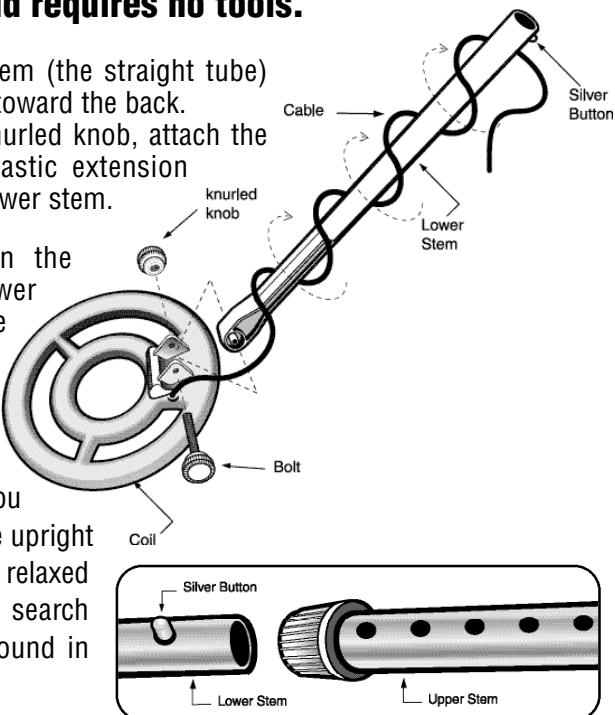
Assembly is easy and requires no tools.

- 1 Position the lower stem (the straight tube) with the silver button toward the back.

Using the bolt and knurled knob, attach the search coil to the plastic extension protruding from the lower stem.

- 2 Press the button on the upper end of the lower stem, and slide the lower stem into the upper stem.

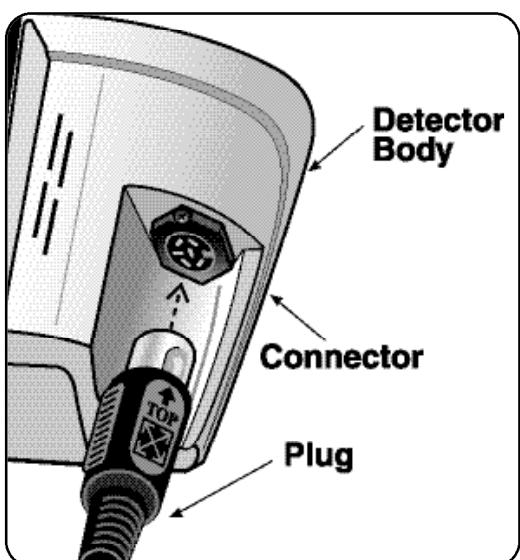
Adjust the stem to a length that lets you maintain a comfortable upright posture, with your arm relaxed at your side, and the search coil parallel to the ground in front of you.



- 3 Wind the cable securely around the stem.

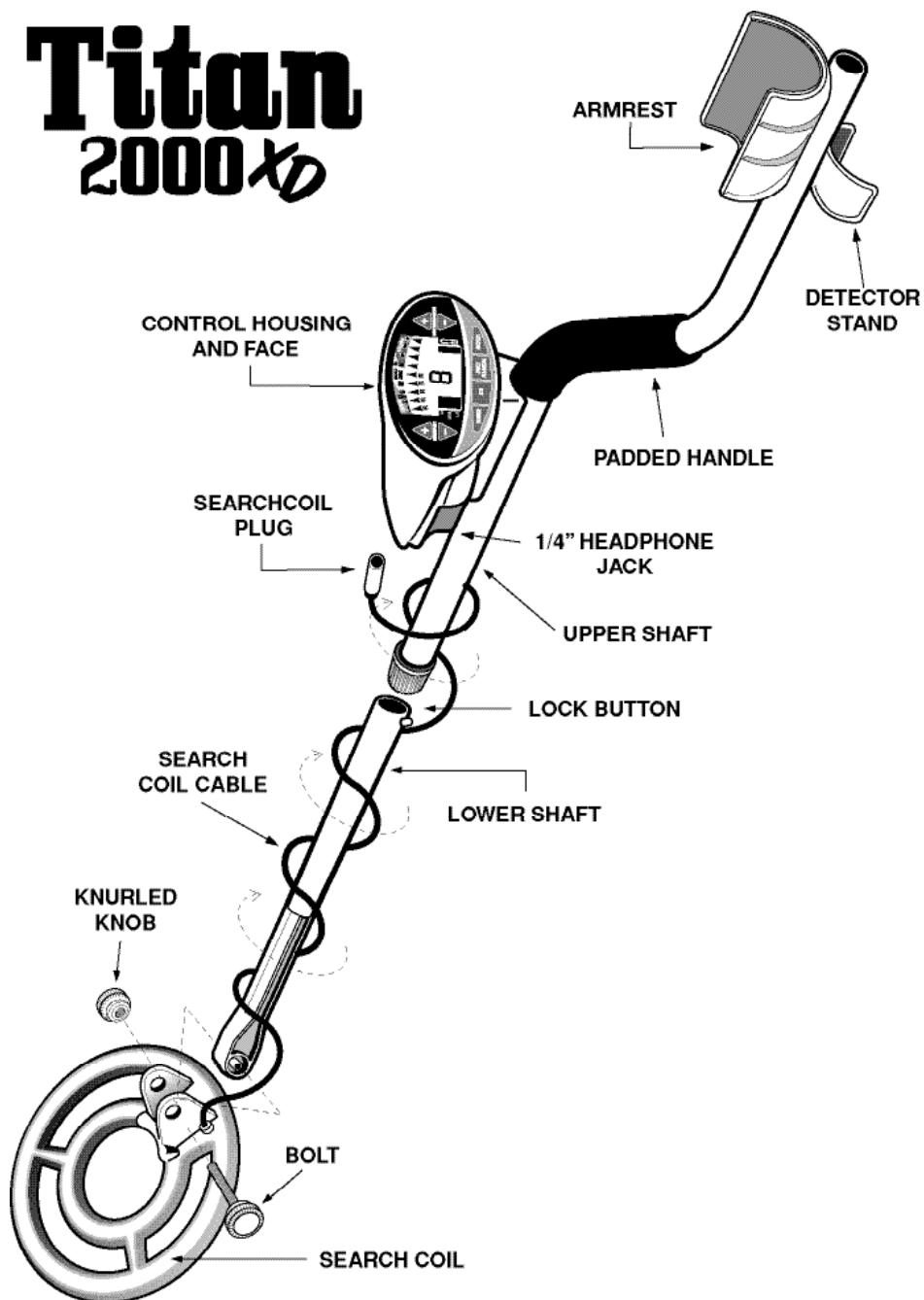
- 4 Insert the plug into the matching connector on the right underside of the detector body. Be sure that the key-way and pins line up correctly.

Caution: **Do not** force the plug in. Excess force will cause damage. To disconnect the cable, pull on the plug. **Do not pull on the cable.**



ASSEMBLY

Titan 2000 XD



BATTERIES

Use **ALKALINE** batteries only.

To install the batteries:

- 1 Remove the battery cover by disengaging the clip at the back.

- 2 Align the polarity of the batteries correctly, with the positive "+" toward the coil plug connection, as indicated by the + and - indicators on the housing.

- 3 Insert (2) 9-Volt **ALKALINE** batteries, with the contacts pointed inward, and press down on the back of the batteries to snap them into place.

Some brands of batteries will require moderate force to clear the retaining tabs.

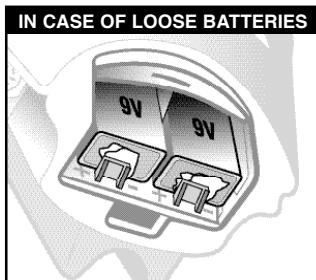
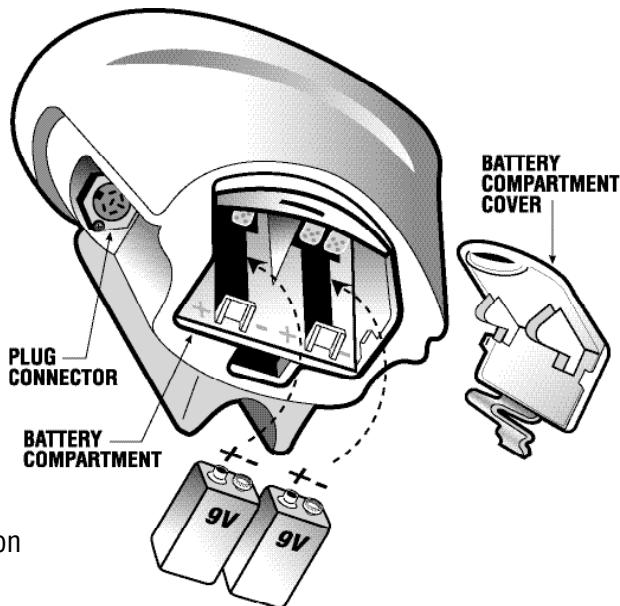
If the batteries fit loosely, and you want to guarantee a very secure electrical contact, insert a piece of paper or thin cardboard between the back of the battery and the supporting post.

- 4 Replace the battery door.

The Low Battery Indicator will come on and stay on if the batteries need to be replaced.

Most metal detector problems are due to improperly installed batteries, or the use of non-alkaline or discharged batteries. **If the detector does not turn on, please check the batteries.**

If the detector does not turn on, check to see that the batteries fit tightly. If the batteries are loose, press them forward while pressing the ON touchpad. To tighten up a loose battery, wedge a piece of paper or thin cardboard between the back of the battery and the supporting post, as illustrated above.



QUICK-START DEMONSTRATION

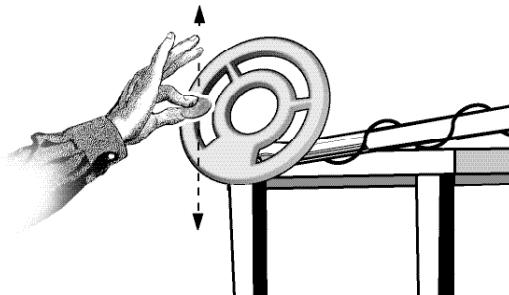
I. Supplies Needed

- A Nail
- A Pull-Tab from a beverage can

- A Quarter
- A Zinc Penny (dated after 1982)

II. Position the Detector

- Place the detector on a table, with the search coil hanging over the edge. (or better, have a friend hold the detector, with the coil off the ground)
- Keep the search coil away from walls, floors, and metal objects.
- Remove watches, rings and other jewelry or metal objects from hands and wrists.
- Turn off appliances or lights that cause electromagnetic interference.
- Pivot search coil back toward the detector body.



III. Power Up

Press the **POWER** touchpad.

IV. Wave each Object over the Search Coil

- Notice a different tone for each object.

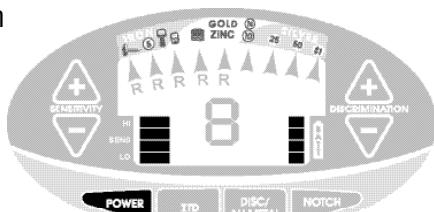
Base Tone: Nail

Low Tone: Pull-tab

Medium Tone: Zinc Penny

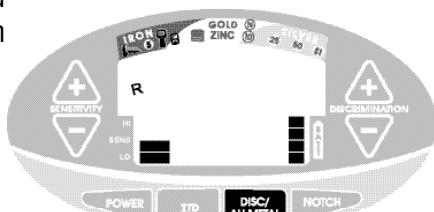
High Tone: Quarter

- Motion is required.** Objects must be in motion over the search coil to be detected.



V. Press the **DISC/ALL METAL** touchpad(*)

The detector will beep twice and "R" will appear under the iron indicator.



Quick-Start Demo continued on next page

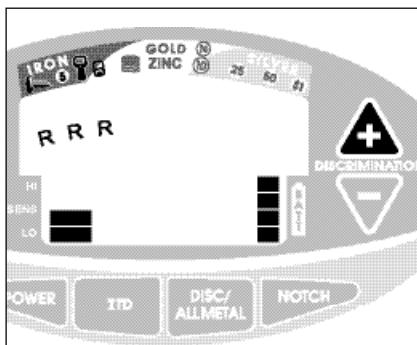
QUICK-START DEMONSTRATION (continued)

VI. Wave the Nail over the Search Coil

- The Nail will not be detected.
- The Nail has been "Discriminated Out."

VII. Press the "DISCRIMINATION-▲"

Three "R"s are now displayed.



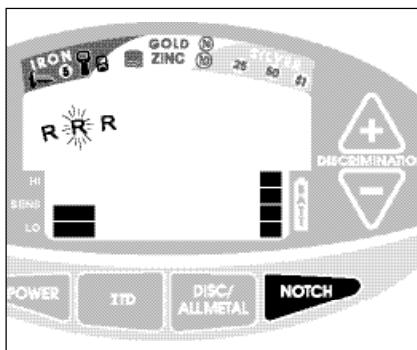
VIII. Wave all objects over the Search Coil

The Nail and Pull-Tab will not be detected.

The other objects will be detected with their own distinctive tones.

IX. Press the NOTCH touchpad.

A flashing "R" will appear under the 5¢/PT segment.



X. Press the DISCRIMINATION ▲ touchpad three times.

The flashing "R" will move to the ZINC segment.

XI. Press the NOTCH touchpad again.

The "R" will appear under zinc.



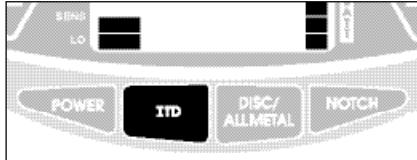
XII. Wave the zinc penny over the search coil.

The penny is discriminated out.

XIII. Press the DISC ALL-METAL touchpad

The detector returns to ALL-METAL mode. No "R"s are displayed. All types of metals will be detected.

XIV. Wave the pull-tab over the coil.



XV. Press the ITD touchpad.

An "R" will appear.

XVI. Wave the pull-tab over the search coil again.

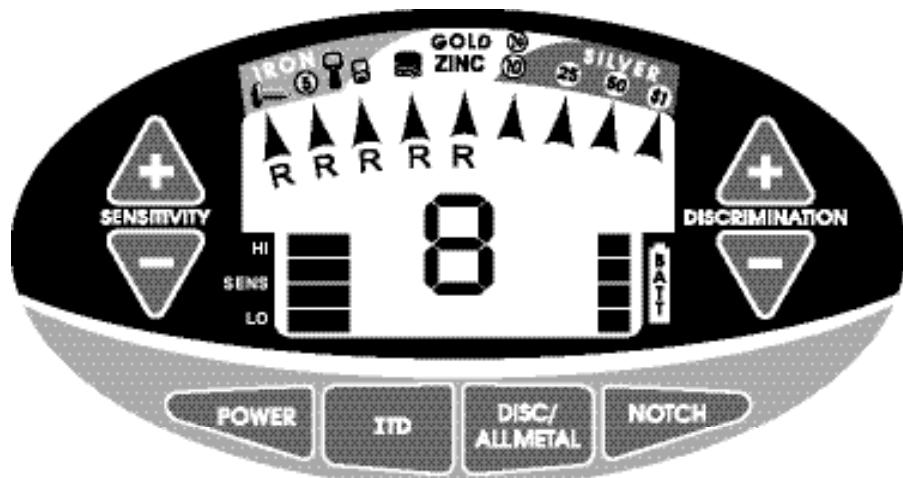
The pull-tab (the most recently detected item) is eliminated from detector.

BASIC OPERATION

POWERING UP

Press the **POWER** touch pad.

- The detector will beep 4 times
- All display segments will illuminate momentarily
- The **SENSITIVITY** and **BATTERY** indicators will stay illuminated



SENSITIVITY

The detector's default sensitivity will be indicated with two segments. At this setting, the detector will detect a coin-sized object, such as a quarter, buried approximately seven inches deep. To change the sensitivity level, and thus the detection depth, press the **SENSITIVITY ▲ or ▼ keys**.

CAUTION:

At higher sensitivity levels, the detector is susceptible to electromagnetic interference from electronic devices. Reduce sensitivity if demonstrating indoors or if using near power lines or electrical equipment.

Reduce sensitivity if detector emits false signals

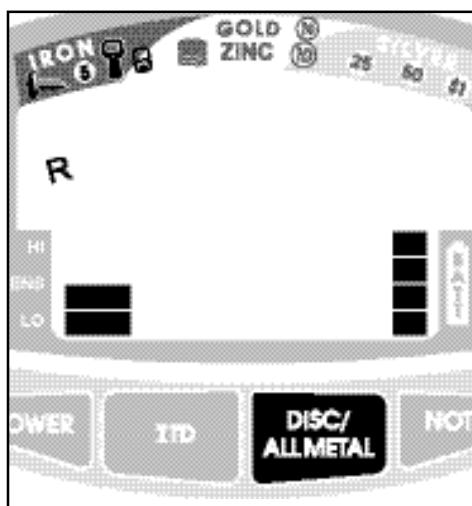
BASIC OPERATION (continued)

DEFAULT OPERATION

The detector defaults to **ALL METAL** mode after powering on. In this mode, all types of metals will be detected. An object's probable identification is indicated by the arrows at the top of the display. In addition, the probable depth of coin-sized objects is indicated by the large numeric indicator in the center of the display. All detected objects will cause the depth indicator to illuminate. The depth indication is not accurate for larger objects; however, it will provide accurate relative depth indications. The greater the distance an object is from the search coil, the greater its depth value.

DISC/ ALL-METAL Touch Pad

Pressing this touch pad will cause the detector to toggle between two operating modes, **DISCRIMINATION** and **ALL-METAL**. If the detector is in the **ALL-METAL** mode (the default mode), pressing the touch pad will change the detector into **DISCRIMINATION** mode. If the detector is in the **DISCRIMINATION** mode, pressing the touch pad will change the detector into **ALL-METAL** mode.



DISCRIMINATION MODE

Discrimination is used to eliminate unwanted objects from detection. To enter this mode, from **ALL-METAL** mode, press the **DISC/ALL-METAL** touch pad.

After pressing **DISC/ALL-METAL**, the detector will:

- **Beep** twice
- **Display** an "R" under the left-most segment, Iron

Ferrous objects will not be detected in **DISCRIMINATION** mode.

Heavily oxidized ferrous objects will sometimes, however, be detected, usually with a high tone and an indication to the right of the target identification scale.

BASIC OPERATION (continued)

To increase the level of discrimination, press the **DISCRIMINATION ▲ touch pad**. Each time the ▲ pad is depressed, an additional "R" will appear, thus eliminating from detection the objects which fall into the corresponding categories.

To decrease the level of discrimination, press the **DISCRIMINATION ▼ touch pad**. Each time the ▼ pad is depressed, an illuminated "R" will disappear, thus returning to detection the objects which fall into the corresponding categories.

Discrimination Mode is a fixed-start-point elimination system. Objects are cumulatively eliminated as the level of discrimination increases.

NOTCH MODE

To selectively eliminate a category from detection within the metallic spectrum, use the **NOTCH Mode**.

Technical Note:

The **NOTCH touch pad** causes the status of an "R" segment to toggle between **ON** and **OFF**.

To use the NOTCH Mode:

The **NOTCH touch pad** can be depressed at any time. But for first-time use, place the detector in **ALL-METAL** mode.

A first demonstration is best accomplished as follows:

- 1) Turn the power **OFF**.
- 2) Turn the power **ON**.
- 3) Press **NOTCH**.

A flashing "R" will appear under the **IRON** segment.

- 4) Press the **DISCRIMINATION ▲ touch pad several times**

Notice that the "R" moves upon each press of the DISCRIMINATION ▲ touch pad.

- 5) Press **NOTCH** again.

The flashing "R" will become permanently illuminated.

If an object has been "**notched-out**", you can return it to detection status. To "**un-notch**" a category:

- 1) Press **NOTCH**.
- 2) Move the flashing "R" over the permanently illuminated "R".
- 3) Press **NOTCH** again.

BASIC OPERATION (continued)

ITD

The **ITD** control is a convenient way to eliminate a known undesirable metal object from detection.

To demonstrate the **ITD** control:

1) Set the detector in **All-Metal Mode**

Note: **ITD** functions in all modes, but is best demonstrated first from the **All-Metal Mode**.

2) Pass the search coil over an undesirable object.

3) Notice the Target Indication

Note: You can only **ITD** objects that register under the five left-most segments (from Iron to Zinc).

4) Press ITD. An "R" appears under the segment to be eliminated.

5) Pass the search coil over the same object again.

The undesirable object is eliminated from detection

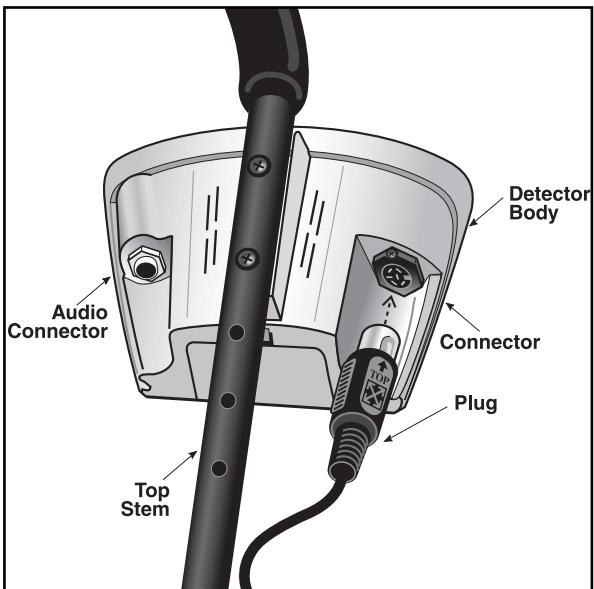
The **ITD** control is easy to use in the field. As you are detecting, and encounter an object which you wish to eliminate from detection, simply press the **ITD** touch pad after detecting the object.

The **ITD** control eliminates the most-recently detected object category from detection. The category eliminated is indicated with an "R".

HEADPHONE JACK

Using headphones (not supplied) with your metal detector makes it easier to identify subtle changes in the threshold levels for better detection results, and also reduces drain on the batteries. The **Titan 2000 XD Metal Detector** has a stereo headphone jack located at the rear of the case.

This device is to be used with interconnecting cables/headphone cables shorter than three meters.



AUDIO TARGET IDENTIFICATION

While the **LCD (Liquid Crystal Display)** is very accurate in identifying buried objects, the user in the field does not always maintain the display screen in his field of vision. Therefore, we have incorporated an audio feedback mechanism to alert the user to the nature of buried objects. This audio feedback system first alerts the user to the presence and classification of objects, whose nature and location can be confirmed using the **LCD** display.

The detector can sound four different tones, depending on the object detected.

BASS TONE

Ferrous objects, such as iron and steel, will induce a bass tone.

The smallest gold objects can also induce a bass tone.

LOW TONE

Pull-Tabs, nickels & smaller gold

MEDIUM TONE

Newer pennies (post-1982), larger gold objects, zinc, small brass objects, and most bottle screw caps will induce medium tones. Many recent vintage foreign currencies will induce medium tones.

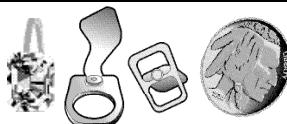
HIGH TONE

Silver and copper coins, larger brass objects, older pennies (pre-1982), and highly oxidized metals will induce high tones. Quarters, dimes and other precious coins fall into this category.

BASS TONE



LOW TONE



MEDIUM TONE



HIGH TONE



TARGET AND DEPTH DISPLAY

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, in inches.

The detector will register a repeated, unchanging target identification 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 you register 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 on the left side of the LCD scale.

Gold flakes will register under Iron/Foil
Small gold items will register under PT.
Medium-sized gold items will register under S-cap.

Large gold items will register under Zinc.

SILVER TARGETS: Silver objects will register to the right of the scale, under 25¢, 50¢, or \$1, depending on the size of the object. The larger the object, the farther to the right it will register.

IRON/FOIL: All sizes of iron and aluminum 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.

PT (pull tab): All older pull tabs from

beverage cans will register here. Some newer pull tabs will 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: Newer pennies (post-1982) will register here. Many non-U.S. coins of recent vintage will also register here.

10¢: Dimes and pre-1982 pennies will register here. Older, pre-1982, pennies are composed of copper, which has a metallic signature similar to a dime.

CAUTION: The target indications are visual references. Many other types of metal can fall under any one of these categories. While the **Titan 2000 XD** will eliminate or indicate the presence of most common trash items, it is impossible to accurately classify ALL buried objects.

DEPTH INDICATOR:

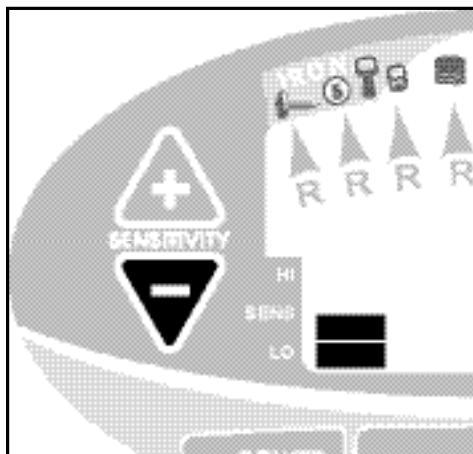
The Depth Indicator is accurate for coin-sized objects. It indicates the depth of the target, in inches. Large and irregularly-shaped objects will yield less reliable depth readings

When passing over an object, the depth indicator will light up and stay illuminated until another object is scanned. Repeated indication at the same depth level indicates an accurate target detector. 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.

SENSITIVITY ADJUSTMENT

ELECTROMAGNETIC INTERFERENCE

The principle use for the Sensitivity Control is to eliminate Electromagnetic Interference (**EMI**). A hobby metal detector is an extremely sensitive device; the search coil creates its own magnetic field and acts like an antenna. If your detector beeps erratically when the search coil is motionless, the unit is probably detecting another electromagnetic field.



Common sources of **EMI** are electric power lines, both suspended and buried, motors, and household appliances like computers and microwave ovens. Some indoor electronic devices, such as dimmer switches used on household lighting, produce severe **EMI** and can cause the detector to beep erratically. Other metal detectors also produce their own electromagnetic fields; so if detecting with a friend, keep two metal detectors at least 20 feet apart.

If the detector beeps erratically, **REDUCE THE SENSITIVITY** by pressing the **Sensitivity ▼ Pad** on the left of the control panel.

SEVERE GROUND CONDITIONS

A secondary use for the Sensitivity Control is to reduce false detection signals caused by severe ground conditions. While your **Titan 2000 XD** contains circuitry to eliminate the signals caused by most naturally occurring ground minerals, 100% of all ground conditions cannot be anticipated. Highly magnetic soils found in mountainous and gold-prospecting locations can cause the detector to emit tones when metal objects are not present. High saline content soils and sands can sometimes cause the detector to false.

If the detector emits false, non-repeatable, signals, **REDUCE THE SENSITIVITY**.

MULTIPLE TARGETS

If you suspect the presence of deeper targets beneath a shallower target, reduce the sensitivity to eliminate the detection of the deeper targets, in order to properly locate and identify the shallower target.

IN THE FIELD TECHNIQUES

PINPOINTING

Accurate pinpointing takes practice and is best accomplished by “**X-ing**” the target area.

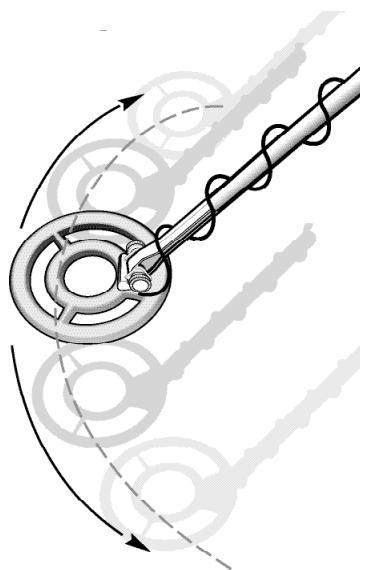
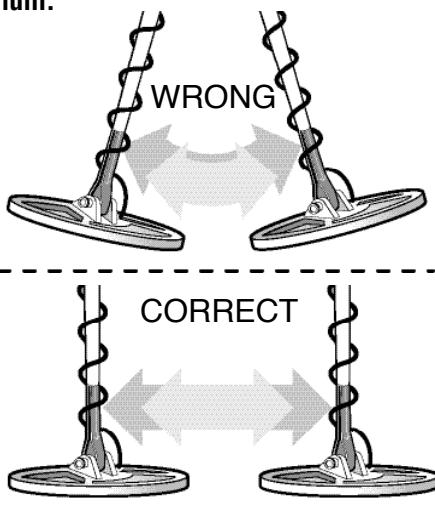
1. Once a buried target is indicated by a good tone response, continue sweeping the coil over the target in a narrowing side-to-side pattern.
2. Take visual note of the place on the ground where the “**beep**” sounds.
3. Stop the coil directly over this spot on the ground.
4. Now move the coil straight forward and straight back towards you a couple of times.
5. Again make visual note of the spot on the ground at which the “**beep**” sounds.
6. If needed, “**X**” the target at different angles to “**zero in**” on the exact spot on the ground at which the “**beep**” sounds.



When pinpointing a target, try drawing an “X”, as illustrated, over where the tone is induced.

COIL MOVEMENT

When swinging the coil, be careful to keep it level with the ground about one inch from the surface. **Never swing the coil like a pendulum.**



NOTE: This modern Metal Detector is referred to as a Motion Detector since it can respond to a target only while the searchcoil is being moved over the Target

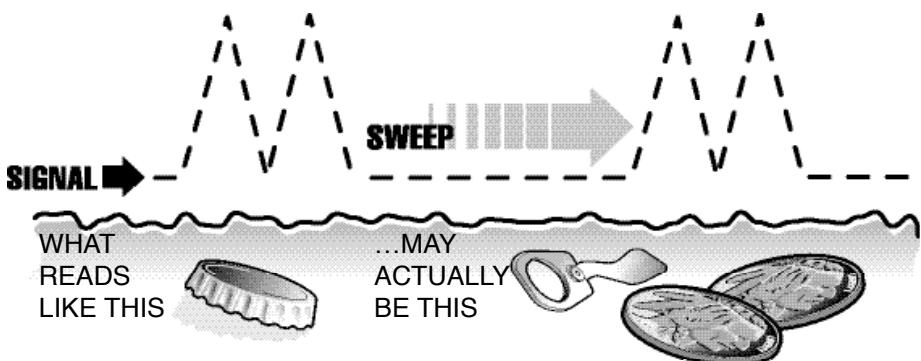
IN THE FIELD TECHNIQUES (continued)

Swing the search coil slowly, overlapping each sweep as you move forward. It is important to sweep the coil at a consistent speed over the ground as you search. After identifying a target, your sweep technique can help in identifying both the location and the nature of the target. If you encounter a weak signal, try moving the coil in short, rapid sweeps over the target zone; such a short rapid sweep may

provide a more consistent target identification.

Most worthwhile objects will respond with a repeatable tone. If the signal does not repeat after sweeping the coil directly over the suspected target a few times, it is more than likely trash metal.

Crossing the target zone with multiple intersecting sweeps at multiple angles is another way to verify the repeatability of the signal, and the potential of the buried target. To use this method, walk around the target area in a circle, sweeping the coil across the target repeatedly, every 30 to 40 degrees of the circle, about ten different angles as you walk completely around the target. If a high-tone target completely disappears from detection at a given angle, chances are that you are detecting oxidized ferrous metals, rather than a silver or copper object. If the tone changes at different angles, you may have encountered multiple objects. If you are new to the hobby,



IN THE FIELD TECHNIQUES (continued)

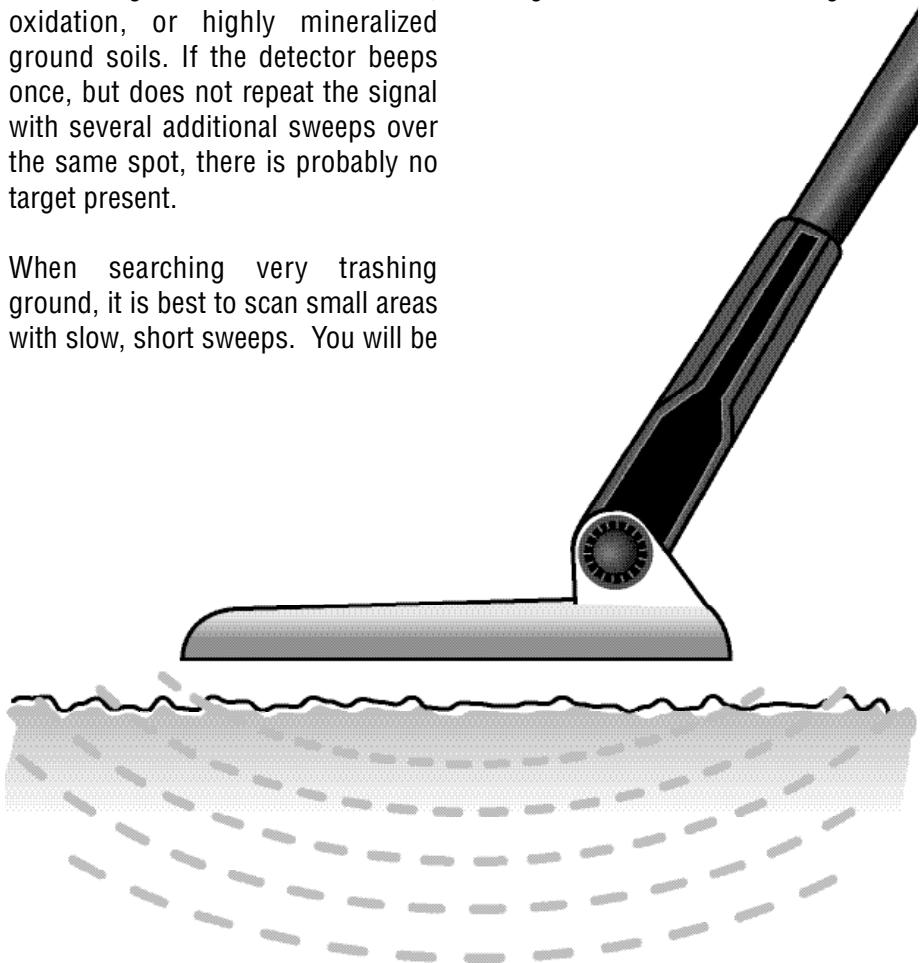
you may want to dig all targets at first. With practice in the field, you will learn to better discern the nature of buried objects by the nature of the detector's response.

You may encounter some false signals as you proceed. False signals occur when the detector beeps, but no metal target is present. False signals can be induced by electromagnetic interference, oxidation, or highly mineralized ground soils. If the detector beeps once, but does not repeat the signal with several additional sweeps over the same spot, there is probably no target present.

When searching very trashing ground, it is best to scan small areas with slow, short sweeps. You will be

surprised just how much trash metal and foil you will find in some areas. The trashiest areas have been frequented by the most people, and frequently hold the most promise for finding the most lost valuables.

Also maintain the search coil positioned just above the surface of the ground, without making contact with the ground. Making contact with the ground can cause false signals.



TROUBLESHOOTING

TROUBLE SHOOTING GUIDE

SYMPTOM	CAUSE	SOLUTION
Detector chatters or beeps erratically	<ul style="list-style-type: none">Using detector indoorsUsing detector near power linesUsing 2 detectors in close proximityHighly oxidized buried objectEnvironmental electromagnetic interference	<ul style="list-style-type: none">Use detector outdoors onlyMove away from power linesKeep 2 detectors at least 20' apartOnly dig up repeatable signalsReduce sensitivity until erratic signals cease
Constant low tone or constant repeating tones	<ul style="list-style-type: none">Discharged batteriesWrong type of batteries	<ul style="list-style-type: none">Replace batteriesUse only 9V alkaline batteries, or fully charged rechargeable
LCD does not lock on to one target ID or detector emits multiple tones	<ul style="list-style-type: none">Multiple targets presentHighly oxidized targetSensitivity set too high	<ul style="list-style-type: none">Move coil slowly at different anglesReduce sensitivity
No power, no sounds	<ul style="list-style-type: none">Dead batteriesPoor battery contactCord not connected securely	<ul style="list-style-type: none">Replace batteriesPush batteries in tighterInsert paper spacers (see page 5)Check connections

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. Most pull-tabs can be eliminated with the Mode Control, 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.

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 try not to leave any 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

First Texas Products, L.L.C. Five Year Limited Warranty

Titan Metal Detectors are warranted against defects in workmanship or materials under normal use for five years from date of purchase to the original user. Liability in all events is limited to the purchase price paid. **Liability under this WARRANTY is LIMITED** to replacing or repairing, at our option, any **Titan Detector** returned, shipping cost prepaid, to

First Texas Products, L.L.C.
1465-H Henry Brennan
El Paso, Texas 79936

Damage due to neglect, accidental damage or misuse of this product is not covered by this warranty.

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

NOTE TO FOREIGN COUNTRY CUSTOMERS

This warranty may vary in other countries, check with your distributor for details.

Factory warranty follows the channel of distribution.

Warranty does not cover shipping costs.

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Titan is made exclusively for Kellyco Metal Detector by First Texas Products, L.L.C.

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