Titan
1000 XD

Owner's Manual

	TARGET DEPTH	TARGET ID		
SENSITIVITY	SURFACE	►	SILVER/ COINS	1¢ 25¢ 50¢ $1
	2"	►	GOLD/ COINS/ PULLTABS	
	4"	►	SM GOLD/ IRON/ TRASH	
	6"			

MODE   OFF   ON
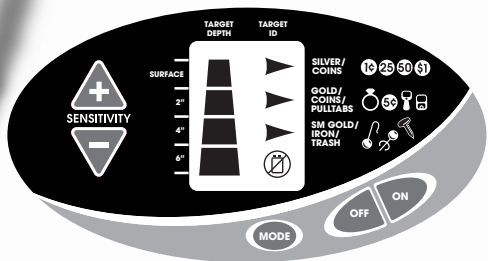
TABLE OF CONTENTS

ASSEMBLY

Assembly is easy and requires no tools.

❶ 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.
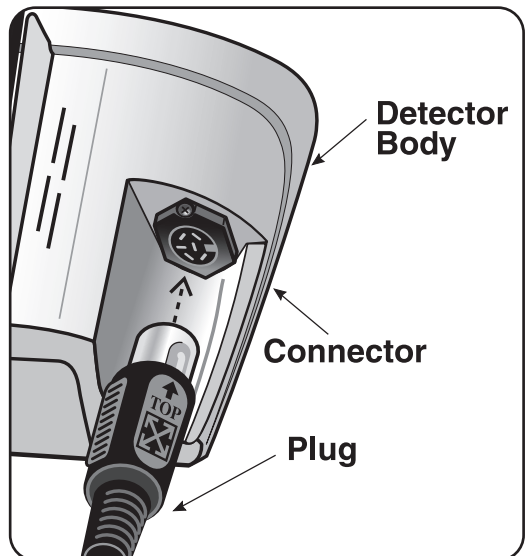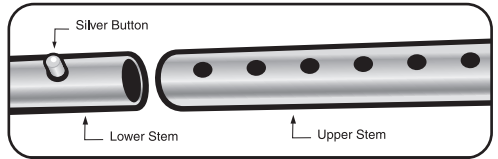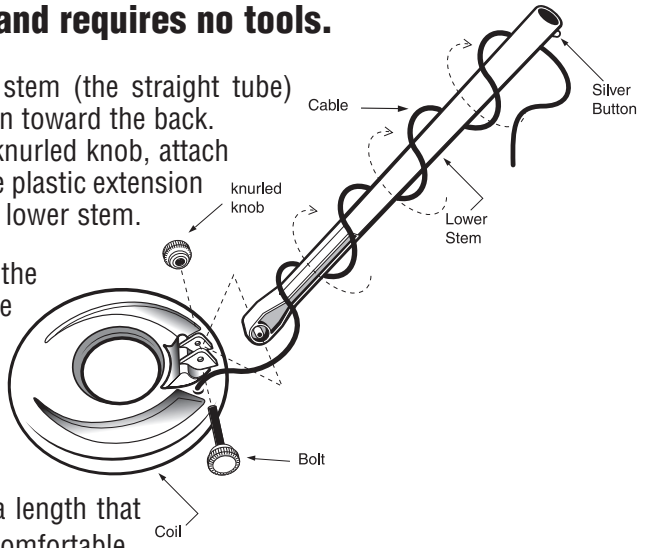
Cable

Silver Button

knurled knob

Lower Stem

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

Bolt

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.

Coil

Silver Button

Lower Stem

Upper Stem
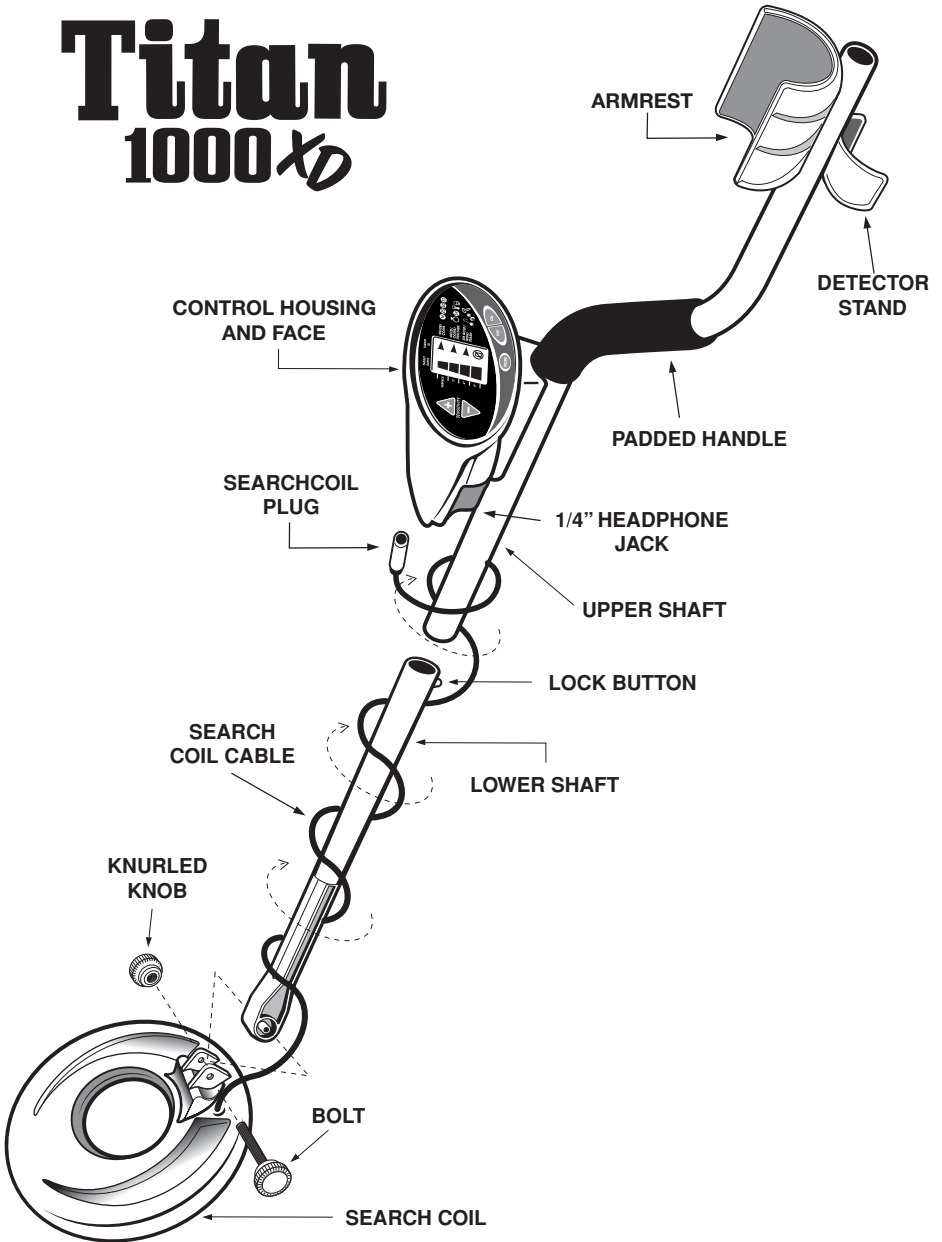
❸ Wind the cable securely around the stem.

❹ 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.***

Detector Body

Connector

TOP

Plug

ASSEMBLY

Titan 1000 XD

ARMREST

DETECTOR STAND

CONTROL HOUSING AND FACE

PADDED HANDLE

SEARCHCOIL PLUG

1/4" HEADPHONE JACK

UPPER SHAFT

LOCK BUTTON

SEARCH COIL CABLE

LOWER SHAFT

KNURLED KNOB

BOLT

SEARCH COIL

BATTERIES

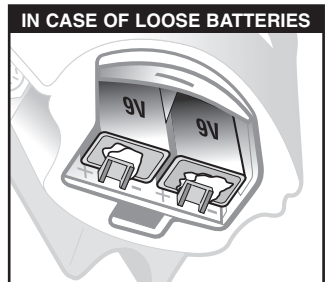Use **ALKALINE** batteries only.

To install the batteries:

❶ Remove the battery cover by disengaging the clip at the back.

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

BATTERY COMPARTMENT COVER

PLUG CONNECTOR

BATTERY COMPARTMENT

9V   9V

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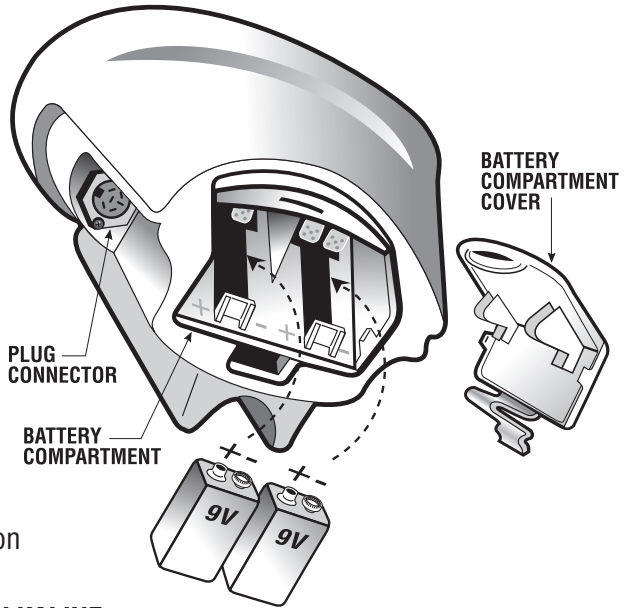
Some brands of batteries will require moderate force to clear the retaining tabs.

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.

IN CASE OF LOOSE BATTERIES

9V   9V

❹ 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

a. 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)

b. Keep the search coil away from walls, floors, and metal objects.

c. Remove watches, rings and other jewelry or metal objects from hands and wrists.

d. Turn off appliances or lights that cause electromagnetic interference.

e. Pivot search coil back toward the detector body.
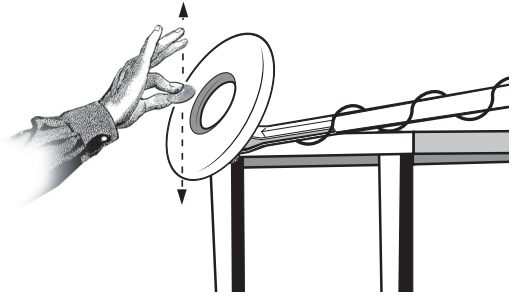
III. Power Up

Press the ON touchpad.

The detector will beep twice and the full sensitivity setting will be indicated on the left of the display.
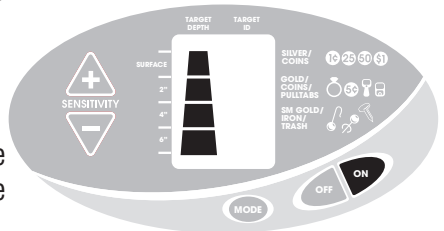
IV. Wave each Object over the Search Coil

a. Notice a different tone for each object.

Low Tone:	Nail
Medium Tone:	Pull-tab & Zinc Penny
High Tone:	Quarter

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

V. Press the MODE touchpad(*)

The detector will beep twice and the sensitivity setting will flash on the left side of the display.
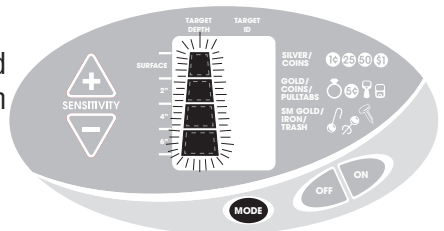
QUICK-START DEMONSTRATION (continued)

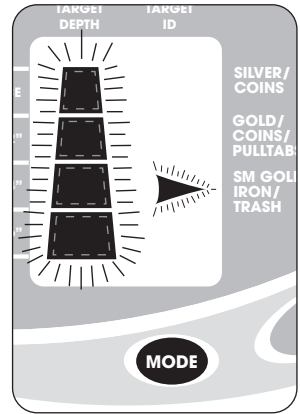**VI. Press the MODE touchpad again.(*)**
    a. A flashing indicator will point toward IRON.
    b. The flashing indicator tells us that Iron has
        been eliminated from detection.

VII. Wave the Nail over the Search Coil
    a. The Nail will not be detected.
    b. The Nail has been "Discriminated Out."

VIII. Wave the Quarter, Penny, and Pull-Tab
      over the Search Coil
        These non-ferrous objects will be detected
        with their own distinctive tones.

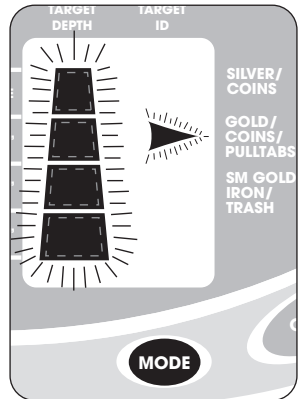**IX. Press the MODE touchpad again.(*)**
    a. The detector will beep twice and the sensitivity setting will flash on the
        left side of the display.
    b. Notice the flashing arrow pointing toward Iron.
        The flashing arrow indicates that this target category is currently
        "Discriminated Out."

X. Press the MODE touchpad again.(*)
        The flashing arrow will now point toward
        MID-RANGE.

XI. Wave all objects over the Search Coil
        The Pull-Tab and Zinc Penny will not be
        detected.
        The other objects will be detected with their
        own distinctive tones.

XII. Toggle modes by pressing the MODE
      touchpad again.(*)
    a. Press once to see the current discrimination
       status of the detector (Mid-Range Eliminated).
    b. Then press again to toggle to the third discrimination setting.
         i.   Iron is eliminated.
         ii. Mid-Range Metals are eliminated.
         iii. Only high-tone metals like silver and copper will be detected.

(*)Note: The mode status will flash for 10 seconds. After 10 seconds, mode
    status will time-out and stop flashing.

BASIC OPERATION

POWERING UP

Press the **ON** touch pad.

All display indicators will illuminate momentarily.

> The 4-segment pyramid-shaped Sensitivity Indicator will illuminate on the left side of the display. The 4-segment pyramid indicates that the detector is at full sensitivity.

> When an object is detected, the object will be identified by a tone, a display indicator, and a depth indication.

A two-minute **"warm-up"** is required before the detector reaches full sensitivity.

UNDERSTANDING THE DISPLAY

The **LEFT SIDE** of the display has a dual purpose:

❶ **SENSITIVITY LEVEL**

Upon power-up, and after pressing either the up- or down-sensitivity pads, the pyramid-shaped display indicates the detector's **sensitivity level.**

The sensitivity level can be changed using the up- and down-pads.

At maximum sensitivity, the unit can detect a coin-sized metal object buried about 6" beneath the surface; larger objects can be detected much deeper.
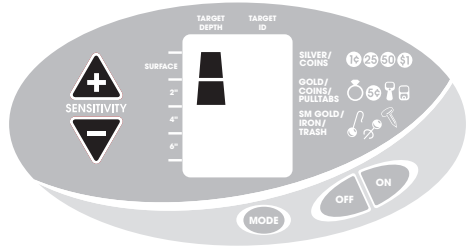
❷ **DEPTH INDICATION**

After detecting an object, the pyramid-shaped display indicates the approximate **depth** of buried, coin-sized objects.

Objects at or near the surface will illuminate the single segment at the top of the scale.
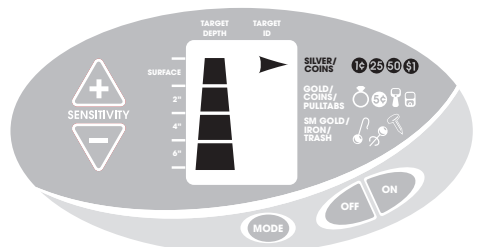
More deeply buried objects will illuminate more segments, indicating depths of 2, 4, or 6 inches, as identified to the left of the display.

NOTE: The depth indicator is not accurate for large, or irregularly shaped, objects. However, the scale will provide relative depth indications for larger objects; a given object will induce deeper readings the farther it is from the search coil.

BASIC OPERATION (continued)

**The RIGHT SIDE of the display classifies objects into three categories.**

Silver/Copper: ————————————————

Objects composed of silver and cooper will illuminate this arrow. Buried and heavily oxidized metal objects, such as old tin cans, can also fall into this category.   Larger aluminum objects, like beverage cans, will sometimes fall into this category.
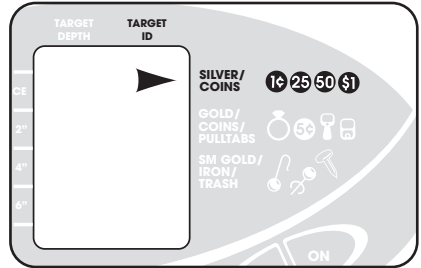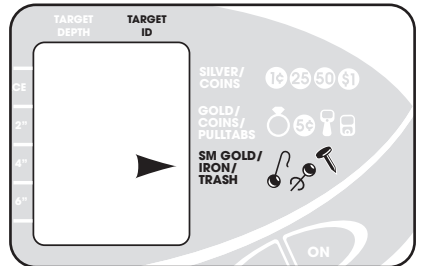
Mid-Range: ————————————————

Mid-range objects cover a large variety of metals.

Among them are: pull-tabs from beverage containers, nickels, medium-sized gold objects, some types of aluminum, and zinc.
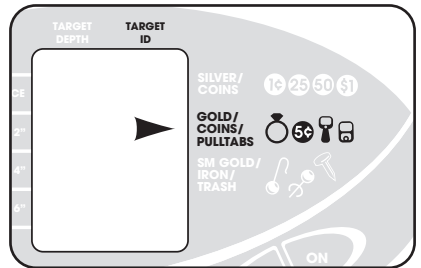
Iron: ————————————————————

All ferrous objects, and some smaller aluminum objects, fall into the iron category. Small gold objects can also fall into this range.

The **BOTTOM RIGHT SIDE** of the display will illuminate a Low Battery Indicator symbol if the batteries are discharged. The indicator illuminates, and remains illuminated, when the 9-volt batteries have discharged to a level of 7.35 volts.
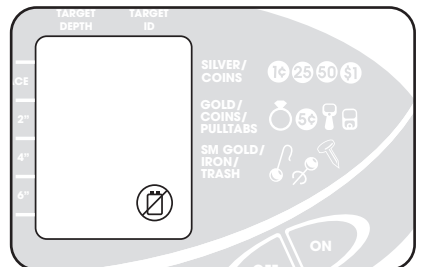
Reading the Display IN THE FIELD

With the detector in use in the field, the display will indicate both the DEPTH and the TARGET IDENTIFICATION of each object detected. After a target is detected, these indicators will remain illuminated with this information until the next target has been detected. If uncertain about the target's identification, try sweeping the coil at a faster speed. A more rapid sweep over a target will generally provide a more accurate target identification.

BASIC OPERATION (continued)

The MODE CONTROL

The **MODE touch pad** allows for the elimination from detection of unwanted metal objects. By pressing **MODE,** the user toggles among four different discrimination settings.

>*If an object is detected during mode selection, the detector will exit mode selection. If this happens, you will need to press MODE again and begin mode selection over again. To avoid this, keep the detector stationary and reduce sensitivity before pressing MODE.*

During **MODE** (or discrimination) selection, the **SENSITIVITY INDICATOR** on the left of the display will flash continually. The detector will remain in this discrimination selection mode for 10 seconds until a metal object has been detected.

The first time you press **MODE,** the detector will indicate the current discrimination setting, both visually, and with distinctive tones. Each **first time** the user presses **MODE** after **powering on,** the detector will do the following:

FIRST Push of THE MODE BUTTON: The pyramid-shaped **Sensitivity Indicator** will **FLASH** continually, give a **HIGH TONE,** and show that you are in the **ALL-METAL MODE.**

SECOND Push of THE MODE BUTTON: ... will give you a **LOW TONE** and show that you are in the **IRON DISCRIMINATION MODE.**

THIRD Push of THE MODE BUTTON: ... will give you the **MEDIUM TONE** and show that you are in the **MID-RANGE DISCRIMINATION MODE.**

FOURTH Push of THE MODE BUTTON:... will give you the **LOW** and **MEDIUM TONE** and show that you are in **FULL DISCRIMINATION.**

After a mode has been selected, and targets have been detected, the detector will store the discrimination settings.

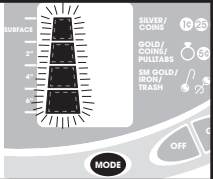Each subsequent time the user returns to **MODE** selection, the detector will:
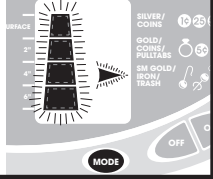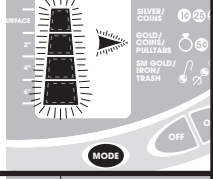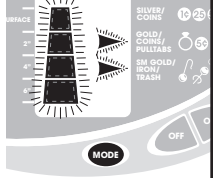
❶ **Then indicate the last stored discrimination setting.**

The user can then toggle through the discrimination modes by pressing the MODE touch pad. The detector will store the current discrimination setting until the power is turned off.

NOTE: Larger detected targets like aluminum, brass, large iron items cannot be rejected by the discrimination system. Only the smaller know trash targets will be rejected. **TIP:** To check and see if an item is large try raising the search coil off the ground about 6 to 12 inches, if you still get a strong audio signal it may be a large target.

BASIC OPERATION (continued)

Discrimination Settings are as follows:

Mode	Metals Eliminated	Status Tones	Display (During discrimination selection)
All-Metal	None	High	No Target Indicators Flashing
Iron Discrimination	Ferrous only	Low	Iron Indicator Flashing
Mid-Range Discrimination	Pull-tabs, Screw Caps, some Foil, medium Gold, Zinc, Nickels	Medium	Mid-Range Indicator Flashing
Full Discrimination	Ferrous and Mid-Range metals	Low & Medium	Iron and Mid-Range Indicators Flashing
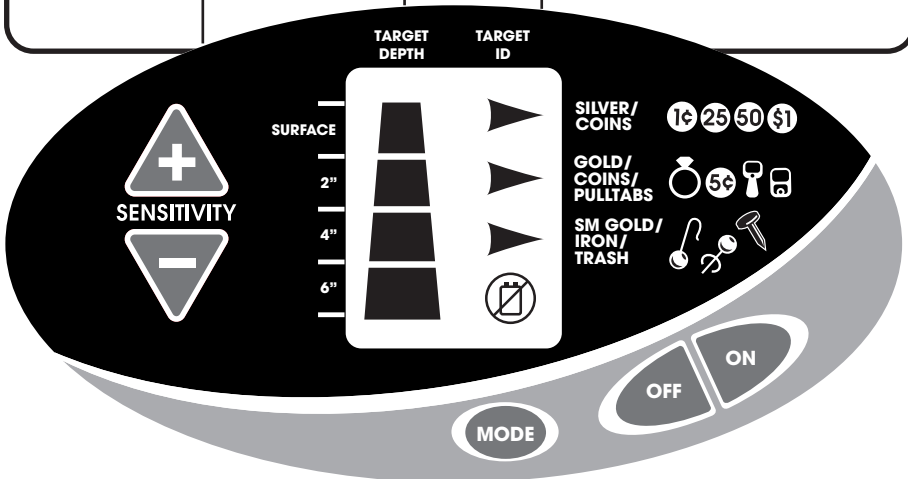
AUDIO TARGET IDENTIFICATION

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 will sound three different tones. These three tones correspond to the three target categories depicted on the **LCD** display.

LOW TONE
Ferrous objects, such as iron and steel, will induce a low tone. Small gold objects can also induce a low tone.

MEDIUM TONE
Pull-tabs, 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, including loonies & toonies.

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.

LOW TONE

Nails, Bottle Caps, & Small Gold

MEDIUM TONE

Old & New Pull Tabs, Zinc US Pennies (Post 1982), Nickel, Larger Gold Objects, Pennies, Loonies & Toonies.

HIGH TONE

Copper, Silver & Brass Copper Pennies (Pre 1982)

Audio Target Identification (ATI) classifies metals into three categories.

SENSITIVITY ADJUSTMENT

Upon power-up, the detector defaults to 3/4 sensitivity. To increse to full sensitivity, press the Sensitivity ▲ touch pad.

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 magnetic 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 will 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 Down-Sensitivity Arrow ▼ 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 1000 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 also 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.
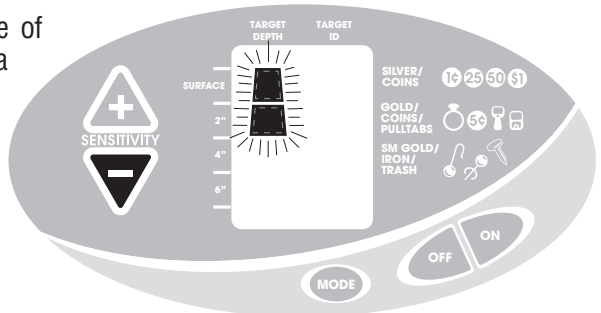
IN THE FIELD TECHNIQUES

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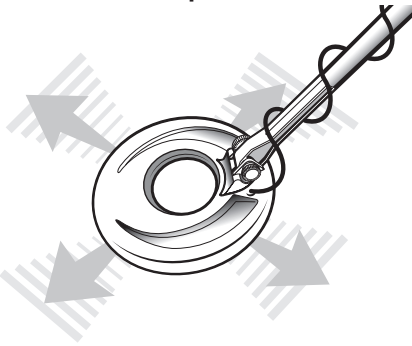
When pinpointing a target, try drawing an "X", as illustrated, over where the tone is induced.

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.**

WRONG

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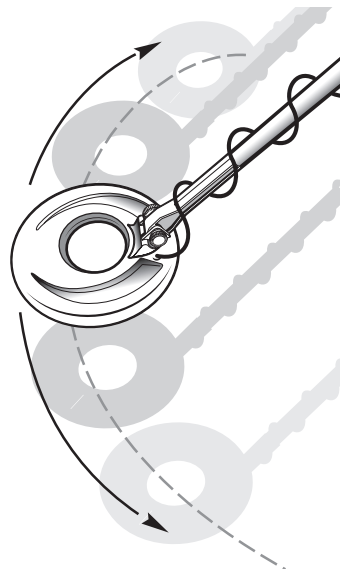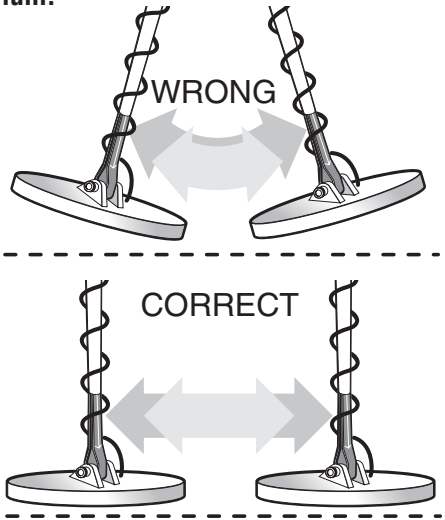
NOTE: *This modern Metal Detector is referred to as a Motion Detector since it can respond to a target only while the searchcoil is being moved over the Target*

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 a different angles, you many have encountered multiple objects. If you are new to the hobby, 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

SIGNAL

SWEEP

WHAT READS LIKE THIS

…MAY ACTUALLY BE THIS
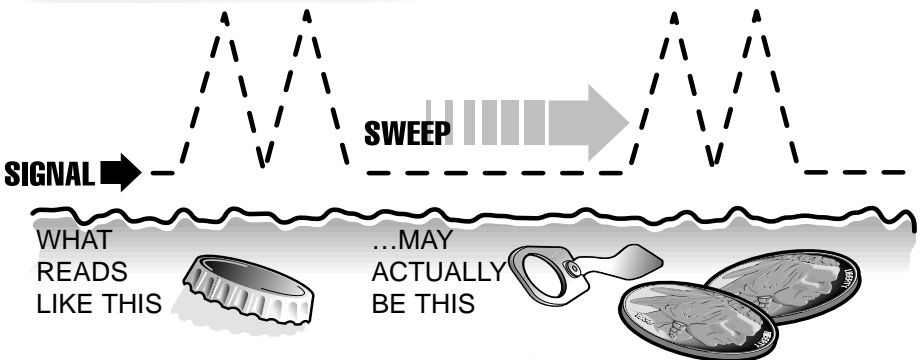
detector's response.

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.
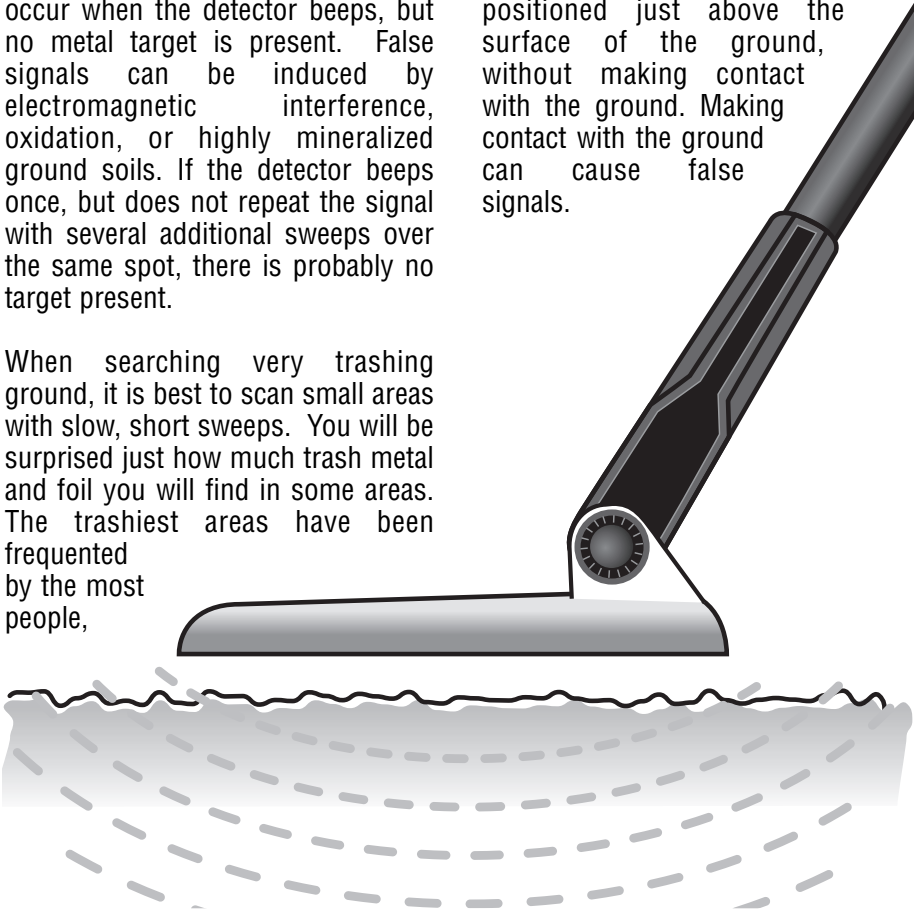
USING HEADPHONES

Using headphones (not supplied) improves battery life, and prevents the sounds from annoying bystanders.
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.

TROUBLESHOOTING

TROUBLE SHOOTING GUIDE

| SYMPTOM	CAUSE	SOLUTION
Detector chatters or beeps erratically	• Using detector indoors • Using detector near power lines • Using 2 detectors in close proximity • Highly oxidized buried object • Environmental electromagnetic interference	• Use detector outdoors only • Move away from power lines • Keep 2 detectors at least 20' apart • Only dig up repeatable signals • Reduce sensitivity until erratic signals cease
Constant low tone or constant repeating tones	• Discharged batteries • Wrong type of batteries	• Replace batteries • Use only 9V alkaline batteries
LCD does not lock on to one target ID or detector emits multiple tones	• Multiple targets present • Highly oxidized target • Sensitivity set too high	• Move coil slowly at different angles • Reduce sensitivity
No power, no sounds	• Dead batteries • Poor battery contact • Cord not connected securely	• Replace batteries • Push batteries in tighter •Insert paper spacers **(see page 5)** • Check connections

CARE AND MAINTENANCE

Your **Titan 1000 XD** Metal Detector is an example of superior design and crafts-manship. The following suggestions will help you care for your metal detector so you can enjoy it for years to come.

Keep the detector's chassis dry and do not let water enter it. If the chassis gets wet, wipe it dry immediately. Liquids might contain minerals that can corrode the electronic circuits.

Use and store the detector only in normal temperature environments. Temperature extremes can shorten the life of electronic devices, damage batteries, and distort or melt plastic parts.
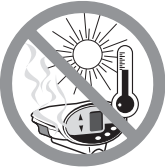
Keep the detector away from dust and dirt, which can cause premature wear of parts.

Handle the detector gently and carefully. Dropping it can damage circuit boards and cases and can cause the detector to work improperly.

Use only fresh batteries of the required size and type. Old batteries can leak chemicals that damage your detector's electronic parts.

Wipe the detector with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean it.

Modify or tampering with the detector's internal components can cause a malfunction and might invalidate it's warranty.

The searchcoil supplied with the detector is waterproof however, and may be submerged in either fresh or salt water. After using the searchcoil in salt water, rinse it with fresh water to prevent corrosion of the metal parts.

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.
1120 Alza Drive,
El Paso, Texas 79907

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.

www.kellycodetectors.com

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1085 Belle Avenue, Winter Springs, FL 32708
(407) 699-8700

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