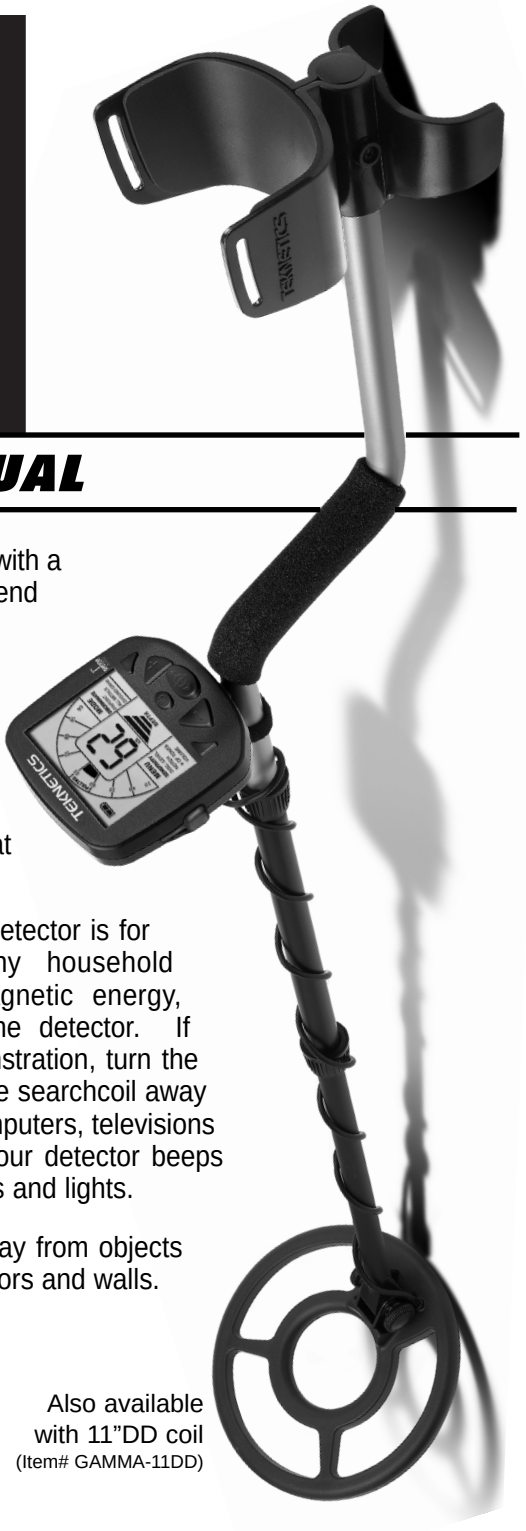
gamma 6000
METAL DETECTOR



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# GAMMA-11DD)

TABLE OF CONTENTS

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

Adjusting the Armrest

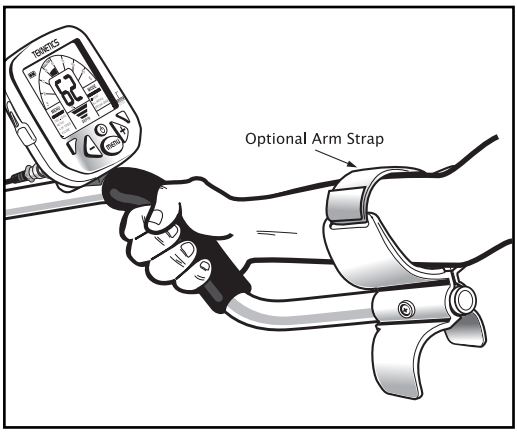
The armrest may be moved forward or backwards by removing the single screw and nut, and then repositioning the 2-piece armrest. Users with shorter arms may find the armrest more comfortable in the forward position. In order to move the armrest backwards, the plastic plug must be removed from the aluminum tube.

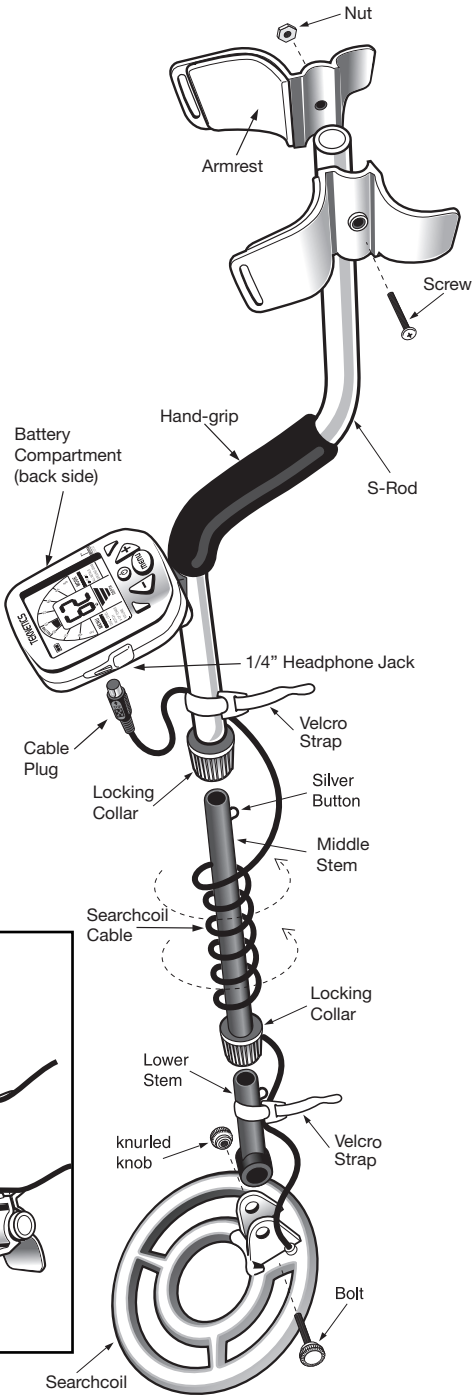
Armrest Strap

(optional accessory)

The strap is available for purchase as a separate accessory. Some users prefer to use the strap when swing the detector vigorously, in order to hold the detector secure against the arm.

The detector can also be used without the strap, with no compromise to detector balance and stability under most conditions.

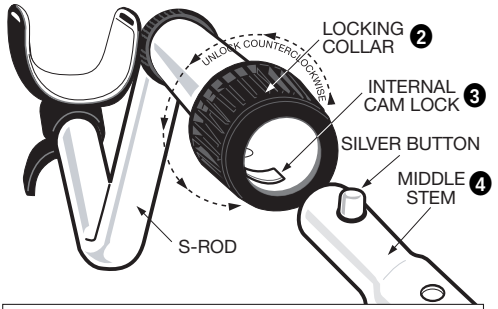


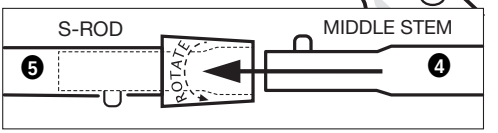


ASSEMBLY

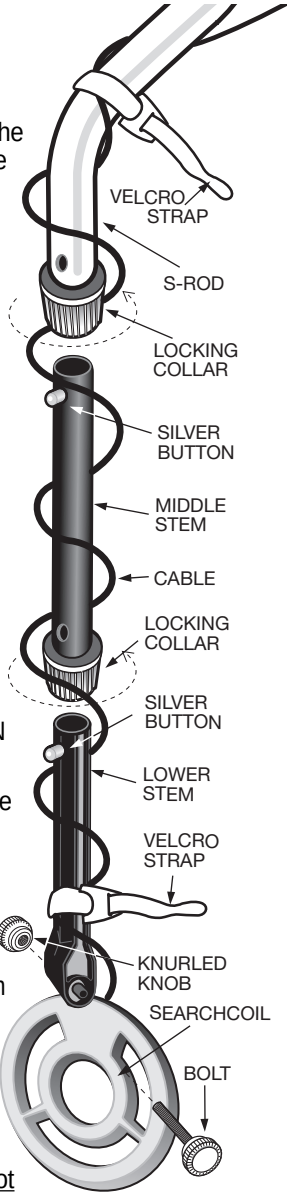
Caution: Forcing in MIDDLE STEM with CAM LOCK raised may form a burr on camlock. If this happens, remove burr with knife to allow insertion.

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.
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.

BATTERIES

The detector requires a single 9-volt **ALKALINE** battery
(battery not included).
Do not use ordinary zinc carbon batteries.
Do not use "Heavy Duty" batteries.

Rechargeable batteries can also be used.
If you wish to use rechargeable batteries, we recommend using a Nickel Metal Hydride rechargeable battery.

The battery compartment is located on the back side of the housing.
Slide the battery door to the side and remove it to expose the battery compartment.

BATTERY LIFE

Expect 20 to 25 hours of life from a 9-volt alkaline battery.
Rechargeable batteries provide about 8 hours of usage per charge.

SPEAKER VOLUME AND BATTERY CHARGE

You may notice the speaker volume drop while one battery segment is illuminated.
With one segment flashing, low speaker volume will be very apparent.

BATTERY INDICATOR

The remaining battery life is proportional to the percentage of the battery icon illuminated.

After the battery indicator begins flashing, expect the detector to shut off within 10 minutes.

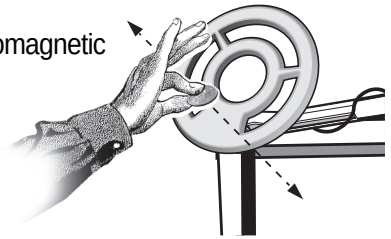
QUICK-START DEMONSTRATION

I. Supplies Needed

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

II. Position the Detector

a. 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.
b. Keep the searchcoil away from walls, floors, and metal objects.
c. Remove watches, rings, and jewelry.
d. Turn off lights or appliances, whose electromagnetic emissions may cause interference.
e. Pivot the searchcoil back.



III. Power Up

Press ⏻.

IV. Wave each object over the searchcoil.

a. Notice a different tone for each object:
Nail: Low Tone
Coins: Sound varies in pitch and volume depending on distance from coil
b. Motion is required.
Objects must be in motion over the searchcoil to be detected in this mode.

V. Press ◤ twice to enter the DISC. LEVEL program.

Then press + until "40" appears in the center of the screen.
a. The word "IRON" disappears from the display

VI. Wave the nail over the searchcoil.

a. The nail will not be detected
b. The nail has been "discriminated out."

VII. Press + until "80" appears.

a. The words FOIL, NICKEL, PULL-TAB, S-CAP+ and ZINC disappear.

VIII. Wave the nickel

a. The nickel will not be detected.

IX. Press ◤ twice to toggle down to NOTCH.

Then press + three times
a. The word "NICKEL" reappears on the display

X. Wave the Nickel.

The nickel is now again detected.
The nickel has been "notched in."

XI. Press ◥ once to toggle down to ALL METAL

XII. Pass the quarter over the searchcoil.

Move the quarter closer to and farther away from the searchcoil. Notice the changing depth-display values at the bottom of the screen.

XIII. Press and hold ◉ . Pass the quarter over the searchcoil

Move the quarter closer to and farther away from the searchcoil. Notice the changing 2-digit depth-display values in the middle of the screen.

THE BASICS OF METAL DETECTING

A hobby metal detector is intended for locating buried metal objects. When searching for metals, underground or on the surface, you have the following challenges and objectives:

1. Ignoring signals caused by ground minerals.
2. Ignoring signals caused by metal objects that you do not want to find, like pull-tabs.
3. Identifying a buried metal object before you dig it up.
4. Estimating the size and depth of objects, to facilitate digging them up.
5. Eliminating the effects of electromagnetic interference from other electronic devices.

Your metal detector is designed with these things in mind.

1. Ground Minerals

All soils contain minerals. Signals from ground minerals can interfere with the signals from metal objects you want to find. All soils differ, and can differ greatly, in the type and amount of ground minerals present. You therefore want to "calibrate" the detector to the specific ground conditions where you are hunting. The detector incorporates a semi-automated ground-balancing feature which will eliminate false signals from most types of soils. But if you want to maximize the detector's target identification accuracy and depth of detection, use the GROUND GRAB® function to calibrate the detector to the ground where you are searching. See the section on GROUND GRAB® for details.

2. Trash

If searching for coins, which will induce higher tone sounds, you want to ignore items like aluminum foil, nails, and pull-tabs. These undesirable items induce lower tones. You can listen to the sounds of all objects detected, and decide on what you want to dig up. Or you can eliminate unwanted metals from detection by using the DISCRIMINATION feature.

3. Identifying Buried Objects

When searching in the DISCRIMINATION Mode, different objects induce different tones (high, medium, low) and are classified on the display screen in different categories from left to right. A 2-digit numerical reading is also provided in the middle of the display for more precise target identification. The DISCRIMINATION Mode requires motion: sweep the coil over the metal object.

4. Size and Depth of Buried Objects

When using the detector in the motion DISCRIMINATION Mode, the relative depth of an object is displayed at the bottom of the display in a 3-segment format: shallow, medium, or deep. A more accurate depth reading is available in a no-motion mode, using PINPOINT or ALL METAL Mode. These modes display target depth in inches. These no-motion modes do not require the coil to be in motion to detect metals. The ability to hold the searchcoil motionless over the target also aids in tracing an outline of the buried object,

or in pinpointing the exact location of the object using techniques described in the pinpointing section.

5. Electromagnetic Interference (EMI)

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

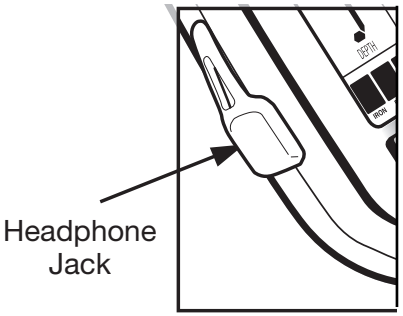
The detector has a 1/4" headphone jack on the left side of the housing.

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.



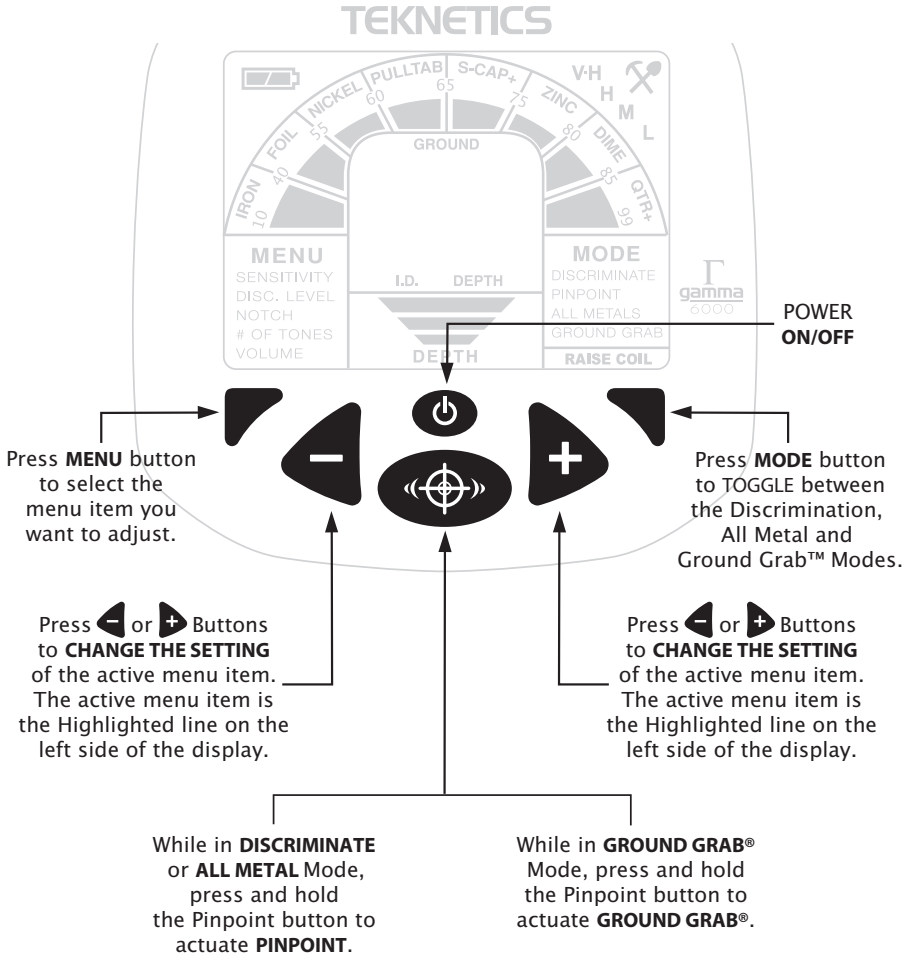
OPERATION and CONTROLS

POWERING UP

Press ⏻

- The detector always starts in the DISCRIMINATION Mode. Motion is required.
- Sensitivity is at about 70% of maximum (value reads “80”)
- All target categories are illuminated, meaning that all metal objects will be detected.

HOW TO WORK THE CONTROLS



MENU SELECTIONS

1. SENSITIVITY

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

Maximum sensitivity setting is 99.
Minimum sensitivity setting is 05.

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

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.

Notice that the sensitivity settings behave differently above 90. From 05 to 90, gain is changing. Above 90, the threshold level changes. Setting above 94 will be noisy or sound erratic.

HOW DEEP WILL IT GO?

The Gamma 6000 Metal Detector will detect a coin-sized object, like a quarter, to a distance of about 11" (28cm) 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.

All modes share the same sensitivity setting. If sensitivity is adjusted in any mode, the change is also effective for the other modes.

MENU SELECTIONS *continued*

2. DISC. LEVEL

Use + and − to increase or decrease DISCRIMINATION level.
Each time you press +, more types of metals are eliminated from detection. Elimination occurs from left to right. When a category description (for example "IRON") disappears from the display, then all targets classified in that category will not be detected.
Pressing − reverses the discrimination process. With each press of −, more types of metals will be included and therefore detected.

Discrimination is a cumulative elimination system. Targets can be eliminated from left to right on the scale, with each additional press of +, resulting in more objects being eliminated from detection.

3. NOTCH

The category icon will remain illuminated until the number printed to the right of the icon is reached. The number remaining illuminated in the middle of the display is the lowest target value included, and therefore detected. All lower value targets are eliminated from detection

Use + and − to notch target categories IN or OUT while the NOTCH line is highlighted.

Whereas the discrimination feature eliminates all categories sequentially from detection, the NOTCH control allows you to selectively include or exclude target categories from detection.
With each press of + or −, the notched category moves across the display screen. As you move the position of the notched category, you are *changing the detection status of the selected category.*

- If a target category was previously eliminated (word not visible) then notching that category will return it to detection.
- If a target category was previously retained (word is visible) then notching that category will remove it from detection.

Only one target category at a time can be selected for notching. To notch multiple categories in or out, press again while NOTCH is highlighted. Each subsequent press of allows you to set an additional notch. Each time you press , followed by +, the notch program will begin by changing the status of the IRON segment.

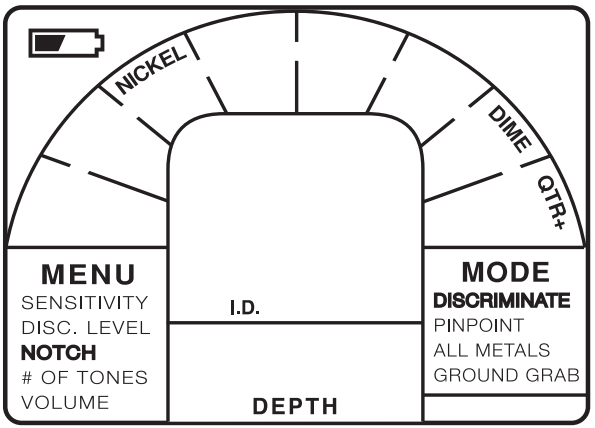
MENU SELECTIONS *continued*

NOTCH *continued*

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, and quarter categories will be detected.
- All other categories of targets (iron, foil, pulltab, s-cap+, and zinc) will not be detected.



MENU SELECTIONS *continued*

4. # OF TONES

While the # OF TONES line is highlighted, use + and − to program the number of different audio tones.

Different target categories are identified by different audio tones in order to give you the fastest real-time reference while searching. Most experienced users become familiar with the tones and search without always looking at the display.

Use this selection to program the number of audible tones the detector will emit.
The default setting is 3 tones.
Depending on your **number of tones** selection, audio target categories are:.

# Tones	Iron	Foil	Nickel	PullTab	SCAP	Zinc	Dime	Qtr+
1	*VCO	VCO	VCO	VCO	VCO	VCO	VCO	VCO
2	Bass	VCO	VCO	VCO	VCO	VCO	VCO	VCO
3	Bass	Low	Low	Low	Low	Low	High	High
4	Bass	Low	Medium	Low	Low	Low	High	High

*VCO (originally referred to as *Voltage Control Oscillator*)

Pitch increases with increasing signal strength. A given target will induce a HIGH PITCH when close to the coil, but a LOWER PITCH when farther away.

The audio volume always varies in proportion to signal strength. The closer a target gets to the coil, the louder the volume.

5. VOLUME

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

The default volume setting is 10. 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 3 or 4 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

There are four selections under the MODE section of the display.

- Press ◥ to toggle between DISCRIMINATION, ALL METAL and GROUND GRAB®.
- While operating in the DISCRIMINATION or ALL METAL Mode, press ⌖ to activate PINPOINT Mode.
- While operating in the GROUND GRAB® Mode, press ⌖ to automatically ground balance the detector.

1. DISCRIMINATE Mode

This mode is the default mode, and requires the searchcoil to be in motion in order to detect and identify targets. This is the mode most commonly used for continuous searching. In this mode, targets are identified with distinct tones, and are classified in categories at the top of the display. A two-digit numerical value, on a scale of 10 to 99, is displayed in the middle of the screen. The depth range of the target is also displayed at the bottom of the display. All menu items can be selected and customized in this mode.

2. ALL METAL Mode

This mode is similar to the “Fast Autotune” or “SAT™” Mode found in other detectors. Only the SENSITIVITY and VOLUME menu items are adjustable in this mode.

3. PINPOINT

To activate this mode, you must first be in either the DISCRIMINATION or ALL METAL Mode. Press and hold ⌖ to activate pinpoint. This mode is momentary; pinpoint detection is only active for as long as you keep ⌖ depressed.

Metal targets are detected with the searchcoil motionless over the target. Target identification is not possible in this mode. All metal objects will induce a single monotone hum. The 2-digit value in the middle of the screen represents the approximate target depth, in inches.

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.

MODE SELECTIONS *continued*

How to Pinpoint

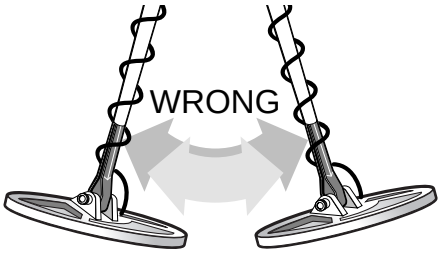
Position the searchcoil an inch or two (2.5-5cm) above the ground, and to the side of the target. Then press and hold . Now move the searchcoil slowly across the target, and the sound will communicate the target's location. As you sweep from side to side, and hear no sound at the ends of the sweep, the 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.

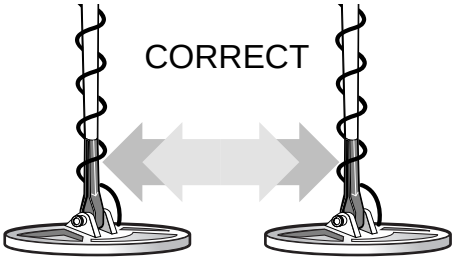
Narrow It Down

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.





GROUND BALANCING

4. GROUND GRAB® COMPUTERIZED GROUND BALANCING

All soils contain minerals. Signals from ground minerals interfere with the signals from metal objects. All soils differ, and can differ greatly, in the type and amount of ground minerals present. This detector incorporates ground balancing algorithms which eliminate interference caused by the ground minerals found in most soils.

The GROUND GRAB® and MANUAL GROUND balancing feature allows the user to more precisely calibrate the detector's internal circuitry to the specific ground you are searching.

We therefore recommend that you use GROUND GRAB® to most accurately calibrate the detector to the specific ground conditions where you are hunting. It is a quick and automated process, and will instantly grab the ground reading of any patch of ground you are standing over. This process will maximize the detector's target identification accuracy and depth detection capability.

AUTOMATIC GROUND BALANCING PROCEDURE USING GROUND GRAB®

1. Find a spot of ground where there is no metal present.
2. Hold the detector with the searchcoil about one foot above the ground.
3. Enter the GROUND GRAB® Mode.
4. Push and hold  .
5. Physically *pump* the searchcoil and detector up and down over the ground.
   Lift it about 6 inches above the ground and lower it to within 1 inch of the ground, about once or twice a second.
6. A 2-digit ground value will appear on the display. This is the Ground Balance setting.
7. When the 2-digit ground value stabilizes, release the button.

Note: GROUND GRAB® will not automatically balance over highly conductive soils, such as a wet salt water beach. Automatic balancing is not possible in soils with ground values less than 40. The screen will display "--" and an alarm will sound if over metal or in ground with a value less than 40.

MANUAL GROUND BALANCING

In most situations, it is preferable to use GROUND GRAB® to automatically ground balance. Generally, it is best to first let the detector automatically cancel interference from ground minerals. However, for gold prospecting, searching on a wet saltwater beach, or searching in an area with so much metal trash that there is no *clean* ground for the detector's internal computer to sample, we recommended that you manually ground balance. Manual ground balancing requires a bit of skill, acquired with some practice.

GROUND BALANCING *continued*

When manually ground balancing, try to "feel out" a spot on the ground to make sure there is no metal present. In order to avoid locking onto metal, the detector will not ground grab where the GROUND setting is less than 40. Where the ground reads less than 40, the ground value is displayed as "--", and manual ground balancing is required.

To perform the Manual Ground Balancing operation, do the following:

1. Select the GROUND GRAB® Mode
   The legend **GROUND** appears near the top of the screen.
   The present ground balance setting is displayed **(0-99)**.
2. Physically *pump* the searchcoil and detector up and down over the ground. Lift it about 6 inches above the ground and lower it to within 1 inch of the ground, about once or twice a second. You are trying to balance the sound as described on the top of page 19.
   a. If the detector balances, use this setting as a starting point for manual balancing.
   b. If "--" is displayed press − until you find the desired setting.
3. While pumping the coil, press + or − to change the ground balance setting.

The range of ground balance settings indicated on the display range from 0 to 99; however, each displayed number spans about 10 pad presses of the + and − buttons. The actual internal ground balance settings change with each step; there are a total of **1000** different settings.

The scale at the upper-right of the screen indicates the *AMOUNT* of magnetic mineralization. The searchcoil must be in motion to measure this. The most accurate measurement is obtained by *pumping* the searchcoil, as in the Ground Grab® procedure.

The indicators are as follows:

V-H = Very High Mineralization
L = Low Mineralization
M = Moderate Mineralization
H = High Mineralization

The two-digit GROUND setting number displayed at the center of the LCD indicates the *TYPE* of ground mineralization.
Some typical ground mineralization types are:

0 -10 Wet salt and alkalis
5 - 25 Metallic iron. Very few soils in this range. You are probably over metal.
26-39 Very few soils in this range -occasionally some saltwater beaches
40-75 Red, yellow, and brown iron-bearing clay minerals
75-95 Magnetite and other black iron minerals

GROUND BALANCING *continued*

When operating in ALL METAL Mode the goal is to eliminate the sound as the coil is being pumped over the ground. In some soils, the sound is not completely eliminated. If the ground balance adjustment is incorrect, there will be a difference in the sound as the searchcoil is either moving toward or away from the ground. It may sound like you are either ***pulling the sound out of the ground,*** or ***pushing the sound into the ground.***

- If the sound is louder as you raise the searchcoil, increase the ground balance setting.
- If the sound is louder as you lower the searchcoil, reduce the ground balance setting.

NOTE: Experienced users often prefer to adjust the ground balance to get a weak but audible response when lowering the searchcoil. This is called *adjusting for positive response.*

Positive and Negative Response

The purpose of ground balancing is to adjust the metal detector to ignore ground minerals. If the setting is incorrect, ground minerals will give either a *positive* or a *negative* response, depending on which direction the adjustment is off.

POSITIVE RESPONSE

If the G.B. setting is too high a number, the response of minerals will be *positive*. This means that when the searchcoil is lowered to the ground in PinPoint or All Metal Mode, the sound will get louder as the searchcoil approaches the ground. The sound will grow quieter as the searchcoil is raised. What, if anything, you will hear in Discrimination Mode depends on the discrimination setting. When searching in All Metal Mode, if ground balance is properly set to cancel the ground, and you sweep over a *positive hot rock,* the rock will give a “zip” sound similar to that of a metal object.

NEGATIVE RESPONSE

If the G.B. setting is too low a number, the response of minerals will be *negative.* When the searchcoil is lowered to the ground in PinPoint or All Metal Mode, the machine will be silent. The machine will sound off as the searchcoil is lifted away from the ground. What, if anything, you hear in Discrimination Mode depends on the discrimination setting. When searching in All Metal Mode, a *negative hot rock* will produce a “boing” sound after passing over it, making it difficult to know where it is located. It will not have the sound and “feel” of a metal object.

TARGET IDENTIFICATION

In DISCRIMINATION Mode, targets are identified both audibly and visually as follows:

1. Different pitch tones for different types of metals
2. A 2-digit Target-ID
3. An illuminated icon within the target category best describing it The detector must be in DISCRIMINATION Mode to identify targets.
   The ALL METAL Mode does not provide target identification.

AUDIO TARGET IDENTIFICATION:

When in the 4-tone mode, tones identify targets as follows:

BASS TONE- Ferrous objects, such as iron and steel, like nails and tin cans. Smallest-sized gold objects and steel bottle caps

LOW TONE- Foil, pull-tabs (some new style), nickels, steel bottle caps.

MEDIUM TONE- Newer pennies (post-1982 are minted from zinc). Larger gold pieces, small brass objects, and most bottle screw caps. Most recent-vintage non-US coins. Pull-tabs (old style, some new style)

HIGH TONE- Silver and copper coins, large brass objects. Older pennies (pre-1982 were minted from copper). Dimes, quarters, half-dollars, silver dollars. Susan B. Anthony and Sacagawea dollar coins. Flattened aluminum cans (with a stronger signal than a coin)

2-Digit Target Identification

The 2-digit value in the middle of the screen provides a specific target value to help identify buried targets more accurately. With practice in the field, you will learn to associate target values with specific objects. Coins are more likely to yield the same value with each pass of the coil due to their concentric shape. The presence of multiple targets will yield multiple tones. Trash objects are more likely to yield a different number on each pass. The angle of the coil relative to an object may also influence target identification. If waving coins over the searchcoil for practice, wave with the flat side parallel to the searchcoil; this is the position you will most often find coins buried in the ground.

2-Digit TARGET IDENTIFICATION Values

Category	Numeric Value Range	Some Common Objects	Typical Values for Common Objects
Iron	10 - 39		
Foil	40 - 54		
Nickel	55 - 59	US Nickel	57
Pull-Tab	60 - 64		
S-Cap+	65 - 74		
Zinc	75 - 79	US Zinc Penny	77
		(after 1982)	
Dime	80 - 84	US Dime	83
		US Copper Penny	82 - 83
		(pre-1982)	
Quarter+	85 - 99	US Quarter	88 - 89
		US Half-Dollar	91-93
		US Silver Dollar	96-98

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

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 will register under iron.
Small gold items will 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.

3-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 3" deep,
Top & Middle Segment	=	3" to 6" deep
All Segments	=	Over 6" 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.

TROUBLESHOOTING

TROUBLESHOOTING 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 battery • Wrong type of battery	• Replace battery • Use only 9V **alkaline** battery
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 battery • Cord not connected securely	• Replace battery • Check connections

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.teknetics2.com

The ***Gamma*** 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: 915-225-0333

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 Par 15 Subpart B Section 15.109 Class B.

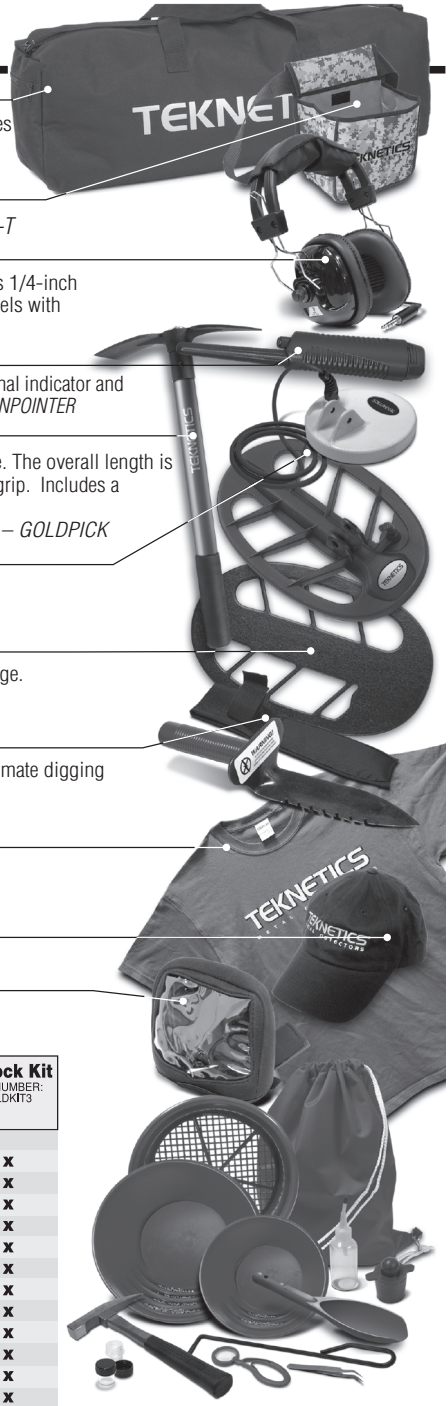
Published by First Texas Products, L.L.C.

TEKNETICS®

1465 Henry Brennan • El Paso, TX 79936 • (915) 225-0333

MADE IN THE U.S.A.

ACCESSORIES



Teknetics® Padded Carrying Bag.
Made of rugged double-stitched nylon construction. Includes handy outside zip-pocket for extra batteries or small accessories. – *CBAG-T*

Teknetics® Camo Pouch
Camo pouch with two inside pockets, belt included. – *PCH-T*

Stereo Headphones
Use with Teknetics® metal detectors with true stereo. Utilizes 1/4-inch stereo & 1/8-inch plug. Compatible with all Teknetics® models with 1/4-inch & 1/8-inch jacks. – *HEADT*

Pinpointer
Pinpoints the exact location of buried metal objects. Audio signal indicator and vibrator. No assembly required, runs on (1) 9-Volt Battery.– *PINPOINTER*

Teknetics® Gold Pick
Tempered steel head is 10" long and the edge is 3 1/4" wide. The overall length is 19" with a durable fiberglass handle and a rubberized hand grip. Includes a powerful super magnet attached to the head
to quickly discriminate iron targets and magnetic hot rocks. – *GOLDPICK*

Replacement/Accessory Searchcoils
11" Biaxial Standard Coil – *11COIL-TEK*
5" Biaxial Accessory Coil – *5COIL-TEK*

Coil Covers
Specially made to protect your coil from abrasion and damage.
11" Biaxial Standard Coil Cover – *COVER-11DD*
5" Biaxial Coil Cover – *5COVER-CZ3*

Lesche Knife
Made from high quality heat-treated tempered steel. The ultimate digging tool. Comes with a durable sheath.
12" in length with a 7" serrated blade – *LESCHE KNIFE*

Teknetics® T-Shirt
100% cotton with Teknetics® Logo.
Sizes: S, M, LG, XL & XXL – *TKTSHIRT*

Teknetics® Baseball Cap
One size fits all. – *TKCAP*

Teknetics® Face Rain Cover
Specially made to protect from weather – *RAINCOV-DELTA*

Gold Prospecting Kits	Gold Kit PART NUMBER: GOLDKIT1	Deluxe Kit PART NUMBER: GOLDKIT2	Hardrock Kit PART NUMBER: GOLDKIT3
Items Included:			
10 ½" Gold Pan	x	x	x
14" Gold Pan	x	x	x
Classifier		x	x
2 Shatterproof Vials	x	x	x
Snuffer Bottle	x	x	x
Black Sand Magnet		x	x
Treasure Scoop		x	x
Tweezers			x
Magnifier			x
Crevice Tool			x
Rock Pick			x
Instruction Booklet	x	x	x
Backpack		x	x

FOR COMPLETE DETAILS VISIT WWW.TEKNETICST2.COM • 1-800-413-4131