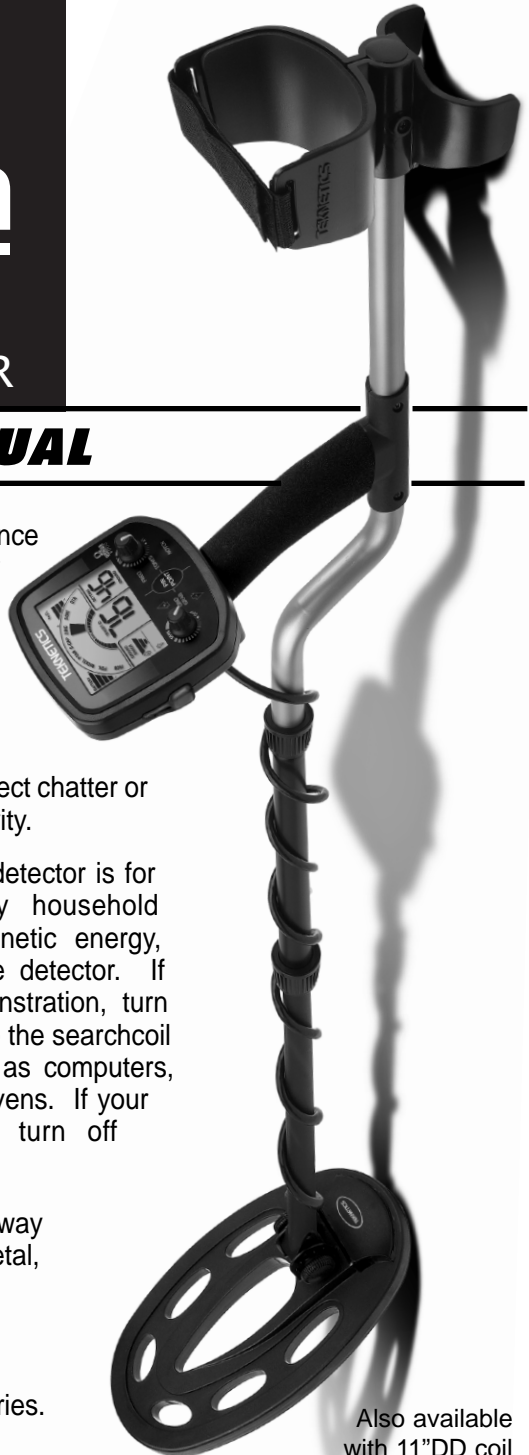# Ω
omega
8 O O O
METAL DETECTOR

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# OMEGA-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
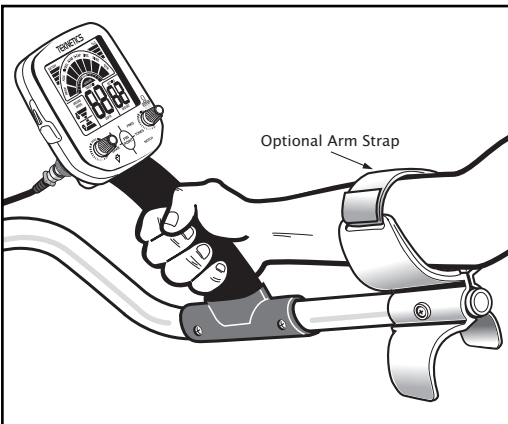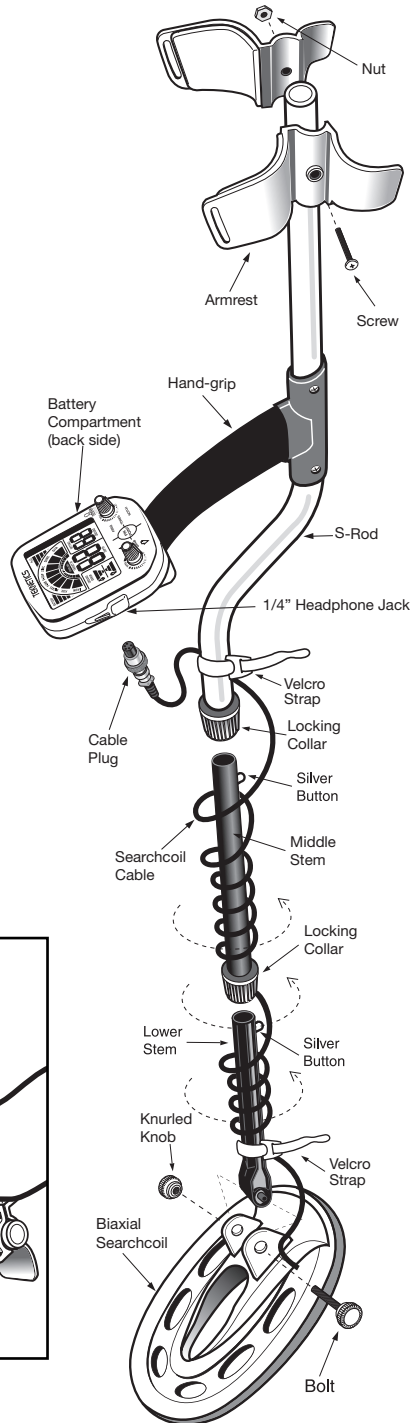
ASSEMBLY

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.

Nut

Armrest

Screw

Hand-grip

Battery
Compartment
(back side)

S-Rod

1/4" Headphone Jack

Cable
Plug

Velcro
Strap

Locking
Collar

Silver
Button

Searchcoil
Cable

Middle
Stem

Locking
Collar

Lower
Stem

Silver
Button

Knurled
Knob

Velcro
Strap

Biaxial
Searchcoil

Bolt

Optional Arm Strap

ASSEMBLY (continued)

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.
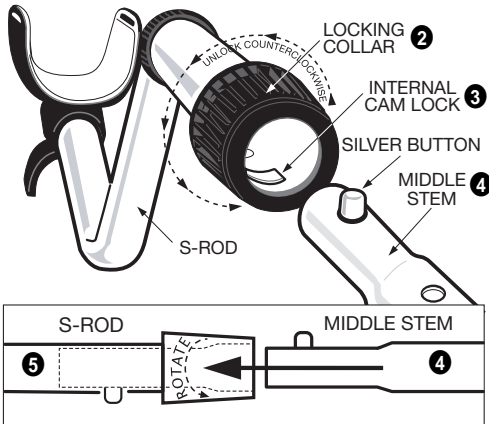
4 Insert the MIDDLE STEM into the S-ROD, with the SILVER BUTTON pointed upward

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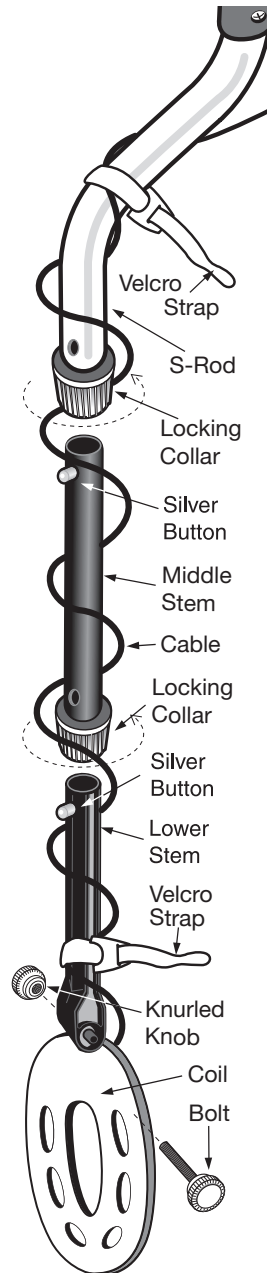
* Note: Very tall users can purchase the optional Extended Lower Stem (TUBE5X), for extended reach.

5

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
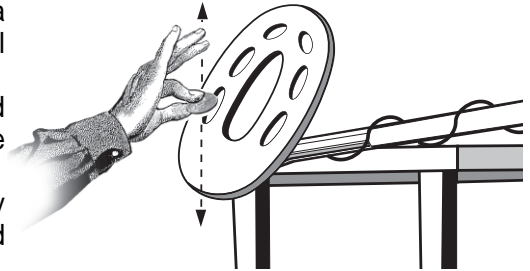10 minutes.

QUICK-START DEMONSTRATION

I. Supplies Needed
- a Nail
- a Nickel
- a Zinc Penny (dated after 1982)
- 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. Click on detector with the left knob. Set it at the 12:00 position for this demonstration.

IV. Click the right knob to the lowest Disc setting

V. Wave each object over the searchcoil.
a. Notice a different tone for each object:

Bas Tone:	Nail
Low Tone:	Nickel and Zinc Penny
High Tone:	Quarter

b. Motion is required.
   Objects must be in motion over the searchcoil to be detected in this mode.

VI. Rotate the DISC (right) knob until the word "IRON" disappears from the screen. Make sure that the word "FOIL" is still illuminated.

VII. Wave the nail over the searchcoil.
a. The nail will not be detected
b. The nail has been "discriminated out."

Quick-Start Demo continued on next page

VIII. Rotate the DISC knob until the words IRON, FOIL, NICKEL, P-TAB, S-CAP and ZINC all disappear.

IX.   Wave the nickel
> a. The nickel will not be detected.

X.   Press the NOTCH touchpad on the front panel three times.
The word "NICKEL" will start flashing. Wait until the flashing stops. "NICKEL" will be illuminated.

XI.   Wave the Nickel.
> a. The nickel is now again detected.
> b. The nickel has been "notched in."

XII. Rotate the right knob 100% counterclockwise and click on into AT Mode Pass the quarter over the searchcoil. Vary the distance from the searchcoil on each pass. Notice the changing pitch and volume.

XIII. Press-and-hold ⊕(PIN-POINT)⊕
> a. Notice that motion is not required.
>   A motionless object induces a sound.
> b. Notice the single monotone hum. The PINPOINT Mode produces only this single sound, regardless of the type of metal detected.
> c. Move the quarter closer to and farther away from the searchcoil. Notice the changing depth-display values. The 2-digit depth reading indicates the distance, in inches, away from the searchcoil.

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 both automated and manual ground-balancing features which will eliminate false signals from most types of soils. If you want to maximize the detector's target identification accuracy and depth of detection, use the GROUND GRAB® Computerized Ground Balancing function to calibrate the detector to the ground where you are searching. See the section on GROUND GRAB® Computerized Ground Balancing 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, bass) 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 in the center of the display with the SIGNAL strength indicator. A more accurate depth reading is available in a no-motion mode, using PINPOINT. These modes display target depth in inches. This no-motion mode does 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. EMI (Electromagnetic Interference)

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

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

HEADPHONE JACKS

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

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

USING HEADPHONES

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

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

Headphone
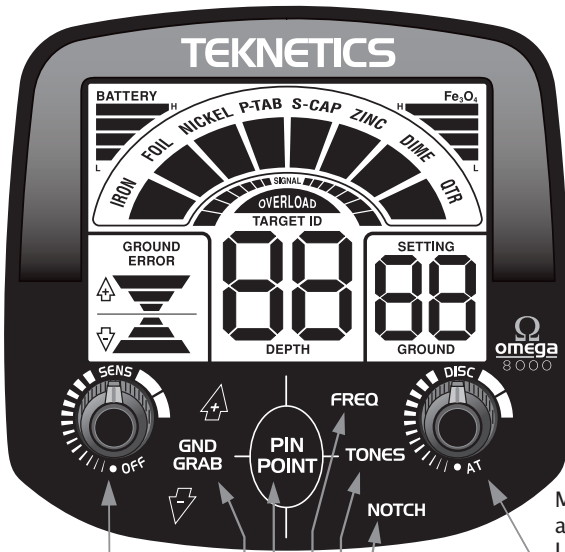Jack
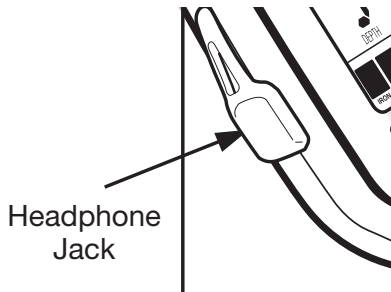
OPERATION and CONTROLS

POWERING UP

Click the left knob to turn the detector ON.

After clicking the knob on, continued clockwise rotation will increase sensitivity.

We suggest keeping the sensitivity below 70 until you become familiar with the detector's operation.

HOW TO WORK
THE CONTROLS

TEKNETICS

BATTERY   Fe₃O₄

FOIL NICKEL P-TAB S-CAP ZINC DIME

IRON   QTR

SIGNAL

OVERLOAD

TARGET ID

GROUND ERROR

SETTING

88 88

DEPTH   GROUND

Ω omega 8000

SENS   DISC

OFF   AT

FREQ

GND GRAB   PIN POINT   TONES

NOTCH

MODE SELECTION
and DISCRIMINATION
LEVEL control
Click LEFT to enter Auto-Tune Mode.
Click RIGHT to enter DISCRIMINATION
Mode. Rotate knob to desired
discrimination level.

ON/OFF/SENSITIVITY:
Click to turn on.
Turn knob to increase
detection sensitivity.

NOTCH
Press to selectively include or
exclude specific target categories.

GROUND GRAB
Press-and-hold touch
pad in middle to activate
automatic ground balancing
Press ⚡ or
⚡ to manually
adjust the ground setting

TONES
Press to customize the
number of tones you hear
and change tone characteristics

PINPOINT
Press-and-hold to
narrow down location
of your finds

FREQUENCY
Press to change frequency
to avoid interference
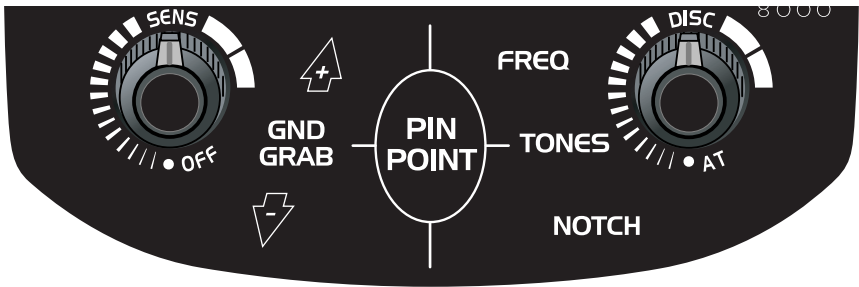
CONTROL KNOBS ARE AS FOLLOWS:

1. SENSITIVITY:

    a. Click right to turn on. Click left to turn off.

    b. Turning the knob clockwise increases the detector's sensitivity; the higher the sensitivity, the deeper targets will be detected, and the more likely the detector will be to detect very small targets.

    c. As you turn the knob, notice that the SETTING value at the bottom-right of the screen will display your current sensitivity setting.

    d. The sensitivity has two ranges. From 0 to 70, the sensitivity increases on a linear scale. Above 71, the sensitivity threshold level starts changing. At values greater than 70, some internal circuit noise will be noticed. The higher the number, the higher this background "static" will be. Many seasoned detectorists prefer to operate at high sensitivity level, with the accompanying noise. They call this "working into the noise" When some background level of noise is audible, small changes in the volume and tone will denote the presence of buried metal.

2. DISC / AT AUTO-TUNE

    a. Click counterclockwise to the AT icon to enter the Auto-Tune Mode.

    b. This is the detector's most sensitive mode of operation.

    c. It is a motion mode of operation; the coil must be in motion to detect metal.

    d. Auto-Tune Mode induces a hum whose pitch and volume vary with the size of the target. Larger targets and targets moving closer to the searchcoil will increase the tone's pitch and its volume.

DISCRIMINATION

    a. After clicking on, the knob's rotation controls the detector's discrimination setting. Left in the far counterclockwise position, without clicking the knob off, turns the discrimination function off; all metal targets will be detected.

    b. Rotating the knob clockwise increases the level of discrimination.

    c. Notice that as you rotate the knob, the SETTING values at the bottom-right of the screen will change. At the same time, target icons across the top of the screen will disappear to indicate that entire target categories have been eliminated

TOUCHPAD CONTROLS ARE AS FOLLOWS:

GND GRAB: Ground Grab® Computerized Ground Balancing.

The control allows you to set the detector's internal ground setting equal to the phase of the ground you are searching over.
See the section on Ground Balancing for a more thorough explanation of this feature and the reason for using it.

Press-and-hold the GND GRAB® touch pad to invoke automatic ground balancing. This will "grab" the ground value.

In order to determine the most accurate ground value, pump the coil up and down over the ground while standing in one place over a patch of ground free of metal.
1: Start with the coil 6" above the ground; lower it to about 1" from the ground.
2. Continue this pumping motion until all of the bars in the "GROUND ERROR" window disappear.
3: At the point where the GROUND value at the bottom right of the screen stop changing, the detector has correctly measured the ground's phase.
4: Immediately release the control pad to set the detector's internal ground setting value equal to the last GROUND value displayed.

If you wish to manually change the detector's internal ground setting, press the ⬆ or ⬇ touchpads. Note that each 10 presses of these touchpads will change the displayed setting by only 1 number. The detector actually has 1,000 different ground settings to choose from, but uses only 2 digits to display the number. Reasons for this manual ground balancing feature are explained in the Ground Balancing section of the manual.

FREQ: Frequency Selection

Use this control if detector behaves erratically and you suspect electromagnetic interference from some other electronic device. This control will change the detector's operating frequency. Press until you find one of the frequencies which minimizes the interference.

Choices are:

❶ - default frequency

❷ - 1st alternate frequency

❸ - 2nd alternate frequency

Changing frequency may require you to change the ground balance setting. See section on ground balancing.

TOUCHPAD CONTROLS *(cont.)*

TONES: Number of Tones Selection

In <u>Discrimination Mode,</u> the OMEGA indicates target type by audio tone.
The TONES button allows the user to select one of four different ways to group target types by tone.

Your selection depends on personal preference and search objectives. For example, coin shooters usually select d3 or d4. Relic hunters might select d1 or d2, depending on search area conditions.

In <u>Auto-Tune Mode</u>, the TONES button allows the user to vary the pitch of the base tone.

See page 18 for a detailed description of the tones provided for each selection.

NOTCH: Selective Target Inclusion or Exclusion

The purpose of the NOTCH function is to change the detection status of a target category.
- If a category was not eliminated from detection before being "notched," then notching the category will eliminate it from detection.
- If a category was eliminated from detection before being "notched," (i.e. the category's icon was not illuminated), then notching the category will return the category to detection.

Upon each press of NOTCH, a target icon will flash.
Each subsequent press will move the flashing icon to the right.
The following target categories can be notched in or out:
    Iron, Foil, Nickel, Tab, S-Cap, Zinc
After the Zinc category, pressing NOTCH will exit the NOTCH function.

To select a category for notching, press NOTCH until the desired icon flashes. After a few seconds, the flashing will time out and the current target category will be notched.

Practice pressing NOTCH a few times and its function will become obvious.
The NOTCH feature is not available in Auto Tune Mode.

CONTROL SETTING DISPLAY

The setting for each control is displayed as a 2-digit number on the bottom right of the screen. Each time you turn a control knob, or press FREQ or TONES, the setting for that control is immediately displayed below the word "SETTING."

This 2-digit display value will revert back to the Ground Balance setting after a control is not adjusted for a few seconds.

When the SETTING value represents the Ground Balance setting, "GROUND" will be displayed under the number.

GROUND BALANCING

WHAT IS GROUND BALANCING?
Why do I need to Ground Balance?

All soils contain minerals. Signals from ground minerals are often tens or hundreds of times as strong as the signal from a buried metal object. The magnetism of iron minerals, found in nearly all soils, causes one type of interfering signal. Dissolved mineral salts, found in some soils, are electrically conductive, causing another type of interfering signal.

UP

DOWN

Ground Balancing is the process by which the metal detector cancels the unwanted signals coming from the ground minerals while still detecting the signals from buried metal objects. This is accomplished by matching the detector's ground balance setting to the phase of the ground signal.

When the detector is calibrated to the soil, the result will be deeper target detection, quieter operation, and more accurate target identification.

How to Ground Balance your detector:

Ground Balancing procedure with the "Gnd Grab®" touchpad.
1.   Turn the detector on and select AT (Auto-Tune) Mode.
2.   Sweep searchcoil across ground to find a clear patch of ground with no metal present.
3.   Rotate SENS knob to point where you hear a slight background hum.
4.   Press and hold the GND GRAB® touch pad, and pump coil over clean ground. (Note: pump coil from within 1" of ground to 6"- 8" above ground)
5.   When the ground value "settles down" to only one or two numbers in variation, release the GND GRAB® touch pad while still pumping the coil. Note that the Audio Response to the ground changed and "Evened Out" when you released the button. Also note that the Ground setting changed. After balancing, you can hunt in Auto-Tune... or return to Disc Mode.

The most accurate GROUND value is the value displayed when "pumping" the coil over the ground in an area free of metal.

Understanding ground conditions assists the user in setting up the machine, knowing when to readjust ground balance, and in understanding the responses of the machine while searching. This detector provides two kinds of ground data: **1.** the amount of mineralization (the greater the amount of mineralization, the greater the loss of detection depth & ID accuracy; this loss is more pronounced in Discrimination Mode) **2.** the type of mineralization (which affects mostly where the ground balance should be set).
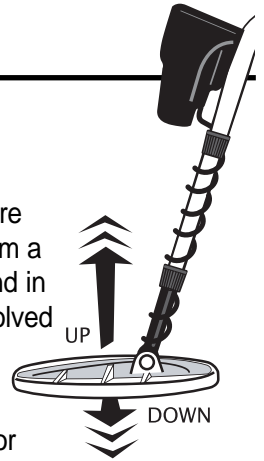
GROUND BALANCING -Technical Info

Fe$_3$O$_4$ BAR GRAPH

The Fe$_3$O$_4$ 4-segment bar graph indicates the amount of ground mineralization, independent of type, expressed as an equivalent volume concentration of magnetite (Fe$_3$O$_4$). It updates every second.   It is sensitive to motion and will give the most accurate readings if you "pump" the searchcoil up and down several times over the ground. The presence of metal or "hot rocks" will cause the readings to be inaccurate. If you stop moving the searchcoil, the bar graph will go blank.

INDICATION	% Fe$_3$O$_4$	SUSCEPTIBILITY
4 Bars -High	0.4 - 1.6	1,000 - 4,000
3 Bars -Medium	0.1 - 0.4	250 - 1,000
2 Bars -Low	0.025 - 0.1	60 - 250
1 Bars -Very Low	0.006 - .025	15 - 60
None - -	less than .006	less than 15

Magnetic susceptibility is expressed in micro-cgs units.   In a salt water environment in the absence of iron minerals, the bar graph indicates relative electrical conductivity.

In soils with greater than 4,000 micro-cgs units magnetic susceptibility, the signal from the soil may saturate ("overload") the circuits. This will not harm the detector but the machine will not be usable in that condition. The solution is to hold the searchcoil several inches above the soil surface so it isn't "seeing as much dirt". By listening and watching you will know how high you need to hold the searchcoil in order to avoid overload.

The highest magnetic susceptibilities are usually found in soils developed over igneous rocks, in alluvial 'black sand" streaks on beaches, and in red clay soils of humid climates.

The lowest magnetic susceptibilities are usually found in white beach sands of tropical and subtropical regions, and soils developed over limestone.

Ground Error

The bottom left-hand corner of the display contains a graphic which indicates if your detector's ground balance setting needs to be adjusted.

The Omega has a tracking system which continuously analyzes the *phase* of the ground you are searching.
It then compares this *ground phase value* with the detector's internal Ground Setting indicated on the bottom right of the display.

  * If the detector's internal Ground Setting is equal to the actual phase of the ground, the detector is properly ground balanced and the Ground Error window is clear.

16

GROUND ERROR (continued)

* When the detector's internal Ground Setting is <u>higher</u> than the actual phase of the ground, the bars on the *top* of the graph will be illuminated. The bigger the error is, the more bars will show up.

* When the detector's internal Ground Setting is <u>lower</u> than the actual phase of the ground, the bars on the *bottom* of the graph will be illuminated. The bigger the error is, the more bars will show up.

* If the Ground Error *exceeds the level of three bars*, ⚡ or ⚡ will appear, indicating that the maximum error has been reached, and action must be taken to adjust the Ground Setting.

To maintain maximum detector performance, keep the Ground Error to a minimum by adjusting the Ground Setting.
Before making an adjustment, it is best to verify the Ground Error as follows:
1. Place the detector into Auto-Tune Mode.
2. Pump the searchcoil up and down over *a patch of ground free of metal,* repeatedly moving the coil to within 2" of the ground and lifting it up about 6" over the ground.

If bars appear at the top of the graph, **adjust** the Ground Setting by pressing the ⚡ until all of the bars disappear. If bars appear at the bottom of the graph, **adjust** the Ground Setting by pressing the ⚡ until all of the bars disappear.

While in Auto-Tune Mode, pumping the searchcoil over the ground, you will also hear audible evidence of an out-of-adjustment Ground Setting. If the Ground Setting is too low, there will be a difference in the sound as the searchcoil **is moving away** from the ground. It will sound like you are pulling the sound out of the ground. **If the Grown setting is too high, it will sound like you are pushing the sound into the ground.**

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

GROUND ADJUSTMENT CHART

If bars appear	or in Auto-Tune pumping coil sounds like	then
AT TOP	PUSHING SOUND OUT OF GROUND	PRESS (–) TO ADJUST
AT BOTTOM	PULLING SOUND INTO GROUND	PRESS (+) TO ADJUST
NO BARS	SAME SOUND WHEN RAISING AND LOWERING	NO ADJUSTMENT NECESSARY

AUDIO TARGET IDENTIFICATION SYSTEM

Different types of metals will induce different types of sounds, depending on your TONES setting.

There are 4 choices in <u>DISCRIMINATION MODE</u>:

d1. Medium-to-high pitch tone, varying in proportion to target signal strength. Large shallow objects will produce a squeal. The variable audio pitch provides you more information about the detected object. Volume and Pitch increase with increase in signal strength.

d2. Iron produces a bass tone regardless signal strength. Volume varies in proportion to signal strength. Non-ferrous targets respond as in d1.

d3. Three different audio tones.
Bass Tone: Iron
Low Tone: Foil, 5¢, Tab and Zinc
High Tone: Dime, Qtr.

d4. Four Different audio tones
Bass Tone: Iron
Low Tone: Foil, Tab, and Zinc
Medium Tone: 5¢
High Tone: Dime, Qtr.

The default setting is d3.
To choose from the above selections, press the TONES touch pad.
Each press of the TONES touch pad cycles to the next selection.

There are 4 choices in <u>ALL METAL MODE</u>
A1, A2, A3, A4 - pitch varies with each setting.

18

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.

Reading the display (cont.)

DEPTH INDICATOR:

The Depth Indicator is calibrated for coin-sized objects. It indicates the probable depth of the target, in inches.

While holding the PinPoint touch pad, and passing over a metal object "DEPTH" will appear under to the two-digit number in the middle of the screen.

TWO DIGIT TARGET INDICATOR

In Discrimination Mode the Two-digit target indicator, in the middle of the LCD display, 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 the probable identification of buried objects. The target value can vary each time the coil passes over the target, depending upon the angle of the object and the distance from the coil.

As a starting point, refer to the table below.

TARGET Readout

The table below lists some common approximate target value equivalents. With experience in the field, you will recognize many types of metal objects by their numeric value.

TYPICAL VALUE	POSSIBLE OBJECTS
10-40	Iron
56-57	Nickel,
60-62	Pull-Tab (old style)
62-65	Pull-Tab (new style)
66-72	Screw Cap
76-78	Zinc Penny
82-83	Dime & Copper Cent
86-87	Quarter
90-91	Half Dollar
94-95	Silver Dollar

SEARCH TECHNIQUES *(in DISC Mode)*

Target Verification

After detecting a target, do the following:

1. Walk around the target in a circle.
2. While circling the target, continue sweeping the searchcoil across the target.
3. Sweep once every 30° or 40° of the circle.

   If the tone does not change and the Target-ID value is consistent as you circle the target, you can be highly confident of the target's identification.

   If the tone or Target-ID changes as you circle the target, you may have multiple targets or an irregularly shaped object.

   If the tone completely disappears at different angles, the target may be trash or a low-value metal.

   If you are new to the hobby, dig all targets. With practice in the field, you will soon identify audible and visual target feedback with certain types of metal objects.

WRONG

CORRECT
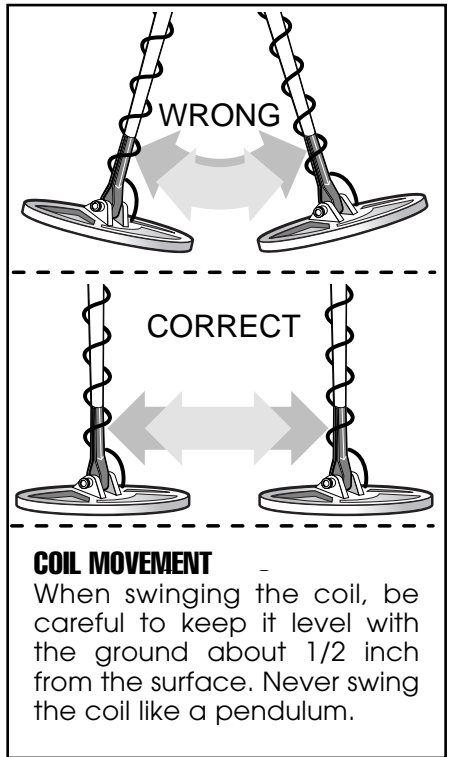
COIL MOVEMENT
When swinging the coil, be careful to keep it level with the ground about 1/2 inch from the surface. Never swing the coil like a pendulum.

Pinpointing process in motion modes:

1. Sweep over target in narrowing side-to-side pattern.
2. Take visual note of spot on ground where "beep" occurs.
3. Step 90° to the side of the target.
4. Sweep coil over same area, at 90° to 1st sweep pattern.
5. This pinpoints the target location with an "X".

TARGET PINPOINTING *(in PINPOINT Mode)*

After you have identified a target using a motion mode of detection, press-and-hold the PINPOINT pad to identify the target's exact location. This technique can yield more information about the target's shape and size and also find its exact location to facilitate extraction.

Pinpoint as follows:
1. Position the searchcoil just barely off the ground, and to the side of the target.
2. Now move the searchcoil slowly across the target, and you can locate it by the sound. The target is located directly under where the sound is loudest.

Narrow It Down:
1. To narrow the response further, position the center of the searchcoil near the center of the response pattern, but not directly over the center.
2. Release the PINPOINT touch pad.
3. Press-and-hold PINPOINT pad again.
4. Repeat this narrowing procedure to narrow the field of detection further.

Note: Depth indication is less accurate after narrowing.

COIL DRIFT
If you plan to use the PINPOINT Mode for continuous searching, realize that drift will occur over time, causing the detector to gain or lose sensitivity. Periodic retuning of the detector is required to minimize drift; release and press PINPOINT again to retune.
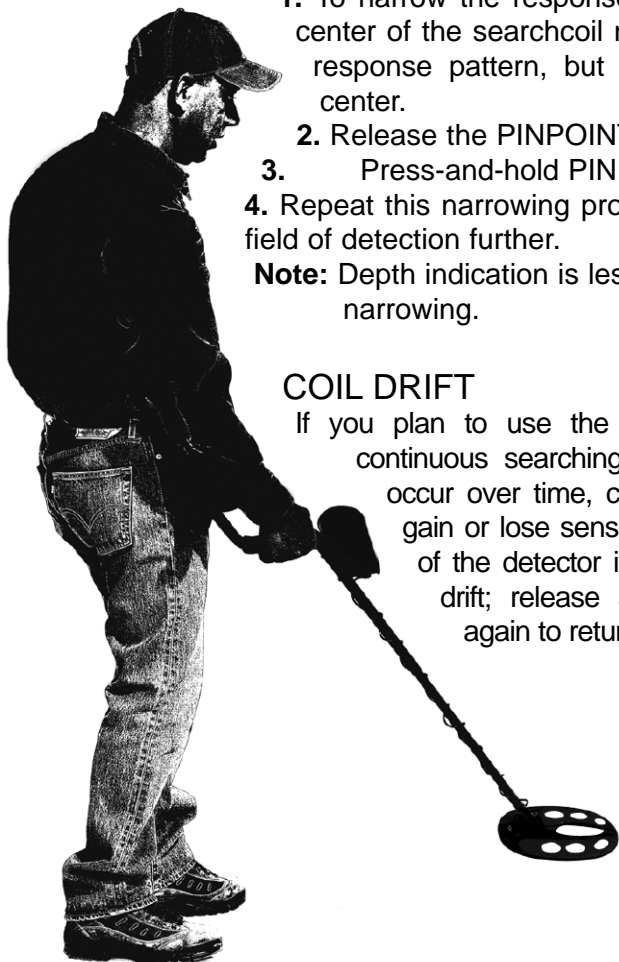
TREASURE HUNTER'S CODE OF ETHICS:

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

5-YEAR LIMITED WARRANTY

Register your warranty on-line for a chance to win a
FREE DETECTOR.
For details, visit www.tekneticst2.com

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

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

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

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

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

First Texas Products L.L.C.
1465 Henry Brennan Dr.
El Paso, TX 79936
Phone: 915-633-8354

NOTE TO CUSTOMERS OUTSIDE THE U.S.A.
This warranty may vary in other countries, check with your distributor for details.
Warranty does not cover shipping costs.

According to FCC part 15.21 Changes or Modifications made to this device not expressly approved by the party responsible for compliance could void the users authority to operate this equipment. This device complies with FCC Part 15 Subpart B Section 15.109 Class B.

TEKNETICS®
1465 Henry Brennan • El Paso, TX 79936 • (915) 633-8354
MADE IN THE USA

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*

Neoprene Face Rain Cover
Specially made to protect from weather — *FACE-COVER*

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.TEKNETICSDIRECT.COM • 1-800-413-4131