GOLDEN µMax OPERATOR INSTRUCTION MANUAL

CONGRATULATIONS!

Your new Tesoro Golden µMax metal detector is part of a new series of detectors designed to provide you with many happy hours of enjoyment in the most rewarding hobby I can think of—treasure hunting. Ahead of you lie fascinating and exciting experiences as you step into the past—uncovering artifacts lost by past generations, or as you take pleasure in the great outdoors with family and friends searching for precious metals. I wish we could share these experiences with you, and all of us at Tesoro wish you the best of success.

Your Tesoro detector is capable of meeting your needs in a wide range of treasure hunting situations. As with any other metal detector, familiarity with this instrument is probably the limiting factor in determining how successful you can be. I recommend that you read this manual and fully understand how to operate this detector before attempting to use it in the field. As you become more familiar with your detector through practice, your rate of success will increase dramatically.

The Golden µMax is a precision electronic instrument that will last for years if properly cared for. Treat it right and it won't let you down.

Good Hunting! Jack Gifford

GENERAL DESCRIPTION

The Golden µMax is designed to help detectorists improve their coin shooting finds. It combines three systems to help identify targets before they are dug. First is Tesoro's tried and tested ED120 discrimination. Offering 120° of discrimination range covering a broad spectrum of unwanted targets. Second is a four tone audio ID. The tones cover 1) iron and foil, 2) rings, nickels and some pull tabs, 3) most pull tabs and screw caps, 4) pennies, silver coins and jewelry. A special tone for targets that are causing the machine to saturate is also included. Third is a Notch Filter discriminate. Notch discriminate will allow you to tune your Golden µMax to discriminate out

most pull tabs while keeping the nickel and gold ring. It is user adjustable to fit the hunting styles of most detectorists.

The Golden µMax uses a state-of-the-art microprocessor to perform all of these functions and still keep a weight of less than 2½ pounds. With a standard 9x8 coil and three piece break down pole, the Golden µMax is sure to help you meet your detecting goals.

GETTING STARTED - UNPACKING THE BOX

Your Golden µMax was shipped with these parts:

1 Upper Pole Assembly

Fully assembled, including upper pole stem with handle grip, padded arm bracket and control housing.

1 Middle Pole Assembly With Pole Lock

1 Lower Pole Assembly

Fully assembled, complete with two friction washers, mounting screw, and thumb nut.

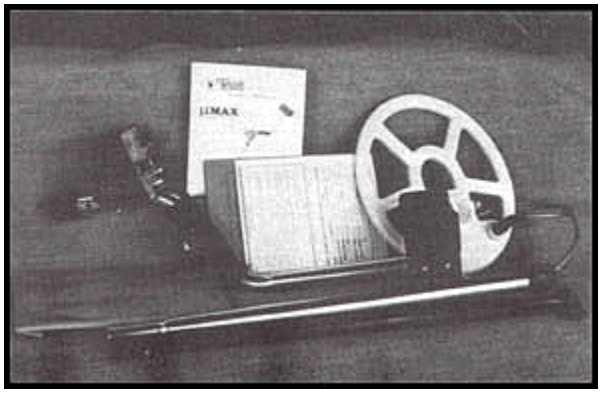
1 9 x 8 Concentric Searchcoil With 3' Cable

1 9 Volt Alkaline Battery

1 Operator Instruction Manual

1 Tesoro Warranty Card

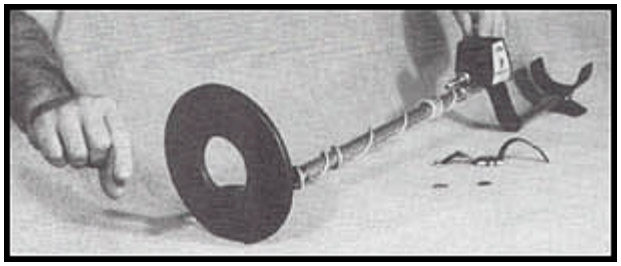
If any of these items are missing, contact the Tesoro Authorized Dealer where you purchased your detector immediately.



Assembly of the Golden µMax is simple and requires no special tools. Just install the battery, mount the searchcoil on the lower pole assembly, connect the two pole assemblies together, wrap the excess cable around the pole and plug the cable into the control housing. Finally, adjust the pole length and searchcoil angle and you're ready!

INSTALLING THE BATTERY

Your Golden µMax is equipped with a battery test switch so that you can always be sure you are getting top performance. (See QUICKSTART for operation.) The battery should be checked after the detector has been on for about 10 minutes and then periodically when used for long durations.



To install or replace the battery, first make sure the SENSITIVITY control is set to POWER OFF—turned completely counterclockwise past the "click." Remove the battery door from the back of the control housing. Do this by pressing your thumb firmly on the louvered square—at the bottom of the battery door—and sliding the battery door upward in the direction of the arrow.

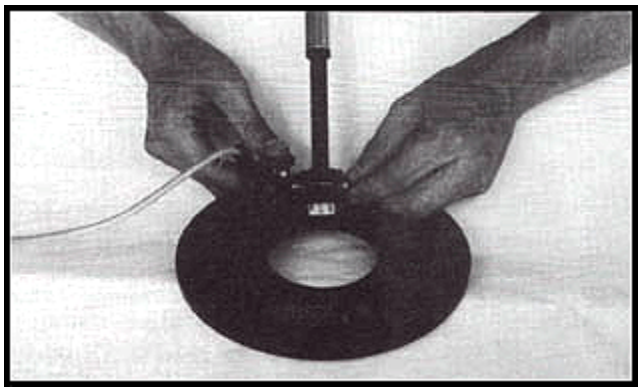
Check the polarity on the battery and on the diagram inside the battery compartment. Make sure that they match and simply drop a fresh 9 volt alkaline battery into the compartment. ***Note: If the battery is not installed properly, damage may occur to your detector.***

Replace the battery door by sliding it into place making sure the upper mount slots are in line and the lock tongue is snapped in place.

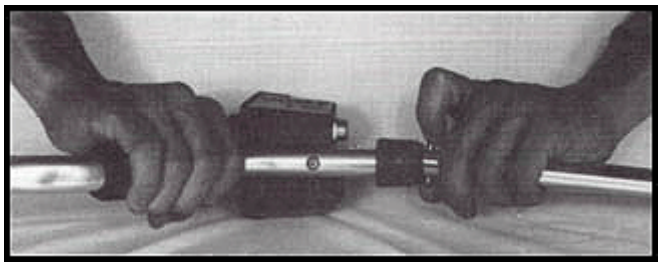
(Above photo depicts the Silver Sabre µMax model; however, battery installation is the same for the Golden µMax.)

ASSEMBLING YOUR DETECTOR

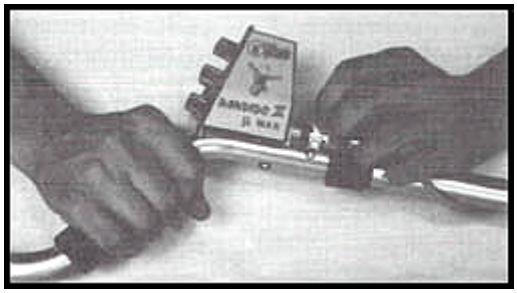
1. On the lower pole assembly, remove the mounting screw and thumb nut from the black nylon pole tip.
2. Insert the pole tip between the mounting ears of the searchcoil and align the holes of the pole tip and washers with those of the mounting ears.
   Note: The pole tip should fit very snugly into the mounting ears.



3. Insert the mounting screw through the holes in the mounting ears and pole tip—entering from the side opposite the cable connection.
4. Install the thumb nut on the mounting screw and tighten by hand.
   Note: Do not overtighten the thumb nut. It should be snug but not too difficult to loosen up.
5. On the middle pole assembly, depress the two spring buttons and slide the middle pole assembly into the upper pole assembly until the spring buttons click into the holes, thus locking the two assemblies into place. Tighten the pole lock to secure the two assemblies together.



6. Slide lower pole into middle pole until spring buttons click into the first set of adjustment holes. Turn pole lock to tighten, thus locking the assembly into place.
7. Wrap the cable around the pole leaving enough slack near the searchcoil to permit searchcoil adjustment. *Note: Do not allow the cable to flop loosely over the searchcoil. Since the detector is sensitive enough to "see" the tiny wires in the cable, a floppy cable can cause false signals as the searchcoil senses the moving wires.*
8. Plug the male cable end into the female connector on the control housing and tighten the cable thumb nut. You are finished!
   Note: You will want to adjust the pole length and the searchcoil angle to your preference.



(Above photos are shown using the Bandido II µMax model; however, assembly procedures are the same for the Golden µMax.)

ADJUSTING THE POLE & SEARCHCOIL

The pole length should be adjusted so that the detector does not become uncomfortable or tiring after long periods of use. The detector grip should rest in your hand with your arm relaxed, your elbow straight but not locked, and with the pole extending out in front of you at the approximate angle shown in the photo.

You should be able to swing the detector back and forth in front of you—using relaxed *shoulder movement*—while keeping the searchcoil as close to the ground as possible. This swinging movement is often called a "sweep."

The searchcoil should not touch the ground during your sweep. The pole length should be adjusted to allow this without having to lift the detector with your elbow or shoulder. The searchcoil should rest about one inch above the ground while you are standing erect. The angle of the searchcoil should allow the bottom to be parallel to the ground.

The pole length is adjusted by depressing the spring buttons and extending or shortening the pole until the spring buttons click into the set of holes that give you the most comfortable pole length.

To adjust the searchcoil angle, simply loosen the searchcoil thumb nut slightly and move the searchcoil into the desired position. Tighten the searchcoil thumb nut by hand so that the searchcoil will hold in place.

QUICKSTART

The Quickstart is designed to teach you how to use your new Golden µMax. It provides a quick and easy means of learning your detector and the concepts behind all of the functions.

You will need the following items:

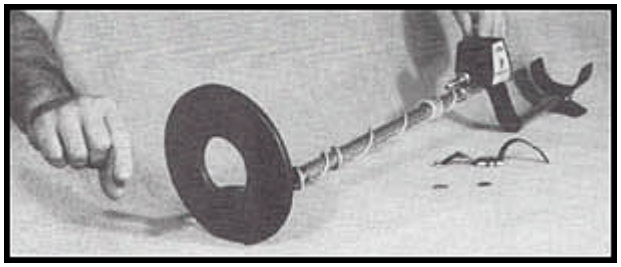
1. Your fully assembled Golden µMax.
2. An iron target (a small nail or screw will do), a nickel, a quarter and a couple of different pull tabs.
3. A nonmetal table top or counter.

Here's what you will do:

1. Perform Audio Battery Test
2. Adjust Threshold
3. Perform Air Test in ALL METAL Mode
4. Adjust the SENSITIVITY
5. Check and Identify Discriminate ID Tones
6. Perform Air Test in DISC Mode
7. Set Notch Window Width

Prepare for the Quickstart

Place your assembled Golden µMax on the nonmetal surface. Make sure that there are no metal objects near the coil and remove any jewelry from your hands and wrists.



Start with the controls like this:

1. THRESHOLD, SENSITIVITY and DISCRIMINATE LEVEL knobs turned completely counterclockwise.
2. MODE and NOTCH switches in the center position.
3. NOTCH WIDTH knob at the 12 o'clock position.

Perform Audio Battery Test

Turn the SENSITIVITY knob from OFF to about 7 or 8. You may hear a brief beep. This is just the detector turning on and does not signify anything. Push the MODE switch to the left and release. The switch is spring loaded and will pop back to the center position.

If the battery is fully charged, you will hear 6 or 7 beeps. As the battery drains, you will hear fewer and fewer beeps. When you hear only 1 or 2 beeps, it will be time to replace your battery.

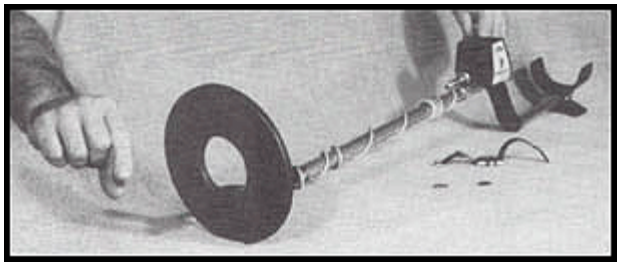
Adjust THRESHOLD

Now turn your THRESHOLD knob clockwise until you hear a slight but steady hum. You will have to turn the knob to somewhere between the 1 o'clock and 3 o'clock position to get the best hum.

The purpose of the threshold tone is to give you a reference to judge targets by. In the field, some targets may be small enough or deep enough that they will not be able to generate an audio signal by themselves. By monitoring a threshold, you already have an audio signal so changes will be easier to hear. However, if the threshold is set too loud or too soft, small changes in the signal will be hard to hear. Take some time to find the right threshold level for you.

Perform Air Test in All Metal Mode

Once you have set the correct threshold hum, you are ready to perform an air test in the All Metal Mode. Changes in the volume of the threshold will indicate signal strength. Try waving your targets in front of the coil. Start from a distance of 10 to 12 inches away from the coil and slowly work your way in. Then try starting 6 inches from the left or right side of your coil and working your way to the center of the coil. Notice the changes in the audio signal. Your strongest signal will always be closest to the center of the coil, but additional information can also be learned by the signal strength. A smaller or deeper target will give a less noticeable change in the threshold than a larger or shallower target will give. Take some time and try all of your targets at different depths to find out how your detector sounds.



Adjust the SENSITIVITY

We are now ready to switch the detector into the Discriminate MODE. Go to the mode switch and flip it all the way to the right and into the DISC position. The first thing that you will notice is that the threshold hum stops. The discriminate circuit uses a silent search mode, meaning that no sound will be heard until the coil goes over a target. The most common use of the detector will be to hunt in the DISC MODE and switch to ALL METAL to pinpoint a target. This will give you the advantage of ignoring unwanted targets and not having to listen to the threshold hum until you are ready to recover a target.

The all metal circuit uses a single channel to detect various metals. The discriminate circuit uses two different channels, then amplifies and filters the signals and then compares the two to

determine whether or not to beep at a target. While this is a great advantage for ignoring unwanted targets, it can make the circuitry more susceptible to interference. A number of outside conditions such as power lines, highly mineralized soil and wet salt sand can cause interference. The SENSITIVITY knob is used to raise or lower the power to the operational amplifiers, which changes the gain. Gain is the measurement of how much a signal is amplified. The higher the gain the more depth and sensitivity to small objects a detector has. Unfortunately, any small interference that is amplified can cause the detector to become erratic. The SENSITIVITY control is used to find the best gain setting in any location without letting the detector become unstable.

The SENSITIVITY knob is numbered from min to 10 and then has an orange area called the Max Boost zone. For most normal hunting, anywhere in the numbered zone will work very well. However, the Max Boost will allow you to increase the power to the operational amplifiers to the point of overload. An overload situation will not hurt your detector, but it will maximize the gain that is used by your detector. This can, in certain conditions such as low mineralization in the soil, cause your detector to penetrate deeper into the ground and become more sensitive to small objects.

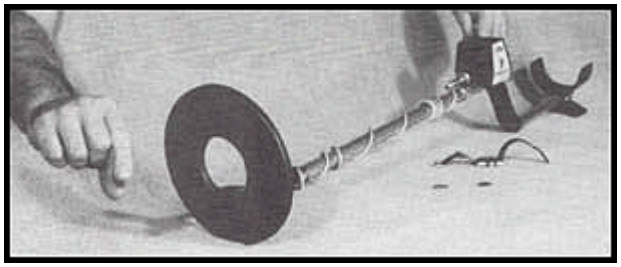
Take some time to try waving targets in front of the coil with different sensitivity settings. Notice that the higher the sensitivity setting, the farther away from the coil the target can be and still get a response.

Check and Identify Discriminate ID Tones

Your Golden µMax detector has several different audio tones. As you were testing the sensitivity, you may have heard some of these tones. In this section of the Quickstart, we will take the time to identify each of the tones and what it means.

The first tone that we will talk about is the “saturation tone.” When a target is too close to the coil, it creates a very large signal. For most non-ID machines this is no problem. However, with target ID features, this can cause some problems. We have created a very specific double beep signal that lets you know when a target is very close to the coil.

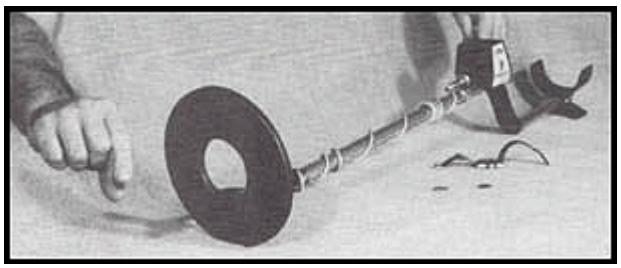
Start with any of your targets and start waving it about 4 inches away from the coil. Slowly move the target towards the coil until you hear the double beep. At that point the detector is telling you that it is saturating and will not identify correctly. Also remember that the size, shape and composition of the target will also affect the saturation signal. A large iron horse- shoe will cause more saturation than a silver dime. When you encounter this signal in the field, just lift your coil up about 2 to 3 inches and the signal should stabilize. Take some time to find the saturation point for your targets.



Next we will wave different targets at the coil and see what kind of response the machine gives us. Start by waving your quarter about 3 to 4 inches away from the coil. You will hear the detector's highest tone. This tone will cover from zinc pennies up to all of the silver coins and silver jewelry. Next wave the pull tabs at the coil one tab at a time and note the tones. All pull tabs will fall into the two middle tones. The second highest tone will cover most of the pull tabs, some gold rings and screw caps. Now wave your nickel. The tone you are hearing will cover foil, nickels, gold rings and some pull tabs. Please note that there is some overlap of both gold rings and pull tabs. This manual will go more into detail about that in the **"Set Notch Window Width"** section. Last wave your iron target. You should hear the lowest tone of all. This tone covers iron and foil. Some iron targets such as washers or other oddly shaped items may produce a "rolling tone." This tone is a combination of both high and low tones. It may start high and go low or start low and go high. Take some time to try your targets and get used to the tones they create. You may also want to take a selection of other targets and see what tone they produce.

Perform Air Test in DISC Mode

As discussed before, the Discriminate Mode is used to filter unwanted targets from good targets. The principle behind this is pretty simple. The detector sends out a signal and then receives it back creating a small electronic field. As metal passes through the field that the detector generates, it causes a change in the received signal. The amount of change that each type of metal causes is fairly constant; therefore, we can tune our detectors to miss the targets that we don't want to find. The change is based on the type of conductivity that each target has. The general list of conductive targets is as follows: iron, foil, nickels, gold jewelry, pull tabs, screw caps, pennies and silver coins starting with dimes and working up to silver dollars. This list is meant to be a guide only. There is a point that some gold rings and some pull tabs overlap. Also the depth of the target and its orientation in the ground can change the received signal. A coin that is flat to the coil will produce a better signal than a coin that is on edge. Take some time now to try different combinations of depth and orientation of your targets and find out how your detector responds.



We are now ready to discriminate targets from each other. We will start with the DISCRIMINATE LEVEL at MIN. Please notice that the DISCRIMINATE LEVEL knob has words that correspond to the items that are discriminated out. There is also an arrow between Iron and 5¢. This is the recommended discriminate level when using the notch filter. This manual will go more into detail about that in the **"Set Notch Window Width"** section.

All four targets (the iron, nickel, pull tabs and quarter) will respond with a good audio signal at the MIN setting. Next, we will turn the DISCRIMINATE LEVEL up to the preset arrow. This should be high enough to knock out the iron target and still get a positive response on the nickel, pull tabs and quarter. When you are done with the preset setting, turn the DISCRIMINATE LEVEL to the 5¢ setting. This level is high enough to knock out the nickel. At this time the iron target and the nickel should give no response, while most of the pull tabs and quarter will give a solid response. Next, turn the DISCRIMINATE LEVEL just past the PULL TAB marking. At this time most or all of the pull tabs should not give any response. Only the quarter should give a strong audio signal. Now roll the DISCRIMINATE LEVEL all the way to MAX. Notice that the quarter is still responding. The discrimination will not go high enough to lose most silver coins.

This air test was designed to show you quickly how your Discriminate Mode works. Each machine may be a little different than all the others, so you may want to take some time and try different targets to find the responses of your machine. At a later date, you may also build a test garden to test your detector in the field.

Set Notch Window Width

There is a very distinct difference between the regular Discriminate and the Notch Filter Discriminate. While both filter out unwanted targets, the regular Discriminate Level knocks out everything below the level it was set at. The Notch Filter Discriminate works only in a certain band and does not affect the targets below or above it. This gives the detector the advantage of losing most of the pull tabs and still keeping nickels and gold rings. The Notch Filter Discriminate has two settings—NARROW and WIDE.

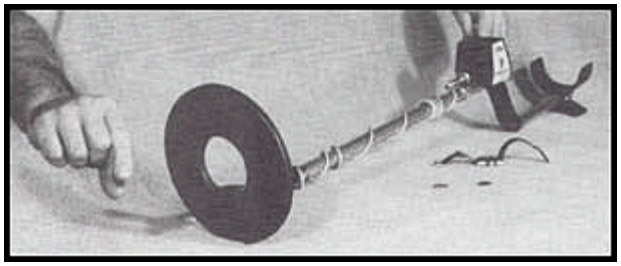
NARROW covers most pulltabs and WIDE covers pull tabs and most screw caps.

While in either Notch Mode, the NOTCH WIDTH knob becomes active. This knob controls the edge of the notch window in the nickel/pull tab/gold ring area and allows you to determine what targets will be inside the notch window. Turning the knob counterclockwise, towards the wider part of the graphic, increases the size of the window and the number of targets that are discriminated. Turning the knob clockwise, towards the thinner part of the graphic, decreases the size of the window and allows more targets to be found. After you are finished with the Quickstart, take some time to familiarize yourself with the NOTCH WIDTH control. Find the setting that best suits your hunting style and the local conditions.

NOTE: No detector can guarantee to discriminate out all of the pull tabs and respond to all of the gold rings. The Golden µMax uses the Notch Width knob so the user can determine the amount of Notch Filter Discrimination that is right for their location and hunting style.

With the DISCRIMINATE LEVEL at MIN, move the NOTCH switch to the left into the NARROW position.

For simplicity, we will only work in NARROW Mode. Try WIDE Mode after finishing Quickstart. At this setting you should be getting responses from the iron target, the nickel and the quarter. Depending on the type and alloy of your pull tabs, some may be responding at this setting. Next, wave the nickel about 3 inches from the coil and slowly turn the NOTCH WIDTH counterclockwise to increase the notch window. As you turn the knob, first you will get a broken signal, then the nickel will no longer respond. Check your other targets. Only the iron and the quarter should give a signal. Then using a pull tab, slowly turn the NOTCH WIDTH knob clockwise to see if the pull tab will respond. Due to the numerous alloys in pull tabs, your tab may respond quickly or not at all. Return the knob to the 12 o'clock position and check your targets once again. You may want to take the time to get more targets and test your NOTCH WIDTH settings.



Next, with your NOTCH WIDTH set at 12 o’clock, turn the DISCRIMINATE LEVEL knob to the preset arrow and check your targets. Only the nickel and the quarter should respond. Now turn the DISCRIMINATE LEVEL knob up to the PULL TAB level. Only the quarter should respond now. By using the regular Discriminate with the Notch Filter Discriminate, you will be able to knock out most of the junk targets that plague a detectorist. But if the DISCRIMINATE LEVEL is set too high in the Notch Mode, it will override the notch settings and you will lose the valuable nickel and gold ring targets.

Conclusion

Congratulations, you have just finished the Quickstart for your new Golden µMax metal detector and in the process have learned quite a lot about your detector. But experience is the best teacher. I would recommend that you get out and practice with your detector as much as possible. Any time spent using your detector will give you valuable experience.

OPERATING TECHNIQUES - FIELD USE

Handling Your Detector

The detector should be held in a position that is comfortable for you as shown in the **"Adjusting the Pole & Searchcoil"** section in **"Getting Started."** Swing the detector from side to side in

about a three foot arc, overlapping succeeding strokes well. This motion is called a “sweep.” The Golden µMax was designed to get maximum depth without the frantic pace required of earlier motion detectors, so go at a pace that is comfortable for you. In fact, trying to hunt too fast may even cause a loss of depth in heavily mineralized locations.

Regardless of which mode you are using, try to keep your searchcoil height constant and close to the ground. Most people tend to raise the coil at the end of a sweep—much like a pendulum—especially if in a hurry. Try to avoid this, as any increase in height from the ground will cause a corresponding loss of depth.

In areas with well-kept lawns, the easiest way to maintain a constant searchcoil height is to allow the coil to rest on the grass as you sweep from side to side. In rough and rocky areas, it is best not to “scrub” the coil on the ground, as the rocks will act like abrasives and wear away the coil bottom (an optional coil scuff cover will protect against this). Sweep the coil as close to the ground as possible without touching. Hitting the ground or rocks may cause a false signal much like a desired target would. Sweeping the coil too high above the ground results in a loss of depth.

Planting a Test Garden

To better learn how your detector will perform in the field, it would be helpful to bury some coins and trash metal items in an area that you know is clear of other metal objects. Check the area with DISCRIMINATE LEVEL set at MIN to be sure it's clear of trash, then bury the targets at least 1 foot apart and from 3 to 5 inches deep to start. Make a map of the area to be sure you know what each target is and how deep it is. Practice on these targets to familiarize yourself with your detector’s target response. This will also help you learn the proper sweep speed for best operation. This type of practice area is often called a “test garden” or “test bed” and is one of the best tools to help you develop your metal detecting skills.

Recognizing False Signals in Discriminate Mode

When operating in the DISC Mode, some “false signals” may be caused by 1) heavy concentrations of trash metal objects, 2) very large trash metal objects, or 3) electrical interference. These signals are generally short, choppy sounds and sound different than “good signals” (good target response sounds).

At the end of your sweep, as you reverse the coil direction, the detector is most susceptible to trash-induced noise. There are two ways to tell whether these sounds are good deep signals or trash “noise.” The first is by repeatability. Trash-induced noises will not be regular as you sweep the coil over the suspected target several times, whereas a good target response will be repeatable. The second method is to switch to ALL METAL Mode and check the target response sound. If the response is weak, it may well be a deep, good target. But if the response is very strong, it is probably trash. Note that a coin close to the surface can give a double beep sound, but it is regular and repeatable. Raising the coil an inch or two will restore the single beep on surface targets.

Recovering a Target

If the target is shallow and the soil is soft, you may be able to “probe” and find the exact location of the target before you dig it. Since filling all holes after you recover the target is so important, digging a small precise hole is best. If the target is deep, you may need to dig a larger hole. As you dig, occasionally check the hole with your detector to see if you have moved the object, can probe it or have already dug it. Be sure to fill all holes after you recover the target. Be sure to protect your hobby by leaving the site cleaner than you found it and with *all holes filled!*

RECOMMENDED RECOVERY METHODS

GENERAL INFORMATION - CARE AND USE

Basic Care

The Golden µMax is a sturdy instrument, but it is not designed to withstand abuse. In caring for your Golden µMax, there are several important “DO NOTs” to remember. DO NOT use it to pry rocks loose or to beat bushes out of the way. DO NOT drop the machine into water. DO NOT use it unprotected in the rain. DO NOT leave it exposed at night where dew could form on it. DO NOT store it in places that could get extremely hot (next to a woodstove or in an attic). DO NOT leave it in the trunk of a car or in the back of a hatchback-style car where high temperatures could build up. DO NOT store it with the battery installed as batteries may leak. DO NOT spray lubricants such as WD-40, or any type of cleaners, solvents, sealants or other chemicals into or onto the electronic parts, switches or controls. And finally, DO NOT attempt to modify or repair the detector’s electronics as this will void your detector's warranty.

THE WARRANTY DOES NOT COVER DAMAGE RESULTING FROM AN ACCIDENT, NEGLECT OR ABUSE.

Protecting Your Investment

Often detectorists are disappointed when their new detector slowly becomes less and less responsive and seems to have lost some of its original peak performance. You can help prevent this from happening to your detector by following these basic care and protection guidelines.

- Operate your detector exactly as recommended in this Operator Instruction Manual.
- Use only high-quality alkaline batteries of the correct voltage. Never substitute a different voltage. When using a Ni-Cad battery, always use a separate convertible pack with the proper voltage output for the detector’s design.
- Remove the battery from the detector after each use. This will prevent damage to the detector if the battery leaks.
- The searchcoil cable is hard-wired to the searchcoil and protected by a strain relief. Inspect the strain relief frequently to make sure it is firmly attached and intact.

- Keep cables properly wound around the pole stems and protect them during use. Floppy, pinched, or cables that become snagged during use may short, causing erratic noises or unnecessary replacement of the searchcoil.
- Sweep the searchcoil carefully, especially when using around rocks and building foundations. Avoid hitting the searchcoil against hard, solid objects and surfaces.
- Keep your searchcoil slightly off of the ground during the sweep, especially when using in gravel or hard, rocky dirt.
- Always use a properly designed protective scuff cover on the searchcoil. (See "Optional Accessories" in the next section.)
- Remove and clean out scuff covers periodically to avoid buildup of mineralized dirt particles which will affect performance.
- The searchcoil is waterproof and can be submerged in either fresh or salt water. After the searchcoil is used in salt water, rinse it and the lower stem assembly well with fresh water to prevent corrosion of the metal parts.
- The searchcoil is waterproof but the electronics are not, so always prevent any moisture or water from entering the control housing and never allow the cable connectors to become submerged in water.
- If working in or near water, or if there is a possibility of rain, use a protective weather resistant pouch or plastic bag to cover the control housing. Make sure it can "breathe" in order to ensure against condensation buildup inside.
- After each use, clean the detector with a soft cloth to remove dust, moisture, or other contaminants.
- When transporting the detector in a car during hot weather, store it on the floor of the passenger compartment if possible. Using a carry bag gives additional protection. In any case, never allow the detector to roll around unprotected in the trunk or back of a pickup truck.
- Protect your detector from dust, moisture, and extreme temperatures during storage.
- When shipping, use the original factory carton or similar heavy-duty container and provide a minimum one inch of padding around all parts.
- Treat your detector as you would any sensitive electronic instrument. Though ruggedly constructed and designed to withstand the demands of normal treasure hunting, proper care is essential.

OPTIONAL ACCESSORIES

Tesoro metal detectors and genuine Tesoro accessories are sold only through independent Tesoro Authorized Dealers, who are almost always metal detectorists themselves. They can answer your questions about your Tesoro detector, what accessories may be helpful, and about metal detecting in general. See your Tesoro Authorized Dealer for more information and prices on optional accessories.

Scuff Covers

We highly recommend using a scuff cover to protect your searchcoil at all times. The scuff cover for the Golden µMax, fitted with the 9x8 searchcoil, is Tesoro Part # SCUF-9x8.

Searchcoils

The 9x8 concentric searchcoil provided with the Golden µMax is designed for best all-around performance. Optional searchcoils may add to your detector's performance.

Smaller searchcoils give better “target separation”—that is, more distinct target response for metal objects buried closely together—which is very useful when hunting trashy sites. Very small searchcoils can deliver the best response and depth to small targets such as fine gold chains with some sacrifice in depth on larger objects. Larger searchcoils give a wider sweep, cover more ground, and provide greater depth especially on larger objects; however, they may not detect some very small objects such as half dimes and will have difficulty in very trashy areas.

Widescan searchcoils ignore ground mineralization better than concentric searchcoils and may offer improved performance in extreme ground conditions.

Selecting the right optional searchcoil depends on factors such as what you are searching for and search site conditions. No one searchcoil is better than all the rest. Several optional interchangeable searchcoils are available for the Golden µMax. They are all easy to mount and require no special tools. See the following list of these searchcoils with the Tesoro part # and description.

Tesoro Searchcoils

Tesoro Part #	Description
COIL-4RC	4" round concentric (closed center, white)
COIL-7RC	7" round concentric (closed center, white)
COIL-7RW	7" round wide scan (closed center, white)
COIL-8.5RW	8½" round wide scan (closed center, white)
COIL-10.5RC	10½" round concentric (closed center, white)
COIL-11RW	11" round wide scan (closed center, white)
COIL-12x10-CL	12 x 10 concentric (spoked, white)

Optional scuff covers are also available for any Tesoro searchcoil.

Headphones

Most metal detectorists prefer to use headphones instead of the detector's built-in speaker. Headphones help block out background noise such as wind and make it easier to hear faint signals. Headphones with a built-in volume control will allow you to adjust the sound volume to your preference.

SPECIFICATIONS

Operating Frequency	10 kHz
Searchcoil Type	Concentric
Searchcoil Size	9 x 8
Cable Length	Approx. 3’
Audio Frequency	All Metal (VCO) 260 to 420 Hz Disc. 4 tones: 240 Hz, 315 Hz, 370 Hz, 500 Hz
Audio Output	1½” speaker and headphone jack
Headphone Compatibility	¼” stereo plug
Weight (may vary slightly)	2.2 lbs.
Battery Requirement	One 9 volt DC (alkaline)
Battery Life (typical)	10 to 20 hours
Optimum Temperature Range	30° to 100° F
Optimum Humidity	0 to 75% R.H.
Operating Modes	No-motion All Metal Silent Search Discriminate Notch Norm Notch Wide (Larger Window)
All Metal Tuning Mode	Fast Auto Tune

WARRANTY SERVICE

Your Tesoro metal detector is covered by a Limited Lifetime Warranty, the terms of which are listed below. If your metal detector should require service, you may return it to the Tesoro factory at the address below.

LIMITED LIFETIME WARRANTY

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

This instrument is warranted to be free of defects in material and workmanship as long as it is owned by the original consumer purchaser. This warranty is not transferable and is valid only if the warranty registration card has been completed and mailed within 10 days of purchase.

TESORO will, at its option, repair or replace any instrument covered by this warranty, without charge, except for transportation charges, at its factory in Prescott, Arizona.

This warranty excludes batteries, damage caused by leaky batteries, cable breakage due to flexing on body mount units, and wear of the searchcoil housing. Also excluded are instruments which have been abused, altered, or repaired by an unauthorized party.