



# TIPS AND TRICKS

Accumulated from various sources

## Tips and Tricks with the Tesoro Tejon

### One way to set up the Tejon for bad ground is as follows:

- Ground balance according to the owner's manual. Once ground balanced turn the Ground Balance knob one-quarter turn clockwise.
- Turn the sensitivity knob all the way to ten, you will hear chatter and at this point you will want to turn the sensitivity knob counter clockwise just to the point the chatter stops.
- Set the primary disc in the "All Metal" tone mode. Note: some say that the Tejon can't be hunted in audible "All Metal" but I beg to differ, as I have been able to get a consistent threshold with mine but it takes practice.
- Set the secondary disc just above just above the click (non audible "All Metal").
- When you get a signal using the primary disc toggle the switch to the secondary disc, if you do not get a signal (Null) dig your target. I have found many whole Spencer bullets in heavily hunted sites using this method.

### Setting the Tejon up for good ground

- Ground balance according to the owner's manual. Once ground balances turn the Ground Balance knob one-quarter turn clockwise.
- Turn the sensitivity knob all the way to ten, you will hear chatter and at this point you will want to turn the sensitivity knob counter clock wise just to the point the chatter stops.
- Set the primary disc just above the click in "All Metal" (you will still be hunting in "All Metal but the consistent threshold will not be heard).
- Set the secondary disc at the O in the word Foil. Note: you may want to experiment with a square nail for actual settings. Using a square nail adjust the secondary disc clockwise until the square nail nulls out.

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It has been suggested that the Cibola, and Tejon get better depth in discrimination mode when ground balanced slightly negative of neutral in all metal mode. You have to be careful not to go too far negative or you will start to get false signals.

Also, about the maximizing the threshold setting (super tuning) ... it does

increase depth of detection but it also hurts discrimination of larger pieces of iron. It also takes away some of the subtle tone edges on the larger iron. The normal preference is to run with the threshold set to a low background tone that is suitable for pin pointing. You might give away a little bit of depth, but it is more usable and will generally give better results in most conditions.

If hunting an area where there is not a lot of trash and the hunt is for relics, turn the threshold up all the way and go for maximum depth.

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**Tesoro Tejon (*Tay-hawn*)**  
**(from a Treasure Depot detector review)**

For the most part, Larry and I ran our machines with nearly identical settings. (See Larry's suggested setup in his field report beginning on page 28). For me, I set the DISC LEVEL just at or slightly above the FOIL mark and the ALT DISC LEVEL set just a hair above the TAB mark. This allowed me to use ALT DISC as a "coin-check." After getting a signal in Discriminate, pushing the trigger forward momentarily switches the unit into ALT DISC, and if I still get a good signal, then the target is probably a coin. Quite often I made the decision to dig a target even before switching to ALT DISC, and in some cases I never even bothered to check targets in ALT DISC (just because they sounded so good). The beauty is that you can set either of the two settings wherever you want. It is important to note here that the alpha character labels associated with the two Discriminate knobs make it a bit difficult to know exactly where to set the knob pointer. For example, if you set your DISC LEVEL control on FOIL, do you put the pointer on the "L" in FOIL, or the "F", or somewhere in between? The only way to know for sure is to test it by waving a foil target across your coil while adjusting the DISC LEVEL control. When you hit the point where foil is knocked out, make a mental note of exactly where the pointer is. I hate to keep saying it but because this machine is so sensitive, you will have to test specific targets to see exactly where they get knocked out and set your controls accordingly. If you are off by a hair (on the high side), you may be knocking out desired targets. This machine is tight so you will have to learn the various settings for your style of hunting and types of targets you desire.

Here is one example of how you can use the dual Discriminate controls. I was searching for a new site (Stage stop), and I knew the exact field it was in but not where the actual building had stood. Sites of this nature usually have a large concentration of iron and nails in the immediate area, so I wanted to know when I started picking up concentrations of iron targets. However, I did not want to have to dig them all. That would be an indication that I was on or near the building site. On the other hand, I didn't want to accidentally pass over a good target in the process so here's what I did. I set the DISC LEVEL knob way down on IRON, which would knock out only the tiny pieces but still allow me to hear nearly every good-sized nail. I tested this by digging a few targets so I was sure I was picking up only the bigger nails. Then I set the ALT DISC LEVEL to just above FOIL. As I

moved across the field and got hits, I could crosscheck them quickly in ALT DISC, and if they blanked out, I knew it was an iron target, but if I still got a good signal, I knew I better dig it! With this setup, I was able to quickly move across the area and assess the site by the number of "iron" hits I was getting.

As you begin to use the Tejón, you will realize it has a very distinct personality. First and foremost you will quickly realize that the Tejón has a very distinctive audio. It almost talks to you. Well, that may be a bit overstated, but the sensitivity of this machine is so much stronger than traditional Tesoro machines that the audio really comes alive with subtle "crackles" and "chirps" and "pops. (noisy??)" It will take you a while to become totally familiar with what it is telling you, but the longer you use it, the more "language" you will begin to recognize. Targets that are just below the discrimination settings will give you "ticks" and "pops," but to take this a step further, we have learned that some of these "ticks" and "pops" can really be good deep targets and it may take you a while to recognize the distinction.

After we became familiar with the Tejón, we began experimenting a bit and noticed that some of those faint "ticks" had a rather mellow or smoothness to them that was a bit different than that of a nail or rejected target. When we recognized this distinction, we began cranking the sensitivity all the way up and rescanning the targets. Very often a "smooth tick" at sensitivity 10 would turn into a smooth target when the sensitivity was set to max. In some areas, the machine may be too noisy to run with maximum sensitivity all the time, but it may pay off for you if you check those "iffy" signals by cranking it up to check some of those targets. One last comment on the audio quality of the Tejón. I do not recommend using cheap, poor quality headphones with the Tejón because they may handicap your ability to hear the distinctive audio characteristics of this machine.

Some iron targets will fool the Tejón. Iron with a very heavy halo (buried for a very long time), large solid pieces, or round-shaped rings or loops may sound off like a coin. You may be able to detect a slight hint of a "crackle" in the audio, but not always. This is the audio distinction that the Tejón gives you. Good targets have a very smooth and mellow "beep," and iron targets have a distinct "snap" or "crackle" at both ends of the "beep" (crackle-beep-crackle).(Other Tesoros do too) It may take you a while to distinguish the difference. At first I dug a lot of iron nails, but after digging some nice targets, I could then distinguish the difference in the audio.

On many occasions we would register "coin" sounding targets, only to have the targets disappear once the dirt was disturbed. After repeatedly checking this (by turning the DISC LEVEL to ALL METAL) and finding small bits of iron or nails, we began to realize how sensitive the machine was to the halo of iron targets. Once the halo was disturbed (after scooping the dirt and target from the hole), the machine would then discriminate the small iron target and all of a sudden the target seemed to disappear. After continuously checking these "ghost" signals,

we eventually reached the confidence level to simply fill the hole back in and move on to the next target or we recognized the target as iron by the audio distinction.

I have also seen this halo effect work on a non-iron target, and this experience really surprised me. I was hunting a city park one day, purposely only looking for deep coins. I had the DISC LEVEL set at TAB, basically knocking out everything below that (including nickels). In one spot I got a very sweet sounding, faint and smooth signal. After digging a plug, I checked it and didn't get a signal but still had a signal in the hole. I removed a couple more inches of dirt and repeated the process. At about 6" down, I lost the target in the hole and surprisingly didn't get a signal in the dirt pile either. I pulled more dirt from the hole just to be sure it was not loose or on-edge down in the hole, and then switched to All Metal in an attempt to locate my "ghost" target. I was surprised to get a solid hit in the dirt pile and after a little effort I found the item; it was a 1906 "V" nickel! With the DISC LEVEL knob set at TAB, I should not have heard this coin, so the only explanation that I could come up with was that the halo must have been strong enough for the machine to pick up. Once I disturbed the coin and the halo disappeared, the machine knocked the coin out and I could no longer hear it. I checked the surrounding area, the hole, the plug, and the dirt pile in All Metal and there was no other target anywhere to be found; the machine had ID'd that nickel's halo. That's the only conclusion I could come to.

Another characteristic we discovered had to do with iron nails and pinpointing. It was accidental as to how we discovered this. Larry discovered the "secret" first and passed it on to me, and sure enough it proved to be true for me as well. Mind you, under normal circumstances you may not be digging the kinds of targets we were, because we were in "super sleuth" mode, so that we could fully understand the abilities of the Tejón. Both of us would occasionally get strong signals that would register in both DISC & ALT DISC, with no hint or indication of the target being iron. After digging plugs and in some cases, deep holes, we would sadly discover that it ended up being a nail off to the side of the hole. This perplexed us at first because the Tejón pinpointed so accurately in the Discriminate Mode, and we were sure we were digging dead center to where the machine indicated the target was. How could we be pinpointing so badly? What we discovered was that for some reason, the target center of certain nails read one location in Discriminate Mode and a slightly different location in All Metal, only inches away. This was not a bad thing. Actually it was quite good because it allowed us the benefit of identifying that target as a nail without having to dig it. This seems to happen only on nails with large heads, and I am guessing here but I think a larger halo develops around the "head" of the nail, and that is what the Discriminate Mode sees and centers on, but in the All Metal Mode, the machine is seeing the entire nail and centers on its center (which is some distance away from the nail head). So, when you get a target that seems to "move" as you switch from Discriminate to All Metal, it's probably iron and probably a nail with a large head. Until you get comfortable with the Tejón, you should always use the

All Metal pinpoint mode as your guide.

One drawback of the Tejón has to do with crosstalk, and it may never affect you unless you come in close contact with other Tejóns. Machines set at exactly the same frequency will have significant crosstalk. We discovered this only because our first production machines were set to the exact same frequencies of our prototype machines, which we began loaning to fellow hunters. We could not get within 20 yards of each other without hearing significant chatter between the machines. If you discover your partner's machine matches yours, one of you may wish to send your machine back to Tesoro, and they will alter the frequency slightly so the crosstalk is eliminated.

All Metal operation was very difficult for me to realistically test at my sites here in Wisconsin. There was so much junk iron in the ground that the machine was constantly sounding off, making it virtually impossible to hunt in this mode.

For Tejon the threshold is set to where you good a nice comfortable hum when in all Metal. The sensitivity is set as high as possible without getting chatter. I primarily hunt CW relics so I have the primary disc. set to the lowest level of discrimination and the secondary disc. set to nickel. This allows me to determine if the target is lead or brass with a forward bump of the switch. If the area is not trashy I will hunt in all metal. Ground balance and you are ready to hunt. I live in north Georgia and have had good success with the Tejon. I can swing it all day long at less than 3 LBS.

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### **Some suggested settings:**

#### INITIAL SET-UP

The owner's manual does a good job of describing the assembly of the Tejon. Just remember to wind the coil cable in a clock-wise direction (looking down) so that the cable doesn't pass over the small, center "receive" coil. Also, make sure the cable clings to the pole with some slack at the coil end to allow coil pivoting,

TONE CONTROL---Thjs is one of the nice things about the Tejon. You can set the pitch of the "beep" for best auditory discrimination. It's been my experience that, to my ears, the richest Tejon vocabulary occurs with a relatively high pitch; this setting is around 2:30 to 3:00 o'clock and is the setting most Tejon owners use. It's likely that the "high tone" mod that some Cibola and Vaquerowners opt for is similar to this setting. Note: I have little to say about the VCO click setting; I never use it, preferring the tone setting above.

THRESHOLD---The threshold on the Tejon is not the smooth, clean tone that you may be used to with other detectors. In fact, it is somewhat wavering and raspy. Don't fret, this is apparently the case with all rejons and, it is reported anecdotally by owners with multiple Tejons, that the less smooth the

threshold, the deeper the Tejon.

when setting the threshold level in the all-metal mode, if you listen very closely you may be able to detect two threshold tones. One is the obvious, louder, normal threshold audible from about the 12:00 position and upward. The second, weaker, somewhat steadier tone lies beneath the louder threshold tone and is easiest to hear below the 12:00 position. In air tests, with my threshold set around the 11:30 position (and the sensitivity set at "10"), I can sometimes hear changes in the weaker tone very slightly deeper than the standard threshold tone. This hasn't, so far, been of any value to me in the field but it's there for me to try on any ultra-deep targets I may encounter.

so, as a starting point, your threshold knob adjustment will likely be in the 11:00 to 12:00 range for optimal depth detection (assuming your Tejon is similar to mine).

**SENSITIVITY**---I try to run this setting as high as I can without chatter or excessive falsing. This is usually in the neighborhood of "10." I'm rarely able to venture into the Max Boost range. Note that even at the "0" setting, the Tejon is still very deep (out to B" on coin-sized targets in all-metal) so don't be afraid to cut back on the sensitivity to reduce falsing, iron pips, or other noisiness.

**AIR TESTING**---This is kind of a fun thing to do to learn the approximate discrimination settings and to periodically check the health of your detector. The owner's manual goes over the air testing procedure but I'd like to point out a couple of things...

1. Ground balance setting---Ideally, you should ground balance a piece of ferrite before air testing but most folks forego this. Realize, though, that the GB setting can affect the apparent depth of a test target in the all-metal mode. That is, setting the GB to full negative/CCW will get you an extra couple of inches of depth compared to a full positive/CW setting. If you don't have a piece of ferrite then, just set the GB at mid-range. The GB setting has hardly any effect if testing in the discrimination mode(s).
2. Testing in the all-metal mode should get you air test depths in the 12"-15" range depending on size of the coin (assuming you are using coins).
3. Testing in the discrimination mode is pretty revealing. Besides allowing you to assign targets to knob settings, it also allows you to see how little depth is lost with increasing discrimination. That is, a setting at the high discrim setting of SCAP is only about a half-inch "shallower" than the much lower FOIL setting; and high coins are still detectable in the 11u-12" range.
4. It's probably a good idea to keep a record of your air tests just to keep track of the "health" of your detector.

**TARGET PRACTICE**---After going through the set-up and air test, it's a good idea to get some practice at hearing what good and bad targets sound like. Most folks use a coin garden but even laying targets on the ground, practicing ground balancing, your sweeps and pin pointing can be worthwhile before going "into the field."

**BATTERIES**---The manual states that you can expect a battery life in the 20-

30 hour range. If there are a bunch of targets and the detector is forever sounding off, battery life will be less than if targets are few and far between. Standard alkaline AA batteries have a capacity of about 2100 mAH and, within the past yr, the newer NiMH rechargeables have reached that range and beyond. I'm trying a set of 2100 mAH NiMH batteries now and although I get only 3 beeps (as opposed to 6) on turn on (due to the 1.2V/cell compared to the alkaline's 1.5V/cell) I can't tell any difference in performance or depth, so these may be worth using. I do know, however, that the stated capacity of rechargeables refers to their "new" state and that successive charging reduces their capacity. I've got a set of D-cells that I use in a radio that after about 75 recharges has lost about 75% of their capacity (eventhough they are supposed to be rechargeable 1000 times). Nonetheless, the NiMH batteries appear to be cost effective alternatives to the alkalines. Well, that's about all that comes to mind for this first installment of tips. Next time I'll get into the more detailed intricacies of Tejon usage.

## Tejon tips (Part 2)

After you've set up your Tejon to your liking as described in Part 1, it's time to get out in the field.

The Tejon is a single-tone detector without tone, visual, or numeric information to ID a target for you; nor does it have a nice scale to tell you how deep a target is. All the Tejon has is a "beep." Quite a primitive way of detecting you might think, but there is a tremendous amount of information in that little beep. And by becoming fluent in the "Beepish" language you'll be able to do most everything an ID detector can do; in fact, you may end up being able to do a lot of the same things better.

Before beginning "beep analysis," I want to say that all of the tips that follow are based on the premise that you have "X'd" or pinpointed the unknown target to its "smallest" size. That is, that you are swinging the receive coil directly over the target,

"X'ing" Pinpointing---The lightning fast response and small receive coil on the Tejon make X'ing and pinpointing very easy and accurate. I'm usually able to do this procedure in the discrimination mode but on oddly shaped target I'll switch to the fast all-metal mode (toggle toward you) to "aurally paint" a visual "profile" of the target.

Profiling---To make the most accurate dig/no-dig, target ID and depth decisions, I need to "profile" the target. By "profiling" I mean X'ing the target to determine its CONSISTENCY (through several sweeps directions), APPROXIMATE SIZE, and APPROXIMATE SHAPE. That is, eventhough a target

may "sound good," if it is inconsistent, or larger (or smaller), or shaped differently than what you are looking for, it's probably not in a class of your "sought after" targets. This is my STEP ONE in deciding whether to continue analyzing a target. Of course, if you are a relic hunter or detectorist that digs

everything, the act of profiling becomes less important.

#### BASIC BEEP ANALYSIS

The seemingly lowly "beep" is actually a rich storehouse of information on the Tejon. It is composed of two principal components---the on/off transients (i.e., the "b" and the "p") and the longer duration "ee." Both of these components aid in IDing and estimating target depth with the "b" and "p" being somewhat more useful in IDing a target and the "ee" taking the lead in depth estimates.

NOTE: The discrimination circuitry in the Tejon is useful down to about 11"-12". Beyond that depth, you must use the all-metal mode and are mostly limited to "profiling" (although depth estimates can be made).

THE "b" AND "p" ANALYSIS---In the all-metal mode, the information in these components is minimal and, as noted, limited mostly to profiling and depth estimates. In the discrimination mode, however, they really come alive and there are some basic rules of thumb to go by...

1. On targets ABOVE the discrimination level you have set, the rise/decay time of the "b"/"p" transients will be relatively long in duration. That is, they will have a "smooth" sound. Shallower targets sound "full" and "smooth," deeper targets still sound smooth but can take on a "squishy," "less full" character.
2. As your target's conductivity APPROACHES the discrimination setting, the rise/decay time shortens and the "b" and "p" begin to sound more "abrupt." It may still be a "good" target but its conductivity will be closer to the cut-off point. For example, if you have your discrimination set to just accept zinc pennies, the zincs will sound more "abrupt" than higher conductivity coins.
3. Targets EQUAL TO the discrimination setting will take on a "crackle" character.
4. Targets BELOW the discrimination setting will either disappear or possibly sound off as "pips" or "chatter."
5. When X'ing from different directions, listen for the "worst case" scenario. That is, if you get a smooth response in one direction and a more abrupt "b" or "p" in another direction, consider the more abrupt transient as the most meaningful. (EXCEPTION: In masking situations you have to proceed to analyzing the "ee" in beep; see below.)

As an example, steel crown caps with their convoluted rims will often sound smooth in one sweep direction but you can almost always hear the "ra-ta-tatats" of the edge in another sweep direction.

So, in summary, the "worst smoothness" of the "b" and "p" in any sweep direction gives you the best indication of where the target falls in relation to your discrimination setting.

THE "ee" ANALYSIS---The "ee" in the "beep" is most obviously useful in estimating the size and depth of an object. But its value extends beyond that. Similar to the "b" and "p," listening carefully to the "ee" can provide useful ID info. Again, some rules of thumb...

1. Targets well ABOVE your discrimination setting will give a "full tonality 'ee'" (that will vary in duration depending on sweep speed and target size).

2. As a target APPROACHES the discrimination setting, the "ee" will sound "thinner" and, perhaps, somewhat weaker.

3. Targets EQUAL TO the discrimination setting tend to give intermittent "eg" sounds.

4. Targets BELOW the discrimination setting WILL GENERALLY LOSE TONALITY. This latter quality can be useful in masking situations.

Masking---When a discriminated-out target is near a desired target, sometimes a detector will fail to "see" the desired target. Many times, this situation will reveal itself as an "iffy" target, with an uncertain size and different signals depending on sweep direction and/or speed. If shortening your sweep fails to differentiate the possible two (or more) targets, listen for any sign of tonality. If the target(s) are completely below your discrimination setting, there won't (in most cases) be any sign of tonality in the "ee." On the other hand, even an occasional "ee" sound means you should probably dig it.

EXCEPTIONS: Sometimes large or problematical items (e.g., rusted iron, fruit juice seals, washers, etc.) will power past the discrimination setting and give a signal with tonality...I've yet to come up with a procedure to avoid these types of mis-IDs. Also, in theory (but rarely in practice in my experience), the conductivities of two "bad" targets can "sum" or "average" to give an erroneous conductivity reading that's above your discrimination setting but I've never encountered this with the Tejon (but I have with my ID machines).

Coins on edge.--Sometimes when you are sweeping a small target that you've guessed is "good," you'll notice that the fullness (and duration) of the "ee" may be somewhat less in one sweep direction than in another. In my experience, a high percentage of the time this is a coin on edge.

Coin denomination---At a constant sweep speed, and with practice, you can learn to tell with somewhat surprising accuracy, the difference between a dime and a quarter by listening to the duration of the "ee" (and, therefore, the size of the target), I can also usually (but not always) tell the difference between a copper penny and a quarter, but not between a copper penny and a dime. Zincs and nickels are handled with the dual discrimination of the Tejon.

So, in summary, besides size and depth estimates, analysis of the "ee" sounds can tell you how close to your discrimination cut-off point a target is and can aid in the ID process.

This is already pretty long so I'll save depth estimates, dual discrimination, etc. until next time.

In closing, let me state that to use the preceding tips optimally, you need a good set of ears and a good set of headphones. You also will likely need practice TRYING TO HEAR the cues. If you presently have "untrained ears," you may or may not be able to hear some of the subtle cues that the Tejon provides. This isn't a character flaw or personal shortcoming on your part, you may just presently lack the "auditory analysis infrastructure" needed.

That is, the neural pathways and analysis networks may not presently exist in your system and require development (through practice). Much like learning a foreign language (which initially sounds like gibberish), hearing these cues

takes practice before things start differentiating themselves and the "light goes on." I've read that neuropsychologists say that it takes about two weeks worth of practice to permanently establish new neural networks so don't expect results overnight.

## Tejon tips (Part 3)

Thanks everyone for the kind and encouraging comments re: Parts 1 and 2 of this tip series. As I mentioned, being forced to put into words what I've learned about the Tejon has helped me better understand what I do while I'm detecting.

A couple of more points re: beep analysis and the ID process...

1. "Signal settling"---While you are analyzing a beep, continue sweeping the small X's over the target. The Tejon seems to require multiple sweeps to "settle down" and provide a consistent report...consistently "good," consistently "iffy," or consistently "bad." Use a minimum of 3 or 4 repeated sweep patterns to get a consistent signal.

2. Predictions---The quickest way that I've found for acquiring signal analysis skills is by making predictions about a given target. For me, for the first several sessions with a new detector, this involves digging virtually all targets, good and bad, and making predictions about their "goodness." This forces me to listen very closely to the target's signal and helps to form the "acoustical signatures" that become part of my internal ID catalog. I even probably take this process to an extreme by carrying a digital tape recorder to note the signatures and my guesses. After a period of practice, you'll have a set of "good" and "bad" signatures in your internal catalog. Some targets won't fit into any of your existing signatures; these "iffy" signals are always dug and contribute to refining your internal "icons."

Foiled you---No matter how much I analyze a signal, I'm still fooled by some targets. A partial list includes bent square tabs, the broken "tail" of a beaver tail, fruit juice seals, washers, deep iron that busts past the discrimination setting, clipped zincs/coins, flattened screwcaps, some rusted iron, etc. I should mention that most of these mis-ID's are "iffy" and usually just don't "sound exactly right" but are close enough to a "good signature" that I always dig them. Unfortunately, I'm at a loss for words to describe why they don't "sound right;" I guess I need more practice.

### DEPTH ESTIMATES

I use an electronic probe to help locate a target so I haven't probably refined the "depth estimate" portion of Tejon use; if I'm within an inch or two of the correct depth, that's sufficient for me when using a probe. If I didn't use a probe, I'd probably be forced into making more precise depth estimates, but..

Target size X signal strength---These are the two variables that are most obvious and principally contribute to the depth estimate process and are

directly related to target depth.

I mostly use the strength or loudness of the "ee" in the beep, combined with the profiled size of the target, to estimate depth. Your local soil conditions really play a significant role in estimating depth so I can't give firm guidelines for the size/signal strength relationship other than the obvious "large targets give stronger signals than smaller targets at the same depth," etc. Luckily, the signal strength of the "ee" of a target's beep is pretty linear as a function of depth in both the discriminate and all-metal modes. As mentioned earlier, the discriminate mode's depth limit is around 12" in the all-metal mode goes much deeper and at its deepest limits the "ee" sounds very "thin" and becomes a whisper with little or no tonality.

You'll also note, in the discrimination mode, that the "b" and "p" of the beep will sound less strong and take on more of a "squishy" sound.

After some experience, you should be able to develop an internal depth scale that correlates target size, signal strength and depth. You will "slide" this scale somewhat based on local soil conditions, specifically the moisture content of the soil. At any rate, with a little practice you should be able to get within an inch or two of most targets' correct depth.

Other depth indicators--

1. Double-beep---the Tejon, like most detectors, will give a double-beep on surface targets (or targets within about a half-inch of the surface). These can be readily found visually or by using a probe.

2. Overload signal---Not frequently mentioned, the Tejon has an overload signal that sounds off on very shallow, large targets. It is the same sound as you hear when you turn on the detector and get the battery check. That is, it sounds like "beeeeeeeep, beep, beep, beep."

#### DUAL DISCRIMINATION

Some people don't see the value of this feature while others find it to be very useful. For the type of detecting I do, the dual discrimination feature is absolutely invaluable and responsible for dramatically increasing my good-to-bad target ratio.

Being primarily a coin shooter who detects at moderately trashy, modern sites, being able to PRECISELY set both discriminators so that I can VERY QUICKLY access both of them and make dig/don't dig decisions enables me to cover a lot of ground and spend more time digging the good targets.

The value of the dual discriminator system to me is not so much in digging the good targets (most detectors can do that); rather it is an improved ability to ID the trash targets. I've mentioned this before in other posts but the ID detectors I've used can generally accurately ID a coin (especially at shallower depths), it's just that they also frequently ID a trash target as a coin.

Some examples of my use of the dual discrimination feature---

1. CLAD COIN MODE---This is the mode I use for about 80% of my detecting. Square pull tabs masquerading as nickels is the biggest problem that I encounter at the modern sites I usually detect. By actual count, I was digging 4 square tabs for every indicated nickel on my ID detector; this really ticked me off, wasting time digging tabs. The following set-up has dramatically

reduced my pull tab/nickel problem with hardly any pull tabs being dug during a normal detecting session.

Disc #1---Set to just "crackle" on a nickel (around the "I" in "FOIL") while giving a solid hit on square tabs. This is an EXTREMELY touchy setting. After ground balancing at a site, I'll lay several samples of pull tab and a nickel or two on the ground and VERY carefully set Disc #1. Again, this is a very delicate setting because the two types of target are very close in conductivity...sometimes I can't even visually see the minute adjustments I'm making to the Disc #1 knob, so take your time, it can be done with most types of pull tabs.

Disc #2---I set to just "crackle" on a zinc penny. This adjustment is much easier than Disc #1.

\$, d "crackle" in Disc #1 indicates a nickel, a solid hit in Disc #1 but no hit in Disc #2 indicates a pull tab (or other aluminum trash), while a crackle in Disc #2 indicates a zinc and a solid hit is a high coin.

By using the preceding set-up, I'm able to optimally coin shoot, IDing nickels, zincs, and high coins, with a surprisingly degree of accuracy while digging a minimum amount of trash.

2. DEEP NICKEL MODE---The Clad Coin Mode allows me to detect high coins down to 11"-12" but because the nickel is set on the cusp of acceptability, nickel depth is limited to about 4"-6". If I really want to clean out an area of its nickels, I'll use this mode.

Disc #1 setting---Again, after ground balancing, I'll set this to give a solid hit on nickels; around the "O" in "FOIL."

Disc #2 setting---This is set to just reject nickels and give a solid hit on square tabs. This setting is just as tricky as the Disc #1 setting in the Clad Coin mode. On my detector, the right spot is virtually precisely on the center of the "S-cent" mark on Disc #2.

By using these settings, a solid hit in Disc #1 and no response in Disc #2 (which rejected nickels) indicates a probable nickel. In this mode, I'm able to get to around the 12" depth in my soil (and am continually surprised at how many nickels are present at the deeper depths). Note that I usually only use this mode after cleaning out an area of its high coins.

3. GOLDfiEWELRY MODE---I use this mode mostly at the beach when I want to be concentrating on the more valuable jewelry and not on the mostly clad coins that are present (and usually corroded).

Disc #1---Because it's been reported that about 95% of gold rings fall between the conductivities represented by foil and just below the zinc penny, I'll set Disc #1 between IRON and FOIL.

Disc #2---This knob I'll set to just accept a zinc penny.

So, again, a hit on Disc #1 but no hit on Disc #2 would indicate a target in this gold/jewelry range.

Note: I'm not able to ground balance the Tejon in the very low mineralized dry sand around here so I'll set the GB toward the negative end of the setting or, really, just leave it where ever it happens to be (since I've never been able to detect any significant depth difference). Note also that I'm not able to

use the Tejon in the wet salt sand due to excessive falsing.

RELIC CHERRY-PICKING MODE---I've never used this mode because I do very little relic hunting but I do know a guy who uses a dual discrimination detector and who specializes in Civil War buttons. He sets his detector to just accept/just reject these buttons and has dug a small mountain of them over the years.

Those are a few of the dual discrimination modes that I've used or know about. I'm sure that there are others but these illustrate the extreme flexibility of the Tejon's system, a system that I, at least, find invaluable.

I have a few more things to say about the Tejon but I'll put those in the next, and final, part.

Again, thanks for the kind words and encouragement. I hope that some of what I've posted proves to be of value to new Tejon owners.

### **Tejon tips (Part 4; Final)**

Whew! This is almost over, I'm sure that you're as tired of reading these tips as I am of writing them.

Anyway, a few final thoughts...

It may seem after reading Parts 2 and 3 that using all of the cues presented by the Tejon's beep that it would be too complicated or time consuming to be worthwhile. In reality, after you've learned the Tejon, things go really quickly. For me, "profiling" a target and deciding whether it's worth continuing with generally takes less than 10 secs. That is, if it's not the right size, if I get any inconsistency on a sweep, or if all I hear are "below disc" sounds, I move on, Then it's on to estimating depth and the identity of the target by using the dual discrimination. Total time for me, from start to retrieval, averages probably 30 secs for clearly good targets at depths less than about 6". Iffy and deep targets require more time, of course. The point being that it only seems complicated and time consuming.

ALL-METAL SLOW RE-TUNE---The Tejon has a slow re-tune mode when Disc #1 is clicked "off." And it is slow; sometimes taking 5-10 secs to re-tune, I personally rarely use this mode but can see its worth when you need maximum depth and coverage and the site you are detecting isn't overly populated with iron trash.

MINERALIZATION---I've read that the Tejon isn't any deeper than other detectors in highly mineralized soil. My soil has very low mineralization so I can't comment but it would seem to me that if you can ground balance the Tejon the mineralization would essentially be neutralized. A full positive GB setting may result in the loss of a couple of inches of depth, however. Maybe folks with more experience with the Tejon in mineralized soil can educate me here,

COILS---All of the Lobo ST coils fit the Tejon so several coils are available. I own only the stock 9" x 8" and 5.75" coils and find them to be excellent in their depth, trash separation, weight, etc. The 5.75. is particularly good in

high trash areas and is only about an inch shallower than the stock coil. I don't own the 10" x 12" spoked coil but have read that it isn't much (if any) deeper than the stock coil but covers a larger area.

FINAL THOUGHTS (Finally!)---Besides its light weight, excellent pinpointing, fast response, and exceptional depth there are three things that, in my mind, distinguish the Tejon and make it invaluable for the type of detecting I do:

1. Useful discrimination at depth---The discrimination of the Tejon is accurate and useful out to about 11"-12". This is 4"-6" deeper than the few ID detectors I've used and is important to me because of my unstable soil where coins sink quickly.

2. Analog ED180 discrimination---I've always felt that Tesoro's discrimination is among the best and the fact that it is analog with an infinite range of settings (as opposed to factory-determined, step-interval settings) allows it to be customized for local conditions.

3. Dual discrimination---This is the clincher for me. Because I can custom-set the two discriminators and quickly switch between them I've been able to reduce my trash digging and cover much more ground in the same amount of time. The proof is in the pouch.

Well, I think I've ridden this horse about as far as it will go so I'll (finally) close. If you've read these tips, you now know about as much as I do about the Tejon. I appreciate your indulgence and the kind words you've taken time to post.

Good luck with your Tejon, It's not for everyone but for those it fits, taking the time to learn (and "become one with") it will reward you richly.

Good luck and happy hunting...Thomas

Whew...

TeJon tips (Part 1)

Since there are apparently a few new Tejon owners on this board and because I've learned a few things about the Tejon in the almost two years that I've owned it, I thought I'd take some time to pass on a few tips and tricks.

Given my tendency toward long-windedness, I'm breaking these tips into separate posts/parts. This first part covers pretty basic stuff so it likely won't be too helpful but later parts will cover the finer points like depth estimates, ID decisions, the dual discrimination feature, etc.

So, without further ado...

Before I get to the "initial set-up," I want to stress one very important point... HEADPHONES---Properly set up, the Tejon has an extremely rich language that is necessary to learn/understand and HEAR if you are going to realize the full potential of this detector. Besides reducing extraneous noise and extending battery life, a good set of headphones will convey to your ears the full vocabulary and acoustical nuances that you need to push the Tejon to its limits.

I use 10-year old, expensive (\$175) audiophile headphones with an impedance of 100 Ohms and a sensitivity of 92 dB. They are probably overkill but are the best I've tried, although I've never used designed-for-detector

headphones. What I do know is that headphones with an impedance in the 100 Ohm range seem to work better than the B, 32, and 600 Ohm headphones that I tried (although this is confounded by the fact that the 100 Ohm headphones were also the most sensitive). It appears that the audio output impedance of the Tejon (through the headphone jack) is in the neighborhood of 100-150 Ohms (though I have no definitive data) so choosing headphones in this ball park will ensure maximal power transfer. Sensitivity is important because sensitive headphones more readily reproduce the transients (i.e., "on/off" transitions) associated with "b" and "p" in the "beep" that you hear. Much ID info is contained in these transients so want to be able to hear them optimally.

Just about any headphones are better than no headphones, IMO, but if I were in the market for them, I'd select the most sensitive headphones with an impedance as close to 100 Ohms as possible. Unfortunately, there seems to be a positive relationship between cost and increasing impedance and sensitivity... You can get an incredible amount of performance out of the Tejon with less than optimal headphones but, in my opinion, to take it to its limits good headphones are almost a necessity. Some of you might know this already but I just got my Tejon and was trying to learn it in my test garden. This will be very helpful to people having a hard time telling the difference in the sounds.

I had it set up with the tone at 3 a clock which was recommended to me and I like, if you listen you can tell the subtle differences in the tone but while in the pinpoint if you thumb the tone knob to VCO the difference is dramatic, pull-tab is a LOT different than coins and iron and screw caps even more so they'll blow your ears off.

