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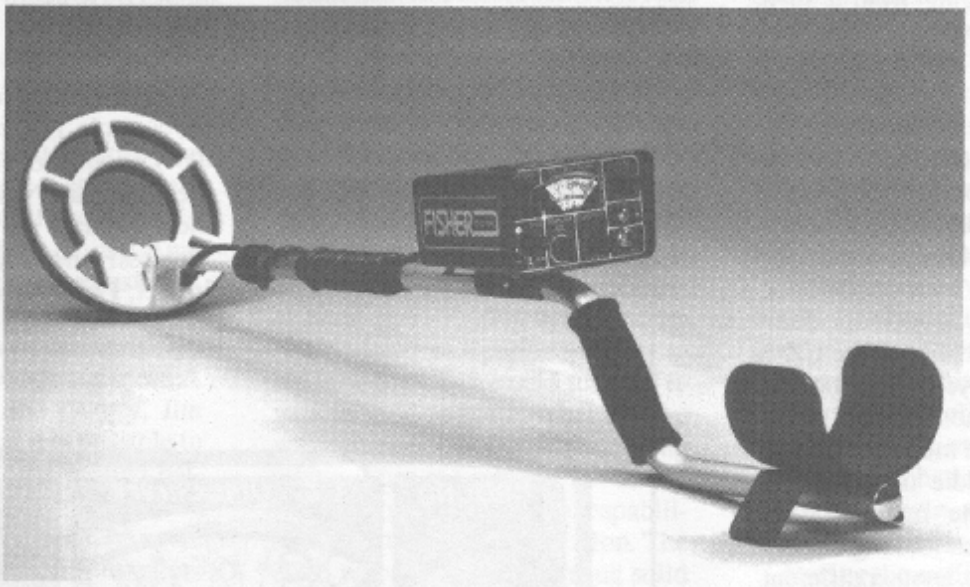
The CZ-5 QUICKSILVER

FISHER'S NEW TARGET ID MACHINE



About a year ago, I was fortunate enough to field test a new target ID detector from Fisher Research Laboratory, the CZ-6 Quicksilver. Now about a year later, I find myself fortunate enough to test their newest target ID addition, the CZ-5 Quicksilver. (For simplicity, this detector will be referred to as the CZ-5).

So what type of detector is the CZ-5? Simply stated, the CZ-5 is equivalent to the ultra deep seeking CZ-6 in performance, doesn't have the CZ-6 splash proof features, and costs less (retail price of $850). One feature the CZ-5 has, not found on the CZ-6 is an internal speaker.

What does this mean to somebody who hasn't tried one of Fisher's target ID detectors?

Well, the CZ-5, like the CZ-6 is one of the deepest seeking detectors on the market. In fact, it is one of the deepest seeking units I have ever used.

Before getting into the specifics of the field testing, I would like to review some of the controls and operations of the CZ-5. First of all, the CZ-5 differs from most VLF detectors in the technique used in the transmitting and analysis of the VLF signals. Most detectors transmit a single frequency signal into the ground and amplify and analyze the received signal at that frequency.

The CZ-5, like the CZ-6, transmits two signals simultaneously, one at 5KHZ and the other at 15KHZ. Analyzation of a target is accomplished by utilizing information from both frequencies to determine the target probability. This technique is referred to by Fisher as "Fourier Domain Analysis System."

Because this new design is so radically different from Fisher's other detectors, such as their 1200 series, the coils used by the CZ-5 and CZ-6 are not compatible with the other detectors. Fortunately, Fisher has

developed optional coils, a 5" and a 10-1/2", to compliment the standard 8" coil for their target ID detectors.

Fisher's target ID system is also unique in design. Instead of an infinite ranging meter system, Fisher utilizes a meter divided into 7 distinct blocks or zones. On the meter face plate, these zones are easy to read divisions indicated by a name such as Iron or Foil, or a graphic display such as a pull tab or a coin. Above these zones are two tapering bands, one gold and the other silver. The thickness of bands indicate the likelihood of targets made of gold or silver. At the bottom of the meter, are numbers ranging from 2 to 8 which are the probable depth indications when using the no motion all metal mode.

Also located at the bottom of the meter is the indication for the battery check feature. The two 9 volt transistor batteries can be easily checked by turning the sensitivity control fully counterclockwise with the detector and noting battery level indication.

Another uniqueness of the CZ-5 is, this target ID system has the feature that once the detector determines a target, the meter movement locks in the middle of the target zone, making the interpretation simple. Also, when looking closely at the meter layout, another different feature is noticeable. Although nickels are a low conductive target normally located somewhere between foil and pull tabs on typical target ID machines, on the CZ-5, the nickel zone is next to the other coins. In other words, all typical coin zones are together.

To compliment the target ID, the CZ-5 has a form of audio ID to aid the treasure hunter in determining a target. This audio ID consists of three distinct audio tones, a low tone to indicate probable iron objects, a medium tone to indicate most common trash items such as foil and pull tabs, and a high tone to indicate probable coin targets.

An additional audio feature found on the CZ-5 is a distinct audio "bell tone" response which indicates a signal overload condition. This is an excellent feature since target ID detectors are unable to properly identify a target who's signal overloads the detector circuitry.

To precisely adjust the CZ-5, the detector has 4 adjustable controls, a large push button, and a two position selector switch. The 4 adjustable controls are: 1) a single turn ground balance control, 2) an on/off/volume control, 3) a sensitivity/battery check control, and 4) an 8 position autotune/discrimination level control.

The large push button, when actuated, selects the no-motion all metal mode. When in this mode, the depth indication feature is active.

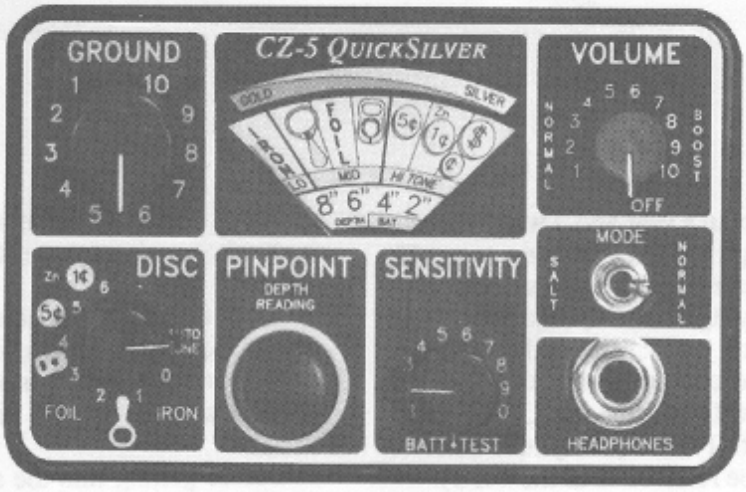
The two position toggle switch is used in conjunction with the ground adjust control. Marked "normal/salt," this switch allows for the broad range needed to properly adjust for the ground mineralization when going from saltwater to mineralized ground conditions.

INITIAL TESTING

Before taking the detector outside for my standard tests, I took time to review the owner's manual. Although I have mentioned this before, I cannot emphasize enough the importance of the information that can be found in these manuals.

Because almost everyone is anxious to get started with their new detector, Fisher has a "Condensed Operating Instructions" which make it a snap to get going by setting the controls to "Turn-On-And-Go" marks. So to begin with, I decided to try them.

These "preset" settings are expressed in red indications on each of the controls. For example, the sensitivity control recommendation is 2, the ground and volume are 5, etc. At these settings the detector worked flawlessly in the discriminate mode. In fact, I was surprised that I could



Fisher's CZ-5 QuickSilver control panel showing the target ID system's unique design.

pick up one of my standard test targets, a 6-1/2 inch deep dime. This was an impressive feat to say the least for such a low sensitivity setting.

The all metal mode, however, did display some ground reaction problems, indicating that ground adjustments were necessary for best all metal mode results. A slight but quick adjustment of the ground balance control made the all metal mode respond correctly.

This test prompted me to try something else — totally misadjust the ground balance control and see what effects it had on the discrimination mode. Although this technique is not recommended, it is possible for the controls to get bumped and not noticed by an operator so I wanted to see the consequences.

Trying the detector with the ground balance control at either extreme didn't give any false signals in the highly mineralized ground at my test site, but, when misadjusted, it seemed to cause a slight loss in sensitivity. It did, however, seriously effect the all metal mode as expected.

Checking with the factory, Jim Lewellan noted that it is possible to get false signals if the ground balance control is off sufficiently in highly mineralized ground. As a safe bet, I recommend an owner to follow one of the two procedures noted in the owner's manual and make sure to properly ground balance the instrument for the best results at any new site.

Since some people are concerned about ground adjustments, I should say that both of the two ground adjust techniques discussed in the owner's manual are extremely simple, making it very easy for the novice to quickly make the necessary adjustments.

Additional testing over other known test targets with the sensitivity control on the CZ-5 set at low as 2, I could easily pick up targets that many other detectors have difficulty detecting even at maximum settings.

Furthermore, with the sensitivity control near maximum, I found I could swing the coil as high as 6 to 8 inches above the ground and still pick up my favorite 6-1/2" deep dime.

One test target relatively new to my controlled testing is checking for a signal from a nickel buried at a depth of 9 inches. I normally use this target to check the all metal mode depth capabilities of detectors. As mentioned before, the ground at the site is extremely mineralized which makes detection of this coin extremely difficult in any mode by any detector.

The CZ-5 detected the nickel consistently in the all metal mode, but the response to the target in the discriminating mode was intermittent. This intermittent detection may not seem impressive, but the CZ-5's capabilities have exceeded other detectors I have tried over this target. Also, the response in the all metal mode is as good as any other coin detector I have used, and is as good as many gold hunting detectors.

One last test I performed was to see how the CZ-5 would respond to various gold nuggets. What I found was impressive. For example, among others, I use a couple of extremely small nuggets to check the capabilities of both modes of operation. The CZ-5 responded with a strong solid response in both modes.

From my testing, I suspect this detector would do a dynamite job nugget hunting especially with the optional 5" coil.

HUNTING IN PARKS

Unfortunately, the CZ-5 arrived at a time when the soil conditions were at their worst, extremely dry at first, and then cold and snow covered. This made selection of test locations somewhat difficult. In the parks, I had to be careful to pick areas where there was no grass or had received adequate watering. Even then, I limited my depth of digging to minimize any possible damage.

Surprisingly, the most common coin besides the penny that I was able to consistently find was the nickel. The CZ-5 consistently ID'd this coin accurately, better than any other brand of ID detector I have used recently. Also, I had fewer false indications from tabs falling in the nickel range with this machine.

Like most areas of the country, our local parks get hit fairly hard making it difficult to find any silver. I did however, manage to find two silver dimes, one Roosevelt and a Mercury, both coming from about 6 inches in depth. I suspect that I had a couple of other potential silver coins deeper, but I elected to pass on trying to dig them since the soil at that site was extremely dry.

I did manage to pick up enough coins to weight down my pouch sufficiently. And, as expected, most of the coins were pennies with only a few wheatbacks in the bunch.

With the sensitivity set near maximum, I definitely got a lot more intermittent signals caused by trash. Unfortunately, this is to be expected with any extremely sensitive detector. Probably the most common false indications I had came from very deep nails, again, a condition I have seen with all other detectors.

During the outings in the parks, I found that my luck was just as good and, found more good targets as deep with a sensitivity setting of somewhere between 2 and 5 as I did at maximum. Also, at the lower settings, I didn't get nearly as many false responses.

Also, I found it easier to pinpoint the targets easier in the all metal mode at the lower settings. As a result, I decided that when working in dry or very trashy ground, if I operated the detector with the sensitivity down at a lower level, I increased the number of finds for the day, since I wasn't chasing as many false targets.

CZ-5 QUICKSILVER

HUNTING AN OLD FAVORITE SITE

Because areas were limited to the weather and other conditions, I decided to try one of my favorite sites located right in the middle of my home town. On the plus side, this location has produced some unique finds, such as old coins, watch fobs and other unique objects dating back almost a hundred years. On the minus side, the site is extremely trashy.

Besides the possibility of finding unique objects, this site was selected because I was able to dig as deep as I wanted to since it was nothing but bare ground. Also, the location simulated typical conditions at a ghost town.

At this site, I dug non-ferrous targets down to depths of about a foot in depth. Unfortunately, none of the targets found were coins. I did, however, find a handful of things such as thimbles, lipstick and compact cases, bullets, shell cases, etc. The types of objects that make you wonder about the people who once owned them.

What I noticed while digging these targets is that relying on the target ID to determine the target wasn't the best thing to do. Since most of the targets at the site dated back to a hundred years or so, the target ID labels weren't applicable.

Rather than rely on the target ID feature, I opted to use another great feature of the CZ-5, audio ID, to guess the nature of the target. Copper and silver items normally were indicated with the high pitch tone. Various brass, lead, as most aluminum targets would respond with the medium tone.

Knowing the characteristics of gold, I knew that if I was lucky enough to find something like a small gold coin or gold ring (which I wasn't), it would respond in the middle tone range.

From the testing at this site, I concluded that in areas such as ghost towns, old homesteads, and other old sites, a person should set the discrimination level as low as practical and dig any and all targets, while ignoring the probable target ID indications as a determining factor.

Also, my testing of gold nuggets and a piece of information I received with the detector, the Fisher World Treasure News, Vol. 4, Issue 5, reinforced this philosophy. In the article on how to find gold rings, the article stated that of 161 gold rings tested, 134 fell into the middle tone zone, or indicated as tabs or foil. My testing of several gold nuggets indicated the same condition. In other words, most gold targets are going to fall in the middle tone range.

I didn't find anything spectacular during my brief period of testing, but I am sure very deep and unique finds are possible. I wish I would have had more time for testing purposes so I could have purchased the optional 5" coil.

I suspect it would be dynamite in very trashy areas. Hopefully, I will get the opportunity at a later date.

CONCLUSION

Fisher's metal detectors have always been known for their extraordinary depth capabilities, and the CZ-5 is no exception. The CZ-5 does what most people want, it goes deep, very deep.

To complement the depth capabilities are the features of visual and target audio ID. Both are as convenient and accurate as any I have tested before.

If you're looking for a very powerful detector with most of the practical features found on metal detectors today, I strongly recommend that you give the CZ-5 Quicksilver from Fisher a try.

For more information abut the CZ-5 Quicksilver or other ultra deep seeking metal detectors you can contact Fisher Research Laboratory by calling (209) 826-3292.