



FIELD TEST

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By Jerry Bass

Photos by Bill Agler



Stunning styling and powerful performance. Gold Mountain delivers both of these features in the bold new V.I.P.

THE GOLD MOUNTAIN V.I.P. VLF/TR DISCRIMINATOR

Whenever a V.I.P. comes to town, it's a very special occasion—and the arrival of this new Gold Mountain model is certainly no exception!

V.I.P. is actually an acronym for "Very low frequency Induction balance Phase relationship metal detector." Specifically, it's a 15 kHz VLF/TR discriminator, a distinction shared by a number of today's most popular and productive instruments. But there are dramatic differences in design and performance that make the V.I.P. every bit as noteworthy as its name implies.

Make no mistake: this is a totally new detector. Longtime Gold Mountain users will recognize the traditional black and gold colors and top-drawer quality, but everything else is char-

acterized by improvement and innovation, including features like these:

New all-aluminum control housing. Attractive and efficient electronic packaging requires a proper combination of materials and skills, and the V.I.P. speaks well for Gold Mountain's abilities in this area. Featuring a high quality black enamel finish, white and gold trim, and black anodized stems, it's not only good looking but practical. The common sense control panel layout, speaker placement, and other details attest to sound design criteria and a down-to-earth understanding of Thers' interests and needs.

"Instant Recall." According to Gold Mountain, V.I.P. also stands for "versatility in performance," and this feature certainly contributes toward

that end. Located in the end of the V.I.P. handle, the Instant Recall control replaces the usual push button tuner. In fact, it performs both re-tuning and mode changing functions, allowing the operator to switch instantly from VLF ground cancel to TR discrimination and back again—and re-establishing exact threshold tuning with each change. This arrangement offers obvious advantages within each primary search mode, and facilitates such special techniques as "hot rock" analysis and reverse discrimination. With "Instant Recall," the V.I.P. is versatile indeed.

Automatic tuning. Those who hunt saltwater beaches or other areas of rapidly changing conditions will be quick to recognize the value of V.I.P.

auto-tune operation. A simple flick of a switch provides constant electronic drift correction. Once the V.I.P.'s auto-tune circuit is activated, there is no need whatever for manual re-tuning.

Tone control. This unique feature permits adjustment of audio frequency — high pitch or low, or anywhere between. And since most persons hear certain frequencies better than others, setting the V.I.P.'s signal-pitch to one's personal preference can significantly improve perception of faint signals. Detectors lacking this ability force acceptance of a single tone which may not correspond to the operator's optimum hearing range.

Several treasure hunters with partial hearing loss have already tested the V.I.P. and are enthusiastic about this feature. They have adjusted to a tone that they hear quite well.

Other treasure hunters have reported that they have adjusted to a tone that is clearly different from the background noise of surf, traffic or other droning sounds. Gold Mountain therefore deserves special recognition for incorporating this "custom audio" capability into the V.I.P.

Improved power supply system. Despite its sophisticated circuitry, the V.I.P. requires only four 9-volt transistor batteries. These are easily snapped onto a convenient new power supply module which slides into the control housing, permitting quick access and replacement. There's also a new accessory rechargeable battery system which even permits recharging right in the detector!

Most or all of the following features are standard on Gold Mountain models but have been further refined where possible for use on the V.I.P.:

- Power/Sensitivity control
- Tuning Range control
- VLF Ground Cancel control
- TR Discrimination control
- Battery Test switch
- Meter
- Speaker
- Earphone jack
- Shielded, submersible searchcoils
- Adjustable, extendable stems
- Two year transferrable warranty

Obviously, the V.I.P. is a full featured professional quality detector, but that doesn't mean it's difficult to understand or use. On the contrary, with Gold Mountain's comprehensive new operating instructions, nothing could be easier. As an example, let's go through the simple, step-by-step VLF tuning routine:



The control panel is carefully detailed.

VLF Ground Cancel Tuning

1. Hold the detector with the searchcoil waist-high and away from all nearby metal. Do not tune the detector near a car, metal fence, building with metal siding, or any other large mass of metal.

2. Turn the Power/Sensitivity control on and continue turning it clockwise until it stops at "high."

3. Push the Instant Recall control left and hold it in that position.

4. Adjust the Tuning Range control until a faint "threshold" tone is heard.

5. When threshold tone is heard, release the Instant Recall control. It will automatically snap back to a central position. Do not push the Instant Recall control to the right, as this will switch the unit from VLF to TR.

6. Lower the searchcoil to within two or three inches of the ground. Listen for a change in sound. If there is no change, no further tuning is necessary. However, if there is either a decrease or a moderate, general increase, adjust the VLF Ground Cancel control to compensate for the change:

a) If the sound decreases, increase adjustment by turning the control clockwise.

b) If the sound increases, decrease adjustment by turning the control counterclockwise.

Most soils will cause a decrease in sound, due to iron mineralization. A loud, sudden increase probably means that there is metal beneath the coil and that another spot should be selected for ground cancel adjustment.

7. Raise the searchcoil, re-tune by pushing the Instant Recall control left and then releasing it, and then lower the coil as before. Repeat step #6 if necessary, until there is little or no change in sound when the coil is raised or lowered.

This concludes VLF tuning. All metals are detected in this mode. Best results will usually be obtained by operating with the searchcoil at a height or one or two inches above the ground. In areas of severe mineralization, the coil may need to be raised a bit higher. Scrubbing the coil directly on the ground while searching in VLF is not recommended.

TR Discrimination Tuning

Much of the tuning procedure for TR mode is the same as for VLF, but there are three important differences:

1. The Instant Recall control must be pushed right for TR operation (as opposed to left for VLF).

2. Ground balance adjustment (steps #6 and #7 in VLF tuning) is unnecessary.

3. Discrimination adjustment must be made.

Assuming that the V.I.P. has already been properly set up for VLF operation, perfect TR tuning can be instantly accomplished by lowering the searchcoil to within an inch or two of the ground, pushing the Instant Recall control right for a second, and then releasing the control. That's all there is to it.

Of course, TR tuning can also be carried out without preliminary VLF tuning. In any case, after switching to TR mode, it will be necessary to adjust the level of discrimination as desired. Here's what to do:

Place on the ground a sample of the junk to be rejected, making sure there is no other metal nearby. Several inches away, place a coin. To avoid overadjustment, use a nickel if the junk sample is a nail, foil, or a bottle-cap. Use a penny or dime if the junk sample is a pulltab or screwcap.

Sweep the searchcoil over the junk and coin, keeping it a couple of inches

above them. If both items cause an increase in signal, advance the TR Discrimination control to the next highest setting. Push right with the Instant Recall to re-tune, then sweep the coil above the items once more. Repeat these steps until only the coin is detected.

Gold Mountain advises against excessive discrimination even though the V.I.P. has total rejection capability. This is because of the familiar VLF/TR tendency to overlook nickels and some rings at high rejection settings. Nevertheless, if maximum discrimination must be employed, the V.I.P. will still maintain exceptional depth and sensitivity.

Two factors in TR operation result in a choice of scanning techniques. The predominance of surface trash or soil mineralization determines which should be used:

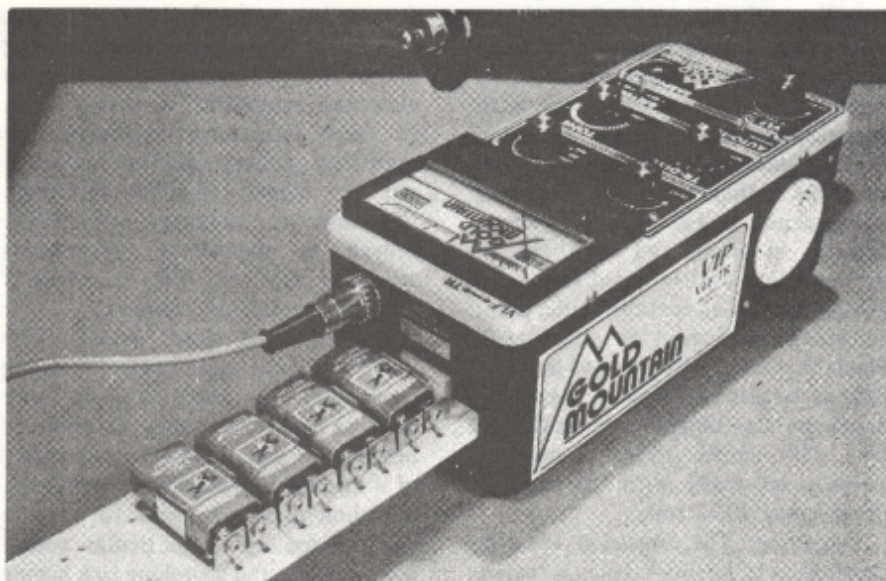
Keeping the searchcoil slightly above the surface eliminates the effect known as "backreading" (false signals caused by junk too near the coil to be correctly analyzed). It may also smooth out full-sensitivity operation in areas of uneven ground, but does produce a little less depth than the alternate method, especially in mineralized locations.

Extra penetration is the advantage afforded by "scrubbing"—pressing the coil to the soil while scanning. Of course, rugged terrain can complicate this approach. Also, when a signal is received, the coil must be raised and the target re-checked for correct discrimination.

Occasionally the V.I.P. may require re-tuning to compensate for normal drift or changes resulting from re-setting controls. To re-tune, push the Instant Recall control in the same direction as during preliminary tuning—VLF, left; TR, right. Hold it in position for a moment, then release the control. Do not push it in the opposite direction; doing so will re-tune the detector but will also change the mode.

If frequent re-tuning is necessary, it may be best to convert to automatic tuning. Set the Auto-Tune control on "auto," and the detector will then continuously re-tune itself, responding to any variation from the pre-set threshold level. No further adjustment is needed.

Regardless of the type of tuning used, it must be remembered that VLF and TR modes are separate and mutually exclusive in the V.I.P. In other words, there is no discrimination in VLF, and no ground cancel



Extra convenience in battery installation is provided by the power supply module.

in TR. However, as pointed out previously, the Instant Recall control permits split-second mode changing. This means the TH'er can search in the deepseeking VLF mode and instantly analyze all signals with true TR discrimination.

The V.I.P.'s Instant Recall system also makes possible a variety of other techniques useful in target analysis and resolution. These are detailed in the detector manual, but space does not permit discussion of them here. Suffice it to say that Instant Recall opens up a whole new dimension of Gold Mountain detector power.

Certainly the most informative and enjoyable research for these reports is actual detector operation. There's simply no substitute for spending time using a machine, rather than reading or writing about it.

Gold Mountain president Phil Storck personally delivered the V.I.P. for this evaluation, and encouraged us to give it a thorough workout. We did exactly that, and here's what we found:

VLF ground cancel. Unimpeded operation in highly mineralized areas is easily maintained with the V.I.P. And because it is a mid-spectrum VLF, it responds well to all metallic targets, ferrous and nonferrous alike. Instant Recall analysis eliminates the usual "hot rocks" problem associated with ground cancel; and, when necessary, sensitivity reduction keeps tiny junk target signals like particles of rust, tack heads, bird shot, etc. under control. Because of the V.I.P.'s coil configuration, many detected items produce characteristic signals, permitting identification without actual TR discrimination. Use of both 7"

and 10½" searchcoils proved the V.I.P. to have excellent VLF capabilities in all categories—depth, sensitivity, stability, etc.

TR discrimination. The V.I.P.'s fully adjustable circuitry provides absolute analytical accuracy. In fact, its discrimination selectivity is sufficient to allow detection of a 10-K gold class ring at a distance of several inches while rejecting all pulltabs—a feat some competitive instruments simply cannot perform. See-through is evidenced by the V.I.P.'s ability to locate nickels under nails, and pennies under pulltabs. Co-planar coils keep target-masking to a minimum, and have a backreading zone of only an inch or so. The 15 kHz frequency is not only ideal for discrimination but also less affected by mineralization than "super-low" frequencies. Variable gain (sensitivity) further reduces the erratic effects of mineralization. The V.I.P. is exceptionally productive in this mode, and the "reverse discrimination" technique made possible by the Instant Recall system results in a much higher rate of deep-coin recoveries.

Depth/sensitivity. Using either diameter searchcoil and operating at any level of gain or discrimination, the V.I.P. consistently senses targets which are marginally small, deep, or adversely oriented. Some indication of its abilities with a 7-inch coil may be provided by the following air-test results:

Silver dime	8-10"
Silver quarter	10-12"
Silver dollar	13-15"

These figures may be significantly exceeded under certain ideal field conditions. On the other hand, dis-

tances may be decreased by unfavorable factors and necessary compensation for them. Experienced TH'ers should be able to anticipate with reasonable accuracy any deviation from air-test which would be likely to occur in their areas. An interesting phenomenon in TR mode is an actual increase in depth and sensitivity as the rejection level is raised from zero (acceptance of all metals) to the point at which bottlecaps are eliminated. Small-object sensitivity ranges down to BB-size targets and smaller. Maximum depth on large objects extends to four feet. Of course, these figures are variable, especially with the addition of the larger 10½" coil.

Targeting. The precision locating capabilities of quality co-planar searchcoils are well known, and the V.I.P. is predictably efficient in this respect. A special coil decal indicates the sensitivity center, making pinpointing a snap. Large-target resolution is no problem, thanks to the Instant Recall control, which is also useful for "punching up" faint TR signals by momentarily switching to VLF mode. Targeting methods may need to be altered if automatic tuning is used, and simple criss-crossing is usually the best procedure.

Stability. With both Instant Recall re-tuning and fully automatic tuning, the V.I.P. is well equipped to compensate for normal drift, thermal instability, or other tuning deviations. Even during the usual "warm-up" interval, the auto-tune circuit can keep the V.I.P. on frequency. Insofar as inter-

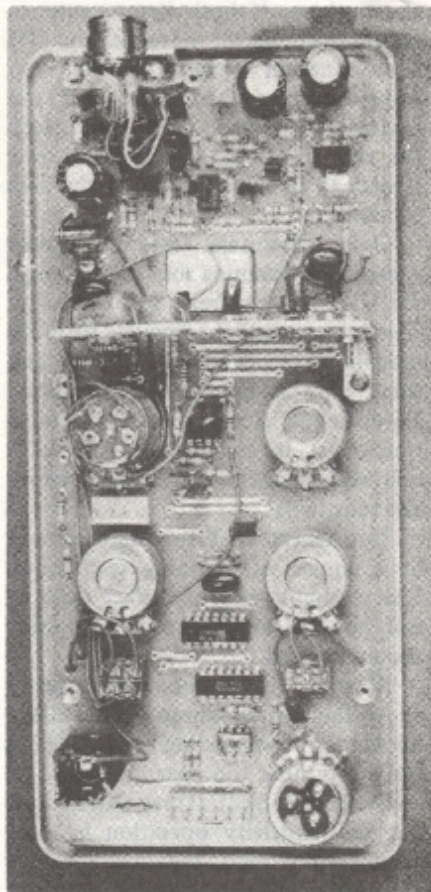
ference is concerned, little or no disruption was experienced during testing except when working very close to electrical equipment or power lines. In those situations, decreasing the sensitivity control setting smoothed out the signal, allowing continued operation. In summary, the V.I.P. proved as dependably frequency-stable as any VLF/TR to which it was compared, if not more so.

Audio. In a word, superb! The V.I.P.'s variable tone control—ranging from 300 to 1600 Hz—not only matches audio frequency to operator hearing but also relieves the monotony of a droning non-adjustable threshold. Somehow, hearing seems to become de-sensitized to a particular sound after a while, and switching to a higher or lower pitch provides a welcome change of pace. V.I.P. volume and clarity are excellent, and only the addition of accessory headphones could further enhance operation. Of course, the V.I.P.'s audio indication system is backed up by a corresponding visual read-out on the large, sensitive meter.

Power consumption. Depending upon type and duration of operation, 40 to 60 hours of service can be expected from ordinary zinc-carbon batteries, and even more from alkalines. Condition is readily monitored by use of the battery test switch and meter. An accessory Ni-Cad rechargeable battery system is available and includes a special three-cell power supply module and a 110-AC plug-in recharger. Hours of service per recharge will vary, but recharging takes only a short time and can be repeated almost indefinitely (up to 1000 times). Both standard and rechargeable power supply modules install in seconds, and recharging can be done without removing the module from the detector.

Ease of operation. While the V.I.P. is among the most advanced instruments in its class, it's as practical for the novice as for the professional. The operating manual clearly explains each feature and function, providing a complete introduction to the detector itself and to metal detecting in general. So, the V.I.P. owner should have no difficulty understanding and using his detector. As far as physical aspects are concerned, the V.I.P. is light, well balanced, and adaptable for comfortable use by the smallest or tallest TH'er. The low-profile adjustable-angle searchcoils help make it exceptionally maneuverable, too.

The V.I.P. VLF/TR Discriminator



Electronic excellence is the key to the V.I.P.

with 7" searchcoil sells for \$319.95.

The V.I.P. Deluxe VLF/TR Discriminator with 7" and 10½" searchcoils is \$369.95.

Both V.I.P. models are accompanied by fresh batteries, complete operating instructions, and a two year transferrable warranty.

Those who purchase the standard V.I.P. can later acquire the deepseeking 10½" searchcoil at an accessory price of \$69.95.

The complete Ni-Cad rechargeable battery system as described in this report is available for \$49.95.

Stereo/mono headphones, custom carrying bags, and numerous other V.I.P. accessories can be supplied by Gold Mountain as well.

A very impressive performer, the V.I.P. is bound to be around for a long time to come. But why wait? Visit your local dealer today and let him give you a personal introduction to a genuine V.I.P.

For a colorful V.I.P. brochure and other free literature describing the entire line of Gold Mountain metal detectors, write to this address:

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Field tests proved the V.I.P. a pleasure!