



## **PRODUCT INSTRUCTIONS**

### **DETECTRON MODEL 7-T VALVE & BOX LOCATOR**

You are now the proud owner of a Detectron Valve & Box Locator. This is the most stable, dependable instrument of its type on the world market today. Your Detectron Valve & Box Locator has many features built into it for ruggedness, but always remember that it is a precision electronic instrument. With proper care you can expect many years of complete satisfactory performance from your Detectron Valve & Box Locator.

Quality parts, plus expert craftsmanship, insure that you, the owner, have made an excellent choice in purchasing a Detectron instrument.

#### **UNPACKING**

If damage has occurred in shipment, file a claim with the carrier immediately. If it is necessary to contact your supplier or manufacturer concerning damaged or missing items, be sure to include all information such as serial number, purchase order number and invoice number. This will assure you of obtaining proper and expeditious service.

#### **PRELIMINARY**

Loosen the adjusting collar on the telescoping stem, and extend the stem until it is long enough so that, when the Detector is held in a comfortable position, the search head is as close as possible to the ground. Tightening the adjusting collar will lock the stem in the desired position.

Please note that the inner portion of the telescoping stem is free to rotate through 1/4 of a turn. This permits the head to be turned sideways for compact storage, but prevents it from twisting far enough to damage the wiring inside the stem. No attempt should be made to twist the stem past the point where it stops.

#### **TUNING**

**IMPORTANT! Read carefully and follow instructions precisely!**

This Detectron Valve & Box Locator, must be tuned at the same level at which it is operated. If change in the operating level is necessary, the instrument must be "Re-Tuned" at the higher or lower operating level. The correct operating position is when the detection head is in the exact same plane as the surface over which it is being used. For maximum results, keep the detection head very close to the surface under investigation.

For proper "TUNING" follow the steps listed below in sequence:



## **PRODUCT INSTRUCTIONS**

1. Turn instrument on.
2. Hold the instrument in the operating position, keeping in mind that the detection head should be close to the ground surface and maintained in this position throughout the tuning and operating of the Detector.
3. Turn the tuning knob (located below the meter) to the left until it stops, be careful not to force it.
4. Now turn the tuning knob to the right until you find a point where there is no tone coming from the loudspeaker and the meter reads "ZERO".
5. Continue turning the knob slowly to the right until the tone reappears and the meter needle responds.
6. Now carefully turn the tuning knob to the left very slowly until the tone just disappears and the meter reads "ZERO".
7. To check for proper tuning and maximum sensitivity, raise the instrument a few inches from the position in which you carried out Steps 1 through 6. If the tone sounds when the instrument is raised, it was properly tuned at the lower level and it can be assumed that maximum sensitivity has been obtained.

## **OPERATING PROCEDURES**

After completing the proper tuning your instrument is ready to use. The instrument is designed to afford the operator ease of handling at a comfortable walking position passing the detector head from side to side in front of the operator allows a rather wide area to be covered on a single pass. Provided the instrument is properly tuned, it will indicate metallic objects when the detecting head is passed directly over them. To pinpoint such an object, simply approach it from several directions and investigate in the center of the area over which you obtained the signal indications.

It is suggested that preliminary operation of the Detector be carried out over known metal objects of various sizes. This will help you to become familiar with the operation of the instrument and will greatly increase your ability to find objects whose locations are unknown. Trial operation will also increase your ability to tune the instrument to its maximum sensitivity, which is important when attempting to locate smaller metallic objects.

## **SPECIAL OPERATING PROCEDURES**

There are many variations to the operation of your Valve & Box Locator, but basically they are alike. For instance, should you desire to operate your instrument over ground



## **PRODUCT INSTRUCTIONS**

area that is highly mineralized, simply tune your Detector to be less sensitive. This can be accomplished by following Step 6 of the "TUNING" procedure, except turn the adjusting knob slightly further to the left.

For locating small iron objects, such as nails in a wall, we suggest you tune the instrument opposite from the tuning procedure as outlined under "TUNING" procedures. For reverse tuning, turn the tuning knob exactly opposite; that is where it states "turn to the left", turn to the right, etc..

The Detectron Valve & Box Locator is extremely easy to operate and after a brief practice, you will be capable of obtaining excellent results.

### **DETECTION HEAD**

The detection head is waterproof and can be submerged in fresh water up to the adjusting collar on the telescoping stem. Care should be taken to keep the rest of the instrument dry, as the detection head is the only portion of the instrument that has been waterproofed.

### **BATTERIES**

The batteries can be tested by sliding the power switch to "Battery Test". The batteries should be replaced when the meter needle falls within the "Replace Battery" area. Since old batteries often give a high reading for a minute or so, the instrument should be turned on for about two minutes for accurate battery testing.

To replace the batteries, remove the four screws (two on each side) in the instrument housing, remove the top half and replace the three size "AA" batteries in the bottom half. Be sure batteries are replaced in the correct position. With the + battery terminal nearest the end of the battery holder marked +. For best results use batteries rated for transistor radio service, such as M15R, 1015, VS-334 or equivalent.

Batteries should always removed when the instrument is to be stored for a long period of time.

Always check to be sure the power switch has been turned off when the instrument is not in use.

### **EARPHONE**

Plugging the earphone into the jacked marked "Phone" will automatically disconnect the built-in loudspeaker.



## PRODUCT INSTRUCTIONS

### Minor Trouble Shooting

#### Characteristics

1. Wide null, 3 or more turns of adjusting knob.
2. No "NULL"
3. Poor signal response over known metal object.
4. No signal

#### Defect

- A. Weak batteries
  - B. Set out of adjustment  
(See Alignment Procedure)
- A. Weak batteries
  - B. Set out of adjustment  
(See Alignment Procedure)
- A. Weak batteries
  - B. Improperly tuned  
(See Tuning Procedures)
- A. Weak batteries
  - B. Broken battery leads
  - C. "Open" circuitry
  - D. Faulty earphone

#### ALIGNMENT PROCEDURE

Indication of need of alignment would be the inability to obtain a null with the tuning control. (New batteries should be tried first, since weak batteries may have the same effect). NOTE: Alignment should normally be done at the factory, and improper field alignment will void the warranty.

Extend the telescoping stem to its normal operating length, and tilt the detection head to its normal operating position. Remove the four screws (two on each side) in the instrument housing and lift off the top half. Support the Detector in a position where the detection head will be clear of all metal objects.

1. Turn unit on
2. Turn the tuning knob to the left until it begins to tighten (do not force), and then turn it back to the right exactly one-half turn.
3. With a small screwdriver, turn the screw on the trimmer capacitor on the printed circuit board to the right until it tightens (do not force).
4. Now turn the screw on the trimmer to the left until the tone from the loudspeaker disappears. Continue turning very slowly to the left until the tone just reappears. The unit will now be properly aligned.



## **PRODUCT INSTRUCTIONS**

### **WARRANTY**

Your Detectron Valve & Box Locator is warranted under normal use and service against defect in workmanship and material for a period of ONE YEAR from the date of its sale to the original purchaser. We agree to repair without charge to the original purchaser, any part or parts that in our judgment are defective, providing the complete instrument is returned to us, transportation charges "PREPAID".

It is given expressly in lieu of all other warranties, expressed or implied and no representative or other person is authorized to make any warranty, or to commit this company to any liability not strictly in accordance with the standard factory warranty.

Careless or improper usage voids this warranty. Unless, in our opinion, the detector is definitely defective in material or workmanship, a nominal charge will be made for repairs.

To validate the warranty, the warranty card must be signed at the time of purchase and mailed promptly to

Tinker & Rasor  
2828 FM 758  
New Braunfels, TX 78130

### **FACTORY REPAIRS**

Detectron offers 24-hour service on factory repairs. Should it be necessary to return your instrument to the factory for repairs, be sure to send the complete instrument and all components. May we also suggest sending a brief note describing your problem. This could expedite repair thus saving you money on unnecessary labor charges. Care should be taken in packaging to insure against damage in transit.

Detectors returned to factory for repairs should be sent transportation prepaid to:

D.E. Stearns, Division of Tinker & Rasor  
ATTN: Repairs  
2828 FM 758  
New Braunfels, TX 78130

For proper and expeditious repair service, advise factory of return shipping information. In most cases the Detector can be repaired and returned the same day it is received at factory.

When ordering parts or requesting further information give the serial number of Detector for which parts or information is required.