

INSTRUCTION MANUAL

Liberty 50

COMPASS

Electronics Corp.



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INTRODUCTION

Welcome to the fascinating world of treasure hunting. Information in this manual will help you to learn detector operation, and to use it with ease as well as being successful. COMPASS strongly recommends reading the following instruction and operating procedures. For your reference and general detector knowledge, additional technical and field information is included.

COMPASS also recommends that, as a starter in field operation, you practice using your new detector in your yard for an hour or so. After a few short hours of hunting various sites you will develop skill and confidence in detector operation and target recovery.

GENERAL

INSTRUMENT CARE

With proper care your detector should last for many years. The search head is fully waterproof, but if used around salt water, rinse thoroughly with fresh water. Do not use any oils or lubricants on the panel controls or allow water to enter the control housing. Avoid excessive shock (jarring) or exposure to extreme temperatures for long periods. If storing detector for periods longer than 30 days, remove the battery and store in a cool, dry place. This removes the risk of corrosion damage due to leakage.

BATTERY REPLACEMENT & CARE

Your LIBERTY 50 is powered by one 9-volt transistor battery. This battery is easily obtained from almost any store, drugstore, shopping center, etc. Alkaline, heavy-duty or nicad (rechargeable) batteries may be used.

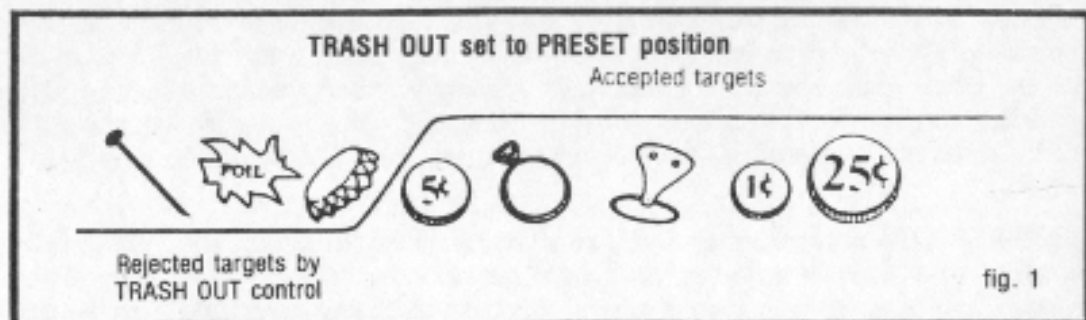
To replace the battery, slide battery door (located on the bottom of the control housing) to the side, and remove battery. Observe the clips that are on the battery and the battery snap to be certain they are not deformed. Secure the battery and replace the battery door.

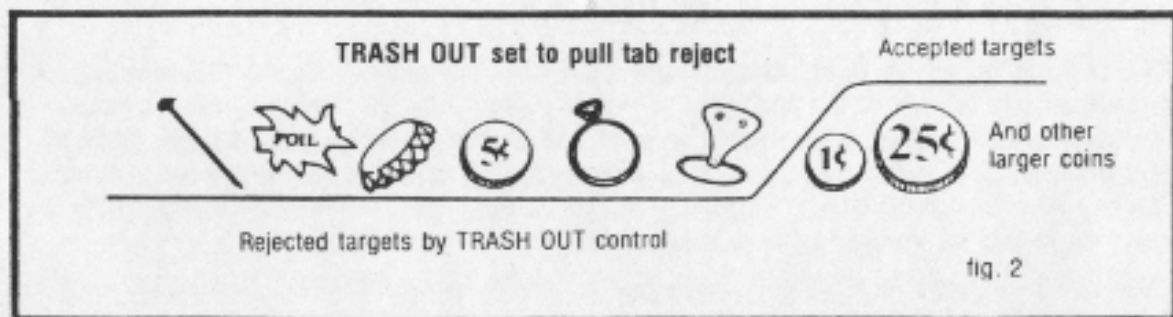
APPROXIMATELY 20% OF ALL METAL DETECTOR MALFUNCTIONS ARE CAUSED BY WEAK OR INCORRECTLY/POORLY CONNECTED BATTERIES!

OPERATION

TUNING PROCEDURES

The TRASH OUT control is located to the left. When at its full counterclockwise "clicked" position, detector power's off. To turn the detector on, turn TRASH OUT control clockwise from this position. The level of discrimination (elimination of certain trash items) is adjusted with this control. At its lowest setting the detector will respond to most ferrous (magnetic) and all non-ferrous objects. This would include all coins, rings, and desired metal objects, as well as nails, pull tabs, and many rusty items which may be considered junk and unwanted. As this control is increased (clockwise) it will ignore unwanted targets, based upon their level of conductivity. The lesser conductive targets are eliminated first, and so on. If the TRASH OUT control is set to eliminate pull tabs, the U.S. Nickel and some gold rings will also be eliminated because pull tabs are more conductive. (See fig. 1). At its fullest setting, the LIBERTY 50 will eliminate most screw caps, but this high a setting will also eliminate the zinc pennies (1983 or newer) and indian head pennies. All other common U.S. coins will be detected.





POWER LEVEL CONTROL

The POWER LEVEL control located on the right side of the control panel will allow the operator to adjust the sensitivity from MINIMUM to MAXIMUM. Should the operator experience an erratic or static interference, they can turn it down (CCW) to a lower setting until the interference is gone. Although using the MAX setting will provide the greatest sensitivity (depth of detection), the panel has a (✓) preset marker to indicate an efficient starting point. Thus, the new or more experienced operator need only set the two controls at their (✓) preset mark, and the detector will be turned on and set to detect.

FIELD OPERATIONS

CHOOSING AN AREA

The best areas for locating those things people might lose, such as jewelry, rings, coins, etc., are logically those places where there has been frequent gatherings of people, on a continuous basis, over a period of years. Some of these sites might be: parks, schools, playgrounds, fairgrounds, yards, swimming holes, carnival sites, etc. As you become better acquainted with your LIBERTY 50, you may want to visit beaches, ghost towns, or wherever your imagination may lead you.

IMPORTANT: It is prohibited to use a metal detector in the boundaries of: National Monuments, National Parks, and designated National Historic Sites. Also, if you are not certain about existing local, county, or state ordinances, it may be good advise to contact the appropriate official.

DEPTH OF DETECTION

Several factors will affect the depth a detector can obtain. The primary one is operator skill and knowledge of the detector. The more practice you have, and the more you find things, the better skilled you become. You will learn the ultimate sweep speed, the types of signals from coins, and how to cover the area effectively.

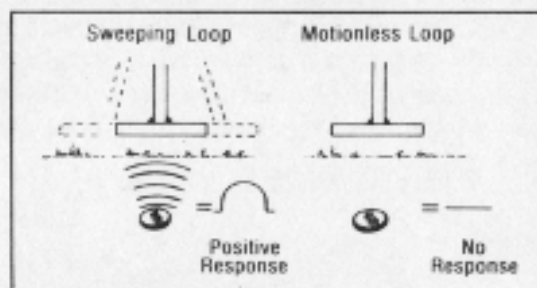
Secondly, there are the physical factors, the most notable being the amount of mineralization in the soil. Although this can be a major factor with some detectors, the LIBERTY 50 is a very low frequency ground cancelling detector, and, therefore, is not as effected, except in extreme mineralized ground. The longer an object is buried in the ground, the more corrosion there will be, due to the fact that acids and salts are present in the soil. Then, soil around the object absorbs metal oxides (which are also conductive) and can make the object appear larger to the detector's electromagnetic field. Because there are so many factors involved, it is impossible to provide an actual depth of detection chart. The larger an object, the deeper it can be detected.

POSITION & SWEEP PROCEDURE

To reduce fatigue it is important to adjust the rod stem and search head angle in a manner which will allow you to stand normal, with the operating arm extended comfortably. The movement of the detector from left to right should be done with a movement and a slight swinging motion of the body. As you sweep the detector left to right, you want to walk forward slowly, which allows better coverage of the search site and is less tiring.

The search head should be advanced approximately 3" on each sweep for complete ground coverage. The LIBERTY 50 is a motion discriminator, which means the search head must be in motion for the detector to detect an object. (see figure 3.) The motion speed, however, does not have to be a fast sweep. Your LIBERTY 50 is a slow-motion type detector, so it will easily signal on coins or similar objects. Practicing with targets buried from 1" to 3" in your yard will assist you as you learn proper operation.

fig. 3



CENTERING A TARGET

Once a target is detected, the operator should slow the sweep speed down to a point where it still signals. Observe where the search head is over the ground when the signal is the strongest as you sweep from left to right and back again. Note that spot, and then move the search head forward and backward, so it crosses that same spot. A target has been pinpointed at the point where the two patterns cross.

RECOVERY OF A TARGET

Once a target has been pinpointed, use a probing device (such as a 5" - 8" screw-driver or coin probe) to locate it in the ground. Insert the probe into the ground gently until it touches the target. Then use the probe to work the target to the surface. Should the target be too deep, use a knife or flat-bladed trowel to cut a plug. You may wish to use an area of your yard to practice plugging. Cut a circle or square, being sure the sides or diameter are at least 4". Do not plug if there is no surface moisture (in areas around the roots), or you feel it would leave the grass dead.

HEADPHONE OPERATION (optional accessory)

Your LIBERTY 50 is equipped with a ¼" jack for optional COMPASS stereo headphones. Mono headphones can be used. The use of a headphone is recommended in noisy areas. Headphones will also allow you to hear the fainter, deeper signals, and will increase the battery life.

Good hunting!