

Operating Instructions

- I.** Once fully assembled, and the batteries installed, set the ON/OFF DISC knob to the RING RANGE "P" (Preset) position and set the ALL-METAL toggle (located on the handle/rod) to the locked forward ALL-METAL position.
- II.** With the Toggle in the locked forward ALL-METAL position all types of metals, ferrous such as iron/steel and nonferrous such as brass, aluminum, copper, bronze, silver and gold, will respond with the same solid "beep" regardless of the DISC control setting.
- III.** If the desire is to locate nonferrous metals, place the ALL-METAL Toggle on the handle in the center position. The DISC (Discrimination) knob then adjusts the level of rejection against trash metals, such as iron and steel. Rejection is noted by a broken and/or inconsistent beep.
 - A.** The Ring Range "P" (Preset) is recommended for most general purpose searching. In this position, the detector will reject most iron and light foil and respond to most nonferrous metals such as large aluminum, brass, bronze and jewelry.
 - 1.** Positions lower (counterclockwise) than Ring Range provide even less trash metal rejection, to the point of detecting virtually all types of common metals except small iron and small stainless steel.
 - B.** The Coin Range "P" (Preset) is optional. In this position, the detector will reject more trash metals including some nonferrous such as aluminum pulltabs. However, some nonferrous metals such as nickels and jewelry will also be rejected.

- 1.** Positions higher (clockwise) than the Coin Range will provide even greater degrees of trash metal rejection.
- C.** The most useful range on this control is between the Ring Range "P" and Coin Range "P" positions. If when searching at the Ring Range position you feel you are digging too much trash, adjust slightly toward the Coin Range and try again. Finding the lowest (furthest counter clockwise) position that eliminates the common trash metals in your area and still responds to the desired metal is ideal.
- D.** When a trash metal is being rejected, it will produce a shorter sounding beep that is typically inconsistent, a click or flutter-sounding beep. When a good metal is accepted it will produce a consistent, smooth, solid, and longer sounding beep. Some trash metals, such as larger pieces of lead, brass, aluminum or tin, will produce a good sound regardless of the DISC control position.
 - 1.** The speed the loop is swept and how closely the loop is swept over the center of the metal will impact how accurately the discriminate circuitry performs. For the best results the loop needs to be swept about two seconds per pass, from left to right and another two seconds from right to left returning to the starting point.
- VI.** Once either Ring Range "P" or Coin Range "P" has been selected, sweep the round loop close to the ground passing it from side to side. The loop must be swept (in motion) for metals to respond and provide accurate discrimination. Again each pass of the loop from left to right (or from right to left) should take about two seconds. If the loop is swept very very slowly or is stopped, the detector may not respond to metal.

V. At this point, it is a good idea to find an area relatively free of metal to practice. Place a coin on the ground. Pass the loop over the coin. Note that some loop movement is necessary to receive a good clean sound. Note that if you sweep the loop too slow the metal doesn't respond well.

VI. Now place a large nail and/or a steel bottle cap (not aluminum) on the ground. Sweep the loop over these metals. Note the inconsistency in the beep, and that it is a shorter click or has a flutter to the sound. An operator will soon learn to ignore the clicks or flutter sounds junk produces and listen for the smooth consistent beep coins and other nonferrous metals produce.

VII. Once a smooth consistent beep has been located, pinpoint exactly where to dig by squeezing and holding the ALL-METAL toggle in the temporary position and "X-ing" the loop slowly over the area "eyeballing" the center. The detector will "beep" as the physical center as the loop passes the center of the target. Note that some loop movement is required. It is a good idea to place coins on the ground and practice pinpointing. It takes some time to develop pinpointing skills. Release the ALL-METAL toggle and it will automatically return to the DISC position before continuing to search.

VIII. Again, if the desire is to detect iron/steel such as tools, relics or property stakes, place the ALL-METAL toggle in the forward LOCK position and leave it there during searching. With the ALL-METAL toggle in the forward LOCK position, all types of common metals ferrous and nonferrous respond.

Non-Ground Searching

I. The PRL-1 can penetrate a variety of surfaces to locate metal.

A. Wood, paper, cardboard, ice, food products, plastic, pharmaceuticals, cloth, rubber, meat, bone, glass, and all other nonmetal (nonconductive and/or nonmagnetic) surfaces can easily be penetrated to locate metal.

B. Most rock and soil types can also be penetrated to locate metal. However, metallic content (several ounces per ton of material) or magnetic content (usually associated with iron oxides) will tend to reduce penetration/sensitivity. The Ground Balance adjustment described under Advanced Operators will be of some help in such conditions.

C. The PRL-1, like all metal detectors without separate receivers, can not penetrate metal to locate other metal items. It will detect the first metal and be insensitive to further metal items beyond the first.

II. As with all surfaces to be searched, sweeping the loop as close as possible to the surface that you wish to penetrate and keeping the loop in motion, is critical to good performance.

A. The greatest degree of penetration is in the physical center of the loop thus, overlapping each pass of the loop is needed to assure good coverage.