

There have been major design and technology advances in detector hardware and software features. These advances have greatly increased a detector's capability to locate a target. Along with new detector designs, there are design enhancements to search coil construction which provide greater search coil performance. These performance improvements have greatly enhanced the metal detector's capability to identify a target more correctly and to improved the detector's ability to pin-point more precisely the target's location.

The old school method was to locate the target's ground position by using the pin-point capability of the detector and then taking a metallic probe shaped like a long blade screw driver to locate the target's exact position. The process would be to insert the metallic probe into the ground where the detector had pin-pointed the target's location in small incremental changes until the target was found with the probe. After the target was located the detectorist would create a divit and remove the target. This approached worked well for a target no greater that five to six inches deep. However, greater depths were a challenge to most detectorist resulting in the detectorist digging an ever expanding and deeper hole until the target was located.

To complement these new detector design and technology advancements are an array of new electronic pin-pointing probes. Thus, the target retrieval process now minimizes ground disturbance, damage to grass and other plant life because of the introduction of the electronic pin-pointer and the design advances made in detectors.

There are two types of electronic pin-pointers currently available:

- **Hand Held Electronic Probes**
- **In-Line Metal Detector Target Probe**

In Table ONE below - is a list of Hand Held and In-Line Probes by manufacture, list price and some of the other key and common attributes of these probes.

<b>Table: 1</b>									
	List Price	Battery	Vibration	Audio Tone	On /Off Switch	Tuning or Sensitivity Control	LED Indicator	Warranty	Notes
<b>Hand Held Electronic Probes</b>									
DetectorPro Uniprobe All-in-One	\$350.00	9 Volt	No	Yes	Yes	Volume	No	2 yrs	Head phone frame, Frquency & Threshold Controls
DetectorPro Pistol Probe	\$299.00	2-9 Volt	No	Yes	Yes	No	2-LEDS	2 yrs	Holster, Silent Mode, Frquency & Threshold Controls
Cache Probe CP200	\$195.95	12 Volt	No	Yes	Yes	Yes	Yes	1 yr	VLF Technology, Light Indicator
Minelab Pro-Find 25	\$195.00	9 Volt	No	Yes	Yes	Yes	Light	2yrs	VLF, Holster, Increase or Decrease Senitivity
Tesoro Treasure Mate	\$171.00	9 Volt	Yes	Yes	Yes	Yes	Yes	Life Time	Ground balance & Tuning Control (No Longer Listed)
Garrett Pro	\$149.95	9 Volt	Yes	Yes	Yes	No	Yes	2 yrs	Holster
Vibra Probe 580	\$149.95	9 Volt	Yes	No	No	Auto-Off	No	1 yr	Water Proof,Tilt On / Off, Holster
Kellyco Automax Precision V4	\$140.00	9 Volt	Yes	Yes	Yes	Yes	Yes	1 yr	Belt Clip
White's Bullseye II	\$119.95	9 Volt	Yes	Yes	Yes	Yes	Yes	1 yr	Vibrate / Audio Selectable
Merlin	\$79.00	9 Volt	Yes	Yes	Yes	Yes	Yes	Unk	Hole Light (No Longer Available)
Bounty Hunter / Teknetics	\$69.00	9 Volt	Yes	Yes	Yes	Yes	No	1yr	
Fisher F-Pointer	\$69.00	9 Volt	Yes	Yes	Yes	Yes	No	1yr	
Harbor Tools Cen-Tech	\$16.99	9 Volt	No	Yes	Yes	Yes	Yes	90 Days	Holster
<b>In-Line Metal Detector Target Probes</b>									
Sun Ray In-Line Probe	\$194.95	Detector Battery	No	Yes	Yes	No	No	1 yr	3 inch depth, waterproof probe, mounts on detector
<b>Metallic Probes</b>									
Brass Shaft Probes	\$9.95								Metal Detecting Hobby Talk
Steel Shaft with Brass Tip	\$9.95								<a href="http://www.mdhtalk.org">http://www.mdhtalk.org</a>

**Hand Held Electronic Probes.** Hand held electronic probes are probes that operate independently of any metal detector used by the operator. The probes are designed around the (PI) Pulse Induction technology meaning that the probe will detect all metals that it comes in near contact with but does not have the capability to discriminate metal types. The hand held probes operate from a self contained nine volt battery with an on / off switch for probe control. Some hand held probes may have other controls.

*The advantages of a hand held probe are:*

- Probe is independent of the detector being used
- Audio indicator for target ID
- Vibration indicator for target ID
- Light weight and can be wore in a belt mounted holster
- Vibration target identification is preferred - since the target's audio tone is not transmitted to the headphones
- Probes have 1.25 inches to 2.25 inches of detection range (ground condition and target size will have an effect on range)

*The disadvantages of a hand held probe are:*

- Switches and controls can easily malfunction and stop working due to dirt and moisture
- Turning controls do not have detent stops, they are easily moved by accident
- Hand held probes are not waterproof (There is an exception - Vibra Probe 580)
- Hand held probes do not discriminate metal types (There is an exception - Cache Probe CP200)
- Hand held probes have an independent power source (must carry spare batteries)
- Some hand held probes are not good at detecting small metallic targets (small gold items)
- Hand held probes also can experience battery contact issues

When using a hand held probe it is a good idea to rotate the pin-pointer in and around the hole since targets in the ground can be at any angle or shape and often these attributes can have an effect on the hand held probe's detection range. Most of the hand held probes can indicate target location by either an audio signal, vibration in the handle and in some cases by an LED light on the probe grip.

**In-Line Metal Detector Target Probe.** The in-line detector probe is mounted on the detector's shaft and are ready to use at any time while detecting. The detector's battery system is the power source for the inline probe so no additions batteries are required. Since the probe is attached to the detector there will be an increase in the detector's weight, therefore, the additional weight may effect one's ability to swing the detector for long periods of time.

The in-line detector probe can be switched on or off by a toggle switch attached to the probe's control electronics. The switch either puts the detector in it's standard mode of operation with its own search coil or the switch turns on the probe's small coil and turns off the detector's search coil. This makes the probe usable to pinpoint a target after detection by the detector. Once the probe is switched on and the target is located the target's ID is transmitted to the detectors control electronics. The target information will either be displayed on the detector's screen or transmitted though the detector's headphone to the operator just as if the detector's standard coil was being used.

*The advantages of an in-line probe are:*

- No additional battery is requited
- Probe is mounted on the detector and always available to the operator
- The probe itself is waterproof
- The probe has about 3-4 inches of detecting depth
- A probe design is available for many different detector brands and models

- The probe has all the same functions as the detector it is mounted on
- Based on the detectors setting the probe can discriminate metal types

*The disadvantages of an in-line probe are:*

- Adds to the detector's weight
- Must move the probe to achieve a target signal (probe is a motion detector)
- The probe design is dedicated to a specific detector brand and model series

<b>Table: 2</b>	
	<b>Author's Ranking</b>
<b>Hand Held Electronic Probes</b>	
DetectorPro Uniprobe All-in-One	
DetectorPro Pistol Probe	3
Cache Probe CP200	
Minelab Pro-Find 25	
Tesoro Treasure Mate	
Garrett Pro	2
Vibra Probe 580	4
Kellyco Automax Precision V4	
White's Bullseye II	5
Merlin	
Bounty Hunter / Teknetics	
Fisher F-Pointer	
Harbor Tools Cen-Tech	
<b>In-Line Metal Detector Target Probes</b>	
Sun Ray In-Line Prob	1
<b>Metallic Probes</b>	
Brass Shaft Probes	
Steel Shaft with Brass Tip	1a
<a href="http://www.mdhtalk.org">http://www.mdhtalk.org</a>	

**In Summary.** While reviewing the selection criteria to purchase an electronic probe there are a few important items to consider besides just price.

The first point is how many detectors do you own or are planning to own? If you own multiple detectors then selecting an in-line probe may not be the best choice since most detector brands require a different model of in-line probe. In this situation it may be best to choose a hand held probe since they are not detector depended.

The second point is that hand held probes tend not to be as reliable as in-line probes since the probe controls are exposed to dirt and moisture each time that they are used. This can easily cause switches and controls to completely fail or become intermittent with use. Hand held probes also can experience battery contact issues since each probe has a minimum of one battery.

The third point is the detection range capability of the probe. In-line probes tend to have the greatest detection range while hand held probes

have a detection range of 1.25 inches to 2.5 inches depended on the brand.

In Table TWO on the left is the authors ranking for a few of the probes. A rank of ONE is best and a rank of FIVE is the lowest. As with any ranking the results are based on a subjective analysis of the key attributes, in field use and the review of comments made by other detectorists on various metal detecting forum.

Here is a list of the manufacture's websites and a link to their electronic probe webpage.

### **In-Line Metal Detector Target Probe**

**Sun Ray Detector Electronics** <http://www.sunraydetector.com/>

### **Hand Held Electronic Probes**

**Bounty Hunter Metal Detectors** <http://www.detecting.com/bounty-hunter-accessories.htm>

**DetectorPro Metal Detectors** <http://www.detectorpro.com/>

**Fisher Metal Detectors** <http://www.fisherlab.com/hobby/detector-accessories.htm>

**Garrett Metal Detectors** <https://garrett.com/sport/pro-pointer>

**Harbor Tools** <http://www.harborfreight.com/catalogsearch/result?q=Cen-Tech+metal+detector>

**Kellyco Super Store** <http://www.kellycodetectors.com/accessories/pinpointers.htm>

**Minelab** <https://www.minelab.com/accessories?type=350306>

**Teknetics Metal Detectors** <https://www.tekneticsdirect.com/products/detectors>

**Treasure Products** <http://www.treasureproducts.com/vibraprobe.html>