



# Metal Detectors & Magnetic Locators

## Detection Capabilities

		Type of Metal											Sample Depth								
		ALUMINUM	BRASS	GOLD	SILVER	TIN	LEAD	BRONZE	NICKEL	ZINC	IRON	STEEL	HANDGUN	HUNTING KNIFE	SHOTGUN	175 MM PROJECTILE	MK81 DRAG BOMB	REBAR	WELL CASING	SUBMERGED VEHICLE	
	<b>ALL-METAL DETECTOR</b>	X	X	X	X	X	X	X	X	X	X	X	8 - 12 + inches								
	<b>FERROUS METAL DETECTOR (MAGNETIC LOCATOR)</b>	will not "see" non-ferrous metals										X	X	12 in	16 in	24 in	5 ft	8 ft	12 ft	18 ft	30 ft

### Frequently Asked Questions

#### Metal Detectors & Magnetic Locators

**Q:** What's the difference between a metal detector and a magnetic locator?

**A:** A metal detector finds all types of metal - aluminum, tin, iron, etc. A magnetic locator finds only those types of metal that cause a disruption in the earth's magnetic field - ferrous metals, mainly iron and steel.

**Q:** Which is better?

**A:** It depends on your requirement. An all-metal detector will find both ferrous and non-ferrous metals at limited depths. A magnetic locator will find only ferrous metals, generally at greater depths. The magnetic locator will not 'see' other types of metals and so will not be subject to signal interference from them - things like aluminum cans, pull tabs and other common "trash" materials found in many environments.

**Q:** What are the detection capabilities of each?

**A:** A metal detector will find targets at a distance about equal to the diameter of the search coil, generally 8 - 12+ inches deep. A magnetic locator will detect targets up to 30 feet deep depending on their size. Because the magnetic locator works on a different principle than the metal detector, it will locate objects through any magnetically inert medium, for example water, snow, rocks, walls, floors, etc. - the medium doesn't matter. Due to the shape of its search coil, the all-metal detector is restricted in its ability to penetrate thick overgrowth, shubbery and other ground covers.

**Q:** What are the drawbacks of each?

**A:** Both devices will find things the user may not be looking for, i.e. they will produce "false positives". A metal detector will register *all metal* and not just, say, the silver coins the user is hunting for. The magnetic locator will detect *all ferrous metal* in its search area, so finding a handgun in a dumpster will be problematic.



Environmental Remediation dig  
The Badlands of South Dakota

Photo by John Melcher  
HGL Munitions Response Team, Albuquerque, NM

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