

Mine/Metal Detectors

Vadar Mustafa Sector Manager Ahmed Bahjat Ismail Human Resource Officer

Mines Advisory Group

INTRODUCTION

- A Metal Detector is a device which is used to detect a metal object that is not visible to our naked eye.
- It consists of an oscillator which produces an alternating current that passes through coil producing alternating magnetic field
- The first industrial metal detectors were developed in 1960s widely used for Demining and other industrial purposes.

How a demining system work?



- 1. The detector produces pulses of electronically current and the coil converts them into magnetic pluses.
- 2. and 3. Then the mine receives and sends back the magnetic field.
- **<u>4.</u>** And to finish the coil receives the magnetic pulses and transmits the information to the control box .
- 5. The Control Box Give a Sign to the user via a sound or a light it depend on the type of the Detector.

COMPONENTS OF TYPICAL METAL DETECTOR

- Stabilizer (optional) used to keep the unit steady as you sweep it back and forth
- Control box contains the circuitry, controls , <u>speaker</u>, <u>batteries</u> and the <u>microprocessor</u>
 - Shaft connects the control box and the coil; often adjustable so you can set it at a comfortable level for your height
- Search coil the part that actually senses the metal; also known as the "search head," "loop" or "antenna"



APPILICATIONS

The most common applications for metal detector include the following :

- Helpful for to detect land mines.
- Security in the places like airports, metro railways e.t.c.
- Archaeology department like treasure hunting.
- To detect foreign bodies in food items.

Metal Detectors Types : Mil D1 metal detector.



Metal Detectors Types : Large Loop.



Metal Detectors Types : F3.



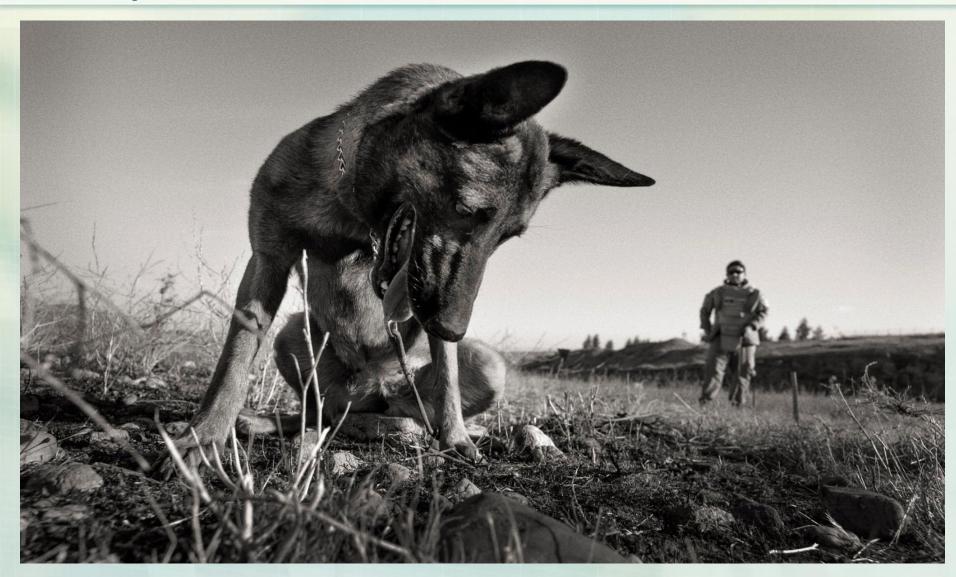


Metal Detector/Ground Penetrating Radar HSTAMIDS mine detector.



Mine detection dogs.

From 2010, MAG's operations in Iraq had integrated Dog Detection clearance methodologies .



Statistics







Demolition of projectiles, fuses and landmines.

People have a right to a safe future, free from fear, so they can rebuild their lives.



Made By Ahmed Bahjat