



## Mine/Metal Detectors

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# 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.
4. 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, speaker, batteries and the microprocessor
- **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"



# APPLICATIONS

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

## MAG IN IRAQ

LANDMINES REMOVED &  
DESTROYED

166,365

UNEXPLODED ORDNANCE  
REMOVED & DESTROYED

1,987,181

SQUARE METRES OF LAND  
MADE SAFE

88,721,529

MAG'S YEARS SAVING LIVES IN  
IRAQ

24



# MAG

**saves lives** **builds futures**



**MAG**

saves lives **builds futures**



**Demolition of projectiles, fuses and landmines.**

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

**THANK YOU**

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