

DIGITAL METAL DETECTOR

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ABSTRACT

For my project, it probably will not find any valuable gold which is buried in the ground but it will demonstrate how a metal detector works. It uses the principle whereby the inductance of a search coil (inductor) changes in the presence of a metal. Some metal detectors can even discriminate between ferrous metal (i.e. those with iron such as steel, cast iron, wrought iron) and non-ferrous metals (aluminum, zinc, lead, tin, copper, mercury, and silver, platinum, gold)

Finally, the LEDs will light sequentially from right to left when a metal object (e.g. ferromagnetic) was brought close to the search coil. If there was no metal object brought close to the search coil or the metal is non-ferromagnetic, the LEDs will light sequentially in the opposite direction, which is from left to right.