

SCR-625 Mine Detector Description

The SCR-625 Mine Detector has a characteristic shape that has become quite familiar. It had a six foot long exploring rod that the operator held. At the end of the rod was a pie shaped search coil, mounted under an 18 inch diameter wooden disk. Strapped to the operator's side in a canvas haversack were the dry-cell batteries that induced a magnetic field around the search plate and amplifier. The resonator was attached to the operator's shoulder. A set of earphones completed the instrument.

The entire detector set weighed 7.5 pounds and produced a low hum in the operator's earphones. The SCR-625 discerned metallic mines 6 to 12 inches below the surface, rather than the desired 18 inches, but was acceptable because few mines were ever buried more than 12 inches below ground.

The detector was standardized and put into production by the Army's Services of Supply in September 1942 and was available for the American units that landed in Morocco in November. Overall, the new detector performed well and became one of the most popular pieces of Army equipment in North Africa. It had two serious shortcomings: it was not waterproof and it was quite fragile.

The SCR-625 Mine Detector in Use

Soldiers clearing a road walked forward and swung their detectors -- sometimes known as outdoor carpet sweepers -- slowly from side to side, sweeping a band 3 to 4 feet wide. In the presence of metal buried less than 12 inches below the surface, the hum produced by the magnetic field increased in pitch. With the search plate directly over a mine, the sound became so high and strong that it was almost a shriek. The deflection of the needle on the meter in the control box at the operator's side also showed the presence of the mine.

When the operator detected a mine, he did not stop to disarm it. He pointed it out to another man following him, who marked the spot. Others came behind them, cautiously unearthed the device, and deactivated it. This simple process was quite effective and large numbers of mines were removed in the North African campaign without many casualties.

Unfortunately, the experience in North Africa was not typical. When the Army got to Italy, the SCR-625 proved to be far less effective due to a high iron content in the soil and German countermeasures to use fewer metallic mines. The Germans switched to nonmetallic Schu antipersonnel mines, which were assembled in wooden boxes. Other problems became evident as well. Operators tired quickly because of the 7.5-pound weight of the instrument. Moreover, even though the SCR-625 was not used while under enemy small arms fire, soldiers still disliked having to stand upright while using it. And the sets did break down, especially in the rain.

Soldiers of the 82nd Airborne Division load a jeep into the open nose of a CG-4 glider in preparation for an airborne landing in Holland, 17 September 1944. The chest packed SCR-625-C Mine Detector can be seen on the jeep to the left of the photo.

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In Europe the SCR-625, even with its later modifications, never attained the level of success reached by the first model in North Africa. Overall, however, it never lost its utility and the research effort that produced it showed itself to be responsive to the needs of combat engineers.