

P E R F O R M A N C E

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An Aviation Consultancy

RADAR — THE FIRST IN A SERIES OF GREAT INVENTIONS

In 1935, the German company GEMA built the first radiowave measuring device that could be rightfully called "radar" (i.e., radio detection and ranging). These devices transmitted over a 52-cm wave length using a split anode magnetron. The signal was returned and evaluated via a cathode ray tube. Distance was measured by the length of time it took the pulse to travel to and from the target.

In 1937, a prototype radio direction finding station operating on a 2.5-m wave length was built at the Bawdsey Research Station in England and handed over to the Royal Air Force for use in detecting German war planes. The Battle of Britain was won, in large part, as a result of this early warning device and helped turn the tide of the air war.

Without modern, efficient radar coverage of our airspace, air travel would not be possible today.

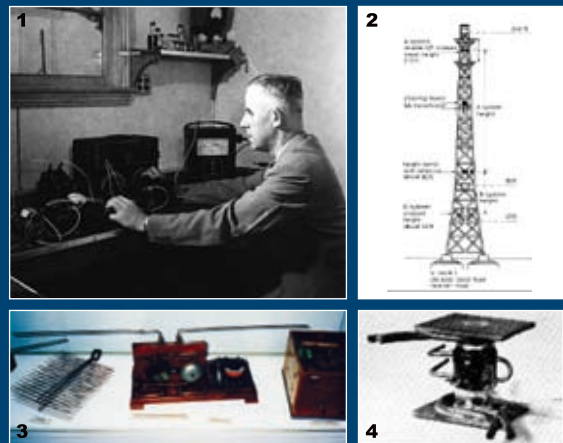
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Photo courtesy of City and County of Denver, Department of Aviation.



Historical images courtesy of Radarworld.org and Martin Hollmann.

1. Dr. Hans Eric Hollmann with an early imaging device.
2. The Chain Home receiver towers were 240 feet (73 m) high and made out of wood. The transmitting towers were 360 feet (100 m) high and made out of steel. The receiver towers were hundreds of yards from the transmitting towers.
3. In April 1904, Christian Huelsmeyer in Duesseldorf, Germany, applied for a patent for his "telemobiloscope" which was a transmitter-receiver system for detecting distant metallic objects by means of electrical waves.
4. The prototype magnetron designed by J. Randall and H. Boot in February 1940.