

Radio Detecting And Ranging

THE RADAR



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Author: High Contrast
Source: Wikipedia

Subjects

- How it works
- The first Radar
- Sir Robert Watson-Watt
- Modern radars in the Second World War
- Radars after the Second World War
- The Quiz



How does it work



How to measure the Distance



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Author: Edward Aspera Jr.
Source: Wikipedia

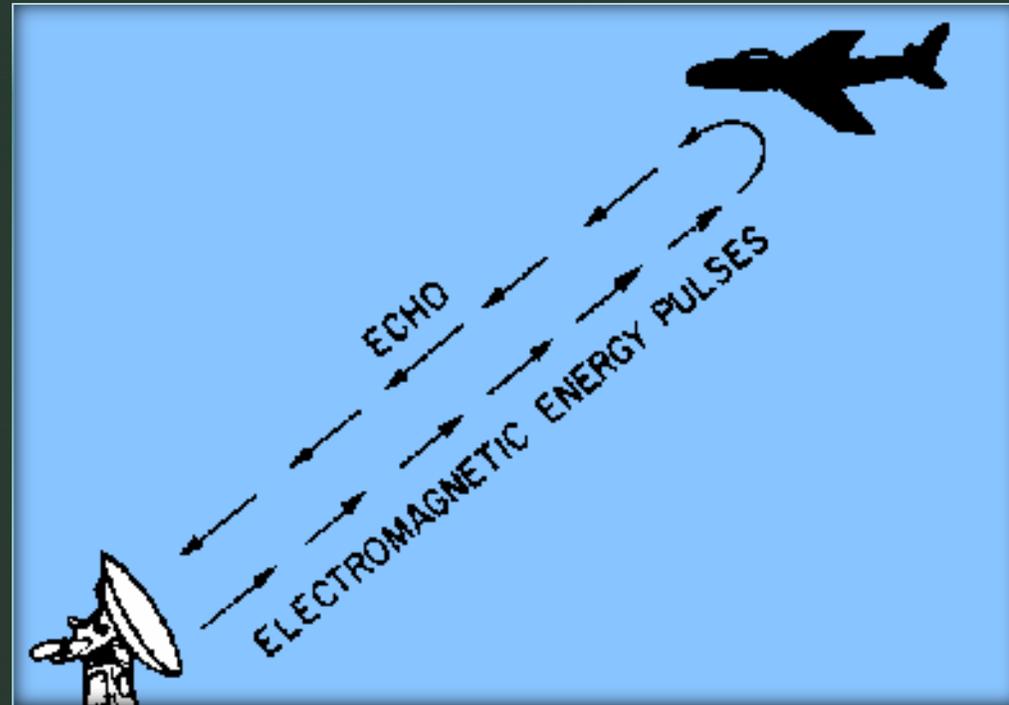


Lightning and sound

- Lightning strikes in your street
- How far is the thunderstorm away from you?
- Count the seconds between the lightning and the thunder
- Multiply the seconds with 300
- For example: 3 seconds with 300: the thunderstorm is around 900 metres away
- Orientation by the sound
- In radar the signals are much faster, we need computers for that

How does Radar work

- Radar sends out an electromagnetic impulse
- This signal is reflected from the object on which it hits
- Radar measures the time from the sending until signal gets back
- You can calculate the distance to the object and back
- Divide the distance by 2



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Author: Mathew Lee
Source: Quora



History



The first Radar

- Heinrich Hertz found out, that there are electric magnetic waves and they can reflect on
- The German Christian Hülsmeier invented the first Radar in year 1904
- In first years, the Radar was forgotten for using
- After a couple of years, it was refounded for the militar

Sir Robert Alexander Watson-Watt

- Sir Robert Watson-Watt was born 1892
- He died 1973
- He was first Assistant at the University College in Dundee (back then part of the University St. Andrews)
- 1927 he became Director of the Radio Research Station near Slough
- 1919 he got a patent for a procedure to locate vehicles
- The first use was 1935 to locate an airplane



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Author: Gordon W. Powley

Source: Wikipedia / Archives of Ontario

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Modern Radars in the second World War

- First usage of Radars in the second world war
- During the Second World War Germany, Great Britain, the United States of America, Japan, the Sowjet Union, France and Italy used Radars

Radars after the Second World War

- Today it is used as weather Radars, Air traffic control Radars, Georadars, Bioradars, harmonic Radars but it is still also used for military operations



Quiz



Quiz

- Who found out, that electric magnetic waves can reflect on things?
- Who got a patent for a procedure to locate vehicles and when?
- When was the first use of modern Radars?
- Tell us three types of Radars that are used.
- How can you hide from Radar?



THAT WAS OUR PRESENTATION ABOUT THE RADAR

- Thank you for listening, we wish you a nice day!
- Here are our sources: <https://de.wikipedia.org/wiki/Radar>