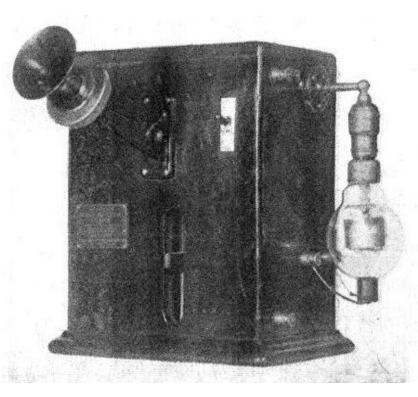
History of Radio Receiver Circuit Development

By Ahmed Al Banna MSC. Electronic and communication Engineering

Aim: Review Radio Circuit Developments

Apparently the first commercial AM <u>Audion</u> <u>vacuum tube</u> <u>radio</u> transmitter, built in 1914 by Lee De Forest who invented the Audion (triode) in 1906, from a short announcement in *Electrical* World magazine. It was not the first AM (sound) transmitter; short-lived technologies like the Poulsen arc and Alexanderson alternator had been transmitting sound since 1906. But the vacuum tube feedback oscillator, invented in 1912 by Edwin Armstrong, replaced them, and has remained the key technology used in radio transmitters to the present day.

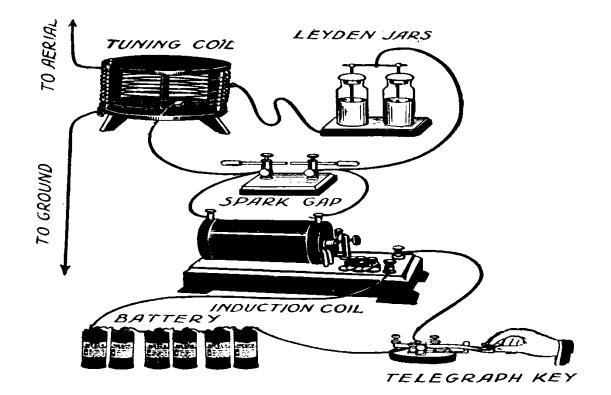


But before 1904 was any radio transmission/receiving?

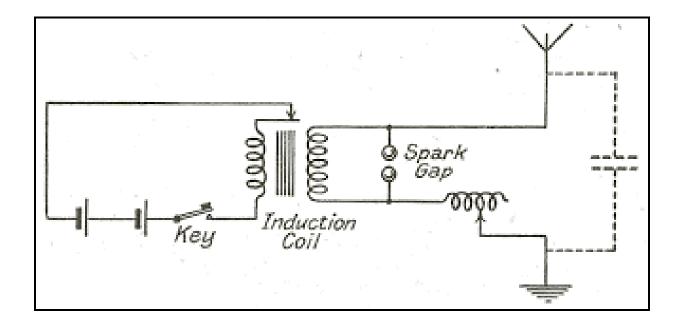
Answer :

Yes a radio transmitter /receiver was invented by Marconi which is called "The spark Gap Transmitter "

Spark Gap Transmitter



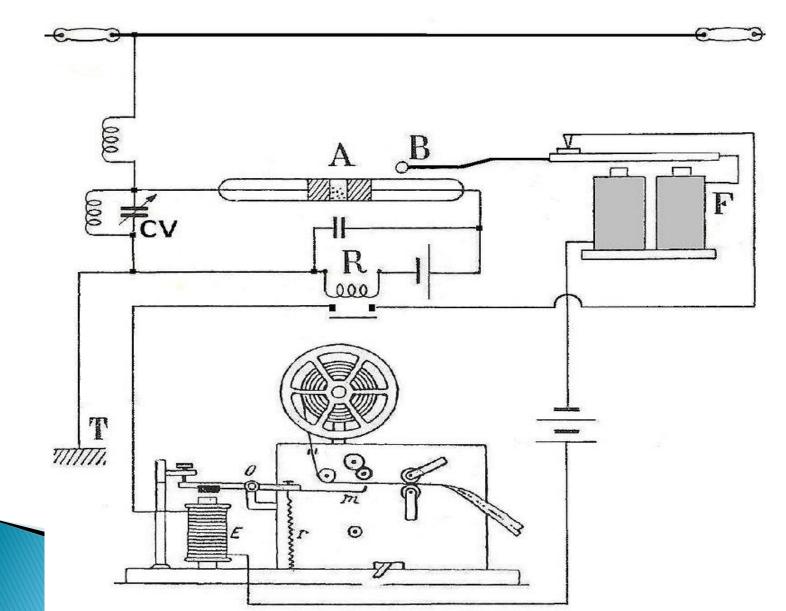
Schematic Explain:

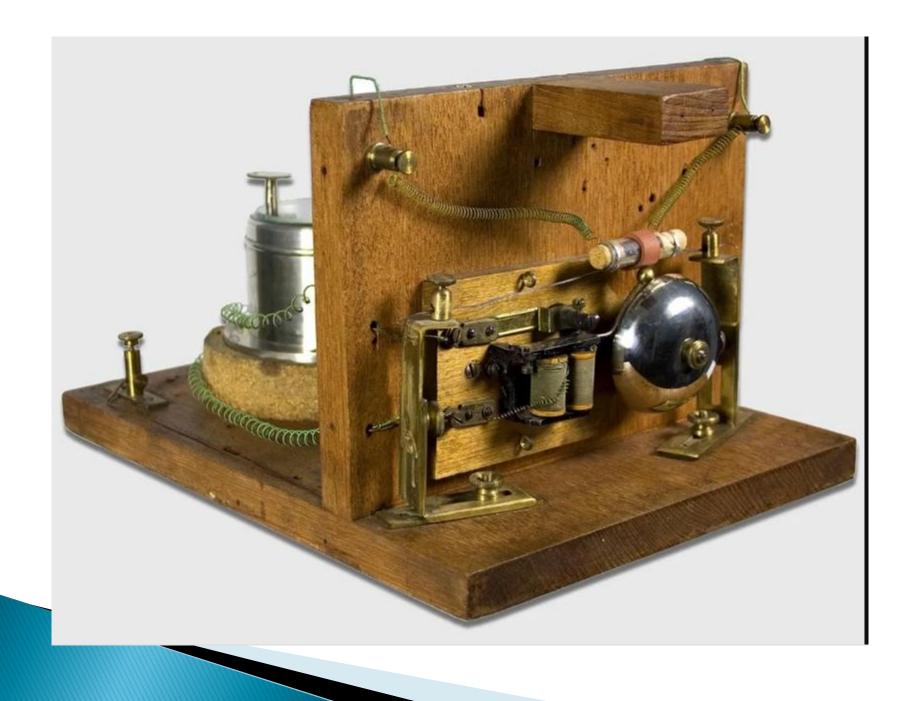


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Spark Gap Receiver

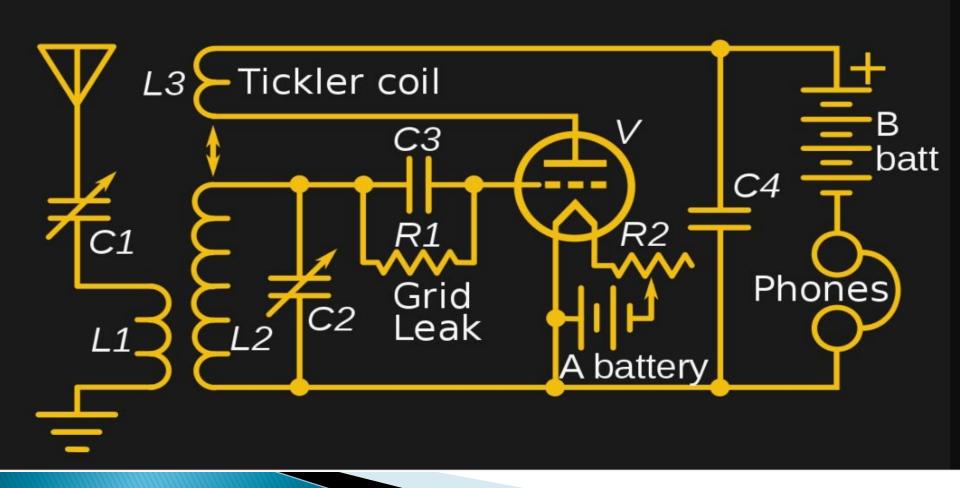








The Regenerative Receiver



Famous Radio Transceiver using Regenerative type called " **paraset**"

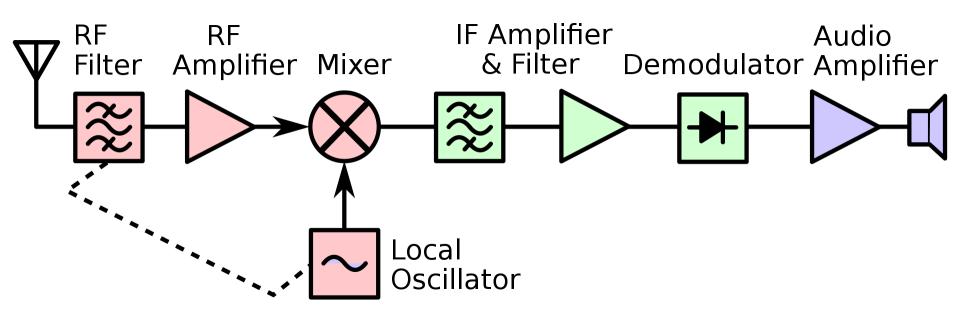


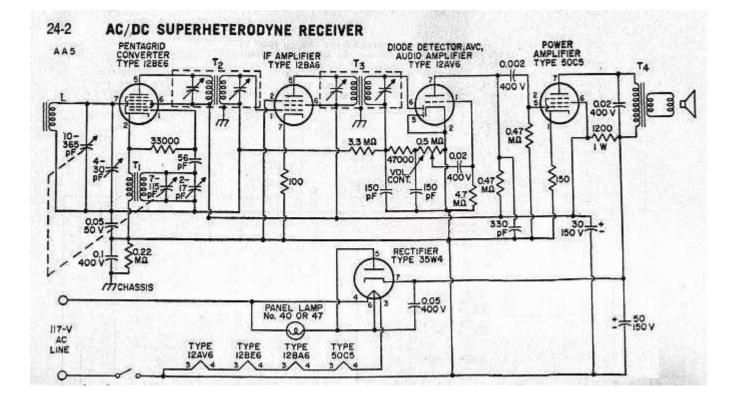
The Paraset was one of the first successful miniaturized radio sets for <u>Britain's Special</u> <u>Operations</u> <u>Executive</u> which conducted <u>espionage</u> and other activities behind <u>German</u> lines during World War II.

Specifications: <u>Receiver</u> coverage: 3.0 to 7.6 <u>MHz</u>, one band. <u>Transmitter</u> coverage: slightly more

than 3.0 to 7.6 <u>MHz</u>, two bands, selectable. Power output: 4 to 5 watts.^[5]

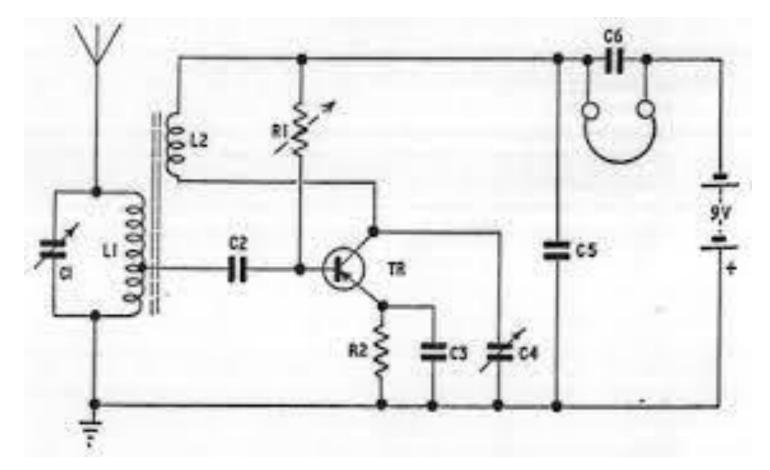
super heterodyne radio

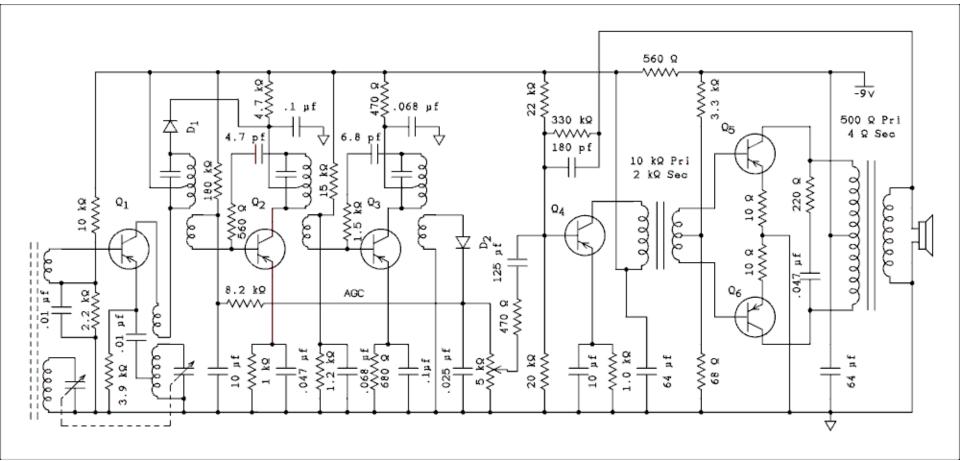






Radio Transistor







PLL



SDR radio using computer for listening



Water Fall



Any Questions?