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Tesla gives 1st public demonstration of radio, March 1, 1893

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Nikola Tesla gave the first public demonstration of radio in St. Louis on March 1, 1893, although he had presented his work prior to this behind closed doors. Tesla first demonstrated wireless transmissions during a lecture in 1891. Just days before the St. Louis presentation, Tesla addressed the Franklin Institute in Philadelphia, on February 23, 1893, describing in detail the principles of early radio communication.

Tesla presented the fundamentals of radio in 1893 during his public presentation, "On Light and Other High Frequency Phenomena." Afterward, the principle of radio communication--sending signals through space to receivers--was widely publicized from Tesla's experiments and demonstrations.

Even before the development of the vacuum tube, Tesla's descriptions contained all the elements that were later incorporated into radio systems. He initially experimented with magnetic receivers, unlike the coherers (detecting devices consisting of tubes filled with iron filings which had been invented by Temistocle Calzecchi-Onesti in 1884) used by Guglielmo Marconi and other early experimenters.



Tesla, later in life, seen adjusting a radio device in his lab.

Radio offers another example of Tesla's work receiving minimal or no long-term public acknowledgement. While Marconi is often credited with inventing the radio, this presentation by Tesla was recalled in courts several years later in invalidating Marconi patents.

Indeed, it, among other facts, pushed the United States Supreme Court in the 1943 case of Marconi Wireless Telegraph Company of America vs. the United States to state that "it is now held that in the important advance upon his basic patent Marconi did nothing that had not already been seen and disclosed."

To be true, what Tesla demonstrated had more scientific interest than practical use, but he believed that by taking the "Tesla oscillator," grounding one side of it, and connecting the other to an insulated body of a large surface, it would be possible to transmit electric oscillations a great distance and to communicate intelligence in this way to other oscillators.

In 1898 at the Electrical Exhibition in New York, Tesla would successfully demonstrate a radio-controlled boat. For that work, he was awarded **US patent No. 613,809** for a "Method of and Apparatus for Controlling Mechanism of Moving Vessels or Vehicles." Between 1895 and 1897, Tesla received wireless signals transmitted via short distances in his lectures. He transmitted over medium ranges during presentations made between 1897 and 1910.

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Editor's note: This article was originally posted on March 1, 2013 and edited on March 1, 2018.



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