

GUGLIELMO MARCONI

April 25, 1874 • July 20, 1937

Guglielmo Marconi died thirty years ago this month, July 20, 1937, in Rome, Italy, and was given a state funeral by the Italian government. In keeping with his own request, he was buried at the town of his birth, Bologna. It was there in the year 1874 that he was baptized a Catholic. His father was of the same faith, his mother, the former Anna Jameson, of the Protestant faith.

It is a privilege and an honor, in this the first issue of our magazine, to recognize the significant achievement of the inventor of wireless telegraphy — this marking the thirtieth anniversary of his death.

The world-wide acclaim accorded Marconi at the turn of the century and throughout the remaining years of his life, slipped inexorably into the dim shadows of the past, and is now virtually unknown by many persons of the present generation.

Nevertheless, great achievements of the past, long since obsolete by contemporary standards, are still deeply etched into the history of all mankind. They provide the yardstick by which man measures the extent of his progress. They can be a source of inspiration for the later generations as they advance steadily toward new frontiers in a changing environment.

In the words of an old American proverb: Hats off to the past; coats off to the future!

This is the first in a series of biographical sketches of famous people in electronic technology, which will be featured in the *Electronics Digest* as an informational program, to better acquaint the young people of our generation with accomplishments that have played a vital role in the progress of our world.

Following is a biographical sketch of the inventor of wireless telegraphy, reproduced from *The World Book Encyclopedia* by special permission:

MARCONI, mahr KOH nee, GUGLIELMO (1874-1937), MARQUIS, an Italian inventor and electrical engineer, won recognition for his work in developing *wireless telegraphy*, or radio. This led to present-day radio broadcasting. He produced a practical wireless telegraph system in 1895 from basic discoveries that had previously been made in wireless telegraphy (see RADIO [History]). He produced the first transatlantic wireless signal in history on Dec. 12, 1901, and patented the horizontal directional aerial in 1905. He shared the 1909 Nobel prize in physics with Ferdinand Braun for their development of wireless telegraphy. Braun, working independently of Marconi, developed a cathode-ray tube. Marconi invented the beam system of wireless for long-distance communication (see SHORT WAVE).

Early Life. Marconi was born on April 25, 1874, in Bologna, Italy. His father was a wealthy Italian, his mother Irish. He grew up as a delicate and studious child. He read widely as a boy, in the excellent scientific library in the Marconi home, and became interested in the study of electromagnetic waves. He was educated by tutors, and later studied at the University of Bologna.

First Experiments. In 1894, Marconi set up apparatus at his father's estate. With this apparatus, he sent and received signals by electrical waves over a longer distance than had ever been done before. But the Italian government took no interest in the early stages of his work. Marconi went to England in 1896 to seek capital for a wireless telegraph company. He applied for and received from the British government the first wireless patent, the famous No. 7777. The patent was based in part on the theory that the distance of communication increases rapidly as the height of aerials is increased.

Marconi formed the first wire-

less company in 1897. The company installed wireless sets in lighthouses along the English coast. Marconi sent the first wireless telegraph message across the English Channel, a distance of 85 miles, in March, 1899.

The value of the wireless for emergencies at sea was shown on April 28, 1899. Heavy seas had pounded the Goodwin Sands lightship off the English coast, and parts of the deckhouses had been swept away. The vessel reported the situation to a nearby station by wireless, and help arrived at the ship in time to prevent loss of life.

The First Transatlantic Signal. Marconi decided to try to send signals across the Atlantic in 1901. He built a sending station at Poldhu, Cornwall, England. He sailed to Newfoundland and set up receiving equipment at St. John's. The first signal sent, the letter "S," came through as scheduled, though exceedingly faint, on Dec. 12, 1901.

Marconi showed the next year that wireless signals can be received over greater distances at night than in the day. While aboard the steamship *Philadelphia* bound for the United States, Marconi received signals sent from a distance of 2,099 miles.

Marconi lost his right eye in an automobile accident in 1912. But he continued to work. He volunteered for active service when Italy entered World War I, and became commander of the Italian wireless service. He began experimenting with very short waves at this time.

Marconi's work brought him honors from governments throughout the world. The Italian government made him a senator of the kingdom of Italy for life in 1909. He received the hereditary title of *marchese* (marquis) in 1929.

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This picture, from an old photographic print, shows Guglielmo Marconi at the receiving set which he used to detect the first transatlantic wireless signal in history on Thursday, December 12, 1901. Marconi's wireless apparatus was located atop Signal Hill, a lofty point overlooking the port city of St. John's, Newfoundland. The sending station for this momentous experiment was located at Poldhu, Cornwall, England, about 2,000 miles across the vast Atlantic Ocean from the North American continent. The inventor was assisted by two electricians, G. S. Kemp and P. W. Paget, in setting up equipment for the historic transatlantic test.

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Marconi the man — a great mind combining the natural curiosity of an inventor and the vision of a philosopher. The man who reached out beyond the horizon for the elusive miracle of global communication by means of wireless telegraphy.

December 12th of this year will mark the 66th anniversary of that first faint letter "S" heard in St. John's. A success achieved after countless hours of thought and preparatory work . . . intermingled with keen disappointments.

Today, we accept as commonplace such electronic miracles as live television programs from Europe via the communications satellite, or pictures of the Moon's surface transmitted to Earth from apparatus in a lunar landing vehicle.

Thus, man measures the extent of his progress from his accomplishments of the past.

