

Father Joseph Murgas

A man with a broad range of interests and talents, Father Joseph Murgas is perhaps best known for developing and patenting the "Tone Method", a system of wireless communication capable of transmitting voice and sound over great land distance, an achievement amateur radio operators recognize today as ground-breaking in the development of radio technology.

Father Joseph Murgas was born in Tajov (Jabrikova), Zvolen County, Slovakia on February 17, 1864. When he was eighteen years old, he entered the catholic seminary at Bratislava to study for the priesthood. Since he had an inclination for the sciences, Murgas studied electricity, astronomy, and advanced physics at various seminaries. He also began experiments with wireless telegraphy and took classes in painting and sketching. On November 10, 1888, Father Murgas was ordained as a priest in the diocese of Banska Bystrica. Since he showed talent in art, Father Murgas was sent to the Academy of Art in Munich Germany in 1889. After the completion of his art study, Murgas was still interested in science and he enrolled as an advanced student in the Electrical College of Vienna, Austria. There he continued pioneering experiments in wireless telegraphy.

Because of his knowledge of art, Father Murgas was selected to pass judgment on a painting in the Hungarian House of Parliament. The painting portrayed the Hungarians conquering the Slavs in a battle in the year 907 AD. A Slav by birth, Father Murgas took exception to the painting and stated that it represented a "pathetic fallacy of history". This judgment led to charges of disloyalty against him. As a consequence, Father Murgas felt it would be best to leave Hungary. (At this time Slovakia was a part of Hungary.) A Slovak friend of Father Murgas was a priest in Wilkes-Barre, Pennsylvania. This priest urged Murgas to come to Wilkes-Barre, where "he could serve God to better advantage".

Arriving in America on April 6, 1896, Father Murgas traveled to Northeastern Pennsylvania and was assigned to a parish in Pittston. A few months later, Murgas was appointed Pastor of Sacred Heart Church at 601 North Main Street, Wilkes-Barre. His predecessor and friend, Father Matthew Jankola, had almost finished building a wooden Church on the site. Father Murgas took over and finished the project. The following year, he oversaw the construction of a residence for himself and a school for the children of the parish. In 1908 Father Murgas dedicated a stone and brick church for the parish. Murgas was very involved in all aspects of the construction. He used his artistic ability to create a painting over the main altar and another above one of the side altars in the church.

Even though Father Murgas was responsible for all the priestly duties of a large parish, he was still fascinated by electrical theories and ideas. Murgas wrote and published articles in scientific periodicals. To demonstrate that he was aware of the possibilities in this area, in 1896 Father Murgas wrote an article which closed with the words: "The field of electrical wonders has just opened and it is difficult to predict the great things it has in store for us." What a prognostication!

Father Murgas started to conduct electrical experiments relating to wireless communication in 1898 and used the basement of the rectory as his workshop. He had to do it the hard way. With little money, he made the various parts for his experiments. There were no "Heath Kits" in those days. Murgas really was a "home brew expert". Some parts took months to build. He dedicated himself to making a wireless system that would overcome the problems of both physical and atmospheric interference. After four years of experimenting, he felt that he had perfected a system for wireless transmission, not only of electrical impulses but also voice modulation.

The Boston Herald on September 18, 1902, printed the following statement in its paper: "Wireless telegraphy experiments between Washington and Annapolis are over. They demonstrated that wireless telegraphy in its present stage of development is absolutely useless for land purposes. Whether it is worth adopting the Marconi system by the U.S. Navy remains to be seen." Marconi had conducted and limited his experiments over water, where he did not have to deal with interference problems that were present in land communication.

Father Murgas knew from his experiments that he could transmit messages over land. Transmission by wireless in those days was by the "Spark Gap Method". On September 14, 1903, Father Murgas applied for, and later received, a patent for a system of wireless communication known as the "Tone Method". Under this system, electrical energy was emitted at two tones each of a different pitch. The tone method could produce combinations of tones to

represent different letters similar to Morse code. High pitch sounds represented a "dit" or dot, and low-pitched sounds a "dah" or dash. It was demonstrated that messages sent by the tone method could be transmitted faster than using a system of successive impulses. This method was faster because a dedicated break between each character was not needed.

The New York Herald on March 13, 1903, published an article which read: "Father Joseph Murgas, Pastor of Sacred Heart Church, Wilkes-Barre, Pennsylvania, has just perfected a new wireless telegraph system, which he believes is superior to the Marconi method. It is far more simpler, and messages can be sent twice as fast. In his exhaustive experiments, Father Murgas found he can send messages seventy (70) miles on land by earth circuit and seven hundred miles (700) miles over sea."

Philadelphia capitalists formed the Universal Aether Telegraph Company on July 2, 1904. Later it was found that some Washington lawyers were also involved as silent partners. An agreement between the Universal Aether Telegraph Company and Father Murgas brought much needed money to assist in his work. In the company's budget they had plans to erect a station with an antenna in Wilkes-Barre and also one in Scranton. The antennas were each to cost around \$4,200, and a small building or shack at the base of the antennas were each to cost around \$1,500. The antenna towers were 200 feet high and of wood construction.

President Theodore Roosevelt was in the area visiting Father John J. Curran on April 27, 1905. The President had heard about Father Murgas' experiments and asked to meet him and see his wireless system. After spending time with Murgas and seeing his equipment, the President said he had never seen such a phenomenon and promised government support. On November 23, 1905, there was a large public demonstration of Father Murgas' wireless system. Public officials present included the Mayors of Wilkes-Barre and Scranton at their respective city stations, agents of the Universal Aether Telegraph Company, newspaper reporters, and many others. The Navy Department was represented by Lieutenant Commander Samuel S. Robison. The Scranton Mayor sent a message, "Scranton sends healthy congratulations to Father Murgas, our Mother City's foremost inventor." The public test of the "Tone Method" was a big success. Lieutenant Commander Robinson reported the tests "most satisfactory" and he thought that Murgas had the best system of wireless transmission.

In this same time period, Father Murgas conducted public communications by voice between his Wilkes-Barre and Scranton stations. By modifying his "Tone System" he was able to transmit speech. It seems quite clear that these transmissions of continuous wave and audio were the first transmissions ever made over land at such a great distance (20 miles). Father Murgas demonstrated that communication by wireless or radio over great land distances was possible. This had not been achieved prior to these public demonstrations. His experiments gave the impetus to all land transmissions by radio that followed. Around this time, Marconi visited Father Murgas and later developed the "Sonorous Method", quite apparently based on Father Murgas' "Tone Method". Professor Reginald A. Fessenden, another early inventor, introduced the "Sound Method", also it seems based on Father Murgas' "Tone Method".

Unfortunately, even with all this success, there was not a storybook ending. Disaster struck quickly and with heavy blows. A few months after the November test, there was a big storm which knocked down the antenna tower in Scranton and also ruined the station. The storm destroyed one of the towers at Wilkes-Barre location. A prominent person in the company backing Father Murgas died and the Universal Aether Telegraph Company decided it could not afford to rebuild the stations. Also, there was a big disappointment when the U.S. Navy did not accept the "Tone Method". The US government and other countries had previously entered into contracts with Marconi and purchased millions of dollars' worth of his equipment. Money already spent on the equipment would be wasted if the government changed to the Murgas system. Wireless was becoming more established and, in a few years, there were about ten new companies in the field. Father Murgas' Company could not compete financially.

Professor Reginald A. Fessenden, an early inventor in radio, brought suit in New York City in 1916 for a patent infringement against Marconi. Fessenden claimed he was the inventor of the "Sound Method" of communication. Marconi's defense was that Fessenden was not the inventor of the "Sound Method" of communication, but rather Father Murgas of Wilkes-Barre, Pennsylvania. Murgas invented the "Tone Method" and Fessenden's "Sound Method" was a similar method of communication. The Court ruled in favor of Marconi and said:

"Based on the Murgas inventions and testified to in written and oral memos by witnesses and as explained in the Electrical Review of October 25, 1902 and of December 2, 1905, it has been proven to me conclusively that Fessenden was not the inventor of what was claimed to have been infringed upon in this notable contribution of the art."

Father Murgas personally continued experimenting on his own until 1912 and secured several more patents in radio. It is thought that Father Murgas stopped experimenting with wireless at this time, but his friends say that he continued his interest in radio until 1922. Because Murgas was a recognized authority on wireless and radio, President Calvin Coolidge appointed him Chairman of the first United States Radio Communication Commission in 1929. Unfortunately, Father Murgas was not able to accept.

Later in his life, Father Murgas turned to his naturalist interests. He continued to collect butterflies until his collection had grown to thousands of items. King's College of Wilkes-Barre was given what remained of his butterfly collection. In the last few years of his life, Murgas confined his leisure time to fishing. He particularly liked to fish at Lake Silkworth and Harvey's Lake. With his engineering abilities and knowledge of fishing, Father Murgas received a patent for a fishing rod.

In addition to his extra-curricular activities, Father Murgas ran a big parish, built a new Church and Rectory, founded a Slovak Beneficial Insurance Association, and assisted in founding an order of Sisters of Saint Cyril and Methodius. During World War I Murgas took a great interest in the freedom of Slovakia, which became a free country after the war. Father Murgas helped raise one million dollars to aid in Slovakia's freedom.

On May 11, 1929, after saying Mass in the morning, Father Murgas told his housekeeper he felt a little weak and went to his room to rest. When he did not appear for lunch, his staff investigated and found he had died. His physician believed Murgas died of a heart attack. A large funeral was held for Father Murgas in the Church he helped to build. He received acclamation of his fellow citizens of all faiths for his many accomplishments in the field of religion, art, and science. Father Murgas was buried in the Sacred Heart Parish Cemetery in Dallas.

Many honors followed even after Murgas' death. On the tenth anniversary of his death in 1939, Father Murgas' beloved Slovakia named its only radio station after him. In October of 1944, a U.S.S. Liberty Ship was named "The Father Joseph Murgas". Pennsylvania Governor Edward Martin set aside November 12, 1944, as Reverend Joseph Murgas Day. In the Governor's Declaration he said in part:

"...In a life devoted to his Church and to the betterment of others, Joseph Murgas gave much to his fellow men. He had many patents in the field of wireless communication and is largely responsible for the development of the transmission of voice by radio."

On the lawn in front of the church where Father Murgas served as Pastor, is a small monument with a facial figure of Father Murgas. The inscription is as follows:

*February 17, 1884 May 1, 1929
In memory of Rev. Joseph Murgas*

Here in the early days of radio communications, he created and developed to practical use, a major advancement in the art that opened the way to improved and dependable radio transmission over great distances.

Presented by the Order of Alhambra

May 12, 1965

A local amateur radio club adopted the name the "Murgas Amateur Radio Club" in 1975 as a tribute to Father Joseph Murgas. Fellow amateur radio operators recognized him as a pioneer who was successful in experimental work of wireless telegraphy, communicating by electrical impulses and voice in what has become known as radio. The Murgas Club has presented several reenactments of the November 1905 public demonstrations. They have also hosted special event stations to educate other amateurs about Father Murgas and his inventions. In 1979 a monument in honor of Father Murgas was presented by the Murgas Club to the Sacred Heart Parish. The monument is a scale size replica of Murgas' twin towers and was placed at the original site of his towers.

In 1994 a Joseph Murgas stamp was issued by the Slovakia Republic on the 130th anniversary of his birth.

Kings College in Wilkes-Barre established the "Father Murgas Room" on its campus in 2015. It contains paintings by Father Murgas, part of his butterfly collection, and displays explaining his radio inventions. An anonymously endowed scholarship has been created in Father Murgas' name at this school.

References

Palickar, Stephen J., *Rev. Joseph Murgas Priest-Scientist*, Sunland California: Cecil L. Anderson Publishing, 1950. Public domain access granted through Penn State University Library.

Brannigan, Alice, Popular Communications, *Father Murgas: Radio's Forgotten Genius*, June 1985.

Article originally researched and written by J. Campbell Collins, Esq., K3YTL in 1975 to support his recommendation that a newly formed radio club in Wilkes-Barre, Pennsylvania be named "Murgas Amateur Radio Club". Upon his death, the Murgas Amateur Radio Club honored J. Campbell Collins by adopting his call sign, K3YTL, as the club call sign.

