

This Month's Stiff: Alexander Stepanovich Popov

Entered Mortal Coil: 16 March 1859

Assumed Room Temperature: 13 January 1906



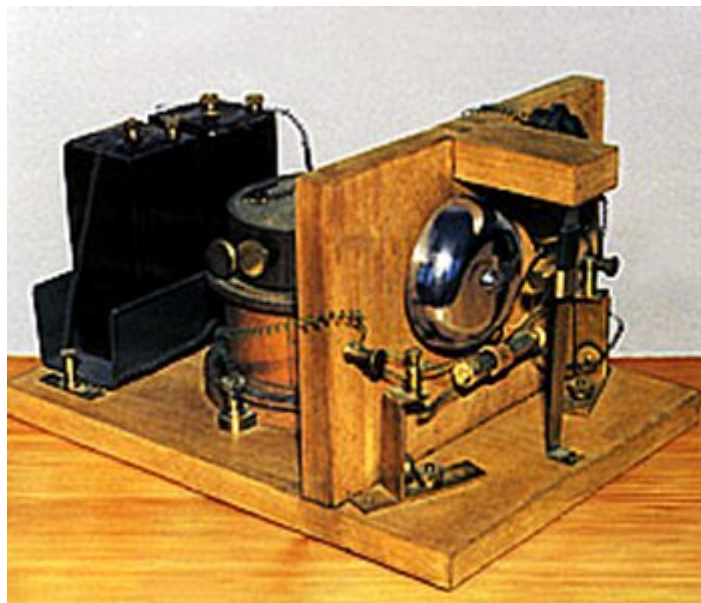
“I was first, Comrade!”

First, before we even get started, we need to play a bit of music to set the proper mood for reading this essay. Download this audio file located at my internet website <http://home.comcast.net/~ka4koe/russiananthem.wav> and play it whilst you're reading. Strange? Well, what do you expect reading these little essays from my twisted mind?

We're going to change gears a little bit and introduce a bit of controversy into our ongoing discussion of dead electrical pioneers of yesteryear. I am sure that many of you have read my previous essays on Guglielmo Marconi, or Dr. Lee Forest. Marconi got patent recognition for his radio system, and good ole' Lee claimed to be the "Father of Radio"...please suppress your giggles now, okay? But what if I told you that both of these gentlemen were pre-empted by Mr. Popov in the invention of the first radio transmitter? Now, I'm not even going to suggest that this is a case of "*goulash communism*", where Nikita Krushchev and his Soviet thugs were claiming that everything under the sun was invented by scientists from good old Mother Russia. In this particular instance, the Bolsheviks may have actually been correct in their wild claims. Sounds incredible, doesn't it?

Perhaps the primary reason that the scientific world at large places priority on Marconi is the fact that Alex was not an entrepreneur. He was first and foremost a scientist doing science for the pure love of it. Seeking publicity for his work would have been distasteful and boastful for this modest man. A good publicist would have done the Russian a world of good.

Let's discuss the **POP-TARTs**; an acronym for **Popov's Transmitting And Receiving Tests**. Alex was aware of Heinrich Hertz's experiments verifying the existence of electromagnetic waves, as was most every other scientist at the time. Experimental work on a coherer had been undertaken earlier by Edouard Branley and Oliver Lodge. Popov reasoned that he could detect lightning strikes many miles away by using a coherer and a simple receiver built around a door bell. He also attached an aerial and a ground wire. Whenever lightning struck nearby (up to 20 miles), the coherer conducted, causing the bell to ring. When the bell clapper sprang back, it struck the coherer, thereby readying it for the next lightning discharge. In all, it was an ingenious and simple device. He demonstrated the lightning receiver on May 7, 1895 to the Russian Chemical and Physical Society in St. Petersburg.



Popov's Lightning Receiver

Another, more impressive test was conducted by Alex and his assistant Ribkin on March 12, 1896 over a distance of several hundred feet at St. Petersburg University, again for the Russian Chemical and Physical Society. The words "HEINRICH HERTZ" were successfully received using Morse code and written on a chalkboard. Unfortunately, the event was not very well documented at the time, and was only written about some years later from eyewitness accounts.

A stumbling block was encountered by Popov in that he didn't make the connection between transmitter performance and the requirement for good "earthing" and an antenna, although his lightning receiver had both. Alex assumed that increased transmitter power was the key to increased range. As we now know, higher power output is important in its own right, but antennas are unquestionably the key to success. At this point, Popov was frustrated in his experiments and turned his energies to exploring Roentgen rays (X-Rays).

Later in 1896, the news of Marconi's successes became known to Alex, and he was understandably disturbed at his hesitation in pursuing his work on his radio equipment. As a tribute to the maturity of the man, Alex later met Marconi and had a cordial discussion with his fellow scientist. No professional jealousy was apparent, as Popov later gave Marconi a samovar and a sealskin coat as wedding gifts.

To this day, May 7 is officially celebrated in Russia as Radio Day in honor of Popov. Make your own choice lads.....Popov or Marconi.

Internet References:

<http://chem.ch.huji.ac.il/~eugeniik/history/popov.html>

<http://www.ptti.ru/eng/forum/article2.html>

© 2007 Philip Ashley Neidlinger

Originally Published: November 17, 2004