



THE GHOST OF REGINALD FESSENDEN

By Everett L. Slosman

WE just left Hallowe'en headed in to the Christmas season, so we have for you a Christmas ghost story. As you might guess, it's not your usual seasonal sentimentality. It's a story about voices and music coming from radios that previously carried only dits and dahs: an event that took place 87 Christmas Eves ago.

The principal star of the show was Reginald A. Fessenden (pronounced FESS-end-in), and his audience was made up of United Fruit Company wireless operators standing a cold watch in the Atlantic.

In that broadcast, Fessenden accomplished something few scientists believed possible. His broadcast reached from Massachusetts' South shore to receivers in far away Guantanamo Bay, Cuba. A lone wolf inventor proved audio could be transmitted, and left many experts, including Edison, speechless.

Though Fessenden invented the heterodyne circuit, history awards the laurels to Marconi, DeForest, and Armstrong. The Canadian-born Fessenden originated broadcasting as we know it today, yet Marconi has been dubbed "the

father of radio" by less knowledgeable historians.

Fessenden's erratic behavior and public image may have contributed to this.

Take station location. When wireless seemed like magic to the public, Marconi isolated his operations on Cape Cod, an hour's horseback ride from the nearest town. Only his employees witnessed the inevitable failures.

Fessenden built on Blackman's Point at the edge of Brant Rock, MA, a summer playground for upper middle class families and a favorite fall hunting grounds for sea duck or scooter. Failed experiments were public knowledge.

Brant Rock is part of Marshfield, a community that still boasts a considerable number of gingerbread houses owned by residents with an attitude. Into this puritanical setting came Fessenden, a six-foot-plus, 300 pound bundle of motion sporting a black Inverness Cape. Heads swiveled and horses reared as he double timed down the one main street, his sandy beard unfurled in all directions.

Residents didn't appreciate his 420 foot antenna made from smokestack pipe. Nor did they appreciate that the tower was hollow, enabling workers to climb to the top and gain a spectacular view of their back yards.

During this same time, Fessenden erected a similar structure at Machrihanash, Mull of Kintyre, Scotland, where conservative locals

arched eyebrows and moved their sheep to other pastures.

Born 1866 in East Bolton, Quebec, to an impoverished Anglican minister, he was also the grandson of an indigent inventor. He spent his formative years in genteel poverty (a Victorian euphemism for flat broke).

Blessed with a razor-sharp mind, academic ability, not money, took him to Bishop's College, Lennoxville. Here he taught math, French, and Greek by day and studied for a degree at night.

However, before graduating, Fessenden took a teaching job in Bermuda where he met and fell madly in love with Helen Trott, a wealthy planter's daughter.

He moved on to New York City pursuing his fortune, and with hard work, good luck, and lot of chutzpah landed a job at Edison Laboratories. Here, he accomplished two things: gained a reputation for non-conventional thinking and married Helen. Shortly after the wedding, Edison's company went bankrupt.

Over the years, a pattern emerged. Fessenden pioneered a concept; others capitalized on it. Twice, Andrew Carnegie, the steel baron, offered Fessenden a partnership and twice Fessenden turned the aging industrialist down.

Eventually, Pittsburgh University made Fessenden a professor of electrical engineering, a job he quit to build an experimental Weather Bureau station at Cobbs Island, VA.

By 1900, Fessenden's audio transmission experiments shifted into high gear and he almost beat Marconi to the first trans-Atlantic transmission. That December, he transmitted an audio signal between two 50-foot towers spaced a mile apart.

After patenting the heterodyne circuit in 1905, Fessenden joined two Pittsburgh millionaires, Thomas Given and Hay Walker, Jr., in forming the National Electric Signaling Company.

Construction began on both Brant Rock and Machrihanash. When they were finished, he built a small test station in Plymouth, Massachusetts, 11 miles away.

A year later, an assistant in Scotland telegraphed, "At four o'clock in the morning, I was listening for telegraphic signals from Brant Rock when to my astonishment, I heard the voice of

Aerial view of the station site as it looks today. The tower is in the green patch of woods. Photo taken from Blackman's ham tower. Above: Reproduction of an old post card. The two houses on the left still stand.



The Tradition Continues

When Dana Blackman, a computer numerical control machinist and ham radio operator (N1EWA), used a family souvenir for his QSL card, he didn't give Fessenden's activities much thought. After all, Dana grew up on stories about the stogie-smoking genius who once leased the family's property for the National Electric Signaling Company.

It wasn't until Dana installed his own 85 foot ham tower that he realized Fessenden represented more than another family story taken from a history dating back to Pilgrims at Plymouth Rock.

A friend, Dave Reilly (AA1A)—considered the "Fessenden Authority in these parts"—set up a special events station at Blackman's Point several years ago and invited the non-hamming Dana to sit in. That started a love affair with hamming.

Dana had no trouble with code; "I learned it in the Boy Scouts and it just went from there." Anxious to get on two meters, he took the technician's test directly.

Now, he hangs out there on his way to work and during at-home evenings. Some Saturdays, he enjoys joining other two meter buffs for an informal breakfast at Marshfield's Masonic Temple. This adds an enjoyable face-to-voice dimension.



Dana Blackman at the controls of N1EWA.

Blackman's Point returned to a quiet resort and Brant Rock resumed its uneventful existence.

Only the tower base and a concrete anchor mark the site. MTV-bred children romp on these artifacts oblivious to the history behind the crumbling structure.

Two of the Point's three remaining homes once served as headquarters for National Electric Signaling, and several members of the Blackman family still live there. One is an amateur radio operator (see sidebar).

During Fessenden's lifetime, he produced over 500 inventions including a radio compass, fathometer, underwater signaling system, sub-



Dana Blackman's QSL taken from an old post card showing Fessenden's station.

His shack, a room on the second floor, houses an ICOM 751A world band rig, a 2 meter Kenwood all-mode, and a lot of peripheral equipment. "I go to flea markets and bump into something I just can't do without." Yet, the room is surprisingly neat.

Dana often visits the Christmas Eve broadcast. "I watch 'em do their thing, play the violin, sing songs, and drink some refreshment. A couple of times the wind's really been blowing and it got kinda chilly down there."

When he drops to 40 or 80 meters, Dana enjoys CW and will occasionally CQ. However, he is not a DXer or contest buff; preferring friendly conversation.

Dana supports special events stations like the one run by Whitey (K1VV) on Fessenden's birthday and there is talk among the two meter crowd about a 90th anniversary station from three years from now.

If you're looking for a contact, patience and some luck may catch Dana away from his activities; working out at the health club, riding a bicycle for exercise, fishing, and remodeling his hundred-plus year old house.

Yet, Dana wants to raise his code speed to 13 wpm. His special nemesis? The word 'antenna' in code. Give you any ideas?

marine detector, turbo-electric battleship drive, an anti-aircraft tracking device, and an acoustical system for musical instruments.

Fessenden's scientific accomplishments were acknowledged by the Radio Engineers Medal of Honor and a John Scott Medal for pioneering in radio. For contributions to marine safety, he received the Scientific American Medal. Fessenden died in Bermuda in 1932.

And now, the "ghost" part of the story.

A commercial radio station, WATD-FM, operates from facilities approximately five miles from Blackman's Point on 95.9 MHz. On Christmas Eve, they move a mobile unit to Blackman's



Blackman examining the base of Fessenden's tower. The swivel enabled the tower to move with the wind, keeping the weather strains from snapping the guy wires.

Mr. Stein telling the operators at Plymouth how to run the dynamos." Fessenden was ecstatic.

However, before National Electric Signaling could hold a public demonstration, Mac-hrihanash's tower went down in a storm. Never one to let a little adversity spoil his mood, Fessenden sent messages to all the United Fruit ships at sea and told them to listen around midnight Christmas Eve.

Inadvertently, Marconi Wireless America had set the stage for a captive audience. They had a firm policy against handling traffic from vessels not equipped with Marconi's radios. United Fruit Company's vessels used Fessenden's receivers. So, shipboard operators were primed for National Electric transmissions. Ironically, 14 years later United Fruit became a key player in the RCA consortium that bought out Marconi's American wireless interests.

Fessenden opened the program by telling listeners what they would hear. Handel's "Largo," became the first record ever aired and the Edison windup phonograph that played it became the first studio turntable.

Live talent took over as Fessenden played Gounod's "Oh Holy Night" on his violin and even sang the last verse when the singer got "mike fright."

Luke's traditional Bible reading, "Glory to God in the highest and peace on earth to men of goodwill," followed. Finally, Fessenden wished the audience a Merry Christmas and promised another broadcast New Years Eve.

That sub-zero windy midnight, wireless moved from Marconi's singular point-to-point transmissions into Radio: the mass communications medium.

Though the broadcast drew raves, a series of torts and lawsuits hassled Fessenden in an endless stream of litigation. For the next two decades, the professor spend more time in court than in the laboratory.

Fessenden left National in 1911. Three years later, the station closed and was dismantled.