

Radio Pioneer: Victor H. Laughter

Dr. Marvin R. Bensman

We know rather little about the earliest history of wireless development other than stories about those particular pioneers whose efforts were influential or successful. It should not surprise those who study that history to discover that many individuals did not achieve success but contributed much. One fascinating story that has never been told is that of Mr. Victor H. Laughter.

Victor H. Laughter was born January, 1888, in Byhalia, Mississippi.¹

At the age of 12, Laughter and his sister Belva boarded with Andersen W. Meely of Byhalia, Mississippi, while attending the Waverly Institute.² They may have been orphaned. It was during this time, in 1900, that Laughter built his first experimental wireless set. Later, Belva married a Mr. Joseph Thompson and moved to Memphis.³

We have no direct record of Victor H. Laughter's further education in the field of wireless or electricity, but he most likely attended some college or institute between 1906 and 1909.

In 1909, his book, **Operator's Wireless Telegraph and Telephone Handbook**, was published by Frederick J. Drake and Company. The book was written ". . .with the end in view of leading the student through the experimental stage, on up to the more complicated types of wireless telegraph and telephone instruments."⁴ The book was a well written and complete description of the wireless field up to that time, with a section on Dr. Lee deForest's audion which had only been patented that year. Laughter noted: "The Audion has proven very sensitive for use in wireless telephony, yet it is doubtful that it will ever come into wide use, owing to the difficulty in manufacture and short life."⁵ This was a true statement for that time. The book went into a second printing in 1918 and finally went out of print in 1929 after selling some 30,000 copies.⁶

At the age of 21, Laughter took the post of Technical Director and Secretary for the American Wireless Institute of Detroit, Michigan, an early electrical engineering school.⁷

It was in 1909 from Detroit that Victor H. Laughter patented his first three inventions in the wireless field. The first, filed on April 28, 1909, was for a transmitting system for space telephony. His second patent was filed July 10, 1909, for further improvements on his earlier patent. The third patent, filed October 20, 1909, was for a transmitter condenser for obtaining high frequency oscillations. All three of these inventions were assigned to Dr. Lee DeForest's North American Wireless Corporation. DeForest's company went bankrupt in 1911, and its assets eventually were acquired by the Radio Corporation of America.⁸

Laughter had by that time corresponded with and met some of the early pioneer influences upon a whole generation of young men; Mr. H.W. Young, editor of **Popular Electricity** magazine in Chicago; and Mr. Hugo Gernsback, publisher of **Modern Electrics** magazine in New York.⁹ In 1909 Gernsback also had opened a wireless parts company, the Electro Importing Company, on Fulton Street, New York, which sold both foreign and domestic devices by mail-order to amateur experimenters. In order to interest young people in purchasing these devices, Mr. Gernsback set out to educate his potential customers on the early art of wireless telegraphy and telephony.¹⁰

Laughter apparently so impressed H.W. Young with his knowledge of radio that, in 1909, his second book, **Wireless Telegraphy Made Simple**, was published by Young's company.¹¹

Then in 1910, at the age of 22, Laughter left Detroit for New York to become the first editor of Gernsback's first magazine, **Modern Electrics**. The magazine had begun publication in 1909, with Gernsback editing the first few issues himself.¹² For some reason four years later Laughter left the magazine, and the next we learn of him he was in Memphis, Tennessee in the Spring of 1913.¹³

In Memphis, as elsewhere, interest in wireless technology was high. There was some amateur activity but the first serious commercial effort was launched by a group of professional engineers, electricians and businessmen who formed the Tri-States Wireless Association to share information and promote wireless communication. By May, 1912, the association was the first tenant of the Falls Building on a top tenth floor suite, directly across from the Falls family's office. An antenna for the Tri-States transmitter was attached to the elevator penthouse on the Falls Building roof.¹⁴ Their call letters were T.A.M. (Tri-States Association-Memphis).

December 1912 they requested an exemption from the then new Radio Act of 1912 to operate on a wavelength of between six and seven hundred metres (499.7 - 350 kHz) with an estimated power of 2 kilowatts. It was estimated their signal could be heard no more than 60 miles. The closest governmental or commercial station at that time was located at New Orleans, Louisiana, some 400 miles away. The department of Commerce reminded the association that general amateur stations had to operate on 200 metres with no more than one kilowatt of power and needed a license. No further record of the station was located in the files of the Department of Commerce Radio Division, but they must have obtained a commercial license because they began wireless operations.¹⁵

The connection of Tri-States with the Falls Building was likely due to the wireless interest of John W. Falls II. Falls had graduated from Yale University in 1900 with a B.S. in Electrical Engineering.¹⁶ Dr. Lee deForest had earned his Ph.D. in Electrical Engineering from the same institution in 1899, and since classes were small it can be

supposed that Falls knew deForest.¹⁷ Laughter must have known deForest as Laughter's 1909 patents would not have been assigned to one of deForest's companies without deForest's knowledge.

The first known wireless contact with a vessel on the Mississippi River was accomplished by the **Tri-States Wireless Association** on May 16, 1912, with the gunboat U.S.S. *Petrel* when it was some eighteen hours out of Memphis. The gunboat was docking at most of the major riverports of the Mississippi to Cairo, Illinois, for training and public relations. The station transmitted statements of welcome by the **Commercial Appeal** and Mayor Edward H. Crump. The *Petrel* responded with thanks and requested the assistance of the **Commercial Appeal** in setting up a recreational baseball game between the crew and a local team. After several calls a game was arranged for Saturday, May 18, 1912, with the Christian Brothers College Baseball Team.¹⁸

The first known voice and music broadcast in Memphis took place from the Falls Building approximately one year later.

Victor H. Laughter apparently had developed an acquaintance with the electrical engineers who comprised the membership of the **Tri-States Wireless Association**.¹⁹ Laughter arranged to have his wireless telephony equipment installed at the **Tri-States** station in the Falls Building over the summer of 1913 and held a demonstration for reporters from the **Commercial Appeal**. The demonstration on June 14, 1913, at 8:30 p.m. consisted of a test broadcast from the station to a receiver located at the home of his brother-in-law Joseph Thompson, some two miles away. The receiver was operated by Thompson's younger brother, Vance.

The first sounds heard over considerable atmospheric disturbances by the reporters were the strains of a waltz being played on a gramophone. Over the next hour or so. Laughter and his brother-in-law Thompson sang, whistled, told stories and played more recorded music. Laughter noted that the signal would travel some 25 miles from Memphis. He admitted that he had demonstrated the equipment for others earlier and felt he had improved upon the work of earlier inventors by suppressing static through the use of a nickle-coated tube as oscillator and using an alternating current with a frequency of 100,000 cycles.²⁰ Nearly all wireless work at that time was with spark, arc, or motor-generator type transmitters. The three-element vacuum tube patented by Lee deForest in 1908 had only recently been determined to be an effective oscillator.

An article by E.J. McCormack on Laughter's equipment appeared in the May-June 1914 issue of **Technical World** magazine. The **Commercial Appeal** reported that McCormack had received a letter from a South American who desired to purchase three of Laughter's devices "good for a radius of 81 miles." The article also noted that the man was interested in the qualities of the prototype which had subsequently been bought by the **Tri-States Wireless Association**.²¹

In April of 1914, a receiver was set up on the excursion steamboat **G.W. Robertson**. Messages were sent back and forth from passengers to friends or relatives by Edward Baily and Clarence DeLaHunt, members of **Tri-States**. While still out on the river the operator of the excursion boat had ordered, by radio, a taxi to meet him. The reporter predicted, "It is probable that several other boats will be fitted up with wireless apparatus, and the time is not far distant when steamboats will be operated like trains by a dispatcher."²²

Another first, certified by the Baseball Hall of Fame, occurred when on April 5, 1914, the inning-by-inning scores of a baseball game involving a major league team were sent from the Falls Building to the **G.W. Robertson**. The game was an exhibition contest between the New York Giants and the Memphis Turtles, playing at Red Elm Bottoms. "The wireless room on the boiler deck of the **Robertson** was the center of interest throughout the trip, and the operator's table had to be roped off to keep the crowd away." The game information was telephoned from the ball park to the Falls Building, and then sent by the station to the **Robertson**. The Giants won the game, 3-2.²³ Memphis physician Louis LeRoy, who witnessed the broadcast, ordered a Laughter transmitter and receiver for installation on his private yacht.²⁴ It seems that this was publicity to demonstrate a practical and commercial value for voiced wireless on the river.

In November, 1914, the W.C. Handy band was employed to play from the Alaskan Roof Garden of the Falls Building, and it was there that Handy introduced the **St. Louis Blues**.²⁵ There is no direct evidence that the band was broadcast by **Tri-States**; but, this might have been the case. However, the **Tri-States Wireless Association** disappeared from the Falls Building and from city directories after 1914.²⁶

Victor H. Laughter also apparently did not stay in Memphis. The next record we have is his request to serve in the U.S. Signal Corp. as a First Lieutenant.²⁷ He was accepted and served from July 17, 1917 to July 21, 1919, when he received an honorable discharge.²⁸ Laughter claimed that while serving in France he assisted Edwin H. Armstrong in the perfecting of the "super-hetrodyne" while they were stationed at the Sorbonne.²⁹ Captain Armstrong did demonstrate his super-circuit at the Sorbonne, after an extensive period of experimentation and development in Paris, with the participation of the members of his signal corps group.³⁰

Laughter returned to Memphis to become a dealer in radio parts and supplies. In January of 1924, he filed his fourth patent for a "Radio Frequency Amplification System." The object of this invention was to "adjust individually the capacity of a series of electron tubes to secure balance and insure uniformity in quality of a series of electron tubes [and] to secure balance and insure uniformity in quality of receivers manufactured on a quantity production basis."³¹

Early in 1925 Laughter moved to St. Louis to work for the Valley Electric Company, and he assigned to the Valley Corporation that patent and another filed November 5, 1925, described as preventing undesirable

oscillations in tube circuits.³² It should be noted that the Falls family businesses were often named "Valley," i.e., Valley Oil Mills, Valley Constructions Company, etc. It was reported that Laughter had a drinking problem which may account for the number of positions he held for short periods of time.³³

His connection with the Valley Company was severed in 1929, and Laughter announced that he would work for the Radio Corporation of America. he noted that his primary task would be on creating loudspeakers which ". . . will contain a diaphragm that responds equally to all notes."³⁴

In 1934, at the age of 46, Laughter returned to Memphis where he joined with Otto Lyons to form the L & L Electric Company at 337 Madison Avenue, and he resided with his sister's family.³⁵ He never married.³⁶

In 1931, Memphian Clarence Saunders, developer of the first self-service supermarket, "Piggly Wiggly," began plans for the "Keedoozle" (for "Key Does It All"); an automated grocery store. In 1934, Saunders enlisted the engineering talent of Laughter and Harry T. Wilson for the next three years. Laughter and Wilson patented a "tube testing apparatus" on April 5, 1937.³⁷ The first "Keedoozle" opened May 15, 1937. The mechanical marvel received national attention, but because of the complex machinery only canned or boxed goods could be handled. The machinery required too many electrical circuits and used relatively unreliable tubes (which was the need for the tube tester). In February of 1938, the equipment was replaced by human employees and it finally closed in December of 1940.³⁸

The Laughter connection with Hugo Gernsback's magazine continued until Laughter's death. He contributed articles to **Radio-Electronics** magazine, the successor title to **Modern Electrics**. In 1948, he used his earlier tube tester patent as the basis for an article on "Automatic Ballast Control in a New Tube Tester."³⁹ His work for Clarence Saunders provided the material for an article in 1949 about "Lead-Pencil Mark Sets Off Relay."⁴⁰ In 1948 and 1950, he described "Electret Construction" and "Making Large Electrets." The electret was an unbelievable device to many scientists at that time, and Laughter was probably the first to show how to make specimens that were as large as pie-plates.⁴¹

Later Laughter applied what he had developed for Clarence Saunders to the problem of automating the stockroom system of the Hitchcock Belt Company, filing a patent on October 11, 1955, for "a conveyor release mechanism."⁴² His electronic inventiveness did not cease. On March 21, 1961, he filed a patent for a "transistor amplifier" which was small enough to be used as a hearing aid.⁴³ Earlier, in 1957, he had written an article for **Radio-Electronics** on the hearing aid.⁴⁴ In 1963, he wrote "What's Your Equalization?", and in 1965 his last published article appeared under the title, "New Transistor Voltmeter is Stable and Drift-Free."⁴⁵

Victor H. Laughter died at the age of 78 on September 30, 1966, at the Kennedy Veterans Hospital in Memphis, Tennessee. He was survived by his sister, Belva, who passed away five months later.⁴⁶

Victor H. Laughter had a number of small "firsts" of which he could be proud: two early excellent books on wireless technology; the first voiced radio transmission in Memphis, Tennessee; the first editor of **Modern Electrics** after founder Hugo Gernsback; the first inning-by-inning transmission of a major league baseball game over his equipment; a number of patents; work associated with such giant names as Dr. Lee deForest and Edwin H. Armstrong; the first automated grocery store equipment design; the development of means to make large electrets and an early transistorized hearing aid.

Yet, like so many other pioneers he seemed to have fallen between the cracks of radio history. This type of person, doing these types of activities, made modern radio broadcasting possible.

NOTES

¹Obituary of Belva Laughter Thompson, **Memphis Commercial Appeal**, February 28, 1967.

²Obituaries of Victor H. Laughter, **Memphis Press-Scimitar**, September 30, 1966; and **Commercial Appeal**, October 1, 1966.

³Obituary of Belva Laughter, *op.cit.*

⁴Laughter, Victor H., **Operator's Wireless Telegraph and Telephone Handbook**, Frederick J. Drake and Company, (Chicago, Ill), 1909; p.iii.

⁵*Ibid.*, p.82.

⁶Obituaries of Victor H. Laughter, *op.cit.*

⁷Letter from Mrs. Alice C. Dalligan, Chief, Burton Historical Collection, Detroit Public Library, February 8, 1984.

⁸Patents 492,763 "Transmitting System for Space Telephony" (April 28, 1909); 957,852 "Transmitting System for Space Telephony" (July 10, 1909); 1,067,179 "Wireless Telephony" (October 20, 1909); see Maclaurin, W. Rupert, **Invention and Innovation in the Radio Industry**. (New York: Arno Press Reprint), 1971, p. 84.

⁹Laughter, **Operator's Handbook**, *op.cit.*, p. iv.

¹⁰Interview with Mr. Stephan Phelan, Memphis, TN., amateur radio pioneer, June 18, 1984.

¹¹Laughter, Victor H., **Wireless Telegraphy Made Simple**, Popular Electricity Publishing Company, (Chicago, Ill), 1909.

¹²Correspondence with Mr. Fred Shunaman, former editor of **Radio-Electronics** magazine, March 6, 1984.

¹³"Memphian Invents a Wireless Telephone," **Memphis Commercial Appeal**, June 15, 1913.

¹⁴Interview with Harry D. Nichols, December 3, 1983.

¹⁵Letter from Tri-States Wireless Association to Department of Commerce, Record Group 173-#63534, December 12, 1912; and reply from Department of Commerce Radio Division, December 16, 1912.

¹⁶Obituary of John W. Falls II; **Memphis Commercial Appeal**, September 1, 1948.

¹⁷Archer, Gleason L., **History of Radio to 1926**, (New York: Arno Press Reprint), 1971, p.70.

¹⁸"Gunboat Has Wireless Talk with Memphis," **Memphis Commercial Appeal**, May 17, 1912.

¹⁹Interview with Mr. Stephan Phelan, *op.cit.*

²⁰"Memphian Invents a Wireless Telephone," *op.cit.*

²¹"Wants Memphis Wireless," **Memphis Commercial Appeal**, July 19, 1914.

²²"Wireless Message Sent from Boat," **Memphis Commercial Appeal**, April 6, 1914.

²³**Ibid.**; Letter from Mr. Thomas R. Heitz, Librarian, National Baseball Hall of Fame and Museum, March 3, 1984.

²⁴**Ibid.**

²⁵Handy, W.C., **Father of the Blues**, (New York: McMillan Publishing), 1914.

²⁶Polk, R.L. and Co., **Directories of the City of Memphis**, 1914—

²⁷National Archives, Adjutant General's Office, Record Group 94-#2627626, Letter from Victor H. Laughter to Signal Corps.

²⁸Letter from Department of the Army, Paul J. Scheips, Chief of Military History and the Center of Military History; **Victor H. Laughter's Certificate of Military Service**, September 8, 1984.

²⁹"Engineer Sees Too Much Optimism Over Television," **Memphis Commercial Appeal**, March 30, 1929.

³⁰Lessing, Lawrence, **Man of High Fidelity: Edwin Howard Armstrong**. (New York: J.B. Lippincott), 1956.

³¹Patent 1,731,012, "Radio Frequency Amplification System" (January 16, 1924).

³²**City Directories of St. Louis** list Laughter as "Radio Engineer for Valley Electric, 1925-1927, and as "Salesman for American School of Correspondence, 1928; Patent 1,731,013, "Radio Frequency Amplification System" (November 5, 1925).

³³Interview with Mr. Stephen Phelan, *op.cit.*

³⁴"Engineer Sees Too Much Optimism Over Television," *op.cit.*

³⁵Polk, R.L. and Co., *Directories of the City of Memphis, 1934-1935*.

³⁶Interview with Mr. Stephen Phelan, *op.cit.*

³⁷Patent 2,196,466, "10 Tube Testing Apparatus" (April 5, 1937).

³⁸"Keedoozle Equipment Removed," *Memphis Press-Scimitar*, February 2, 1938; and "Keedoozle Closes Doors," *Memphis Press-Scimitar*, December 17, 1940.

³⁹"Automatic Ballast Control in a New Tube Tester," December 1936; Correspondence with Mr. Fred Shunaman, *op.cit.*; author cards courtesy of Mr. Harvey Gernsback, present editor of *Radio-Electronics* magazine, February 24, 1984.

⁴⁰*Radio-Electronics*, December 1949, p.35.

⁴¹Correspondence with Mr. Fred Shunaman, *op.cit.*, *Radio-Electronics*, May 1948, p. 20; January 1950, p.8.

⁴²Patent 2,926,815 "Conveyer Release Mechanism," (October 11, 1955).

⁴³Patent 3,140,348 "Transistor Amplifier," (March 21, 1961).

⁴⁴*Radio-Electronics*, April 1957, p.35.

⁴⁵*Radio-Electronics*, January 1963, p.41; June 1965, p.34.

⁴⁶Obituaries of Victor H. Laughter and Belva Laughter Thompson, *op.cit.*