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RADIO CLUB
Feature I
(HISTORY)

On the top floor of Wilder Laboratory is a small door, invariably closed, and bearing a tiny card which reads "W1ET." Here are the headquarters of the Dartmouth Radio Association, one of the smallest, yet most interesting, of all the college activities.

The Radio Club, as it is more popularly known, has a comparatively long and colorful history. Back in the early days of 1917 before the United States entered the World War, a small group of Dartmouth enthusiasts banded together to work at their favorite hobby of radio. The fact that man could talk thru the air without the aid of wires was still a wonder to be gaped at. Radio transmission was being experimented with and sworn at by military, commercial and amateur interests, while our present day networks of broadcasting, radio telephone, and general dependable communication facilities were still undreamed of.

The first Dartmouth experimenters, however, were soon compelled to shut down their station. The United States declared war in April, and one of its first acts was to place a ban on all amateur radio work. Amateur aerials were taken down, amateur transmitters sealed, and amateur receiving apparatus dismantled. Many of the Dartmouth radio men went off to France.

American amateurs played an important part in the World War. The struggle made use of many factors which had never before been involved in warfare. Radio communication was one of these, and the military

forces found an alarming scarcity of operators to fill their immediate needs. It is said that when a representative of the Navy Department came to the president of the American Radio Relay League, a national association of amateurs, and requested its aid in enlisting services of five hundred experienced operators, the A. R. R. L. secured them in less than ten days. Before the war had ended over three thousand more amateur operators were serving in the American ranks.

It was nearly a year after the Armistice had been signed before the government lifted the ban on amateur operation. By 1920 a new crop of Dartmouth radio men had come along. The Radio Club again started operating, now in its present "shack" - an amateur persists in calling his radio quarters a "shack," be it a palace or a toolshed - atop of Wilder, with the call W1XAV.

W1XAV employed the faithful, old-time type of noisy spark transmitter. This equipment was once universal from coast to coast before the advent of the vacuum tube, termed "C. W. (continuous wave) transmission." After the war thousands of amateurs, eager to again start work, crashed gloriously out across the air with the juggernaut notes of spark outfits. Their inaccurate operation created bedlam, and W1XAV was probably no exception when it came to setting up reception interference, termed "QRM" in radio jargon, for less fortunate amateurs.

Before 1921 there had been no very remarkable achievements in amateur distance work, called "DX." The new power tubes, an outgrowth of the war, were placed on the market in that year, and by December 30 American amateur stations were heard in Europe, two-thirds of which employed tube instead of spark transmission. This, to the amateur ^{World} ~~was~~ was indisputable proof of "C. W." superiority. Before long two-way communication with Hawaii from the west coast became common, altho two-way contact with Europe had not yet been accomplished.

In May, 1923, the Radio Club followed the popular trend, dismantled its old spark transmitter and installed the new tubes which were securing everywhere such unusual results. They were assigned a new call of W1YB by the government, and used 500 watts power. Subsequently the additional call of W1ET was given them as well. New Zealand had begun hearing American amateurs, as had ships in scattered parts of the world. Australia soon reported reception. Power tubes were acclaimed the unrivalled type of transmission, but another great discovery was yet to come.

Prior to 1923 amateurs had operated their outfits on wavelengths of 200 meters or longer. The month before Dartmouth installed the new transmitter, two New England amateurs finally succeeded in communicating for several hours with another amateur in Deloy, France. They had operated at what was considered the too low wavelength of 110 meters. In 1924 was held the Hoover Radio Conference which informed American amateurs, much to their dissatisfaction, that they might transmit their radio messages on certain wavelengths in the vicinity of 20, 40, and 80 meters. These wavelengths, at first, were considered practically worthless. Amateurs had a suprise coming.

Many stations, due to the successful contact with Europe, had dropped to 100 meters. On 80 meters many European countries were communicated with two-way. Another drop, to 40 meters, was made, which resulted in two-way work with Australia, New Zealand and South Africa. And then, to cap the climax, on 20 meters a station on the east coast succeeded in reaching one on the west, with perfect two-way reception, at full noon! Anyone who has tried to get distant stations on a radio in the daytime will appreciate what this meant.

Dartmouth was not backward in all this new progress. W1YB broke thru the ether one night to contact LA1A, and thus be the first station

in the United States to communicate with, or "QSO," Norway. Other European stations were speedily chalked up to the Dartmouth transmitter's credit. 1923, year of the power tube installation, still stands as the time of the club's most widespread popularity in the college. During the same year W1YB was one of the few amateurs in this country and Canada to keep in touch with the "Bowdoin" of the MacMillan expedition into the Arctic. A significant fact might be remarked in that MacMillan was so impressed by amateur cooperation while on this expedition that he has never since made a trip without carrying short wave equipment and an amateur operator.

Today the Dartmouth Radio Association has a membership of ^{19.} ~~13.~~ ~~17~~ Sanborn C. Brown '35 (who, incidentally, hails from Beirut, Syria) is president, and one of the four members who hold amateur operator's licenses. The club has facilities for considerable experimentation, and is connected with both the college light circuit of 220 volts, and the town circuit of 110. Voltages as high as 2000 may be obtained ~~or the globe.~~ ~~Amateurs~~ if necessary. ~~Amateurs~~ have a system of verification known as "QSL" cards, which are exchanged by mail when two stations meet for the first time on the air. The Radio Club has a file of these cards from foreign countries that is easily three feet long, and includes 50 to 60 different nations from one end of the world to the other, both geographically and alphabetically. Picked at random from the file, they show amazing variety.....1MDZ, Iraq.....station BAM, Tahiti.....some 44 QSL cards from Australia alone. The Dartmouth transmitter has repeatedly stretched out across the greatest possible distance on the globe, 12,500 miles, a feat which places it foremost among collegiate amateur radio organizations.

WIET's QSL card is interesting. The size of the usual post