W8UM

THE UNIVERSITY OF MICHIGAN AMATEUR RADIO CLUB

by
John Schrader
&
Professor Brown

Professor Brown is the trustee of the W8UM amateur radio station. He holds a "General Class" license and is presently working for his "Extra Class" license. He operated a ham station in high school and this interest in radio led him into electrical engineering. During World War II he was a radar counter measure officer on a Naval ship. Professor Brown teaches courses in electronic circuits and communications.

Did you ever notice students climbing steel towers on top of the East Engineering Building or on the top of the twelve-story Physics and Astronomy Building last spring? They were probably members of the University of Michigan Amateur Radio Club working on new antenna systems to improve the clubs signal in distant parts of the world. The result of this "high rise" activity was dramatically successful, and the club ran up the fourth highest score in the world in the American Radio Relay League's DX Contest (DX is an abbreviation signifying "long distance" radio communication). Running three separate one kilowatt stations, the club exchanged information with over 2200 stations in approximately one hundred different countries.

Radio amateurs are fascinated by a scientiffc hobby which does not directly furnish them any financial gain. In fact they are forbidden by law to broadcast to the general public or to accept fees for messages sent. They operate for the fun of it. The thrill of talking half way around the world, the pleasure of helping someone get in touch with home, the confidence gained in building a new electronic circuit and seeing it work for the first time—these are their rewards.

The University of Michigan Amateur Radio Club operates the amateur station W8UM in room 4524A of the East Engineering Building, a part of the Electrical Engineering Department. It has a membership of about fifty students from all parts of the University. Most club members have passed the rather stiff examinations given by the Federal Communications Commission on radio theory and on the international Morse code. and they hold licenses for their own stations at home. Only licensed "hams" are permitted to operate W8UM, but the club also holds instructional classes for its junior members in order to help them obtain their all important license or "ticket." The United States has a reciprocal licensing agreement with a number of other governments; and in cases where this agreement exists, foreign students are able to operate W8UM when they

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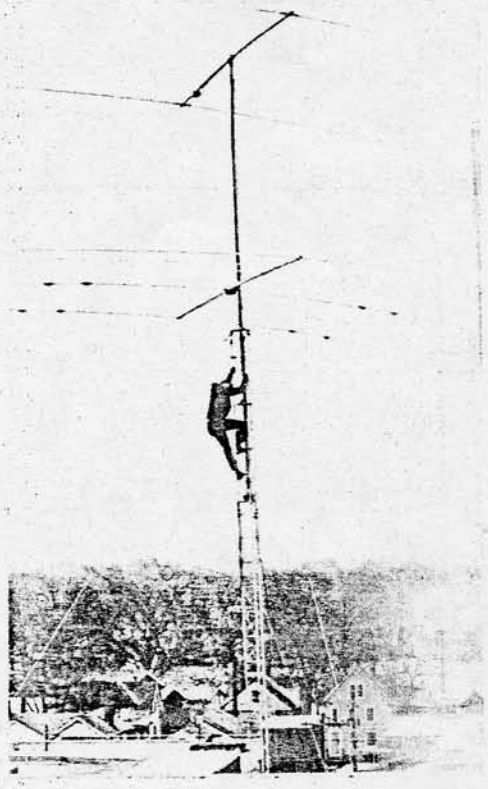
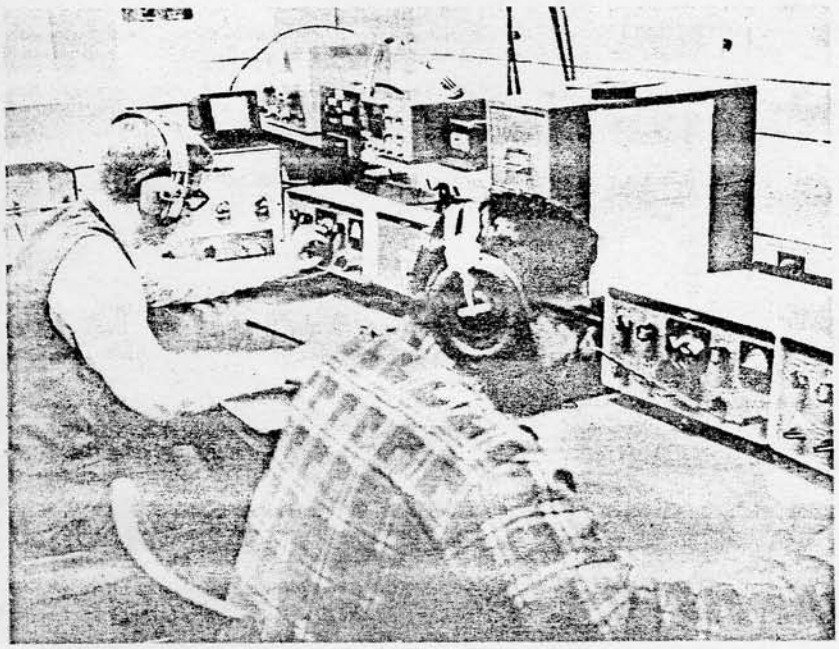
The club's antenna array on top of East Engineering provides coverage of all parts of the globe.





Steve Culp (K8QKY)
Robin Rampersad (9YAEH, Trinidid)

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are licensed at home. For example, Rabindranath Rampersad, an engineering student from Trinidad, is a full club member. The club is especially interested in helping foreign students in communicating with their families and in stimulating possible interest in the hobby, for many developing nations in Africa and Asia have almost no amateur stations.

The club is quite well equipped. It is capable of running one kilowatt, the maximum power allowable under the regulations of the Federal Communications Commission, on each of the five major amateur bands (80 meters, 40 meters, 20 meters, 15 meters, and 10 meters). Communication with other amateurs anywhere in the world is possible in three modes. Single Sideband abbreviated SSB is probably the most popular of these. A fairly recent advance as far as amateur radio is concerned, this highly efficient method of modulation has virtually replaced amplitude modulation, the older voice mode. CW or communication with international Morse code is also used extensively. Experienced amateurs can carry on a conversation using cw at rates approaching fifty words per minute. The third mode, radioteletype or RTTY, is less extensively used, but excellent equipment is on hand in the club room. The roof of the East Engineering Building provides support for a superior antenna system including parasitic beam arrays on 10, 15, 20, and 40 meters and a simple dipole on 80 meters.

One might wonder what there is to do in "ham" radio. Beside just sitting down and talking to someone, the amateur can engage in many interesting activities. Some gain a great deal of personal satisfaction out of helping many of the foreign students here at the University of Michigan keep in touch with their loved ones in their native countries. This is particularly true of the South and Central American countries where the United States holds many reciprocal third party traffic agreements. Other club members enjoy putting the station's equipment and antennas to difficult tests by entering contests in which they communicate with as many people in as many different states or countries as possible. Still others keep W8UM active in the extensive National Traffic System—a telegram-like system in which short messages are sent on behalf of third parties to locations anywhere in the United States or Canada. There are also members whose real interests are experimental. They keep the station's equipment and antennas in first rate working order. They also design and build new equipment for the club. At the present time for example, one group of club members is working on a unit to improve the station's RTTY capabilities while another group is in the process of building a new final amplifier.

The club members come from all over the University and from all over the country. There are even several foreign members. Hams in general are found in all walks of life and in all age groups from twelve to eighty. They have a variety of interests, but all are members of the hobby chiefly because it's fun and interesting. They enjoy the thrill of talking to friends back home or to friends whom they have never really met in far away places such as Soviet Russia, Australia, or India.