



the RARA RAG

Published by

ROCHESTER AMATEUR RADIO ASSOCIATION, INC.

VOL. 43

JANUARY 1991

NO. 5

FIRST MEETING OF 1991, JANUARY 4th EV TUPIS, WB2ELB, TO SPEAK ON THE JANUARY VHF SWEEPSTAKES

The first meeting of 1991, Friday, January 4, 1991, will feature Ev Tupis, WB2ELB, the contest chairman for the Rochester VHF Group.

Ev's presentation will be on the upcoming January VHF Sweepstakes. Ev has promised a few surprises and hints for the upcoming contest.

If you have never participated in the January VHF Sweepstakes, plan on attending and find out what the contest is all about. If you have survived the contest in the past, plan on attending this informative meeting and share past experiences.

The time for the meeting will be 8:00 p.m. at the 40/8 Club, 933 University Avenue. Plan on getting there early for the first meeting of 1991.

RDXA MEETING — JANUARY 15th

Our next meeting will feature a general DX forum, 111 Westfall Road, Tuesday, January 15, at 7:30 p.m.

How to work thru a pile-up, QSLing, bands and modes, how to start out as a DXer are some of the topics to be covered. Here's your chance to find out how the guys with 300+ and 5BDXCC do it.

Everyone interested in DXing is invited: bring your list of DX stations worked recently to look up in our Call Book. *Bob, WE2T*

SILENT KEYS

DONALD J. HASSETT
KD2IC

November 27, 1990

WALTER J. MALONE
W2PZH

December 21, 1990

FCC ESTABLISHES NEW CODELESS CLASS OF AMATEUR LICENSE (PR DOCKET 90-55)

The Commission has revised the examination requirement for the Technician Class operator license, thereby creating a new codeless class of amateur operator license. After these revisions become effective, an examinee will not be required to prove that he or she can send and receive texts in Morse code telegraph signals to qualify for a Technician Class amateur operator license.

The amateur service currently consists of five classes of licenses having increasing privileges and each being progressively more difficult to obtain. The classes are Novice, Technician, General, Advanced, and Amateur Extra.

The FCC noted that offering a codeless license class that authorizes control operator privileges at stations which transmit exclusively above 30 MHz, provides an entry level opportunity to otherwise qualified persons who find telegraph a barrier to pursuing the purposes of the amateur service.

Therefore, the FCC has established the Technician Class as the codeless class of license. This license includes all amateur privileges above 30 MHz. The Commission also amended the rules to grandfather frequency privileges below 30 MHz to current Technician Class licensees.

In addition, the Commission decided to retain the Novice Class operator license in order to provide an alternate entry level operator license opportunity to persons who desire to pursue the purpose of the amateur service and who can pass a telegraphy requirement in place of the more comprehensive written examination requirement for the codeless Technician Class operator license.

Ed Gable, K2MP

**HAPPY HOLIDAYS
FROM RaRa**

the RARa RAG

Published by
ROCHESTER AMATEUR RADIO ASSOCIATION, INC.
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VOL. 43 JANUARY 1991 NO. 5

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The RaRa RAG (USPA 605-440) is published monthly except July and August by the Rochester Amateur Radio Association, Inc., 24 Elaine Drive, Rochester, New York 14623. Subscription is \$4.00 per year (included in the \$9.00 annual membership dues). Second class postage paid in Rochester, NY.

POSTMASTER - Send address changes to The RaRa Rag, P.O. Box 93333, Rochester, New York 14692-8333.

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Amateur Radio News Service

CODE AND THEORY CLASSES CONCLUDE

A bunch of happy faces were noted on December 17th, the concluding night for the just completed Fall 1990 RaRa Code and Theory Classes. Why? Because 20 new Novices received their passing grades and 18 Tech/General students were primed and ready to take their VE examinations for upgrades. The happy conclusion was, however, saddened by the memory of the loss of two key people in our training ranks. Both code instructors, Bud Young, WA2UGE, and Joe Phillips, W2DHF, became silent keys during the course period. Further, our long term Novice section leader, Bob O'Connell, NF2Z, had to take a leave to satisfy a Coast Guard training commitment. A great big "Thank you" must be given to David Bernheisel, N2DPF, and Brad Allen, KB2CHY, who stepped up and ran a very successful course. Also assisting this year were Joe Hood, K2YAH, with General class lectures, and Bob Shewell, N2HJD, and Burt Hinline, N2HXJ, with FM repeater demonstrations. The last night ended with the traditional "Christmas Pizza" party given by the instructors. Your training staff will be meeting early in the year to plan classes around the new codeless Technician class just announced by the FCC. Instructors are needed. Contact any RaRa officer or Ed Gable (K2MP@WB2PSI) or 621-6692 if you are interested in this rewarding experience. Watch the RaRa Rag for details of the Spring 1991 classes scheduled for the latter part of February.

PANEL ACTS ON DXCC LIST

The ARRL Awards Committee has accepted the following recommendations of the DX Advisory Committee on The DXCC status of Germany and Yemen. In the case of the former, the German Democratic Republic is deleted from the DXCC list as of October 3, 1990 (when the GDR was absorbed into the Federal Republic of Germany). Contacts with GDR stations (Y2-Y9) after October 3, and contacts with FRG stations (DA-DL) after September 17, 1973, will be credited as FRG.

As for Yemen, the DXCC recommended deletion of both the former People's Democratic Republic of Yemen (7O) and the former Yemen Arab Republic (4W) as of May 22, 1990. In their place, a new country, Yemen (7O) is added to the list.

Do not submit Yemen QSLs for DXCC credit until *after March 1, 1991*.

Tnx ARRL Letter

RADIO DAZE: THE RADIO IN AMERICAN FAMILY LIFE, 1920-1940 NEW EXHIBIT OPENS AT THE STRONG MUSEUM — FEBRUARY 16, 1991

From the east to the west coast, millions of Americans listened as Walter Winchell barked out his nightly greeting “*Good evening Mr. and Mrs. North America and all the ships at sea*” over the radio waves. For the first time in history, the wide world was brought to American living rooms — through radio.

The development of radio technology and its impact on a struggling society during the Great Depression is explored in the new exhibition *Radio Daze: The Radio in American Family Life, 1920-1940*. The exhibit opens at the Strong Museum on Saturday, February 16, 1991, and will be on view through June 1992.

After the war, the public’s enthusiastic interest in radio created a boom. People waited in lines for hours to purchase radios that provided only the intermittent and distant broadcasts then available. However, large companies such as Westinghouse and General Electric soon began broadcasting regular programming across the nation. Local stations also broadcast phonograph music, and religious and vaudeville programs to avid listeners. *Radio Daze* will feature audio excerpts from some of these early programs plus many radios of the period.

The exhibit also looks at the proliferation of government control over amateur and commercial broadcasters alike. As radio gained influence, more and more regulation was requested by the large broadcast companies to protect their investment in this powerful medium.

The effect and growth of programming, advertising, and sponsorships between 1935 and 1940 are explored. As audiences grew to include all segments of the population, programming became highly diverse, including sports, amateur-hour shows, broadcast concerts and operas, popular music, comedy and western shows, and daytime dramas known as “*soap operas*” because many soap manufacturers sponsored them.

Radio Daze tells the story of the golden age of radio through photos, audio excerpts, and old-time radios. The exhibition is presented with the research assistance of the Old Fashioned Wireless Association.

RaRa JANUARY CALENDAR

- 1 - New Years
- 7 - RaRa Meeting - 8:00 p.m.
40/8 Club, 933 University Avenue
- 13 - Packet Club, 111 Westfall Road, 7:30 p.m.
- 14 - VHF Group- 111 Westfall Road, 7:30 p.m.
- 19 - VE Exams - 111 Westfall Road - 8:30 p.m.
- 21 - RRRR Meeting - Pittsford Town Hall
- 19-21 VHF Sweepstakes

SO YOU THINK PACKET RADIO IS NEAT

New York-Motorola, Inc., last week unveiled it’s Wireless In-Building Network (WIN) technology, the first in what industry insiders said will be a wave of announcements based on radio-frequency technology. WIN is a radio based wireless network allowing data transfer at up to 15 Mbps, compared with Ethernet’s 10 Mbps and Token Ring’s 4/16 Mbps. The first products based on WIN are expected to be delivered in early 1991. Unlike other radio based network devices on the market today, however, WIN will operate at a frequency and bandwidth licensed exclusively to Motorola. That will insure that WIN based LAN’s are not disrupted by radio interference but will also mean that users will have to pay Motorola in some way for that service. Apple Computer is also considering wireless technology. Apple plans to have an on-board radio LAN transmitter as a standard feature in their computers by the middle of 1991. Apple, in contrast to Motorola, hopes to use a freely accessible public operation band. In a public comment to the FCC, Apple suggested setting aside some frequencies dedicated for wireless LAN technology. The company hopes to file formal petitions for a 10 Mbps device by the end of this year. Who needs code tests??? If you want to Autopatch, you can get a Cellar Telephone for almost as much as a 2m Handie. If you want your own 470 Mhz repeater to talk to your friends, you can go Class A CB. The license only costs \$15.and tomorrow, if you want to try “real” packet radio, you will be able to buy a computer with one built in. Folks, it’s either USE it or LOOSE it! If you were thinking of getting into UHF Moon Bounce, ATV, Meteor Scatter, High Speed Packet, Spread Spectrum, Radar, or Transverting Repeater ... You better do it NOW. You may not be able to next year....

Just a thought de WBOHCO.
Via Ham News Outlet

The Rochester Cup and Tips for VHF Sweepstakes '91

by Ev Tuptis WB2ELB
Contest Chairman RVHFG

It's the time of the year to pull together your station to help your club compete for the Rochester Cup. The Rochester Cup is an award designed to rally support in the Rochester NY area for the ARRL's January VHF Sweepstakes. All local Rochester and surrounding area amateur radio clubs (except for the Rochester VHF Group) are welcome to participate for this Trophy sponsored by the Rochester VHF Group. Even VHF Group members can submit logs for their favorite competing club without affecting their eligibility for submitting their logs toward the VHF Group aggregate. Here's a look at the eight categories that your club will be awarded points depending on how each club finishes in each category:

1. Total logs submitted by each club (3 logs minimum)
2. Total score submitted by each club
3. Total QSO's by each club
4. Percent of club membership participating
5. Total score by percent of club members participating
6. Total QSO's by percent of club members participating
7. Total QSO's made by the participating club's President.
8. Total QSO's made by the participating club's Vice President or Secretary, if no Vice President.

Ranking in each category is based on the following point system: 1st place in a category awards 10 points, 2nd place awards 9 points, 3rd gets 8 points, and so on.

The actual criteria for each category is next:

1. If your club submits the most logs it will earn first place in this category.
2. Your club's score is added up from each individual log from your club submitted to the RVHFG Contest Chairman.
3. Your club's QSO's are added up from each log.
4. Your club is awarded points for submitting as many logs as possible from it's members. For instance, if RARA had 700 members and submits 21 logs, that equates to a 3% participation. If the Packet group (no digipeting, please-hi) had 50 members and 20 people submitted logs, that would equate to 40% participation. The idea here is to submit your log and help increase your club's total percentage of participation, no matter what your score or number of QSO's.
5. Your club's score is multiplied by its participation. Suppose the total submitted score of GRAM were 57,500 and 10 percent of it's members submitted logs, then the club score in this category is 5,750.
6. To figure the value for this category, your club's aggregate QSO total is multiplied by it's participation. Xerox total QSO count by all members submitting logs is 1,840 contacts with 12 percent of it's membership sending logs to the contest chairman, then their total in this category will be 220.8!
7. & 8. Club Officers . . . LEAD YOUR CLUB TO VICTORY !!!
Be an example to the rest of your group! Rally your troops to win the battle.

Just in case there is a tie, it will be broken using the values of the following categories, in order: #5, #6, #8, flip of a coin. The following clubs have participated in the past (in alphabetical order):

Drumlins ARC, Genesee Repeater Association, Genesee Radio A.Mateurs, Kodak ARC, Monroe Community College ARC, Rochester Area Packet Society, Rochester Amateur Radio Association, Rochester DX Association, Harris/RF ARC, Rochester Radio Repeater Association, SIARC and Xerox ARC.

Just for the record, the first Rochester Cup competition dates back 5 years to 1986 (has it been that long already?) when the Rochester Radio Repeater Association earned it. Below is a chart of the Rochester Cup winners to date:

1986	Rochester Radio Repeater Association
1987	Rochester Amateur Radio Association
1988	Rochester Amateur Radio Association
1989	Rochester DX Association
1990	Rochester DX Association

In case you are wondering, if a club wins 3 years in a row, they get to keep the Rochester Cup! RARA almost did it, and the RDXA is in a position to do it this year. Is there a spoiler in the works from RARA, RRRR, GRAM, RAPS or XARC? It's tough to speculate. It all boils down to a couple of days in January (19, 20, 21 UTC).

Are you still in the planning stages? Maybe you ought to know a few tricks to help you position your club for victory . . .

1. Categories 1, 2 and 3 favor the larger clubs. They have the greatest chance of having large numbers of logs to submit. As such, there is a large impact on scoring in these categories. Do everything that you can to talk the contest up and get people on.
2. Categories 4, 5 and 6 favor the smaller clubs. If your club has 20 members and 19 submit logs, your rank is extremely high. If you club has 500 members and 19 submitted logs, your rank is significantly lower. Do everything that you can to talk the contest up and get people on.
3. Categories 7 and 8 were designed to allow club officers to lead their troops into battle. But there's a trick here that you should be aware of: NOWHERE DOES IT SAY THAT YOUR CLUB OFFICERS MUST OPERATE A SINGLE OPERATOR STATION! It's proven that multi-ops, on the average, perform significantly better than single-ops. This is even the case where the multi-op is FM only! (the #1 FM only station in the September VHF Contest was a multi-op!). So get a couple of multi-op's going and run one under your President's Call and the other under your Vice President's (or Secretary if no VP) Call, making sure they participate too! Just remember, multi-op is an option if you choose to.
4. If you are a member of a multi-op, YOU CAN STILL SUBMIT ANOTHER LOG UNDER YOUR OWN CALL, if you participate from your own station, too !!! The only restriction is that you cannot contact your multi-op to give them points on frequencies below 2304 MHz. This is especially important, because: When Bob Brown, an operator at the W2BIG multi-op is done with his operating shift and goes home, he can fire up his 2 meter radio from home and submit his log for his favorite club in the Rochester Cup competition. His only restriction is that he cannot count any contact with the W2BIG multi-op! This is an easy way to enhance your clubs numbers!

This year, there are many incentives to participating in January Sweepstakes '91. Several awards have been opened up to non-VHF Group members, too. Specifically they are:

FM Only Class - The only restriction is, as the name implies, that you may use only FM. Both Single and Multi Operators are eligible to compete for these awards. Places are determined by score. Places awarded: 1st, 2nd, 3rd, 4th and 5th.

Rover Class - Put your stuff in the car, take a drive and operate from more than 1 grid. Work as many people as you can in each grid

(make sure you sign your call, including the word ROVER so that people know that they can work you every time you change grids. ie, W2AA/R on CW or W2AA ROVER on phone). Add up all of your logs and get a grand total. The grand total is what will be used to decide the winners in this category. (if you go to FN13 and score 2,195 and then drive to FN12 and score 1,140 and end up in FN02 where you score 3,820 then your grand total Rover Score is 2,195+1,140+3,820=7,155 points! By submitting your 3 logs in the name of your favorite Rochester area club, they will be credited with 3 logs, even though they were submitted by one person! In this class, you are limited to no more than 2 operators. If you are rich enough to have a chauffeur, you can use them, as long as they don't operate. That means that the following combinations are OK: 1 operator who drives themselves around (1 person total), 2 operators - 1 of which is also the driver (2 people total), 2 operators and 1 non-operating driver (3 people total). Places awarded: 1st, 2nd, 3rd, 4th, 5th.

Top YL Score - Only single-ops may compete here and only real non-OM's (no cross operators - just a little joke). Places awarded: 1st, 2nd, 3rd, 4th, 5th.

In addition, you should be aware that, if you are a Rochester VHF Group member (or come to the January double meeting and join up), you are not only eligible to submit your log for your favorite club for the Rochester Cup, but you will also be able to compete for the following additional awards:

Sweepstakes 1991 White Lapel Pin - All RVHFG members submitting a log with a score of 10,000 points or more.

Sweepstakes 1991 Red Lapel Pin - All RVHFG members submitting a log with a score of 5,000 points or more.

Unlimited Multi Operator Class - Operate as a multi-op with no restrictions other than FCC and ARRL. Every member of a placing Multi-op will be awarded. Places Awarded 1st, 2nd, 3rd, 4th, 5th.

Limited Multi Operator Class - Operate as a multi-op, but with no more than 3 operators and no more than 4 bands. Every member of a placing Multi-op will be awarded. This is perfect for the first timers and folks with limited number of radios but and the desire to compete against others with similar resources. Places Awarded 1st, 2nd, 3rd, 4th, 5th.

Unlimited Single Operator Class - One operator, no limits other than FCC/ARRL. Places Awarded 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th.

Medium Single Operator Class - One operator, 150 watts maximum output on most powerful band, unlimited number of bands. Places Awarded 1st, 2nd, 3rd, 4th, 5th.

QRP Single Operator Class - One operator, 10 watts maximum output on most powerful band, unlimited number of bands. Places Awarded 1st, 2nd, 3rd, 4th, 5th.

Worked Most Packrats - The station working the most number of Mt. Airy VHF Group members will be awarded (a similar Worked Most RVHFG Members award is being made in Mt. Airy)

As you can see, this is destined to be an exciting January VHF Sweepstakes, whether or not you will be competing as a Rochester VHF Group member. I wish you well. Don't forget January 19, 20 and 21. Be sure to use 147.48, .51, .54 and .57 in addition to the standards of 146.49, .55 and .58 (.52 is outlawed). As a last piece of advice, look for the rovers, they will be out there (the WB2ELB multi is sending 2 stations out, and I'm sure that there will be plenty of 'Independent' rovers too). Every time they change grids, you can work them again for more contest credit! Finally, keep (and submit) a dupe sheet if your log has over 200 QSO's (an easy mark to reach!)

One final word of caution . . . if you are planning on working as a Multi Operator, 67% of your operators must be Rochester VHF Group members, if you wish to compete for RVHFG awards. If you don't meet this 67%, then all you need to do is show up at the January 11th meeting of the VHF Group with \$5 dues and you can sign up. There's a lot of fun to be had in the January VHF Sweepstakes this year. Don't miss out!

Keep your eyes on the clock . . . and don't forget to call . . . CQ Contest

SUBMIT YOUR SWEEPSTAKES LOGS TO : EV TUPIS WB2ELB, 558 EDMONDS ROAD, BROCKPORT, NEW YORK 14420-9442 NO LATER THAN FEBRUARY 4TH TO BE ELIGIBLE FOR ANY AWARDS.

OFFICIAL ENTRY LOGS, SUMMARY SHEETS AND DUPE SHEETS WILL BE AVAILABLE AT THE JANUARY 11TH MEETING OF THE ROCHESTER VHF GROUP, 111 WEST-FALL ROAD, 7:30 PM.

IF YOU HAVE ANY QUESTIONS ABOUT PARTICIPATING WITH THE REST OF ROCHESTER IN THIS ANNUAL EVENT, CALLEV TUPIS AT HOME: 638-8269 OR AT WORK: 621-1000 EXTEN. 2390.

WANTED: Amateur Radio mentors for two new school stations capable of WEFAX RX, SWL, HF Packet and 160-6m ham. Greece area. Call Ev Tupis at 621-1000 x2390 for more info!

ARRL VEC TARGETS NOVICES

A new pamphlet describing the ARRL Volunteer Examiner Coordinator program is being mailed to all new Novice class licensees. New Novices have not necessarily had any exposure to either the League or the VEC program. The pamphlet describes the licensing upgrading process, how volunteer examinations are conducted, and notes the many services available from the ARRL.

Since July 21, 1984, the ARRL VEC has accredited more than 13,000 examiners, who have conducted more than 11,500 test sessions for some 140,000 people. As a result, 77,500 upgrades have been submitted to FCC.

On a related note, the FCC has announced that the maximum allowable reimbursement fee for a volunteer examination will be \$5.27, starting January 1, 1991. The ARRL VEC maximum will be set at that time at \$5.25. There is *no* fee for the Novice examination.

Tnx ARRL Letter

FOR SALE - Drake R-4A with SSB filters and T-4X with power supply. Excellent condition. Asking \$400. Gene, W2LU, 872-1508.



RECEIVER FRONT-END OVERLOAD PROTECTION

by Miles Brown, W2PAU

Operation of your transceiver (or receiver) in a multi-transmitter/multi-antenna environment can be hazardous to its health. During the past year I had to repair at least three overload-damaged radios. I know Kenwood transceivers in the TS-830 category are subject to the problem, but almost any radio can be affected. My Icom IC R70 also got zapped.

Take the TS-830-S as an example: In the receive mode, the antenna is connected to the r-f input transformer via a capacitive coupling system which provides *no* selectivity on the hf ham bands. The transformer is tiny, and the primary winding uses ultra-thin wire. It wouldn't require much r-f power to burn up the primary coil, probably less than a watt for a few seconds. A high power transmitter feeding a nearby antenna might do it. Even worse, you might get your coax cables confused and feed a transmitter right into the transceiver. (I did!)

Repairing a "zapped" TS-830 is quite a project. The waiting time between placing an order for the parts and the response takes some time. Removing the RF unit assembly to access the solder side of the PC board is a job for someone with good eyesight, a steady hand, and nerves of steel! Usually, the input transformer is the only damaged part, however it is reassuring to replace the r-f amplifier FET and to inspect the various socket pins for solder cracks while the board is exposed. When the rig is restored to normal performance, you are ready for some insurance against it happening again.

An old idea, still embraced by some manufacturers, is to insert an "r-f fuse" in the receiver antenna feed line. The fuse can be a small incandescent lamp bulb with a low power rating and a cold resistance small compared to 50 ohms.

To cope with my high powered transmitters, I selected a "grain of wheat" bulb rated at 5.0 V. at 0.06 A.: Active [TM] Part Number 42046. Even more protection could be obtained with a 1.5 V. 0.025 A. lamp. Radio Shack [TM] Catalog Number 272-1139.

In the TS-830, the bulb can be installed in the mini-coax line to the receiver antenna input, near the 3-prong plug to socket #3 on the RF unit board. This area can be reached by removing only the top cover of the transceiver and the plug can be pulled out to get more work space. Simply cut the *inner conductor* of the coax cable about 1/2 inch from the plug, trim the lamp bulb leads to about 1/4

inch length and solder the lamp in series with the inner conductor. The added bulb become in effect part of the chassis cable harness.

For other types of transceivers, the wiring details will differ, but it should be easy to figure out a feasible arrangement. For a receiver, the bulb can be installed outside the case, in series with the antenna feed line.

The system works! I gave mine the acid test (by mistake) just before the recent Sweepstakes Contest. It took less than 15 minutes to replace the "fuse" and the transceiver is just as sensitive as it ever was.

No claims for originality on this idea, but it may be worth considering by some of you "big guns", FD contestants or expeditioners.

Tnx SJRA Harmonics

ERROR CORRECTION

Thanks to William DeWitt who pointed out the error in the article "First 'SOS' via CW". While the first SOS was in Morse code, it was a spark transmitter rather than a CW transmission. Thanks for the correction Bill!


FOR SALE: GAP brand Vertical antenna, 80-2 meters, yes 2 meters. Hardly used, all apart with directions. Great DX antenna and needs only 3 25' sort of radials to operate on 80-40 meters. Am asking \$200 or best offer with 75' of coax. Call Joel Swartz, 235-4928.

WANTED:

RaRa is looking for a few good men and women to join the ranks of the long running and highly successful Code and Theory classes. If interested in this very rewarding experience contact any RaRa officer or board member, or the course director, Ed Gable (K2MP@WB2PSI) or 621-6692.

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OHIO AMATEUR BATTLES ORDINANCE

Another municipality had found federal law to be on the side of Amateur Radio operators. Rocky River, Ohio attempted to apply three separate ordinances to keep the 30-foot tower of James D. MacMillan, WA8ZHN, on the ground, after his application was rejected by both the building commissioner and the board of zoning appeals.

The town held that the proposed tower would decrease real estate values, was too close to the side lot line, and that certain technical information was missing from MacMillan's application.

According to MacMillan, "the problem with the zoning code is not the 60 foot height limit, but (rather) a provision that the neighbors have a right to protest because they don't like the tower for whatever reason".

This ordinance represented "discrimination under the color of law", MacMillan said. The city "can arbitrarily discriminate based on the whims of the neighbors".

In overturning the town's rejection of Mac Millan's application, Judge Frank J. Battisti held that the city did not apply the zoning laws in such a way as to provide for reasonable accommodation of amateur communications. The court said there was no violation of the height ordinance with respect to the distance from the side lot line because the city has interpreted it incorrectly. The federal court also refused the city's request to relinquish jurisdiction to the state courts.

MacMillan was represented by ARRL Volunteer Counsel Robert M. Winston, W2THU, who has won several other cases in the Cleveland area. "We have won the battle, but not yet the war", Winston said, because the court has not yet ordered that Rocky River issue a permit to construct a tower.

Tnx ARRL Letter

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THE RaRa RAG 20 YEARS AGO —

JANUARY 1971

by Ed Gable, K2MP

This edition announces the upcoming Valentines Day Dinner-Dance at a new location, the Holiday Inn downtown. Eddie Dunn, W2ECH, will be master of ceremonies. Ultrasonics in Biomedicine will be the topic of the next meeting program, presented by Dr. Robert Wang of the U of R. New members included Bill Rhodes, WN2JMX; Lewis Sanfilipo, W2WTG, and Dave Russell, WA2GIA. It was reported that our local propagation expert, Mel Wilson, W2BOC, had published a feature article on the study of 50 MHz sporadic-E propagation. (Note - still good reading today - Ed) Also excellent reading, was a fine historical article by Bob Morris, W2LV. Bob wrote on the famous Red and Blue radio networks started after the initiation of such program linkages between New York's WEFW and WNAC in Boston. RaRa Rag Editor, Harold Smith, WA2KND, promises more historical articles being prepared by Duckey Dengler, W2LK, and Ken Gardner, W2BGN. A two channel, 12 volt, Motorola 41 V, all set to go on 2FM could be had by calling Jerry Vogt, WA2GCF.

SOVIETS SCHEDULE LAUNCH

The first of a new generation of Soviet Amateur Radio satellites is now scheduled for launch November 21, according to AMSAT-Germany. Radio-M1/Rudak-2 (also called RS-14) includes, according to *Oscar Satellite Report*, "some interesting hardware", some of it constructed by AMSAT-DL, that will provide two Mode B (435 up to 145 MHz down) SSB/CW transponders, as well as a Mode B digital transponder for packet radio.

The 10-watt output of the satellite should allow good reception of the downlink with a dipole, according to *OSR*. Here are the satellite's frequencies:

Linear transponder No. 1: Beacons on 145.822 (CW) and 145.952 (1100 bps PSK); downlink on 145.852 - 145.932, inverted; uplink on 435.102 - 435.022.

Linear transponder No. 2: Beacons on 145.948 (CW) and 145.838 (PSK); downlink on 145.866 - 145.946; uplink on 435.123 - 435.043.

Digital transponder (AX.25 packet): Downlink on 145.983 (1200 bps BPSK); uplink on 435.016 (FSK).

Tnx ARRL Letter

IN THE BEGINNING

by W. E. Gary, P.E., Lockard & White, Inc.

Many of us focus our attention today, on the plethora of new technologies and products with which we serve industry's telecommunications needs. Certainly there continue to be new developments in radio and microwave, but fiber optics, digital switching and transmission systems, and networks – LANs, WANs and MANs – capture much of our attention today. While thumbing through some old files and collections of miscellaneous information, I ran across a piece I had written for another publication a decade or so ago on an older technology. It may be of interest to readers who are also history buffs.

The year was 1901. The place was the old Barracks of Signal Hill at St. John's, Newfoundland – the easternmost point on the North America continent. The date was December 10. A young man less than 27 years old launched a nine-foot hexagonal kite made of bamboo and silk. High winds snapped the trailing wire and the kite drifted out to sea. Next, he tried a 14-foot hydrogen-filled balloon – which also broke away. On December 12, he successfully lofted another kite to 400 feet.

The young man cabled his colleagues in Poldhu, England, who began transmitting a prearranged signal – the letter "S" – in Morse code. In less than a half-hour, Marconi repeatedly heard three buzzes in his headset – the letter "S". Several times more that day the signal was heard, proving that the Atlantic Ocean had been bridged by radio.

There is another story of a kite, a trailing wire and electromagnetic transmission, however. The place – two mountaintops in West Virginia. The year – 1865. Although the telegraph had been used widely during the Civil War, the need for a form of "wireless" communications had been recognized. The cast of characters included two small groups of mature, bearded businessmen led by Dr. Mahlon Loomis, a Washington, D.C. dentist!

One group lofted a kite bearing a large section of fine copper gauze connected to the earth through a galvanometer by a fine copper wire. On another mountain eighteen miles away, another group flew a similar kite at the same elevation. At one of the sites, Dr. Loomis opened a switch connected between the kite and a coil of wire buried in the earth. At the other site, the galvanometer quivered each time the switch was operated. Was this the first demonstration of electromagnetic signal transmission? Although never accepted as such *unanimously*, it is now generally construed to have been the first signal transmission through

space – using only "natural static" as a power source.

During his life, Loomis never received proper recognition for his work and was unable to capitalize on it commercially. He is remembered, however, for his invention of the "aerial", which he had named himself and which he used 20 years before anyone else.

Tnx Lockard & White Network

DEFENSE NEWS

DOD seeks Atmospheric Heater to help contact submerged sub.... Congress has appropriated Ten Million dollars to build a ONE BILLION WATT High Frequency transmitter to be located in Alaska. The device will produce enough energy to cause the ionosphere to emit heat and visible light. This phenomenon would be similar to the spectacular light snow of the aurora borealis, or northern lights, which is produced by the sun's heat upon the upper atmosphere's ions. (?)

The Defense News article also says: By using the device, researchers could collect information about ions in the atmosphere. This information could help improve other DOD systems. For example, the range of sophisticated Over the Horizon (OTH) radars may be increased by changing the number and density of the ions in the atmosphere, according to the Pentagon's March 1990 Critical Technologies plan. A modified ionosphere could improve OTH radar performance, possibly allowing the tracking of stealthy targets, the report said. The device could be ready by late 1992, according to a statement from the Office of Naval Research, Arlington, Virginia.

Article was originally posted on a private bbs by W5VYY. *Via Ham News Outlet*

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