



SIGNAL



October 1997 Volume 6 Number 10

This Months Meeting

The speaker for this months meeting is Jacques Patri.

Tentatively Terry Stader will talk about Amateur Radio and Emergency Communications at the November meeting.

Last Month's Meeting

Last months we had a presentation by Miles WF1F. His presentation was on making contacts with MIR and the Shuttle. There was a video of a contact he had arranged and set up for at an area school. He also talked about the different types of equipment needed to access the various satellites.

Public Service

PEPPERELL FALL CLASSIC SOCCER TOURNAMENT

As I finish this issue of the newsletter about half a dozen club members are providing communications for the tournament. The action takes place on fields around the Varnum Brook Middle School and behind the Safety Complex in Pepperell.

Thanks to Ian NZ1B for organizing this event.

MASS ADOPT A HIGHWAY PROGRAM

The morning of Sunday September 28th the club performed the monthly cleanup along our stretch of Rt. 119 in Groton and Pepperell. It was coordinated by Dan N1LLG and the rest of the crew was composed of Ralph KD1SM, Bob W1XP, Stan KD1LE, Ben KB1FJ, Wolf KA1VOU. It took a little over two hours again, but much less trash

was collected this time. We collected only seven bags of trash compared to fourteen bags on the August cleanup. So we are catching up with the "old" trash.

The October cleanup will be the last for the year so we will be looking for volunteers to help out. It would be nice to reduce the time it takes to complete these cleanups. The only way to do this is to have more groups out there. We have been working in two groups of three people. Since we need to work at least in pairs, we need eight people to shift to four groups. This should reduce the time to around one hour. So give us a hand stamping out trash.

Contact Bob McArthur K1QT if you can lend a hand in a future cleanup.

Jim Western AA1PO is our liaison with the State and arranges for the equipment we need and the pick up of the trash after each cleanup.

Final Field Day Report

Almost four months has passed now since our great 1997 Field Day. I apologize for not getting an "official" report to you sooner, but things have been busy! Still, I have an obligation to report to you, and let you know how we did. Pardon me if I ramble on a bit, I tend to do this.

Once again this year, we outdid our efforts from the year before. In a nutshell, we had a barrel of fun. NVARC once again ran in the 2A (two transmitter, emergency power) class. This year for the first time, we used our new club call, N1NC. Everyone from our novice through our extra class operators got to operate for virtually as much time as they wanted to.

We ran 6 meter VHF for the first time. We had a packet station, got a natural power bonus, received the Field Day message, originated a message to the ARRL section manager, operated in a public place, had information for the public, and had articles printed in the local newspaper. This on top of making a whole lot of contacts. In fact, the only bonus points we really missed were those given for a satellite QSO.

This year, we put up more antennas and operated a lot more efficiently. Our score showed this. And the new awning we had was a big, big hit. Many thanks to Stan (with some help from Ben) for coming up with this. Our power distribution system and generator switch over system was outstanding. Kudos to Craig for the extra effort. Thanks to everyone who contributed in other ways, large and small. It takes a big team effort to pull off field day.

I learned a lot this year. Learned about power distribution, learned about 6 meters (which I had never really operated on), and learned (finally) how great a well thought out cover from the elements can be.

I'm constantly asked, "how can we improve next year?" Aside from trying to have a better time (which would be hard to do), I'm not sure. Perhaps next year we can really focus on a novice station, on a really good packet station, perhaps a two meter VHF effort. I understand a rule change is in the making that will make HF digital a separate mode. This means that contacts can be made per band once on each CW, SSB, and RTTY. We have to think about this (if the rules do change). Maybe next year we can just simplify things.

Do you have any ideas? Dennis, K1LGQ inspired so many of us at his QRP talk that there has been discussion of a QRP Field Day. How about a QRP field day with no commercial equipment?

Each year, we pool our combined talents (station knowledge, antenna knowledge, emergency power knowledge, operating knowledge, etc.), and every year we each learn a great deal from each other. We also further sharpen the knowledge and skills we have already learned. Our score improves because we improve, and we in turn teach

each other how to do something new and better.

Our final score submitted to the ARRL was 6,656 points. Last year, with similar conditions, our score was under 6,000 points. Our score reflects the effort, the camaraderie, and the fun we have with our fellow club members, but it is only important if we enjoy ourselves in attaining it.

Thanks again for making Field Day 1997 such a great club event. I hope to see or work all of you next year!

Bruce K1BG

GOTAP

Well that's a fancy FLA (five letter acronym.) It stands for Get On The Air Program. It is a pilot program by ARRL Division Director Tom Frenaye K1KI and Vice Director Don Haney KA1T to address two hurdles new hams have. These problems or issues were identified in the surveys the League has commissioned. The first one, which some new hams never get past, is to get on the air. The program seeks the help of Affiliated and Special Service Clubs to contact newly licensed Hams in as "personal a way a possible". The object is to get them to a club meeting or to participate in a club activity such as a public service event. In that way getting them started in radio. Sending them a newsletter for a few months is another item. Elmering activities such as helping them put a station on the air are also suggested. The League is looking for clubs to "sign up" to a one year commitment to the program. They will provide lists of names. This is targeted at prospective hams, newly licensed hams, recent upgrades, and new ARRL members. So its not like the blind mailings we have tried to area hams. The names supplied are for people who are currently interested in or active in Ham Radio. These lists usually have only a couple of people a month on them. Do we have some people that would be willing to follow this program through for a year?

From The ARRL Newsletter

HAM RADIO NOW AN "OFFICIAL" ISS PAYLOAD

Amateur Radio is now considered to be an official payload on the International Space Station (ISS). In fact, reports Matt Bordelon, KC5BTL, at Johnson Space Center, ham radio was the first payload to become official. Bordelon already has started the training program for the first crew who will be putting together the ISS starting in January 1999.

Based on our initial request to be manifested onboard, the ISS Payloads Office is listing Amateur Radio as being onboard with (1) a transportable station (H-Ts), (2) a site on the EXPRESS pallet, and (3) a permanent station on the Habitation Module. Amateur Radio soon will be assigned a Payload Integration Manager (PIM) for each of these.

MORE ON NEW FORM 159

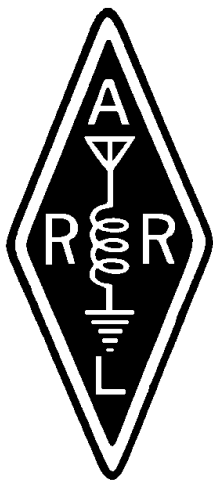
ARRL/VEC Manager Bart Jahnke, W9JJ, offers some additional advice on how to file a vanity call sign application, Form 619V, using the newly revised Form 159, Remittance Advice (dated July 1997). Form 159 must accompany all vanity call sign applications, no matter the method of payment.

On Form 159, Item 1, enter the post office box (POB) number that you'll be sending your payment to. If you're filing a paper Form 610V and sending it through the mail with your payment, Item 1 should read 358924. If

you're filing electronically and mailing a payment for your electronically filed Form 610V, Item 1 should read 358994.

When using a paper Form 610V and filing by mail, you must include a Form 159 plus a copy of your current Amateur Radio license. The address is FCC, Amateur Vanity, POB 358924, Pittsburgh

PA 15251-5924 (so, Item 1 on Form 159 in this case would be 358924, the same as the box number).



To apply electronically and sending Form 159 for your payment by mail, the address is FCC, Amateur Vanity, POB 358994, Pittsburgh PA 15251-5994 (so, Item 1 on Form 159 in this case would be 358994, the same as the box number). Item 19A should be the applicant's present call sign.

NEW USES FOR THE OLD CODE: MORSE 2000 WORLD CONFERENCE SET

Morse 2000 Worldwide Outreach is giving Morse code a new lease on life to help rehabilitate and educate people with special needs and disabilities. The first Morse 2000 World Conference is now set for late October in Minnesota.

Because it can be sent using a binary-opposition movement pattern, Morse code can be generated with left-right, push-pull and puff-sip control. The code—used in communication for the past 150 years and being phased out in many spheres—has proven to be among the best of several adaptive computer-access methods and augmentative or alternative communication techniques for many people with special needs. The ARRL Foundation has supported the program through grants.

"We now have over 2,000 participants in 27 countries!" exclaims Debra R. King, N9GLG, the director of Morse 2000 Worldwide Outreach. King manages the Office of Continuing Education in Human Sciences and Services at the University of Wisconsin—Eau Claire, and enthusiastically promotes the use of Morse code in rehabilitation and education.

Through her encouragement, various Morse code programs are being used or tested to allow people such as those with spinal cord injuries to converse. She provides information for occupational therapists or speech pathologists and promotes the advantages of using Morse code to help their patients. Occasionally, though, it works the other way around: sometimes patients hear about Morse 2000 and put their therapists in touch with King! The bottom line, however, is that the information she provides can save the therapist-patient team years of research attempting to find the best methods and selecting reliable equipment.

Results have generated heart-warming success stories, especially at learning centers and children's hospitals around the world, as reported in MORSEIs, the Morse 2000 newsletter. One researcher told of the case of a woman with ALS (commonly called Lou Gehrig's Disease) who had lost her ability to speak but was able to communicate using Morse code—at first by blinking her eyes and later by using an optical switch activated by jaw movement that was wired to a PC. The same researcher told of a stroke patient who employed his very limited movement to send Morse code messages to his wife. Another report tells of a stroke victim who is able to talk in Morse code by activating a chin switch.

Speech pathologist Thomas King, WF9I—Debra King's husband and the editor of MORSEIs—called Morse code “one tool of many” in providing “adaptive access” for those unable to communicate through conventional means. He told of a young man he called Barry who had been severely injured and rendered a quadriplegic after being hit by a car as a youngster. He retained facial movement and can speak (although he's on a ventilator), but he can use Morse via a puff-and-sip switch to write 20 WPM or so. Now in the high school, Barry hopes to eventually attend college. “The use of Morse for taking notes without calling a lot of attention to yourself has worked out very well,” Thomas King said.

The first Morse 2000 World Conference will be held October 25-26, 1997, in Bloomington, Minnesota. Featured speaker is rehabilitation engineer Kevin Caves of the Rancho Rehabilitation Engineering Program in California. Although the conference is aimed at clinicians, teachers, therapists, assistive technology users, researchers and product developers, Amateur Radio operators also are encouraged to attend and share their technical knowledge, and to help develop equipment and code skills to train others. Registration prior to October 1 is \$98.

For more information on the conference or on Morse 2000, contact Debra King, Morse 2000 Worldwide Outreach, Human Sciences & Services Outreach Office, University of Wisconsin-Eau Claire, Eau Claire, WI 54702-4004; tel 715-836-3990; e-mail kingdr@uwec.edu. Morse 2000 can also be

found on the World Wide Web at <http://www.uwec.edu/Academic/Outreach/Morse2000/morse2000.html>.—thanks to Richard Regent, K9GDF

Ham radio at the CMA Awards: Country music star Patty Loveless, KD4WUJ, did not repeat as female vocalist of the year at the 31st Country Music Association awards this week. Loveless had won the award two years running. Country legend Ronnie Mil-sap, WB4KCG, announced the nominees and this year's winner, Trisha Yearwood. During the awards telecast Wednesday, Loveless performed her latest, “You Don't Even Miss Me,” with help from another legend, George Jones.

ROARS Silver Jubilee Award: To commemorate its 25th anniversary, the Royal Omani Amateur Radio Society (ROARS) has introduced the ROARS Silver Jubilee Award. From October 1 until December 31, 1997, all A4 Stations will use /SJ after their suffix. A special event station, A43XXV, will be QRV from December 17 until December 21. The Award will be issued to any DX station that earns five points. Contacts with A43XXV will count three points. Club Stations A47RS/SJ and A47OS/SJ count two points. Other A4 stations count one point. Contacts with the same station on a different band or mode double the point credit. Send your certified log copy with 10 IRCs or US \$5 to Awards Manager, ROARS, Box 981, Muscat 113, Sultanate of Oman.—Nasser Khalfan Al Rawahi, A41KG

WELL-KNOWN AUTHOR, FORMER LEAGUE STAFFER DOUG DeMAW, W1FB, SK

DeMaw was first licensed in 1950 as W8HHS. An electrical engineer, he was a member of the ARRL Headquarters staff for 18 years--from 1965 to 1983--and served as Technical Department Manager and Senior Technical Editor from 1970 to 1983. During his tenure at HQ, DeMaw served as editor of The ARRL Handbook. In 1970, he engineered the shift in emphasis toward solid-state design in QST and the Handbook. He has hundreds of articles in QST and other publications to his credit. DeMaw also was founder and publisher of VHFer Magazine. (His wife, Jean, W1CCK, also worked on the

Headquarters staff.) DeMaw was a life member of the ARRL and a senior member of the IEEE.

FCC ANNOUNCES ELECTRONIC RENEWAL FORM 900

The FCC's Wireless Telecommunications Bureau (WTB) has consolidated eight renewal forms into one form. Form 900, Application for Electronic Renewal of Wireless Radio Services Authorizations, is an interim measure to permit all WTB licensees, including hams, to renew their licenses electronically.

This form is only for renewals, not for license modifications. You can only enter changes (eg, name, address) using Form 900 as a part of the process of renewing your license. You can only use Form 900 if the expiration date on your license falls within the renewal window (within 120 days of expiration). You cannot use Form 900 to renew an expired license. Form 900 may only be submitted electronically. No Form 900 paper applications will be accepted. When filing Form 900, you will be required to enter a Social Security Number for a taxpayer ID number.

Access Form 900 on the WTB Electronic Commerce page, <http://www.fcc.gov/wtb/electcom.html> (click on Production Page for Electronic Commerce Applications to access the Form 900). Click on any item number for filing instructions. Once you have filed the form, clicking on Electronic Renewal Query lets you view or print the information submitted.

Once you have successfully submitted Form 900, it is important to click on the Continue button to obtain the fee information pertaining to your filing. The screen will prompt you with a Fee Remittance Advice, Form 159. The form will indicate that there is no charge to renew an Amateur Radio license (except for vanity call sign holders, who won't have to renew for several more years yet).

Form 900 updates will be batch processed at night. They are not instantaneous.

Send comments about the FCC Form 900 to sreed@fcc.gov. For technical assistance, call the FCC Technical Support Group at 202-

414-1250. Other general information may be obtained from the FCC's National Call Center at 888-225-5322 (CALL-FCC).--FCC

ARRL SEEKS CHANGES TO CW WAIVER RULES

The ARRL has asked the FCC to change the way Morse code exam exemptions for severely handicapped applicants are handled. The League wants to change the procedural requirements in Part 97 that must be met, prior to granting examination credit.

Under the League's proposed changes, a candidate at least would have to attempt the CW test--with any and all necessary accommodations--before being granted an exam waiver based on a physician's certification. Also, Volunteer Examiner Coordinators (VECs) would be entitled to request medical information pertinent to an applicant's handicap from the certifying physician. VECs also would be required to have this information on file before the application is forwarded to the FCC for processing.

In its petition filed September 23, the League said the two "rather minor changes" are needed to restrict the waiver process to use by severely handicapped individuals "for whom the process was intended in the first place and who deserve the substantive accommodation." The League also said the changes would "stem abuses" of the waiver system without putting unreasonable burdens on examinees.

The CW waiver system has been in effect for seven years. The League says that experience has shown that many applicants without severe handicaps "have abused the process" by obtaining physicians' certifications of inability to pass the telegraphy examination. At present, 8% of those applying through the ARRL-VEC have requested a medical exemption from the higher-speed code requirement. Another large VEC reports similar experience. The League cited "a growing suspicion" in the ham community of anyone who has upgraded by using the waiver route. But the League said this is "completely unfair to those who require and deserve the exemption because they cannot be accommodated by procedural means."

FCC rules requires volunteer examiners to exercise broad latitude in administering CW exams to accommodate handicapped applicants. Measures include using a flashing light or vibrating surface for hearing-impaired applicants, pausing in sending after sentences, phrases, words or even characters to allow an examinee time to interpret, or even substituting a sending test for a receiving test. Instead, the League observed in its filing, there is "a tendency for applicants to seek exemptions instead" of accommodations.

The League said it believes the procedural changes alone will help to deter those who might abuse the process while still allowing exemptions to deserving applicants. (For some additional thoughts on this subject, see the editorial "It Seems to Us" by David Sumner, K1ZZ, QST, Oct 1997, page 9.--Ed.)

FUNCTIONAL SPUTNIK MODEL SET FOR MIR LAUNCH

Plans remain in place to launch a functioning mini-Sputnik from Mir October 4--the 40th anniversary of the launching of Sputnik 1 by the USSR. Sputnik 1 was the first manmade satellite put into orbit around Earth.

Earlier this year, an agreement was signed between Russia and France to commemorate the 40th anniversary of the launch of Sputnik 1, and two groups of high school students cooperated in building the one-third scale model of the original Sputnik 1. Students in Russia built the satellite itself, while students in France built the 2-meter transmitter that will "beep" from space following its launch from Mir. The mini-satellite flew as cargo to Mir last month aboard a Progress rocket. According to Miles Mann, WF1F, of MIREX, the Mir crew will place the satellite in an airlock on Mir and push it out the door on October 4.

Following launch, the scale model of Sputnik will remain close to the Russian space station. It's estimated that its batteries will hold up for up to two months.

The transmitter will put between 100 and 200 mW into a circularly polarized antenna. The transmitter frequency is expected to be between 145.81 and 145.85 MHz (FM). The

audio tone will be at 1.3 kHz but vary with temperature. For more information, see <http://www.oceanes.fr/~fr5fc/angspoutnik.html>--thanks to AMSAT/This Week in Amateur Radio

FCC "WIPs" VANITY APPLICANT OVER MISSING SPACE

Rick McMillion, K6SIX (ex-WB7UGZ), of Winton, California, found out the hard way that the FCC takes its spaces seriously. Back on August 6, McMillion was among the hundreds of hams who filed under vanity Gate 3 for a new call sign. Six weeks later, when the FCC finally issued a big chunk of new call signs to Gate 3 first-day applicants, McMillion was dismayed that his was not among them. But none of the call signs he'd requested had been issued to anyone else, either. Obviously, his application had arrived in that twilight zone Gettysburg calls WIPs, for "work in process."

After waiting another week, McMillion says he just couldn't stand the suspense. "I had already received my canceled check back from the FCC, so I knew they had received it," he said. It wasn't until he called the FCC's toll-free number (888-225-5322 or 888-CALL-FCC) that he found out that in the world of the FCC, sometimes nothing is something. "The person told me that the FCC database and my license had my name listed as "Mc Million" [with a space], and my vanity application had "McMillion" [without a space]. Because of this, the FCC did not process his application because the computer showed that his last name on the application and his last name in the FCC database did not agree. "I could not believe what I was hearing," said McMillion, who's never spelled his last name with a space between the "Mc" and the "Million" [although this is how the FCC database handles such names--Ed]. The FCC told him there was nothing he could do about the "misspelling," but McMillion had other plans. He fired off e-mail messages to FCC Commissioner Rachelle Chong and to John Johnston in the FCC's Wireless Telecommunications Bureau.

McMillion wasn't expecting much, but within a day, he got a reply from Johnston saying he'd check with Gettysburg. An hour later, he heard from Larry Weikert at Gettysburg stat-

ing that there were "some editing problems with Gate 3," and that McMillion's new call sign would be among the first issued when the problems were resolved. True to his word, Weikert messaged McMillion the next day to alert him that he'd just been granted K6SIX.

McMillion says he's impressed. "It's refreshing to know that one person can get a problem resolved with the FCC in a very fast efficient manner." He says he hopes his experience helped out a few others who might have run afoul of the "space" problem.

SOLAR FLUX CONTINUES UPWARD

Solar guru Tad Cook, K7VVV Seattle, Washington, reports: Again this week the average solar flux for the previous 90 days rose two points, and again the daily flux values were above 83, which was the high average value on Wednesday, the last day of the reporting week. Wednesday was the fifty-eighty consecutive day that the solar flux was above the average for the preceding 90 days, and this is a very positive sign indicating a general upward trend in the new solar cycle.

This increased activity can have a downside though, and on October 1 the geomagnetic field was very unstable, which generally means higher absorption, especially on high-latitude and polar signal paths. The planetary A index was 41, and planetary K index went as high as 6. The A index measured at College, Alaska, was 67, and the highest K index was 8, which means miserable HF conditions. These stormy conditions were caused by a flare and a coronal mass ejection a few days earlier. (For a good explanation of K and A indices, see the Propagation chapter in any recent edition of the The ARRL Handbook.)

Conditions stabilized October 2, and geomagnetic conditions were very stable, with the Alaska K indices at zero over most of the day, and worldwide it was mostly one and zero.

Over the next few days look for higher solar activity, with the solar flux up over 100 around October 7-11. It may dip below 90 after mid-month, then rise again to around 90 until November. Based on the previous solar

rotation, October 25 and 26 may be unstable. Look for a smaller possibility of geomagnetic instability on October 12 and again on October 15.

Sunspot numbers for September 25 through October 1 were 50, 40, 33, 23, 27, 25 and 38 with a mean of 33.7. The 10.7-cm flux was 88.5, 89.1, 88.4, 87.2, 89.7, 87.7 and 87.1, with a mean of 88.2, and estimated planetary A indices were 3, 4, 13, 14, 9, 7, and 41, with a mean of 13.

Knot Tying Got You Down

If you use rope to hold up all those dipoles, out in the antenna farm, then you get plenty of practice tying and untying those ropes around trees, branches, and whatever else is available. In my case it is a paint can full of cement with an eye bolt in it. This hangs on the antenna rope which goes through a pulley up in the tree.

There are a few problems with that arrangement. The trees and branches grow around the ropes. The knots gets tight, unless you use Williams knots. The ropes get wet and freeze in the winter.

I kept noticing this little device in the rope section at Home Depot. It is used to tension a pulley type clothesline loop. They are called clothesline tensioners or tighteners. It seemed reasonable, that if they could support the weight on a loaded clothesline, they could support my antennas. The device is a tubular shape with a loop attached to one end. The rope you want to tension feeds through the center of the device. It is a circular wedge that presses three balls into the rope to hold it in place.

This spring I tried a few around the yard. I have been very pleased with how easy it has been to tighten and loosen the lines attached to my buckets of cement.

The package recommends a particular size rope, but I have used it with a range of sizes. The balls will close together if no rope is inserted in the device, so the rope diameter could vary with some sacrifice in gripping strength. Stan

Board Meeting Minutes

Due to a scheduling problem the Board Meeting was not going to be held ill

after the newsletter was published so there are no notes available.

NVARC QSL BUREAU

Bring your cards and a QST label to the meeting or to breakfast and the club will take care of the shipping and bureau fee.

\$The Treasurer's Report \$

As I reported at the September meeting, our income for FY'96-FY97 was down quite considerably from our previous years income. Expenses exceeded income by quite a bit. We're in the black but more membership income will be necessary to keep publishing our newsletter and paying our insurance bill! Income for September was \$157.06. Why the 6 cents? Well, that's what the eagle-eyed road crew found while picking up our adopted highway! And the spear hole in the nickel doesn't even show. HI This is the month our liability insurance premium is due; total expenses were \$274.20.

Thanks again to everyone who renews their ARRL membership through the Club. As an Affiliated Club, the League rebates part of your membership dues to us.

73, Ralph KD1SM

CW Practice Nets

The NVARC slow speed net meets Tuesday and Thursday at 7:30 p.m. on 28.123 MHz. Except the third Thursday of the month. That being the club meeting night.

Say What?

"Computers make it easier to do a lot of things, but most of the things they make it easier to do don't need to be done."

--Andy Rooney

"The most ineffective workers are systematically moved to the place where they can do the least damage: Management."

--Scott Adams

"If you're ridin' ahead of the herd, take a look back every now and then to make sure it's still there."

The Cowboy's Guide to Life

"One only needs two tools in life: WD-40 to make things go, and duct tape to make them stop."

--G. Weilacher



**Nashoba Valley
Amateur Radio Club**

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PIO: Earl Russell WR1Y

Meetings are held on the 3rd Thursday of the month - 7:30 p.m. - Pepperell Community

Ctr. Talk-in 146.490 simplex

442.90 + 100Hz Repeater

This newsletter is published monthly. Submissions, corrections and inquiries should be directed to the newsletter editor. Articles and graphics in most IBM-PC formats are OK.

You can leave items on PEPMBX or at

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