



de N1NC

December 2000 Volume 9 Number 10

This Month's Meeting

This month's meeting program is the annual Homebrew Night. I hope everyone has been finishing up those projects they started over the last year to show off. There must be some projects Rube would be proud of. We will have a raffle for an ARRL book or books. Ralph will be set up for ULS registration in case you missed it last month.

Bring your short Show-and-Tells to the meetings. They are always welcome. It's always interesting to see the variety of things people are working on.

We are always looking for ideas for the meeting program. Don't be afraid to suggest something that seems interesting to you. Even if an idea might seem impossible there may be a way to use part of it or the discussion may spawn another idea.

We gather at Tiny's for breakfast Saturday mornings at 8:00 AM. We sit in the back dining area.

Last Month's Meeting

Last month's main program was a QSL card sort for the W1 QSL Bureau. Stan picked up the cards from Burt, the W1QSL manager. We sorted many boxes of cards into groupings for the letter sorters. Each letter sorter is responsible for one letter based on the first letter of the call sign suffix. So we had to sort the cards into 26 groups which are then forwarded to the letter sorters who manage the final sort to the individual and ship them to their final destination.

Ralph reported that the Phase 3D satellite had been successfully placed into orbit the previous

night by Ariannospace. He showed slides of the satellite in the final launch integration area, the satellite docked in the rocket, and the rocket just before and after liftoff. He also had a diagram of the placement of Phase 3D (the largest amateur satellite ever constructed) in the rocket underneath the enormous commercial communications satellite that was the main payload. This was the heaviest launch ever done by Ariane.

Ralph then gave a quick presentation on the new FCC Universal Licensing System (ULS). We all have to register in the ULS before our next license renewal. That may all be at the same time but an alternative is to register first to eliminate one possible problem when time may be short to renew. Ralph showed the ARRL step-by-step instructions for registering in ULS and then showed the ULS Web forms themselves. The process is not as intimidating as it sounds. Go to <http://www.arrl.org> and follow the Licensing links to view the ARRL's instructions.

The third part of Ralph's presentation was conducted in parallel with the card sort. He connected a computer on line to the FCC and help interested people actually register. (All you need is your call sign, address, and social security number.) At least two people had problems that will probably require communication with the FCC to resolve. This should encourage people to act now rather than wait till the last minute. The ARRL reports that only about 10% of the amateurs have registered so far.

Twass The Night Before Christmas...Again By W1XP

Yes, it was the night before Christmas and Frank was tired. It had been another busy day. He

had taken the day off work and besides other chores, done his Christmas shopping. He had sworn off last minute shopping every year for at least the last ten, but it always came down to the same last minute rush. He had thought earlier as he was fighting his way through the crowd at the mall, you would think all these people would be considerate enough to get their shopping out of the way earlier, so he could get his done now. Anyway he had been successful. Well, more or less. He had found the scooter for Heather although it took a trip to three stores to find the one she wanted. Of course he was just filling in for a gentleman with a white beard and a red suit. Mary was concerned about the safety of these things, like any doting parent, but they had decided to get it for her. Along with a helmet. After all it was the only thing she wanted besides a pony. That of course was out of the question. No place for one here. Heather had promised if she got the scooter she would wear the helmet faithfully. And hadn't she gladly accepted wearing a helmet when she went horse back riding?

Frank poured himself a cup of coffee, and headed down stairs to the ham shack. He normally didn't drink coffee this late in the evening, but he had asked Mary to make the coffee earlier. They had to stay up late to get some last minute Christmas things done. Mary still had some wrapping to do, and then they would put the presents under the Christmas tree. Then he would be able to get to bed. He had planned to spend the next couple of hours in the shack trying out the new antenna he and the professor had built.

Since he and Ken, the engineering professor, had built the ill-fated 160 meter antenna of last Christmas, they had become ever closer friends. Ken had retired from the university and moved to a small farm not far from here. They had been planning it for some time and when the professor noticed the farm for sale on a return trip from a visit to Frank's one day, they had bought it within a week. It had a small house, but plenty of room for he and his wife, Meg. They each had a study of their own. He had a ham shack and workshop in the large garage, and his wife had a small barn, and plenty of room for pastures and corals for the horses Meg had. No more boarding horses. In fact Meg was even considering taking in a few boarders. Horses that is. Frank had helped them move last spring, and they had all become close friends. Mary and Meg got along great, so when he and Ken got involved in some radio project they went off and did their own thing. They both took to Heather like an aunt and uncle, and she to them. That is where

Heather had gotten into horseback riding. And really she did quite well at it.

Frank hit the main switch and the ham shack came to life. Frank was concerned that he was going to be disappointed. He had planned to try out the new dual band antennas that he and the professor had designed and built. Well Ken had done most of the design. Frank had become interested in the higher bands with the rise in the sun spot numbers. The cycle had been disappointing in the magnitude of the sun spot numbers, but Frank had been having fun on the 12 meter band. He first put up a dipole, then a couple of double extended Zepp's, that Ken had recommended to him. He also had one of these antennas on 17 meters and it worked well also. He had mentioned to Ken that there was probably enough junk antenna parts in the garage to build a dual band 17 and 12 meter antenna, and Ken had responded with a design that he developed on a computer. He had then helped Frank learn enough about computer antenna modeling, that Frank had been able to convert a major part of the aluminum tubing in the garage into a three and four element interlaced Yagi for 17 and 12 meters. The professor and Frank had temporarily fastened it to a mast and rotor on the chimney at the end of the house. If it worked they would put it on the tower. Ken was certain it would work, but Frank was less positive. He had built many antennas over the years and usually got them to work well, but only after a period of tweaking to get the match right, or the front to back acceptable. Since they had put it up last weekend the only thing Frank had determined was that it got into the telephone. No wonder as the telephone wires entered the house just below the antenna. But the chimney was a ready support. The chimney at the other end of the house was a more suitable location. No wires near it and closer to the shack, but it was the one with the living room fire place in it, and he wasn't going near that at this time of year. He had even asked Heather how the antenna looked on the end of the house, and she replied "cool!." Well after all Christmas was coming. Mary asked Frank to take a box of Christmas cookies over to the neighbors, which he traded for a box of fruit cake, and coming back he had noticed a bright glow in the northern sky. He had walked out into the back yard to get a better look. Sure enough the northern sky was aglow with the Northern Lights. It had to be one of the most impressive Aurora displays Frank had seen. He wasn't sure what effect it might have, but he was sure it wouldn't be good for radio communications.

Frank, plopped himself down in front of the transceiver, and took a sip of the coffee. It was still too hot to drink. Then he started tuning the band. Hearing nothing he double checked the antenna switches and tuned some more. Nothing! absolutely nothing!. He checked the other bands and got the same results. He had never heard the bands this dead. The Aurora curtain was really doing a job on radio propagation tonight. Oh well, he was tired anyway. He took another sip of the coffee, leaned back in the chair, and closed his eyes.

Frank awoke with a start, but he wasn't sure why. He thought he had heard something. The noise from the transceiver speaker was low, but all he heard. There it was again. A bit out of tune, and greatly distorted. Frank quickly tuned the signal in and put on the headphones. Then a chill went up his back! He wasn't certain, but he thought he copied it correctly. The signal had faded out again, not stood by. He took a large swallow of his now cold coffee. Partly to relieve the dry lump in his throat. He tuned back and forth carefully. Was it? Yes! there it was again. He touched the rotor and the signal faded, then back the other way. Yes, it was stronger now, but it was in and out, and so distorted with a loud growl on it. He remembered how Ken, had described to him how the aurora could distort signals by providing many points of reflection for the signal, and how these points could be moving causing the signal to become modulated with a rough tone. He had heard it on signals before and never been sure of the cause. It was really making this signal hard to copy, but he was sure he had heard correctly. "MAYDAY, MAYDAY, MAYDAY, this is TA90---, --- --, ---SNCome in Please..... ". Frank picked up the microphone, in his shaking hand. He had never heard a distress call before. In fact he wasn't sure he was hearing one now, but he responded with a QRZ., QRZ. and his call. Nothing but noise. He listened for several seconds, but it seemed a lot longer, and then called again. After a brief period of just noise he heard the distorted voice rising out of the noise again. He copied parts of his call and TA90SN stroke Aeronautical Mobil. Yes, he copied it again. Then the voice ask him if he could increase power? Yes, why hadn't he thought of that. He hit the switches on the home made amp, and quickly checked the settings from the tuning chart for 12 meters. Thank god for Thoriated tungsten filaments, he was on with a 10 dB bigger signal in less than 15 seconds. He called again, and heard nothing. Had he really

heard anything? He mashed the button on the mike, again, and repeated the calls slowly. The LED's of the home made peak power meter were hitting the red one at the end which indicated 1500 watts. Little more he could do. Still nothing. Then he heard the signal coming up out of the noise again. He was saying, ".....much better now. I am lost in the magnetic storm. Our navigation electronics are all disabled by the storm. Even the GPS is out. Have been traveling this way for many years and have never seen a magnetic storm as bad as this. Can you please provide us a signal to home in on as we try flying through the aurora curtain? I am using your.....". Frank sat there staring at the transceiver not knowing what to do. He thought of calling 911 but wasn't sure what to report. He decided to call again, which he did. He called several times, and repeated the information he had copied in the previous transmission. Then he stood by again. This time he heard the signal right off. After the calls, the voice said, "Roger Roger, Frank, copied solid, although with much difficulty. I can home on your signal, but the magnetic storm is so intense, as soon as you stand by I start drifting off course. I estimate that I should be through the storm in another ten or fifteen minutes. Can you talk us through? The handle here is Nic, Over, over....." Frank went back and for the first time in years didn't know what to say. The first thing he talked about was the 17 and 12 meter beam antenna, then he talked about his day Christmas shopping. His daughter getting a scooter instead of a pony, the problems he had finding something for Mary, his disappointment in the sun spot numbers. Then he stood by. He was relieved to hear Nic come back with a better signal than before. Nic said they were making progress through the magnetic storm and would probably need one more transmission like the last to break through the curtain. Then they would be able to reset their navigation equipment and be on their way. Frank asked on a break how many were on board, and Nic said he had a total crew of only ten. So Frank picked it up again and this time told how last Christmas eve he had cut down his 160 meter antenna because his daughter was convinced Santa Clause and his sleigh and reindeer could not get through it to their house. Then Frank stood by. Now the signal was booming in and clear. Nic said they were now clear of the storm and had the equipment all reset and would be on their way. 73 and Merry Merry Christmas, and the signal was gone.

Frank sat there staring at the transceiver, sipping his now very cold coffee. He was really wondering what had happened. Obviously some airplane had gotten lost in the storm and searched for a signal to lead them through it. He would have to talk with Ken about this. He wondered if he should report it. But to who? The FAA, the police? And what about that funny call? What was it TA90SN? TA was a Turkey prefix? That was strange enough. Then the 90? He leaned back in his chair and closed his eyes to consider what had happened.

He awoke with a start as Mary was shaking his shoulder. She was saying how they had things to do. Frank, looked around as if to reassure himself where he was. Boy had that been a weird dream. He punched off the main switch and headed up stairs behind his wife. He was still tired after his over two hour nap. Well with dreams like that, who could be rested. It didn't take long to put the packages under the tree. Even the scooter was there with the helmet in a separate package. All during this Mary was talking about her day with Meg. They had gone to a Christmas display at one of the local churches. It had gone into the history of many of the Christmas traditions. Frank was having trouble pretending to be listening. He couldn't get the dream out of his head. He had pretty well convinced himself it was just a weird dream until Mary asked him who he had been talking to on the radio. He replied no one, but Mary said she tried to call her sister on the west coast to wish her a Merry Christmas and he had been 59 on the telephone for over 20 minutes!

After getting ready for bed, Frank was still trying to sort it all out. If he had been dreaming, how had Mary heard him on the telephone? Could he really have? No, that wasn't possible! He closed his eyes to try and go to sleep. Then just before turning out the light Mary dropped the other shoe. She was saying how she had been surprised to learn at the Christmas traditions show that the origin of St. Nicholas was from the country of Turkey. Mary turned out the light, and went right to sleep, but Frank didn't.

Frank was still trying to sort it out when Heather hit the bedroom like a small bomb. The sun was up and Heather had been down stairs and checked. There were Hundreds of packages under the Christmas tree. "Come on, Come on, get up! We've got to open them." The next few hours were a bit of a blur. Frank seemed a bit detached. It had to be a dream. Maybe he had been talking on the air in his sleep? Was it any different than sleep

walking? That had to be it. He probably better talk to the doctor about it. He didn't want Mary to find out the wrong way. Then the phone rang.

Mary answered the phone and Frank gathered it was Meg from one end of the conversation. It sounded like they were going out to Ken and Meg's for Christmas dinner, although that hadn't been the plan. Frank was watching Heather on her new scooter in the driveway, when Mary came over with a smile on her face. "It seems you have been busy, but I think it is a great idea" as she kissed him on the cheek. "I think I'll wear my new necklace out to Ken and Meg's for dinner. I better go get Heather ready to go".

Frank was still trying to figure things out as they drove out to Ken and Meg's. He had made a mental note of their doctors phone number so he could see him about sleep walking, er sleep talking. Heather had not been anxious to leave all her new toys, but Mary had hinted that maybe there was something out at Ken and Meg's for her, and given Frank a wink. He assumed that Ken and Meg had something for Heather. It wouldn't be out of character. It wouldn't surprise him that Mary had not left something there for Heather either. Oh well, we will know soon he thought as they pulled into the driveway. And then he knew. There stood Ken in the yard, and next to him was a brown and white pony on a halter. There was a big bright Christmas ribbon around the pony's collar. Hanging from the ribbon was a large card that read, To Heather, from Santa Clause. Meg was feeding the pony a handful of hay, and they both were grinning from ear to ear. Needless to say Heather was as excited as she could get. Of course the pony had to be named, and ridden and fed and watered and brushed. And ridden again. While Heather was off on another ride around the coral, with both mother and aunt, on the lead, Frank said to Ken, "You really didn't need to do this, although I think it is a great idea". Ken, looked confused and said, "what do you mean? We didn't buy the pony. Your man dropped off the pony about mid morning, He said he was sorry he was running late, but he had had transportation problems during the night. He must be a ham though as he mentioned that the 17 and 12 meter antenna seemed to be working just great. I didn't know you had had the antenna on the air yet. Anyway he said don't worry, the sun spot numbers will get better. Then he wished me a Merry Merry Christmas and drove off. Funny plate on his truck. TA90SN.

Merry Christmas Everybody, Bob W1XP

Stan

Operating Activities

There are many operating activities scheduled during the winter months. Do you take advantage of them? You don't have to be a contester to have fun and benefit. Four recent events come to mind. CQ World Wide, ARRL Sweepstakes, ARRL 160 Meter Contest, and the ARRL Ten Meter Contest. I missed out on several of them but thought operating the Ten Meter Contest would be fun. There are two versions of most contests, a CW weekend and a SSB weekend although some have everything on one weekend and the same contact on different modes is OK. An exciting aspect of ten meters is you can talk just about anywhere on low power and without fancy antennas. I decided to use the opportunity to fill in some states for Worked All States (WAS). I do have a WAS award for mixed modes and bands. I have been keeping track of WAS on individual bands and modes figuring they would fill in over the long term. Looking over the logs I found I only had six states worked on ten meters. So the contest seemed like a good place to change that for the better. One thing you need to do before a contest is figure out what the exchange is going to be. Typically it is a signal report and something else. It may be a serial number for the contact, the year first licensed, or a geographical identifier like a CQ zone. I put up a quick wire antenna for ten meters to improve my situation over the all band antenna I have.

Over the weekend I swept the contest portion of the band which was the lower part of ten meters since this was the CW weekend. Like most of life it pays to listen more and talk less here too. Getting the callsign of the calling station and his report down before you call will reduce the possibility of becoming a nuisance. Though I'm not in a hurry for each contact that is not the case for the contester calling CQ. Contact rates of several a minute are important to him. So for both of us to have fun I want my contact and he needs to knock them out quickly.

Besides the fun of getting in into the contest with nothing to lose I worked 40 states and a bunch of countries all on ten meters. You don't have to be in the contest to win to have fun and the contesters appreciate as many people getting on the air as possible to give them points. Everybody can win here.

RDFing

Stan and Ralph took the NVARC Radio Direction Finding presentation on the road with a show November 6th in Nashua at the NARC club and November 21st at PART in Westford.

Anyone else telling the rest of the world about their own ham radio specialty??

Road Cleanup

The November road cleanup was held the 19th of November. With a good turn out we got done quickly. Thanks to Ralph, Herm WW1HR, Erik W1ZBT, Craig N1ABY, Stan KD1LE, Ben KB1FJ, Earl WR1Y, Larry KB1ESR, Scott W1XJ, Dave N1MNX, Jim AA1PO.

The next clean up will be April 2001. Gosh where has the big 2K gone?

Octobers Second Presentation

Since I winged it for the last newsletter here is the full description of Les' presentation that should have been in last month newsletter.--ed

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YT
Auto
YT, Yagi Terrain Analysis
Ver. 2.0, Dec 8, 1997, Copyright 1995-97 ARRL, by N6BV
Present antenna: Four-element Yagi, 8.5 dBi free-space gain
Terrain Files:      Antennas:
A = FLAT.PRO       100 ft
B =                 0 ft
C =                 0 ft
E = Elevation-statistics file: None
F = Frequency: 14.0 MHz
G = GO
O = Other          Diffraction is ON
P = Plot profile of terrain
Q = Quit to DOS
Select: _
```

In addition to last months planned presentation, Les Peters N1SV gave a short demonstration of a software program called "Yagi Terrain" (YT) by N6BV. YT, a DOS based program, is used to ana-

lyze yagi antenna take-off angles over varied / irregular terrain. The program produces charts depicting the antennas loss at various take-off angles as well as the probability statistics for a given path, frequency, and antenna specifics. The program which is limited to analyzing only horizontal mono-band beam antennas from a predefined group can however analyze stacked arrays of yagis. Les explained that In order to analyze an antenna the program the user must create a data file using a topographic map. The data file is created by plotting distances and elevations out from the base of the antenna support in a specific direction (i.e. Europe, Africa, South America). Les explained that while this a bit tedious that it was important for producing accurate results. Les also demonstrated the performance of his current antennas illustrating the point that sometimes an antenna can be installed too high for DX communications to certain continents (i.e. Europe) on specific bands. He also demonstrated how to analyze a yagi stack and concluded by explaining how he was using the program to plan antenna upgrades for next spring.

Public Service Teamwork

[October public service went out with a bang and with everything else I forgot to put this article I had already written in the November Signal. But I wanted to make sure everyone who participated was thanked so here it is a month late.-ed]

We had a busy month particularly Sunday October 22. There were late requests for radio support for the Groton Town Forest Cross Country Race and the BayState Marathon in Lowell. It might seem that the Lowell race is out of our area and why would someone call us. Well the request came because the race coordinator is from Pepperell and was involved in the Groton Road Race. Kevin Malloy who runs the Groton race recommended she contact us. The other reason is there are no clubs in Lowell which seems strange. I got enough volunteers to handle the Groton race first since I considered that local. Bob W1XP volunteered to run the event. Karen KA1JVU was the net control station for the race. Thanks to the following members for their help.

The Groton Town Forest Cross Country Race

Bob W1XP, Karen KA1JVU/NCS, Craig N1ABY, Ben KB1FJ, Herm WW1HR, Larry KB1ESR, Erik W1ZBT

Once the Groton race seemed like it was in good hands I set out to staff the second (Lowell) event. Getting enough people seemed like it was going to be a problem even though the initial request was for only five or six. After talking to the coordinator it seemed at least seven or eight would be required. More would have been better. After getting only a few more "volunteers" locally I contacted the Billerica Amateur Radio Society (BARS) and the Westford Police Amateur Radio Team (PART). Getting three volunteers from each club got me to nine of which eight were able to make the race. It was great to see three club support of an event and everything went smoothly from the radio side.

Although the two events were run by different people there were two organizational items that were handled the same way and are sound ideas. The first was that the leaders chose to have the hams meet at a place other than the center of the race activity. This improved accessibility since the start finish line area of any race is controlled and busy. This reduced the confusion that had to be dealt with while trying to get organized. The second was to keep the net control station (NCS) away from the center of the race activity such as the start/finish line. We often try to gain a person by having the NCS be another operator for the event. But in a busy net the NCS should be just that. This person or persons needs to concentrate on making the net function and not worry about the runners going by and such. Thanks to the following area hams for helping out.

BayState Marathon, Lowell, Chelmsford, Tyngsboro Mass.

From PART

KA8SCP Terry Stader, WA1QYM Arthur Budinger, WK1V James Martin

From BARS

KB1FKR Joseph Whalley, KB1CIC Bruce McArdle

From NVARC

Earl Russell WR1Y, Lynda Pozerski N1PBL, Stan Pozerski KD1LE, Scott Pozerski N1OMM

The race coordinators for the events planned for them to happen on different days. But they had to select the dates in advance and in the case of the school in Lowell an alternate date had to be specified. As luck would have it the day they were given access to the vocational school was their second choice and had been committed to by the Groton Race. I was told they have the race dates set for next year and they will not be on the same day.

On November 21st I attended the PART meeting in Westford and on December 6th the BARS meeting in Billerica and presented shirts and pins to the people who helped out. Thanks to all.

Stan KD1LE

Board of Directors Meeting

The Board meeting was held December 14th. We worked on possible meeting programs for the new year, received the Treasurers Report, and discussed the raffle that started last month.

Presentation Preparation Help

If you would like assistance preparing a presentation, several members have volunteered to help. They can review a draft presentation and/or help produce the presentation materials. See Stan, Erik or Ralph if you are interested in some assistance.

From The ARRL Letter

"THE BIG PROJECT" ATTRACTING BIG DONATIONS

Before it's even officially off the ground, "The Big Project"--the educational initiative of ARRL President Jim Haynie, W5JBP--already has attracted a few substantial donations plus several smaller ones. The project, known formally as "The ARRL Amateur Radio Education Project," is aimed at providing a turnkey Amateur Radio curriculum at the middle school level plus resources and equipment to bring it to life for youngsters.

"Without asking we've already received approximately \$125,000 for the project," Haynie said. "This tells me people are very serious about this initiative." Haynie has been courting corporate dollars and seeking foundation grants for the project. So

far, the project has received two substantial donations of stock from anonymous donors. Since the ARRL is a 501(c)(3) organization, donations are tax deductible--at the appreciated value in the case of securities.

In addition, the ARRL Foundation has pledged \$50,000 in start-up funds for the project. A formal check presentation is scheduled for the January ARRL Board of Directors meeting. As conceived by Haynie and under the guidance of ARRL Vice President Kay Craigie, WT3P, the ARRL Amateur Radio Education Project will work directly with teachers who use Amateur Radio as a teaching strategy in the classroom. "The goal is to improve the quality of education for kids by providing educationally valid techniques involving Amateur Radio for teaching all sorts of subjects--science, geography, languages, speech," Craigie said. "Kids get the hobby of a lifetime and preparation for good careers--that's the ultimate goal."

Craigie said the project's philosophy is that Amateur Radio can be a "powerful resource" for teachers in attaining their educational goals--whether or not licensing is involved. "It's about improving education."

Growth in the amateur ranks could be a delayed effect of the program. "Some children will want to study for licenses immediately," Craigie said. "Others will return to the idea in later life." If nothing else, those exposed to ham radio through The Big Project "will remember Amateur Radio as a good thing that made school more fun," she said. "These kids who have good school experiences with ham radio will grow up to be our neighbors, zoning board members, and political officials," Craigie said. "Amateur Radio can never have too many friends."

Haynie has been testing out some of the program's concepts at the DeGolyer Elementary School in the Dallas area. "The kids are like sponges," Haynie said of the sixth graders involved. "They learn it faster than we even want them to."

Donations are encouraged to the ARRL Amateur Radio Education Project, c/o Barry Shelley, N1VXY, 225 Main St, Newington, CT 06111. Contact Shelley, bshelley@arrl.org; 860-594-0212, to discuss details.

FCC SEEKS TO REQUIRE FCC REGISTRATION NUMBER

The FCC has proposed requiring that everyone it does business with obtain and use an FCC Registration Number--or FRN. Many amateurs registered with the Universal Licensing System already have been assigned a 10-digit FRN by the Commission Registration System--or CORES. The FCC has not made FRN use mandatory, however. The FCC released a Notice of Proposed Rulemaking (MD Docket 00-205) December 1.

The FCC says requiring individuals and entities to obtain an FRN will help it to better track and manage the collection of fees. The FCC proposes requiring that FRNs be provided with any filings that require payment of a fee, such as the vanity fee for amateurs. The FCC is proposing to reject filings requiring an FRN that do not include the number. The Commission said its proposed rules "would make the use of the FRN mandatory in certain circumstances so that anyone not yet assigned an FRN or who has not yet obtained one must obtain one."

An individual does not have to hold an FCC license to obtain an FRN. The FCC says the information collected by CORES includes the "entity name and type," Taxpayer Identification Number or TIN--typically a Social Security Number for an individual, contact address and email address. CORES information is not made public.

Comments on the FCC rulemaking notice are due 30 days from the date of publication in The Federal Register. Reply comments are due by 45 days from the date of publication. The FCC began implementing CORES earlier this year. CORES registration eventually will replace Universal Licensing System, or ULS, registration. The FRN will co-exist with the Licensee ID Number issued by the ULS, an FCC spokesperson said this week. More information on CORES is available on the FCC Web site, <http://www.fcc.gov> (click on the CORES registration link).

ARISS INTERNATIONAL PARTNERS RATIFY BYLAWS, ELECT OFFICERS

Amateur Radio on the International Space Station--or ARISS--delegates have ratified new bylaws and elected officers. The ARISS International Group also logged considerable progress in planning the future direction of the ARISS program when it met

December 13 at Goddard Space Flight Center in Maryland.

Now that the solar wings have been deployed and brought on-line aboard Space Station Alpha, more routine operation of the initial ARISS station on 2 meters is anticipated. So far, only Amateur Radio test passes have occurred, although Expedition 1 Commander William Shepherd, KD5GSL, did work a Pennsylvania ham at the tail end of one test pass (see "Pennsylvania ham snags ISS contact" below). The first Amateur Radio contact between the Expedition 1 crew and school children is set for later this month (see "First ARISS School Contact Set!" below). Packet operation is expected to begin soon.

Delegates from the US, Russia, a consortium of European countries, Canada and Japan elected Frank Bauer, KA3HDO, to chair the ARISS Board. European Subregional Working Group Chairman Gaston Bertels, ON4WF, was chosen as Vice Chair. ARRL Field and Educational Services Manager Rosalie White, K1STO, was elected Secretary-Treasurer. All will serve for two years.

Contacts between the ISS crew and schools was a major focus of the ARISS International Group's discussions. The international partners plan to share the time allocated for school contacts. The oldest two years' worth of school applications for the former Space Amateur Radio EXperiment program will get top priority. The ARISS delegates agreed with a motion from observer Ron Parise, WA4SIR--a NASA payload specialist--to require that all school QSO applications include specific educational proposals. It's hoped that the ISS crews eventually will be able to handle at least one school contact per week.

ARISS delegates also approved a QSL card featuring a color photograph of the ISS. The ARRL will handle QSLs for QSOs made by US amateurs with the ISS crew. Other QSL points will be announced.

The ARISS International Group approved a Russian proposal to send up a higher-power mobile transceiver to be installed in the Zvezda Service Module, possibly as soon as next year. Antennas for both 2 meters and 70 cm are to be installed during a space walk next year. A proposal to activate

Slow-Scan TV is in the works. The Expedition 1 crew of Shepherd and Russian cosmonauts Sergei

Krikalev, U5MIR, and Yuri Gidzenko has been aboard the ISS since early November and has been extremely busy with its normal work schedule.

For more information about Amateur Radio on the ISS and SAREX, visit the ARISS Web site, <http://ariss.gsfc.nasa.gov/>.

FIRST ARISS SCHOOL CONTACT SET!

Students at the Luther Burbank School in Burbank, Illinois, will get a chance to speak with the crew of Space Station Alpha later this month. Amateur Radio on the International Space Station (ARISS) spokesman Will Marchant, KC6ROL, says the contact will take place on Monday, December 18 starting at around 2202 UTC. If that doesn't work, they'll try again on Tuesday, December 19 starting at around 2100 UTC. The contact is expected to last about 10 minutes. "The ISS downlink is on the 145.80 MHz 'public' frequency," Marchant said. Efforts are under way to set up a Webcast of the occasion. SAREX veteran and professional engineer Charlie Sufana, AJ9N, will be in charge of the Amateur Radio setup at the school.

The Burbank School, located on the southwest side of Chicago, has a population of 700 pupils in kindergarten through eighth grade. Another 18 schools are under consideration for ARISS school contacts.

Burbank teacher Rita Wright says word of the impending ARISS contact has generated a flurry of educational activities at the school. "Since being notified of our ISS contact, our teachers and students have been very busy with space, space station, and space exploration topics and activities," said Wright, who's the eighth-grade science and math teacher. "Our school is vibrating with excitement and activity."

AO-40 ACTIVATES S-BAND TELEMETRY; TESTING CONTINUES

AMSAT News Service reports that general AO-40 housekeeping tasks continue as ground stations test the complex systems onboard the next-generation Amateur Radio satellite. Magnetorquing operations also continue, prior to moving the new satellite to its final orbit. Launched November 16, AO-40--formerly Phase 3D--for now remains in a geostationary transfer orbit.

North American P3D Command Station operator Stacey Mills, W4SM, reports an S-band (2.4 GHz) transmitter has been activated and has been sending 400 b/s BPSK telemetry. The satellite will transmit S-band telemetry only at certain times, such as when reasonable squint angle and visibility are available.

Doppler correction at this frequency and at this point in the orbit will be dramatic, he said. The 2-meter transmitter (145.898 MHz) will remain on during S-band operation. Information on PSK demodulators is available from AMSAT-NA at <http://www.amsat.org/amsat/sats/ao40/ao40-tlm.html>.

There's been no word on when or whether AMSAT and the AO-40 ground controllers will permit a limited period of general amateur operation while the satellite is still in the geostationary transfer orbit. AO-40 is the largest Amateur Radio satellite ever put into space.

YAESU DONATES MARK-V FT-1000MP, QUADRA TO W1AW

Maxim Memorial Station W1AW has received an early Christmas present--a new Mark-V Yaesu FT-1000MP and matching speaker unit, and a Quadra VL-1000 linear amplifier. Executive Vice President for Engineering Mikio Maruya, WA6F, visited ARRL Headquarters December 1 to formally present the new gear on behalf of Jun Hasegawa, President and CEO of Yaesu's parent company, Vertex Standard Ltd (formerly Yaesu Musen).

Among other features, the Mark-V offers 200 W RF output, improved DSP, a 75 W Class A mode, and interlocked digital/analog bandwidth tracking (see "Product Review," QST Nov 2000, page 64). The Quadra linear amplifier requires no manual tuning and is designed to work smoothly with the Mark-V.

The new equipment has been installed in W1AW's Studio 1 operating suite and will be available for use by visitors to the station. ARRL Executive Vice President David Sumner, K1ZZ, expressed the ARRL's deepest appreciation for the gift.

Maruya, who's been with Yaesu/Vertex Standard for 10 years now, is an Honor Roll DXer who says he only needs North Korea to wrap up DXCC. He previously spent 20 years with Standard as research and development director. Mikio Maruya's

wife, Saeko, is WA6G; his daughter, Rika, is KC6JAM.

Maruya serves as the interface between Vertex Standard in Japan and the US market for the firm's commercial and amateur lines. He said Yaesu/Vertex Standard is committed to the amateur market, which he predicted will continue to grow.

The new gear got an initial workout when HQ staffer Brennan Price, N4QX, put it to use during the recent ARRL 160-Meter Contest.

ARRL'S "RADIOS ON-LINE" SERVICE NOW FREE TO MEMBERS

Listing a classified ad to buy and sell Amateur Radio-related equipment on the ARRL's Radios On-Line service now is free to League members. Listings will continue to be available for viewing by everyone, but now that Radios On-Line is an ARRL membership benefit, only League members may post ads.

ARRL members now will be able to post free ads up to 100 words--subject to a few rules. Members first must register for access to the ARRL members-only pages and be logged on as a member in order to post ads. Classifieds listed on Radios On-Line will remain posted for 30 days unless canceled earlier.

Radios On-Line is for noncommercial, personal use. There are no provisions for nonmembers to post classified advertising. The service provides for listings in more than two dozen categories. Members may list ads seeking or selling Amateur Radio-related equipment. The site includes a search engine to look for specific items.

The ARRL does not warrant any items advertised on Radios On-Line, nor are individual advertisers subject to scrutiny. The ARRL reserves the right, at its discretion, to decline a listing or to discontinue an ad without prior notice.

Visit the Radios On-Line site <http://www.arrl.org/RadiosOnline/> to place or view ads. For information on how to join the ARRL, visit ARRLWeb, <http://www.arrl.org>, and click on the "JOIN ARRL" button.

PENNSYLVANIA HAM SNAGS ISS CONTACT

It was just a matter of being in the right place at the right time, says ARRL member Randy Shriver, KG3N, of Hanover, Pennsylvania. He managed to snag the first—and so far only—"informal" contact with ISS Expedition 1 crew commander William "Shep"

Shepherd, KD5GSL, early on the morning of November 13. "I only had 20 seconds or so," said Shriver. Space Station Alpha was over Newfoundland at the time and had just completed an "engineering pass" contact with NN1SS at Goddard Space Flight Center in Maryland when Shriver dropped in a quick call, and Shepherd came back to him using his own call sign. "Well Randy, you are my first contact from the space station," Shepherd responded. A ham for about 20 years, Shriver says he built his station specifically for SAREX contacts (he's got four stacked 22-element arrays and 100 W). In 1985, Shriver worked Tony England, W0ORE, aboard the shuttle Challenger. WGAL-TV, Channel 8 in Lancaster included a report on Shriver's ISS QSO in its newscasts.

QSL POSTAGE TO REMAIN AT 20 CENTS

While first-class domestic postage in the US will increase to 34 cents starting January 7, 2001, the cost of mailing a postcard—such as a QSL card—within the US will remain at 20 cents. The governors of the US Postal Service this week announced that the price of a first-class letter will rise to 34 cents, but the cost of each additional first-class ounce will decrease from 22 cents to 21 cents. The new 34 cent letter-rate stamps go on sale December 15. International mailing rates also will rise January 7. An airmail postcard (QSL) will cost 50 cents if bound for Canada or Mexico and 70 cents to anywhere else in the world.

For other mail, the basic unit rate has been raised to one ounce--60 cents/ounce for Canada and Mexico; 80 cents elsewhere in the world, meaning users actually will be able to mail more for less. The complete rate schedule is available on the USPS Web site, <http://www.usps.gov/news/2001rate.htm>.—USPS news release

DISCOVERY CHANNEL TO OFFER ISS SPECIAL

The Discovery Channel will broadcast "Inside the Space Station" Sunday, December 10, at 9 PM and 1 AM Eastern and Pacific. The program mentions

the Amateur Radio on the International Space Station—or ARISS—ham gear aboard Space Station Alpha and the prospect of amateur contacts between the ISS occupants and schools on Earth. The program also will be broadcast Sunday, December 17, at 6 PM Eastern and Pacific; Monday, December 18, at 9 PM and 1 AM Eastern and Pacific, and Saturday, December 23, at 5 PM Eastern and Pacific. Visit the Discovery Channel Web site, <http://www.discovery.com/stories/science/iss/iss.html>.

The Public Service List (October)

There are currently no events seeking help but you may check the web site below for the most up to date information.

<http://purl.org/hamradio/publicservice/nediv>.

\$December Treasurer Report\$

For the month of November, income was \$35 in dues and \$18 from the book raffle. Three FoxFinder kits were sold and additional PC boards were purchased for stock, for a net FoxFinder expenditure of \$55.71. Newsletter postage and mileage reimbursement expenses for the QSL card sort totalled \$63.20. Net expenses for the month were \$65.91.



Fund balances as of December 14 are:

General fund \$789.77

Community fund \$1192.55

When you renew your ARRL membership remember to let me send it in for you. If you do this you will save a stamp and the ARRL lets us keep part of your dues to add to the treasury. Make your check out to NVARC.

73,-Ralph KD1SM

2000-2001 Fleamarkets

27 Jan Nashua NH NE Antique RC \$5@8 \$1@9 @ Res Ctr Church Joe 617 923 2665 F

17 Feb Marlborough Algonquin ARC Flea Market @ Marlborough Middle School Ann KA1PON 508-481-4988

18 Feb Westford MA GBARC Radio32 Antique @Regency @8 Tammy ARC 978 371 0512 F+

24 Feb Milton VT NVT WinterHamfest @8 @HS Rt7 Mitch W1SJ 802 879 6589

17 Mar Eastern Connecticut ARA Pomfret CT. kelli@arrl.net

25 March Framingham MA FARA @HS \$14/T@7:30 \$2@9 Bev N1LOO 508 626 2012



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Meetings are held on the 3rd Thursday of the month
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53.890 – 100Hz Repeater
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sions, corrections and inquiries should be directed

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