

telstar



THE MONTHLY NEWSLETTER OF STARS (SOUTH TOWNS AMATEUR RADIO SOCIETY)

ISSUE 131

NOVEMBER, 1991

STARS Membership Is Booming!

In October STARS established new club records for membership! The club voted in 15 new members for a new monthly record, and this brought the club's total membership to 157 for another record.

It's very encouraging to see this new level of interest in amateur radio, in general, and in STARS, in particular.

While the new No-Code Technician license has been bringing in record numbers of new licensees to amateur radio, it is interesting to notice that the 15 new members included 1 Extra, 5 Advanced and 3 General class licensees.

We also have been noticing that many of the new No-Code Technicians are immediately working on upgrading to get HF privileges.

STARS would like to welcome the following new members:

Scott Barto KB2KOL General
Ronald Brodowski KC2P Extra
Lawrence Dietz KB2JSE Advanced
Mark Johnston KE2YQ Advanced
Albert Kavanaugh WA2CTC Advanced
Mike Leaphart WA2ZSA Advanced
Eric Malinowski N2NJM Technician
Ted Malinowski N2NJL Technician
Ed Mino KB2JEN Technician
Sherwood Sipprell K2HL General
Michael Smith N2MRN Technician
Dave Thrun N2KZB Technician
Peter Vasilion KB2NMV Technician
Carl Zebracki K2TDJ General

November Meeting

All people interested in amateur radio are very cordially invited to attend STARS November meeting on Thursday, November 7 at 7:30 PM at the Hamburg Youth Center located on Prospect Street at Hawkins Street in Hamburg, NY.

You are invited

An important feature of this meeting will be nomination of officers for 1992. Bob Witt WA2IQX, president for the last two years, has announced that he won't be seeking a third term, so this important position will have to be filled. Members interested in an office or in nominating others for one should be sure to attend. All contested positions will be voted on at the December meeting.

Other topics for the meeting will be the CQ WW SSB contest, JOTA, an update on activities for the repeater, etc.

John Leitten KA2RFT will put on a demonstration after the business meeting of how to tie knots to help you keep your dipoles, etc. up in the air instead of down on the ground. Bob suggests you bring 2 pieces of rope about 4 feet long so you can practice.

A special welcome back is also extended to Richard Kapalczynski KC2EL Advanced who reinstated his club membership. Dick is now recovering from recent surgery.

A special mention must be made of Sherwood Sipprell K2HL who obtained his first amateur radio license in 1922! At the October meeting, he told stories about his early experiences in radio.

★ STARS ★

STARS & ARRL Memberships

Membership in STARS is open to anyone with an interest in amateur radio; an amateur radio license is not required.

Membership applications may be obtained from Frank Modzelewski WG2H, 1818 Clinton Street, Buffalo, NY 14206, from the newsletter editor or from board members.

Annual dues are payable on January 1 and are \$15 for a single membership, \$23 for family memberships and \$8 for a student membership (through grade 12). The dues are pro-rated on a monthly basis for new members plus there is an initiation fee of \$5 when first applying to the club. For example, a new member joining in July would pay \$7.50 (6 months X \$1.25/month) plus the \$5.00 initiation fee for a total of \$12.50.

Applications should be returned to Frank WG2H along with the appropriate dues. The applications will be reviewed and voted on by the Board of Directors at their business meeting. The applications are then voted on by the general membership at the next regular club meeting.

Members should send their ARRL renewal memberships to Jack Cullum, Jr. KB2ESM, 6871 Webster Rd., Orchard Park, NY 14127 along with a check made out to STARS. No extra cost to you and STARS benefits!

Club Nets

STARS club nets are open to all amateur radio operators and are designed to offer the participants the chance to exchange information on local amateur radio related activities as well as just doing some old-fashion rag chewing!

STARS HF net meets at 10 AM local time on Saturdays on 3.925 Mhz +/- QRM. Net control is usually Guz WB2E2U.

STARS-VHF net meets at 7 PM local time on Wednesdays on STARS club repeater WB2ELW 147.09/.69 (output/input). Net control is usually Bill N2GAO.

Jamboree on the Air

STARS participated in the Boy Scout Jamboree on the Air (JOTA) on the weekend of October 19-20, by setting up two JOTA stations.

Frank K2VTK headed the station set up Field Day style at a Boy Scout camporee in Evangola State Park on Saturday October 19.

Frank was assisted by Gary KB2ESN, Jake KB2NNN, Norm KD2KK, Frank W2ZJ, John KB2NMP, Jay N2MHD, Bob WA2IQX and Frank's son Darren.

They ran into a problem setting up the station when they found that they had a very high VSWR reading with the first antenna they put up. Trying a second antenna, they found the same problem. Eventually, they determined that the problem was with a very large battery that they were using for power. It was only providing about 8 volts, which wasn't enough to run the radio properly.

They finally got on the air using a generator loaned to them by John. Gary brought a second radio out to help make more contacts. Frank W2ZJ demonstrated CW.

Frank want to thank all of those who helped him for their persistence and dedication!

Terry KM4XZ and Frank W2ZJ hosted about 20 Boys Scouts, Cub Scouts and Webelos Scouts at STARS Nike Base club station on Sunday October 20 for JOTA. Terry and Frank demonstrated HF SSB, HF CW, 2 meter repeaters and the repeater autopatch.

The scouts were thrilled to talk to other scouts in Texas and western Canada. They exchanged names, ranks, years in scouts, and interests such as camping, sports and school activities.

While the Scouts certainly were interested in amateur radio, boys will be boys and the highlight of their visit was probably the cider and cookies served as a snack!

The boys went home with literature on how to get into amateur radio and special QSL type cards commemorating their participation in this year's JOTA.

STARS GOSSIP COLUMN

This month's column will start with the nice field trip to the Motorola Inc., Co., in Elma, one of the world's leading providers of electronics equipment.

Motorola provided us with two very talented guides, Ms. Donna Lilly and Mr. Walt Burton, to take us through the plant and answer all of our questions. Ms. Lilly took us into the training room and gave us a run down on the operation of the plant and the various products produced there. Then they took us on a tour and gave us a hands-on talk on all the operations and the way the equipment operated. It sure was fascinating and interesting.

Motorola stresses cleanliness on all operations and maintains a clean room where it is necessary to don white smocks and use hair covers. Even the clean-up lady looked cute in her outfit.

Before I retired, I was a tool and die maker by trade and was very impressed on the flow of parts, from the incoming of raw materials and parts to the finished product. There was an absence of trucks and carts and means of transportation from one operation to another. I know some of you work in other factories and see the trucks and hand wheel carts take finished parts from one machine to the next. Here it was done by conveyors, and the layout was such that when the parts were finally assembled they were next to the packing and shipping department. The modern building was built with future expansion in mind.

Western New York should be proud that Motorola made a decision to stay here. We at STARS wish them luck and a big thank you for the field trip.

Well now, STARS will expand their operating time at the Nike Base. Chairman Terry KM4XZ states that he will keep the club station open on certain weekends for some of the major contests if there is enough club interest. Remember that we have heat in the building now. But please make a sked ahead of time with Terry so that there will not be any conflict. The other weekend the members operated a RTTY station in a contest. This is a first for the club and from the good reports, not the last! So, if contests are your specialty (or you just want to work new countries), why not join the crowd. Lots of good contests are still coming up in 1991.

September was a good month for STARS, there were fifteen applications from new members voted on. This is the largest list since the club was started.

Don't forget that STARS held their last VE exam session for 1991, but that does not make it end for you to upgrade. Check the list elsewhere in this newsletter for exams being put on by other local clubs.

Well, now comes the election of officers. Not only do we have to nominate and elect officers for 1992, we also must appoint a new election committee. I lost my source of printing ballots, so I must step down. You know, our constitution states that all members must be notified in writing on the election; but, if you are a paid-up member and get the Telstar, the last three issues had mention of the election. So that should be sufficient. You know there is a chance to have nominations and elections at the same meeting??

Happy Hamming! Guz WB2EZU

Training Classes

Greg KE2VW and Al K2DWI have volunteered to put on Novice/Technician training classes. They are looking for people interested in taking the classes and in people willing to help them instruct. If there is enough interest (and help available!), they might also include General class training. If you want to see this happen, call Greg at 537-2830 or Al at 652-8890 now!

Repeater Update

At the October meeting, members voted to buy a back-up repeater and controller to reduce the possibility that WB2ELW would ever be down for an extended period of time because of technical problems. Money was also voted to buy upgraded software for the current controller to keep it state-of-the-art!

THE TECHNICAL CORNER

by: Greg Young K2EWW

This is the first installation of a column I will be doing for the STARS newsletter, as time permits.

The first topic will be nickel-cadmium batteries - facts and fiction.

Nickel-cadmium batteries are ubiquitous, with applications wherever portable operation of low voltage devices occur.

Recently there has been much controversy as to the storage capacity of these batteries, specifically whether this capacity changes over time based on how devices powered by these batteries are used.

QUESTION:

Do nickel-cadmium batteries have a limited capacity?

ANSWER:

Yes, all batteries have a fixed capacity as well as operating voltage. Their capacity (in the case of batteries used for handi-talkies) is rated in milli-amp hours (maH).

QUESTION:

Do nickel-cadmium batteries develop a "memory", that is an alteration of the capacity based on improper usage?

ANSWER:

Yes and No!

The common misconception is that nickel-cadmium batteries lose their capacity over time, if not completely discharged after being recharged.

While it is important to cycle a new battery through charging/discharging cycles initially, charging batteries in less than fully discharged conditions will not reduce their capacity if done properly.

The reason most nickel-cadmium batteries develop "memories" is that improper charging techniques are applied to the battery.

For the purposes of the rest of this discussion C refers to the total storage capacity of the battery in maH.

There are three types of chargers, which are generally available.

The first type is the trickle charger which charges the cell at a rate sufficiently high to keep a charged battery fully charged. The trickle rate is typically .02C or below, which is too low to effectively charge a discharged cell.

This particular type of charger is useful in applications where the battery is required on a moment's notice; and you want to assure full charging capacity, without being concerned about damaging the battery by overcharging it.

The second type is the constant rate charger, which is probably the most common for use with handi-talkie batteries, and is also referred to as an "overnight" charger.

The normal sealed cell is designed to be charged at a rate of 0.1C continuously for a period of 14-16 hours. At the end of this period, the battery will be fully charged.

Many of these (overnight) chargers have a built-in safety factor so that if the unit is left on inadvertently over 16 hours, damage to the battery from over-charging and the expansion of internal gases will not occur. This is prevented by reducing the charge rate to less than 0.1C. Unfortunately, this over the long term will serve to diminish the capacity of the cell and hence create a "memory".

If the "overnight" charger constantly charges at 0.1C or above, the capacity of the cell will never fall below 93% of its initial capacity, during its life.

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CQ WorldWide SSB Contest

Terry KM4XZ hosted members at the Nike Base club station over the weekend of October 26-27 for the CQ WW SSB contest. This is traditionally the biggest contest of the year and involves stations from all around the world. Many hams take vacations over this weekend in small foreign countries, like many of the Caribbean islands, just to put them on the air.

Instead of trying to actually contest by racking up the most points, the members shared the club station between themselves to work countries both under their own call and under the club's call sign, WB2ELW. This was a low-key approach designed to let some of the members learn more about contests and to increase their countries worked. For some, it was their first experience with contests.

The equipment used included an ICOM 735 transceiver, a Heathkit 200 amplifier, the 6 element beam for 10-20 meters and dipoles for 40 and 80 meters. A packet station using a laptop computer and an AEA TNC was used to tie into the Packet Cluster DX spotting networks.

The opening hours on Friday night found the members slugging it out with the pile ups to be recognized by the DX stations. This was unusual since the Nike Base club station usually works DX quite easily. Obviously, the pile ups were huge at the beginning, because some other members said they only worked 2 or 3 stations an hour on Friday night from their home stations.

Saturday afternoon and evening found most of the DX stations easier to work except for some of the more rare locations.

Members participating included Steve KB2EQV, Scott KB2KOL, Bob WA2YSJ, John KA2RFT, Ed KB2KVA, Peter KB2NMV, and Jay N2MHD.

Despite working less than half the hours the contest was on and sharing the station with members making contacts with their own calls, members worked a total of 78 countries (including all continents and 27 zones) under the WB2ELW call sign.

Batteries

Continued from Page 4

The third type of charger is the "quick charge" which is designed to charge the cells at rates of up to 0.3C.

Most of these devices have an LED indicator, that either changes color or goes out when the cell is fully charged.

Some rapid charges drop back to trickle charge after this time period, while others drop back to the "overnight" charge. Most nickel-cadmium cells used for handi-talkies today, have the ability to be rapidly charged, and in fact some of the current literature suggests, this may actually be preferred to a constant 0.1C charge rate.

Not all nickel-cadmium batteries can undergo rapid charging, as it does depend on cell construction, and whether or not the free oxygen generated when the battery is overcharged can be utilized to limit the gas pressure and avoid leakage or explosion.

If you are building such a charging device, you must design some form of current reduction, so once the battery has reached adequate charge, excessive pressures are not generated in the cell.

In summary, the nickel-cadmium battery is a very useful device, being capable of up to 1,000 "charge/discharge cycles", if properly cared for.

As you can see from our discussion, the development of a "memory" is a function of the way the batter is recharged, rather than the way it is "put to use".

I hope this proves useful as you purchase new batteries and/or chargers.

Among the countries worked were Easter Island, Cape Verde, Reunion Island, Mongolia, Wake Island, Turkey, Zimbabwe, Gibraltar, Israel, Togo, Senegal, Lesotho, Sierra Leone and Albania.

Terry would like to hear from members if they would be interested in doing something like this for other contests in the future.

IS SATELLITE OPERATION FOR YOU?

by: Frank Green W2ZJ

As a newcomer to satellite work, having been on the birds less than a year, I thought it might be helpful to share some of my initial perceptions about this aspect of our wonderful hobby. Unfortunately, there are still a lot of myths surrounding what amateur satellite operation is all about...myths which may be preventing many hams (you?) from sampling this unique part of amateur radio.

Like you, I've seen the complaints from those who bemoan how horrible it is that satellites have yet to enter the "mainstream" of amateur radio. Also, complaints still abound that the "equipment is too expensive" or that satellite operation is "still too complex" and that new "black boxes" must be purchased for each new mode that gets activated.

One of the main reasons I became active in satellite work was precisely TO GET AWAY FROM the mainstream of amateur radio! Having been a ham for nearly 3 years, I was growing increasingly weary of the same old predictable routine of "name, rank and serial number" QSOs on the other bands. This, along with the increasing amount of "trash" I was hearing there, sent me on a search for something different...something off the beaten path that not everybody else was doing and yet still had some challenge left in it. While some may call this an "elitist attitude", I would argue that it's always nice to get away from the mainstream every now and then. (This concept is also known as "vacation"!)

As for the "too expensive" label...I say "BUNK!" I, like most others, started out on Mode A (uplink on 145 Mhz, downlink on 29 Mhz) through RS-10/11 with a simple vertical antennas and modest power (would you believe as little as 5 watts to a Ringo Ranger!?) In the course of my operations on Mode A, I've contacted several hams who were simply keying the PTT switch on an old 2 meter FM rig for their uplink. This produced a rather chirpy, but yet workable signal up and through the bird on CW. Nevertheless, these folks were ON and seemed absolutely thrilled that they could do so much with what little they (and I) were using!

Recently, a buddy of mine found a used Kenwood TS-700A at a hamfest for "a song" and has since been having a ball working through RS-10! Nice try, but expensive it doesn't have to be!

Now, granted, my recent leap to Mode B (uplink on 435 Mhz and downlink on 145 Mhz) is going to put a crimp in my budget for a while. But it was my personal choice to step beyond the crucible of the Mode A birds, and was more of a "want" than a "need". Like most other aspects of our hobby, satellite work can be as simple or elaborate as we wish it to be. It absolutely DOES NOT require the purchase of a "black box of the month" (or the checkbook to finance them!) While many hams active on the birds are taking advantage of the higher frequencies and digital modes, the bulk of satellite operation still takes place using SSB and CW on Modes A and B. It doesn't require a large investment to get started on Mode A because most hams already own HF rigs and antennas capable of receiving the 10 meter downlinks of the two current RS-series satellites. What's more, I've found reasonably priced all-mode 2 meter rigs are now rather plentiful on the used market, so getting a way to "uplink" on Mode A can often be accomplished for a few hundred dollars...less if you, like my friend, hunt around for a bargain!

So what are YOU waiting for? What's keeping YOU from giving it a try? Believe me, the first time you hear your own voice coming back down through a satellite's transponder will be a thrill that will rival your first Novice contact...sweaty palms and all! It was for me.

See you on the birds!

Operation Big Three

Amateur radio operators in Erie and Niagara counties as well as Southern Ontario provided back-up communication for emergency facilities and personnel during Operation Big Three, a simulated emergency test held on September 14.

STARS was well represented by members who were commended for the excellent job they did. Members participating included Tom KA2ZSC, Brian KD2DL, Peter KB2NMV, Gary KB2ESN, Norm KD2KK, Paul N2MGG, Dan N2IUH, Shane WB2WPM and Bob KA2MLK.

Amateur Radio Examinations

STARS will hold their next amateur radio test session on April 8, 1992 in Hamburg, NY. For information, contact Norm Jones KD2KK at 824-1148.

Lancaster ARC (LARC) will hold test sessions on November 20, and December 18, 1991; and January 15, February 19, March 18, May 20 and June 17 - 1992 in Lancaster, NY. For information, call Chuck Koester WD2AIK at 937-3592.

ARATS will hold test sessions on November 2, and December 7, 1991; and January 4, February 8, March 7, May 9 and June 6, 1992 in Tonawanda, NY. For information, call Vern Siegel AA2AC at 693-5977 (days) or 634-5276 (nights).

Lockport ARA (LARA) will hold test sessions on January 25 and April 25, 1992 in Lockport, NY. For information, call Bobbie Gritzmacher KB2LTD at 433-3396.

For test sessions in Hamburg and Lancaster, send you 610 application, a copy of your current license (if any), a copy of any element credit certificate that is applicable and a check for \$5.25 made out to Dick Haungs to:

Dick Haungs W2UJR
11315 Cary Road
Alden, NY 14004-9547

Please include your telephone number and what test elements you want to take or what license class you want to upgrade to.

People desiring to take Novice exams only should contact John Leitten KA2RFT at 648-0341 or write to Dick Haungs at the above address.

Dick Haungs W2UJR
STARS/LARC VE Liaison

CQ WideWide RTTY Contest

On September 28-29, Bob KA2WYE and Ken KB2HRZ put WB2ELW, STARS Nike Base club station, on the air to participate in the CQ World Wide RTTY contest.

For equipment, they were using a Kenwood TS-140, a PK-232 multi-mode TNC, an Epson lap top computer with a CGA color monitor, and a Hitachi oscilloscope for tuning purposes. They had planned to use a Kenwood amplifier, but compatibility problems with the 220-volt outlet caused them to run barefoot throughout the contest.

In total, they made about 150 contacts during the contest for an estimated score of about 31,500 points.

About 40% of their contacts to be with US stations. They worked 13 states in all 10 of the US call districts.

Some of the foreign stations they worked included Sierra Leone, Benin, The Vatican, Liechtenstein, New Zealand, Antigua, Costa Rica, Dominican Republic, US Virgin Islands, Paraguay, Moldavia, Latvia, Bulgaria, Belgium and Sweden.

Members stopping by to learn more about RTTY and to have a chance to work the equipment included Gary KB2ESN, John KB2NMP, Jake KB2NHN, Bob WA2IQX, John KA2RFT, Norm KD2KK, Ed KB2KVA and Terry KM4XZ.

Bob and Ken want to thank everyone for coming out to support them. They are already making plans to do it bigger and better next year.

Information?

Looking for information on local amateur radio activities? Check into STARS 2 meter net on Wednesday nights at 7:00 PM. Check-ins have been running 15 to 25 each week, and lots of good information is covered. All are welcome!



STARS



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Club Repeater

The club repeater (WB2ELW/R) is located near Orchard Park, NY (147.09/.69 output/input). The repeater is open to all amateurs. Autopatch privileges are available to club members.

Club Meetings

Club meetings are normally held on the first Thursday of the month at the Hamburg Youth Center (Prospect and Hawkins St.) at 7:30 PM. Everyone is welcome; neither club membership nor an amateur radio license is required.

Business meetings are held on the fourth Tuesday of the month at the Hamburg Youth Center at 7:30 PM and are open to all club members.

Club HF Stations

The club Nike Base HF Station (WB2ELW) is located on Lakeview Rd. 1.75 miles e. of Rte 20 next to the Hamburg Town Arena. The station is operated on most Mondays between 7-9 PM local time and is a great DX station. All are welcome.

A second club HF station is located at the Hamburg Youth Center.

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