

This Month's Meeting

At the April meeting we will hold elections and the program will be on SSTV by Paul N1QDX. There are still a few items left from the estate sale like a Kenwood 430 w/ps and a few smaller items. Erik will have a list at the meeting, the leftovers go to Rochester.

The May program will be a presentation on VHF Contesting by Les KA1DZV.

If you have a show-and-tell type of thing or a story you can share bring them along to any meeting.

Last Month's Meeting



The March meeting was a QSL card sort. Burt Eldridge W1ZS, the W1 QSL Bureau Manager brought down cases of cards for us to sort. Burt gave us a brief update on

what's going on at the bureau and some current statistics on the flow of cards

The incoming bureau no longer accepts stamps and envelopes for your cards, only money. Not only is this easier for the sorters it saves you money because they can always use the proper postage.

Then he started opening boxes and breaking open the interior envelopes. Cards and more cards there was no question that he could open them faster than we could sort them even with the twenty to one odds we had in our favor. Actually it was more like one to twenty odds clearly in his favor.



Burt, who lives in Brattleboro Vermont, filled up his van and motored down to our meeting.



There were cases and cases and cases. Here are some very neatly packed QSL cards from Japan.



We had a good turn out for the meeting and had a few non-members drop in.



Bruce KC1US (he's the second person back on the right in the picture on the left) talked to us briefly about the Walk for Hunger. He is organizing the communications for that event. See the PSLIST for more information if you are interested in helping with the communications for that event or most others in New England. <http://purl.org/hamradio/publicservice/nediv>.

Not shown in this picture were the sorters that chose to do it sitting down. After running up and down the length of four tables for a couple of hours it seemed like a better idea than it had originally.

After we got through sorting into the twenty six letters the resulting bundles get forwarded to the letter sorters. There is a person responsible for each letter (a few have more than one). They have to again sort the cards this time down to the individual person and take care of things like mailing.

Ed note: Bob W1XP is our outgoing QSL bureau manager for ARRL members. The club picks up the tab for shipping and the fees for the outgoing League Bureau.



Show and Tell

Bob W1XP brought a project he had completed. An antenna match built in an Ice Cream container. Recycling and homebrew all rolled into one.



The most asked questions were "what flavor was it?" and "did you eat it all yourself?" Oh, and there were a few questions about how it worked.



And a thing of "beauty it is. I still wonder what flavor it was?"

Public Service

The first event of Spring is coming up on April 30th. The Groton Road Race is the largest local event in terms of ham participants that we support. We depend on a good turnout from as many members as possible to make this event a success. The contact for this event is Erik KA1RV 978-448-5536 or piip@merl.com.



The Harvard Bike Race date has changed to July 16th. It was originally scheduled for Sunday May 14th which was Mothers Day and of course is Hoss Traders weekend. If you can help out please contact Stan KD1LE at 978-433-5090 or pozerski@net1plus.com

Adopt A Highway

In April we have our first road cleanup for the new millennium. It will be Sunday April 16th. I would have preferred to stick to the Sunday after our meeting but that is Easter and the next Sunday is the Groton Road Race. The first cleanup for the year usually takes a bit longer, but with a good turn out it should still be only about one hour. Hope to see you there.
Stan

The 3905 Century Club by N1ABY

One of the many facets of Amateur radio that I have been participating in for almost 20 years is the 3905 Century Club. The Century Club is a worked all states and awards net. It is open to all Amateur stations, from anywhere. It gives you many opportunities to work the rare states and get a few DX contacts, too. For the paper chasers, they have 25 different awards that you can earn for contacts on the net. Some of them are quite a challenge to earn! All this information and more is also available on the Web at <http://www.kis.net/kd3o>

The Century Club started out as a Bicentennial Worked All States net in 1976. All of the regular participants enjoyed the net so much that they decided to keep it going after the end of the Bicentennial year and incorporated it as the 3905 Century Club in 1977. The net started out with nightly nets on 40 and 80 meter SSB and they are still operating at almost the same spots on the dial – 3.904 and 7.2335. I found the 40 meter net in 1979 and started operating on the 80 meter net in 1980. Over the years the Net has added sessions on 160 meters, (one of my favorites) 40 and 80 meter CW and 40 and 80 meter RTTY. These sessions meet 2 or 3 nights a week (160 and 40 CW) and some only one (80 CW and RTTY nets).

The net sessions are run as a directed net, lasting 4 hours, with a different volunteer Net Control station each night. The NCS takes a list of check-ins starting with the call area corresponding to the date (for example, 1's are first on the 1st, 11th, and the 21st). The net control takes check-ins from DX stations and what the Net refers to as Masters Degree award holders first followed by each call area, in order. After the NCS goes through all of the call areas, a general call is made to pick up any stations that didn't get checked-in on the first call. On weekend nights, it's not uncommon to have 75 or more check-ins on the 40 and 80 meter nets, so there are lots of opportunities to make contacts on

the Net. There are usually several mobiles, YLs and state capitols, not to mention Canadian provinces and even some DX, even a rare one some times! If you wanted to work WAS – YLs, All State Capitols or maybe All Mobiles, this is a good group to be on with! The NCS goes through the list in order, giving each station the opportunity to make a call, until he goes through the entire list. When the list is short, each station gets several chances to make a call. The stations in the rare states, DX and state capitols often get many calls, which can make it kind of slow for the stations in the more common states!

It is expected that all of the stations on the Net will QSL each contact, since the cards are required to earn the various awards that the net offers. You become an official member of the net by earning the 100 Point award. You qualify for it by working 10 state capitols (10 points each) or a combination of various other stations on the same band. This makes you a full member of the net and allows you to vote in the annual election of officers and for the call area directors every other year.

Beyond that there are the 500 Point and 1000 point awards. The 1000 Point award requires contacts with 5 stations in each state (except KL7 & KH6), each with a different prefix, 10 mobiles and 15 DX contacts, from at least 5 different countries. I have the 1K award on 80 and am "fairly" close to having one on both 40 and 160. Beyond the 1K award, there are multiples of the 1K award, as far as you want to go, except you *can't* use any stations that you used for your previous awards! As tough as that may sound, there are several long time stations that have 12K awards! That takes a lot of years of operating on the nets! The award submissions are checked by an awards manager in each call area.

To make QSLing easier, the net operates free QSL bureaus for the 40 and 80 meter nets and a third one for all of the other nets. It works much the same as the incoming DX bureau. You send your outgoing cards for contacts on the net and some SASE's to the proper bureau manager, and he forwards your cards to you. It works pretty effectively and it saves a lot of money over QSLing directly with an SASE for each card. The majority of the stations who participate on the nets are extremely good about QSLing promptly, since most every one needs the cards for the awards they are working towards.

As I mentioned before, everyone is welcome to join in, especially the CW nets! If you have a unique prefix, you will be sure to get lots of calls! Come on and join us every night on 40 at 7.2335MHz at 0000Z or on 80 at 3.904 at 0200Z. New call signs are really appreciated, especially on the CW nets. See you there! Craig N1ABY

How Radio Works by W1XP

“Many amateurs are proficient operators, but have only a vague idea of the theory of electro-magnetic waves. For example, you continually transmit Hertzian waves, but have you ever pictured what happens when you send a dash?”

The above is the opening statement in an article by Clarence D. Tuska, in QST No. 1, December 1915, entitled “Pictured Electro-Magnetic Waves”. When I read this article a few months ago it struck me that the statement is as true today and it was in 1915. So I thought I would try to write something that would help give a better understanding of what electromagnetic¹ waves are, and how they are radiated and propagated. In thinking about a title for the article the simple one above seemed the best fit, for it is electromagnetic waves that make Radio possible. This discussion will be broken up into a series of non-mathematical articles, which will cover what radio waves are, how they are radiated from the antenna, and how they are propagated through space. So let’s get started with what electromagnetic waves are.

“Radio waves” is a simple name that is used to refer to electromagnetic waves that are used for radio communications. It is an application specific name and can be applied to any electromagnetic waves that are used for any of the applications that utilize the radiation and reception of energy. This includes radio, TV, radar and data modes. It includes waves from sub audio frequencies, to now those of light frequencies. The devel-

opment of radio communications over the years has included the expansion of the frequency limits in both directions. The names used to refer to these waves has varied over the years also. The reference in the 1915 QST article above referred to “Hertzian waves”. This was in recognition of the 19th century physicist, Heinrich Hertz, that discovered and did much of the defining work with these electromagnetic waves. They could just as well be called “Maxwellian waves” in honor of the Scottish mathematician, James Clark Maxwell, that predicted the existence of the waves mathematically before the existence of the waves was recognized. We honor Hertz today with the unit of frequency called a Hertz and call the waves whose existence he demonstrated, electromagnetic waves. .

Hertz in a series of classic experiments verified the existence of the electromagnetic waves and their ability to propagate energy through space. He used a spark coil, spark gap, and a loaded dipole antenna to generate the electromagnetic waves. His receiver was quite simple. It was a resonant loop antenna with a very small spark gap at the opening. When the spark coil was engaged it was possible to observe a small spark across the gap in the receiving loop antenna. He went on to demonstrate the polarization, reflection and refraction of the waves which bore his name. The low power and insensitivity of his equipment did not allow much range and the use of the waves for communications would have to wait for Tesla, Marconi and others.

So just what are these magic waves and how do they travel through space? Well the name says it all. They are composed of electric and magnetic time varying fields. It takes both to have a radio wave. In an electromagnetic wave, as the old song says, “you can’t have one without the other”. Now you are all probably familiar with both electric and magnetic fields. It is a static electric field that causes the pet hair to cling to our pants, and a static magnetic field that causes the magnets to cling to the refrigerator door. So how can these fields make a radio wave you ask? Well let’s consider each separately a bit more first. Then we will try and combine them into a radio wave.

¹One thing that has changed since 1915 is the accepted spelling of electromagnetic.

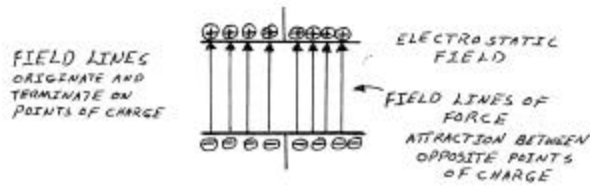


Figure 1. Static Electric Field. Note that field lines originate and terminate on points of electric charge. Energy stored in electric field due to difference in charge between the plates.

The primary feature of a field, either electric or magnetic is that it stores energy. This seems to be a fundamental concept that many of us lose track of. Fields are a way of storing energy. Both the electric and magnetic field store electrical energy. For example the capacitor stores energy in the electric field between the plates and the inductor stores energy in the magnetic field that surrounds the conductors. The static electric field is shown in figure 1. We will start with a static field. In this field the electric field lines begin and end on points of charge. The field lines are also normal to the surface of the conductor but they may be curved in space. We are all familiar with the demonstration of picking up small pieces of paper with a comb on a cold dry day. This is really a demonstration of the force of attraction of unlike charges, or more correctly a difference in charge. It does demonstrate that we can place a charge on something by physical action. The field lines can be kind of envisioned by the attraction of long hair to a charged comb. In a time varying field, the field builds up in one direction, then decreases to zero and then repeats in the opposite direction. The period and intensity of the electric field follows the alternating voltage across the capacitor.

The magnetic field is also a way to store electrical energy. It is caused by an electric current, which is the movement of a charge from one point to another. The magnetic field is closed on itself while the electric field is closed on points of charge. How the electric field breaks free of the charges is part of the radiation mechanism that will be covered later.

The fields of course are invisible. The electric field can be considered as energy stored by position. That is the charges on the plates of a capacitor represent the energy stored as a result of being put there by some means. The energy is stored in the field that exists between the plates

due to the difference in the charge between the plates. When we charged the capacitor we put more electrons on one plate and removed electrons from the other. The energy stored in the capacitor is a result of the work we did in moving the charges around. We can recover the energy stored in the electric field when we discharge the capacitor. That is, move the charges around until the number of charges on each side of the capacitor is equal.

The magnetic field on the other hand can be considered energy stored by motion. The magnetic field is the result of electric charge in motion. Recall for the moment that electric charge in motion is an electric current. If a charge is moving it causes the generation of a magnetic field. The energy that it took to set the charge in motion is contained in the magnetic field. We can recover the energy in the magnetic field by stopping the current. That is stopping the motion of the electrons. Just like stopping a moving car by means of dissipating the kinetic energy in the brakes, we need to do the same to the energy stored in the magnetic field. Otherwise the current will flow forever. This is in a lossless circuit where the energy is not dissipated in any loss, which is resistance. Capacitors have held charge for very long times and “superconductors”, operating at very low temperatures, have supported currents with no measurable decrease in amplitude for years. In each case the energy is stored in the electric or magnetic field. Figure 2 shows the magnetic field around a current carrying conductor. Note that the field lines are closed on themselves. The plane of the field lines is at right angles to the axis of the conductor. The magnitude of the field is proportional to the current flowing in the conductor.

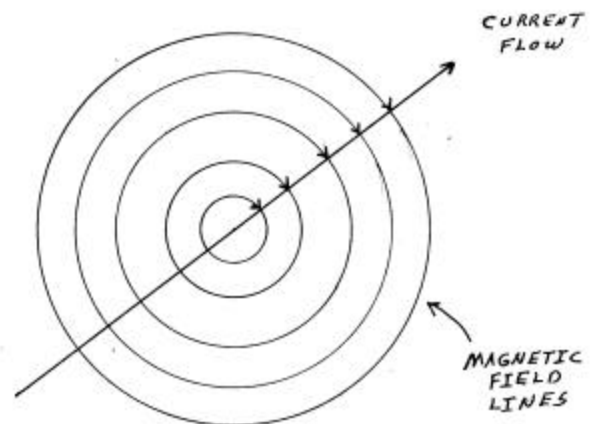


Figure 2. Static Magnetic Field. Note magnetic field lines are closed. Plane of field lines is at right angles to the path of the current.

So we have two distinct fields, the electric field which is the result of the displacement of charge in space, and the magnetic field which is the result of the motion of electric charge, or current. In our electromagnetic wave the two fields are at right angles to each other. This is necessary to the existence of the electromagnetic wave. Furthermore the direction of wave travel (energy flow) is at right angles to the plane of the electric field and magnetic field lines. See the figure 3 for a graphic description of the electromagnetic wave. Note that electric and magnetic field lines are always at right angles to each other, and that they vary in the same way. Now there is one other requirement for wave propagation. That is that the fields be time varying. This means the intensity of the fields has to be changing with time. This is in a sinusoidal manner as is caused by a sine wave voltage source forcing a current in a radiating element. At any point along the path of wave travel, the intensity of the electric and magnetic fields vary in a sine wave fashion as the wave travels by. The electric field for example, starts at zero and increases to a maximum value and then decreases to zero. It then reverses, just as the polarity of an ac voltage reverses in a sine wave, and increases to a maximum in the opposite direction. The magnetic field behaves in exactly the same manner. It also undergoes a reversal at the half wave point in the wave travel. This is necessary so that the direction of travel of the wave is unchanged. Refer again to figure 3. It is pointed out that by somehow changing either the direction of the electric or magnetic field will cause a change in the direction of travel of the electromagnetic wave, and this can be exploited as we will discuss later in this series of articles. There is one other important property of the two fields in the E-M wave. The energy in each field is at all times equal. That means that at any moment in time, half of the energy in the wave is stored in the electric field, and half is stored in the magnetic field.

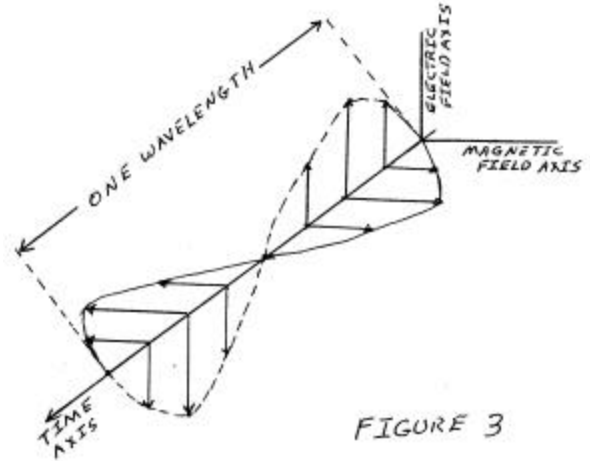


Figure 3. Electromagnetic Wave. The Electromagnetic Wave is a combination of a time varying Electric and Magnetic Field at right angles. The direction of propagation is at right angles to the plane of the two fields. At any instant in time the energy in the Electric and Magnetic field is equal. Half the energy is carried in the Electric field and half in the Magnetic field.

Now there is only one more important feature of the fields in the propagating electromagnetic wave. That is the electric lines of force are closed on themselves. In a static electric field the electric lines of force originate on a charge and end on an opposite charge. This was mentioned above. In a traveling wave, the electric lines of force are closed on themselves as are the magnetic lines of force. This leads to some interesting aspects of the electromagnetic-magnetic wave which we will cover later. The speed of electromagnetic wave travel is that of light. Since light is just another special case of electromagnetic radiation this should not be a surprise. For years the nature of light, electromagnetic radiation, was debated by the physicist. Was it a wave or stream of particles?. Many of its properties can be explained by only one hypothesis. It took Neils Bohr and the Principle of Complementary in 1928 to call a truce to the argument. The only difference between our 160 meter signal and the highest cosmic rays is that of frequency. The same is true of the sub audible electromagnetic waves that are produced by lightning discharges that rattle around the world many times in the cavity between the earth and the ionosphere. The only difference is the frequency of oscillation of the electric and magnetic fields.

At this point we will end this part of our discussion. Just remember what we have dis-

cussed. That an electromagnetic wave is made up of an Electric Field, and a Magnetic Field, that these fields store energy, and that by moving the fields through space we can move energy through space. Also that they travel at the speed of light. Next time we will go into the propagation and attenuation characteristics of the electromagnetic wave. I hope you have found this both interesting and informative.

73 till next month. Bob W1XP

SKYWARN Training



The National Weather Service will be holding a training session in Shirley. Whether you are interested in becoming a SKYWARN observer or are just interested in the weather these are excellent presentations

with pictures, videos, and explanations of various weather phenomenon. The training will be held Wednesday April 26th from 7 to 10 PM at the Lura A White Elementary School. The school is located at 34 Lancaster Road in Shirley.

The Public Service List Feb 28



Listing public events at which Amateur Radio communications is providing a public service and for which additional volunteers from the Amateur Community are needed and welcome. Please contact the person listed to identify how you may serve and what equipment you may need to bring.

Every event listed is looking for additional volunteers

Date	Location	Event
Contact	Tel/Email	
Apr 30	Groton MA	Groton Road Race
Erik KA1RV	978-448-5536	piip@merl.com
May 7	Boston MA	Walk for Hunger
Bob K1IW	413-647-3060	http://cpsg.amateur-radio.net
May 21	Devens MA	Parker Classic Race

Stan KD1LE 978-433-5090
 pozerski@net1plus.com

May 21 Needham MA ADA Tour de Cure
 Bruce KC1US 781-275-3740
<http://cpsg.amateur-radio.net> kc1us@qsl.net

Jun 11 Cape Ann MA ADA Tour de Cure
 Keith N1HLK 781-631-2877 n1hik@nsradio.org

Jun 25 Biddeford ME Tour de Cure
 Bryce K1GAX 207-799-1116 k1gax@arrl.net

Jun 29-Jul 2 Fitchburg MA Fitchburg Longsjo
 Classic Ralph KD1SM 978-582-7351
kd1sm@arrl.net

July 16 Harvard MA Harvard Classic (bike race)
 Stan KD1LE 978-433-5090 kd1le@amsat.org
 World Wide Web users: the most recent copy of this list is maintained as
<http://purl.org/hamradio/publicservice/nediv>.

Y2K Fleamarkets

29 April Nashua NH NE Antique RC \$5@8 \$1@9
 @ Res Ctr Church 617 923 2665

12,13 May Rochester NH Hoss Traders @FG x13
 rt16 Joe K1RQG 207 469 3492

21 May Flea at MIT Nick 617 253 3776

4 June Newington CT NARL

18 June Flea at MIT Nick 617 253 3776

From the ARRL Letter

NEW MEXICO HAMS STAY ON AIR AS MOST OF STATE GOES DARK

New Mexico suffered what could be the largest power loss in the state's history March 18. Amateur Radio operators stood by to fill the communication gap as the outage that resulted from a grass fire left thousands without power.

"We had done our Y2K exercises well, and it paid off," said New Mexico ARRL Section Manager Joe Knight, W5PDY. Knight says smoke from a large grass fire caused the large insulators on a major power line to arc, shutting down the line. Three ma-

major power lines from the Public Service Company of New Mexico's Four-Corners Power Plant followed suit. The outage subsequently took out a major power generating unit. "In a domino effect, most of the state of New Mexico, a small part of southern Colorado and part of El Paso, Texas, were out," Knight explained. Thanks to emergency power, hams and repeaters remained operational.

"Needless to say, there were no cell phones, and the 911 system was jammed," Knight said. ARES/RACES was activated and in full operation through both local and linked repeaters throughout the state. "Operators were cautioned to transmit only for emergency traffic in order to conserve our battery power on the linked repeater system. Since the shopping malls, grocery stores, restaurants, filling stations and traffic lights were down, it made for a real Y2K emergency."

Knight says the linked system was able to help keep the public up to date on what was happening. In addition, 21 battery-powered HF stations checked into the New Mexico Roadrunner Traffic Net and were on standby until the power was restored to most of the state. Two broadcast radio stations, KOB AM and KDEF AM, were on the air using emergency power generators. Knight said the New Mexico State Emergency Operations Center and the Albuquerque EOC also were on line using emergency power.

"There were several traffic accidents and a few burglaries, but the hospitals all operated on emergency power," Knight reported. Approximately 1.3 million people were without power for about three or four hours following the outage, which began around 4:30 PM Mountain Time.

In Las Cruces, officials had to halt the state's high school basketball playoffs when the power went out in the arena.

"It was certainly a wakeup call for amateurs in the affected areas," said Knight.

FLORIDA HAM CITED FOR SAVING LIFE

Ken Johnson, N4ZEB, of Palm Bay, Florida, received the Life Saving Award from the Palm Bay Police Department on March 8 after helping to save the life of a motorcyclist earlier this year. Johnson is a volunteer with the Palm Bay Police Department's Volunteer Citizens Observer Program (VCOP) and Disaster Communications Services (DCS) programs. Early on February 27, he and two other volunteer observers were on a night patrol as part of a pilot volunteer program to perform nighttime commercial building checks for the Palm Bay

Police Department. At about 2 AM, Johnson spotted a fast-moving motorcycle on the opposite side of the highway go out of control. The volunteer observers reported the accident to police. Johnson then went back to where the motorcyclist was lying unconscious in the passing lane of the highway. Because that section of highway was unlighted, the motorcycle off the road, and the motorcyclist dressed in black, the accident scene was not obvious to traffic. Johnson positioned his vehicle between the traffic and the motorcyclist. He then assisted the other observers by providing communications and directing traffic around the scene until police and fire crews arrived. The motorcyclist—who was wearing a helmet—was treated at a hospital for minor injuries and released. As a result of this incident, night patrols continue to be an integral part of the Palm Bay Police Department's VCOP program.—Steven Hathaway, WB2CKM/Platinum Coast Amateur Radio Society

ARRL Official Observers will be encouraged to play a more regular role in Amateur Radio enforcement, now that the FCC has established a credible Amateur Radio enforcement presence.

"It's really up to the Amateur community and to the OOs as to how much we want them to come in and start playing a role," Special Counsel for Amateur Radio Enforcement Riley Hollingsworth said this week.

His remarks followed a discussion on the role of Official Observers during a recent meeting of the ARRL Enforcement Task Force. The League invited Hollingsworth to attend the meeting to compare notes with him and to stress that the League wants enforcement to remain an important FCC initiative. Since taking over the amateur enforcement helm some 18 months ago, Hollingsworth has said he first wanted to re-establish the FCC's enforcement credibility before encouraging greater participation by the OOs. Hollingsworth told the Task Force that when the ARRL felt the FCC's credibility was re-established, the FCC would be ready to ask the OOs for more help. The Task Force concurred that the time was right to gradually fold the Official Observers back into the enforcement blend.

"The FCC is in this with them—we're all in the same boat," Hollingsworth said this week, adding that he's been able to make good use of information supplied by Official Observers in amateur cases. "The problem has never been anemic OO complaints or a lack of quality, it's just been a matter of whether the FCC was present on the enforcement front." Hollingsworth has told the En-

forcement Task Force that OOs can often help him to fill the gaps in cases he's already familiar with.

Hollingsworth noted that while the rate of amateur-related complaints has declined, he's not planning to let up on the pressure. "We're still pedaling as fast as we can right now," he said."

Hollingsworth also said he's like to see amateur enforcement viewed more as an FCC effort and less with him personally. "I would like to see amateur enforcement associated more with the Commission as a whole and part of its infrastructure than with some guy named Hollingsworth up there," he said.

THEY ALSO SERVE WHO SIT AND LISTEN

As one of the several operators taking part in last week's dramatic on-air rescue operation of young Willem van Tuijl, ARRL member Fred Moore, W3ZU, knows better than most that sometimes the best help is to just stand by. "Basically, what needs to be done is a lot of listening and very little talking," said Moore, who lives near Philadelphia and is a regular participant on the Maritime Mobile Service Net. "The net control station is obligated to make well aware that there is an ongoing emergency and that he will not accept any frivolous calls. And that's what I did through the night." Moore and others spent some 14 hours on the Maritime Mobile Service Net the night of March 28, rendering whatever assistance they could to facilitate Willem's rescue and transfer to a hospital in Honduras. The 13-year-old from The Netherlands—now the subject of national news coverage—was shot and seriously wounded by pirates who had boarded the family's sailboat. After the incident, the boy's father, Jacco van Tuijl, KH2TD, turned on his radio to seek help, breaking into a QSO involving Phil Fiol, WB2BMC. Fiol moved KH2TD down to the Maritime Mobile Service Net on 14.300 MHz. The other station called the US Coast Guard, which summoned the Honduran Navy.

Moore's ability to speak fluent Spanish turned out to be crucial. "At one point, there was so much chaos and some confusion because the Honduran Navy people could not understand English well," he said. At that point—after monitoring the situation for some time—he was able to step in himself and assist, with the blessing of the net control station. "There was a need to get some order on the frequency," he explained.

Moore said he was able to get position reports and, in general, coordinate communication between Jacco van Tuijl and the Hondurans, up to and in-

cluding the airlift of Willem and his mother, Jannie, KH2TE, to a hospital in La Ceiba, Honduras.

Moore says that unless a net control can maintain a high degree of order, things can break down in a hurry. During the recent crisis, he said that most operators abided by the rules, although a few persisted in "their nonsense," as he called it. There was even some intentional interference.

Moore also says it's hard for some hams to resist the urge to press the push-to-talk button and put in their two cents worth. Sometimes, he says, egos get in the way of common sense. But he urged operators encountering an emergency net to simply "be quiet and listen" unless they can contribute to the situation.

Moore had high praise for net participant Tony Fabrizi, W0IVY, who stood by for the entire crisis, only occasionally letting Moore know he was available if he needed a break. "That's a real amateur," he said. "I laud that man." Moore says the long hours of duty and little glory can be gratifying. "It makes me feel good when there's a positive result. Hopefully, we were instrumental in helping to save that boy's life, who was at no fault."

Willem remains in Children's Medical Center in Dallas, Texas, thanks to efforts by ARRL President Jim Haynie, W5JBP.

Other stations identified so far as having assisted in the crisis include K4TCV, KD5BZ, K1LNC, WB1AVE, J39GH, N3FK, W1KY, and YV5/VE7AMV.

SMOTHERS BROTHERS TO TOP DAYTON BANQUET LINEUP TOM AND DICK SMOTHERS

Dayton Hamvention® has announced that the Smothers Brothers comedy team will headline the post-banquet entertainment this year. This year's Hamvention also will host the ARRL National Convention.

The Smothers Brothers, Tom and Dick, are perhaps best known for their TV variety program, "The Smothers Brothers Comedy Hour," which aired in the 1960s. The comedy duo will perform Saturday, May 20, at 8:30 PM, following the Hamvention banquet in the Nutter Center. The Grand Banquet begins at 5:45 PM. This year's banquet keynote speaker will be FCC Special Counsel for Amateur Radio Enforcement Riley Hollingsworth, K4ZDH. Hollingsworth's appearances at last year's Hamvention were a huge hit. He'll also appear again this year as part of the FCC forums.

Returning for the third year as master of ceremonies for the 2000 Hamvention banquet will be Carl

Nichols, N8WFQ, chief meteorologist for WDTN channel 2 news in Dayton.
See the Dayton Hamvention Web site for details on this year's event, <http://www.hamvention.org>.

TX0DX OPERATION TOPS 72,000 QSOS

The Chesterfield Islands TX0DX DXpedition team racked up 72,654 contacts before it shut down March 29 after six days of operation. The majority of QSOs were on 21 MHz SSB and CW. More than 2500 contacts were made on 6 meters, and some 800 RTTY QSOs also went into the logbook. The premature shutdown was due to rapidly changing weather conditions that threatened to make landing operations on the reef very risky. The recent decision to admit ARANC—New Caledonia's Amateur Radio society—to the IARU has cleared the way for the Chesterfield Islands to be added to the ARRL DXCC List, pending a vote of the DX Advisory Committee. The TX0DX log search will be operational soon.

NVARC Trading Post

Free To A Good Home!

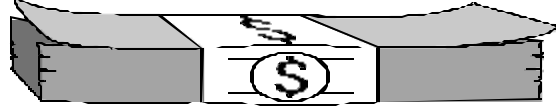
2 wide bed 9pin dot matrix printers. Both work. I will bring them to the (next) meeting or you can pick them up. Call craig, n1aby @ 433-0910 or email n1aby@arrl.net.

\$April Treasurer Report\$

Income for the month of March was \$180 from member dues and \$2 from ARRL membership rebates. Two members paid for more than one year ahead, which caused some of the spike in membership revenue this month. April is also the founding date of the Club so many members renew at this time. We incurred expenses of \$41.67 for newsletter postage and for a new stock of clips for the badges. The FoxFinder project sold two more kits and the committee decided to order a second batch of boards to build more kits. Net FoxFinder expenses were \$26.52.

Current balances:
General Fund \$751.21
Community Fund \$1467.55

Congratulations to Den Connors KD2S for becoming NVARC's very first ten-year member. The Club just had its 8th birthday, but Den expects us to be around a few years from now and sent in a vote of confidence from his wallet.



Is your membership current? Check your newsletter mailing label, it lists your next membership renewal date. And while you are at it, why not check your ARRL renewal date and renew that through the Club too. The ARRL allows us to retain a part of your League dues when I submit your payment. You save the postage too, if you hand me your check at a meeting or at Saturday breakfast.

73,Ralph KD1SM



**Nashoba Valley
Amateur Radio Club**

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V Pres.: Open

Secretary: Ian Norrish NZ1B

Treasurer: Ralph Swick KD1SM

Editor: Stan Pozerski KD1LE

Photographer Ralph Swick KD1SM

PIO: Jon Kinney N1JGA

Board Members

Wolfgang Seidlich KA1VOU 1997

Earl Russell 1998

Bob Reif 1999

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

53.890 – 100Hz Repeater

This newsletter is published monthly. Submis-
sions, corrections and inquiries should be directed
to the newsletter editor. Articles and graphics in
most IBM-PC formats are OK. You can send items

to pozerski@net1plus.com

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