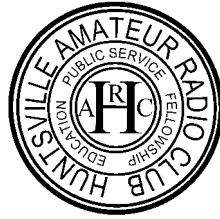


VOX



HUNTSVILLE AMATEUR RADIO CLUB

Huntsville, Alabama

Volume 41, Number 4

April, 2001

Huntsville Amateur Radio Club Information

Club Officers:

President,

John Morris, K4XH
K4XH@aol.com

Vice President,

Paul Paelian, WB4UEE

Secretary,

Brian Bender, KD4FGL
kd4fgl@mindspring.com

Treasurer,

Heath Thorson, KC4HRX, 774-3098
hthorson@hiwaay.net

The club's address is Box 423, Huntsville, Ala. 35804. Meetings are held each Friday night at 7:30 P.M. at the American Red Cross Building, 1101 Washington Street. Dues are \$12.00 per year, family memberships are \$15.00 per year. The club maintains a Web Site at "http://www.harc.net"

The North Alabama Repeater Association operates repeaters on 146.34 / 146.94, 147.78 / 147.18, 223.34 / 224.94 and 448.5 / 443.5. NARA dues are \$16.00 per year and may be sent to NARA at P.O. Box 18941 Huntsville, AL 35804-8941.

The club's packet radio interest group, HUNTSPAC, maintains an extensive packet network for the Huntsville area. Dues for use of this network are \$15.00 per year, and can be paid through the HARC Secretary-Treasurer listed above.

The club's ATV special interest group, TVATV operates an ATV repeater. It's input frequency is 439.25 MHz and its output is 421.25 MHz. A voice coordination repeater is operated with output frequency of 145.33 MHz, input 600 kHz down.

The Vox is published the third Friday of each month except for August. Editor of the Vox is Frank Emens, W4HFU, 3714 Lakewood Circle, Huntsville, Ala. 35811 or femens@hiwaay.net. Material of interest to the HARC membership should be submitted to the editor by the second Friday of the month of publication.

"Vox", Vol 41, Nr 4, Apr, '01
A Newsletter published monthly except for August by the Huntsville Amateur Radio Club, P.O. Box 423, Huntsville, AL

From The Prez

Don't forget Collins Radio night March 23. Butch Schartau, K0BS, from Rochester, MN will give the program. Butch is a former member and is now very active in the Collins Collectors Association. He knows most of what there is to know about Collins Radios. If you have some Collins gear, bring it for show and tell, especially the rare stuff.

As always, our radio spectrum is threatened. A bill has been prepared in Congress to protect these frequencies. Barry Johnson, W4WB is leading an effort to encourage our Representative, Bud Cramer, to support and/or co-sponsor this bill. Every Amateur's support is needed. See the Vox article for details.

Auction Night will be March 30. Corry Smith, K4DOH, will again be the auctioneer. He did a great job last auction night. Bring all your Junk, maybe some will buy it.

April 6, Jared Cassidy, KQ4VT, will lead a pre Field Day program. We will discuss field Day plans and try out equipment. We will bring the anchor auger, anchors, samples of guy wire rope, and a swage for a hands on demonstration. Be sure to bring work gloves and muscle power.

Tom Duncan, KG4CUY, will present a program about QRP receivers on April 13. On April 27, Ralph Hogan, W4XE, will have a program about Military Radios.

Old Timer's night was well attended and Bill Richardson, W4LRE, did an outstanding job leading the festivities. These old timers have lots of good stories to tell and it is easy to get them to tell them. By the time you get old, you have many interesting experiences if you can only remember them. Delicious refreshments, prepared by Peggy Bell, KE4EGB, and her helpers capped a great evening.

73, John, K4XH

MIR to De-Orbit

The de-orbiting of MIR was delayed last month and is now expected to take place sometime toward the end of March. The new target is predicted to be somewhere between March 19-28. By the time most of you read this information, MIR will have become history in the South Pacific.

MIR's mean height is now 252 km (258-km apogee, 246 perigee), coming down at 1.5km each day due to atmospheric drag. It will naturally plunge to Earth around March 28, but that would be an uncontrolled crash. The final rocket firing is anticipated near March 20, but one thing is for sure, it will be soon even if the rockets are not fired.

MIR was launched on 20-MAY-86 and served the Amateur Radio Community very well with many Amateur Radio experiments.

73, Tim, N8DEU AMSAT Area
Coordinator n8deu@amsat.org

2001 Southeastern VHF Society Conference

The Southeastern VHF Society is pleased to invite you to the April 20-21, 2001 SVHFS Conference to be held in Nashville, TN at the Holiday Inn Select, Brentwood, Tennessee. See

CAVEC Amateur Radio License Exams

Exam sessions are held the first Saturday of each month unless a holiday causes the session to be delayed for one week.

Upcoming sessions are:

Saturday, April 7

Saturday, May 5

For information contact:

Larry Frost, KR4GU, 379-3582

Or

Don Tunstill, W4NO, 536-3904

http://www.svhfs.org for further information and the 2001 SVHFS Conference registration form.

The Conference agenda is finalized and includes the following papers and presentations:

- EME Basics, Bob McGraw, K4TAX
- Microwave Dish Construction, Tom Whitted, WA8WZG
- Log Periodic Design, Kent Britain, WA5VJB
- K8GP Contest Station, Owen Wormser, K6LEW
- 23CM EME, Bruce Clark, K0YW & Jay Liebmann, K5JL
- VHF Quad Antenna Design, L.B. Cebik, W4RNL
- 50 Mhz Elecraft K2 with Internal DEM
- VP2M Dxpedition, Dick Hanson, K5AND
- Preamp Design, Kent Britain, WA5VJB
- Simple 7/8" Hardline Splice, Ott Fiebel, W4WSR
- Down East Info, Steve Kostro, N2CEI
- To be announced, Joel Harrison, W5ZN
- Contesting at 2GHz and Above, Jack Nyiri, AB4CR
- 222 EME, Ray Rector, WA4NJP

In addition to the technical program, the following are offered:

- Antenna Gain and Pre-Amp Noise Figure testing
- VUCC Card Checking
- Vendor displays and VHF+ flea market
- Annual SVHFS business meeting and SVHFS Auction
- Saturday Night Banquet with Guest Speaker Emil Pocock W3EP, Including announcing the recipient of the K4UHF award and many door prizes

This year a tower Jack donated by IDC Technologies will be given as a PE-REGISTRATION DOOR PRIZE for those registering prior to March 23, 2001.

The drawing will be held Friday afternoon at the SVHFS business meeting.

Hope to see you there !

73, Bert Rollen, K4AR

Robin Midgett, KB44IDC

As AO-40 Spins

Welcome to another episode of As AO-40 Spins.

Great news on AO-40 (Phase-3D)! The sun sensors started seeing the Sun one-month earlier than anticipated during orbit #147. This means that

magnetorquing has begun and it has reduced the spin rate of the satellite. Currently, the spin rate is about 7.1 RPM down from 17.59 RPM after some unknown events back in early December that increased it.

Whatever increased the spin rate has stopped, because the satellite has not gained any extra spin. Let's hope it was not too much fuel. Attitude information, the orientation of the spacecraft, is collected from the sun sensors and allows us to determine what needs to be done to adjust it to a more favorable attitude to point the antennas toward Earth. This will improve the reception on the S band downlink.

The ground controllers will perform a test firing of the Arcjet with only gaseous ammonia and no electrical power. This test firing will check the Arcjet control electronics and the valves. Even without the Arcjet "burning", the thrust from the test will raise the spacecraft by 100km at Perigee (closest approach to Earth). If AO-40 cannot be boosted in orbit any farther, it will be in a stable orbit far longer than the expected life of the electronics.

The power budget is good and the Heat Pipes appear to be functional again after the spin rate was lowered. This is

HARC ACTIVITY CALENDAR FOR April, 2001

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 Christian Fellowship Net 2100 on 145.33	3 ATV Net 2000 Check In 145.33	4 Southeast Linked Repeater Net1900 on 147.240	5 EMERGENCY NET on 34/94 @ 1930 Skywarn Net on 147.24 @ 2000	6 HARC Meeting Pre Field Day Meeting with Jared Cassidy, KQ4VT	7 CAVEC Exams, 0900 Red Cross building
8	9 Christian Fellowship Net 2100 on 145.33	10 ATV Net 2000 Check In 145.33	11 Southeast Linked Repeater Net1900 on 147.240	12 EMERGENCY NET on 34/94 @ 1930 Skywarn Net on 147.24 @ 2000	13 HARC Meeting Tom Duncan, KG4CUY, kprogram on QRP receivers	14 Hamfest: Marshall County ARC, Albertville
15	16 Christian Fellowship Net 2100 on 145.33	17 ATV Net 2000 Check In 145.33	18 Southeast Linked Repeater Net1900 on 147.240	19 EMERGENCY NET on 34/94 @ 1930 Skywarn Net on 147.24 @ 2000	20 Vox and Social Night Come down and help with the Vox & gossip you may be talked about otherwise.	21 Fifth Annual Southeastern VHF Society Conference, Nashville Apr 20-21
22	23 Christian Fellowship Net 2100 on 145.33	24 ATV Net 2000 Check In 145.33	25 Southeast Linked Repeater Net1900 on 147.240	26 EMERGENCY NET on 34/94 @ 1930 Skywarn Net on 147.24 @ 2000	27 HARC Meeting Ralph Hogan, W4XE Military Radios	28 Hamfest: Bankhead ARC, Moulton, AL
29	30 Christian Fellowship Net 2100 on 145.33	1 ATV Net 2000 Check In 145.33	2 Southeast Linked Repeater Net1900 on 147.240	3 EMERGENCY NET on 34/94 @ 1930 Skywarn Net on 147.24 @ 2000	4 HARC Meeting	5 CAVEC Exams, 0900 Red Cross building

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IC-T81A	\$265		
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TM-G707A	\$270
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TM-261	\$175
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TS-570SG	\$1,125
VC-H1	\$275



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also good news. This allowed cooling of the S2 transmitter from 35-37 degrees C to 19-20 degrees C.

The IHU-2 with the YACE camera is working OK and pictures were taken for a quick attitude determination. More pictures are planned to be taken once the communication links are favorable as the spacecraft is repositioned.

In the mean time, as AO-40 is being tested, there are several Amateur satellites in orbit that offer excellent communications. I will be running a series of articles on the various types of satellites in the VOX in the coming months. I just got off AO-10, an old performer, and worked several European stations along with one in Estonia. It is really nice to work those stations without all the QRM on HF and have pleasant contacts with our Amateur Radio friends around the world.

*Tim - N8DEU
AMSAT Area Coordinator
n8deu@amsat.org*

YOU CAN HELP PROTECT OUR RADIO SPECTRUM

From the ARRL News ? NEWINGTON, CT, Mar 8, 2001—The Amateur Radio Spectrum Protection Act of 2001 is now officially HR 817 (see below). Rep Michael Bilirakis of Florida introduced the bill on March 1 in the US House of Representatives. Last week, ARRL President Jim Haynie, W5JBP, and ARRL First Vice President Joel Harrison, W5ZN, visited the Congressman's office to thank him personally for his continuing interest in protecting Amateur Radio frequency allocations.

The measure has been referred to the House Committee on Energy and Commerce. The bill seeks to amend the Communications Act of 1934 by requiring the FCC to make no reallocation of primary Amateur and Amateur-Satellite allocations, diminish any secondary Amateur and Amateur-Satellite allocations, or make additional allocations within amateur allocations that would substantially reduce their utility without also providing equivalent replacement spectrum.

Barry Johnson W4WB has spoken with Congressman Cramer's Office regarding our Representative's position on this bill. At present, he has no position being that the bill has just gone to the Committee. It is important that we collectively let Congressman Cramer know that we want him to support, and also to co-sponsor, this important bill. An effort is underway to gain the support of the members of all of the amateur radio clubs and associations in the 5th District to sign a letter to Congressman Cramer stating our position. Please give your support to this effort. All that will be required is your permission to include your name, call sign, and address in the letter.

A BILL To ensure the availability of spectrum to amateur radio operators. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, SECTION 1. SHORT TITLE. This Act may be cited as the 'Amateur Radio Spectrum Protection Act of 2001'.

SEC. 2. FINDINGS. The Congress finds the following: (1) More than

650,000 radio amateurs in the United States are licensed by the Federal Communications Commission. (2) Among the basic purposes of the Amateur Radio and Amateur Satellite Services are to provide voluntary, noncommercial radio service, particularly emergency communications. (3) Emergency communications services by volunteer amateur radio operators have consistently and reliably been provided before, during, and after floods, hurricanes, tornadoes, forest fires, earthquakes, blizzards, train accidents, chemical spills, and other disasters. (4) The Federal Communications Commission has taken actions which have resulted in the loss of at least 107 MHz of spectrum to radio amateurs.

SEC. 3. FEDERAL POLICY REGARDING REALLOCATION OF AMATEUR RADIO SPECTRUM. Section 303 of the Communications Act of 1934 is amended by adding at the end the following new subsection: '(z) Notwithstanding subsection (c), after July 1, 2001— '(1) make no reallocation of primary allocations of bands of frequencies of the amateur radio and amateur satellite services; '(2) not diminish the secondary allocations of bands of frequencies to the amateur radio or amateur satellite service; and '(3) make no additional allocations within such bands of frequencies that would substantially reduce the utility thereof to the amateur radio or amateur satellite service; unless the Commission, at the same time, provides equivalent replacement spectrum to amateur radio and amateur satellite service.'

**AMS Meeting Announcement:
Wednesday, March 21, 2001**

*NOTE: ELECTION OF OFFICERS TO
BE HELD AT THIS MEETING!*

Program:

The Mesoscale Structure Of Oceanic Fronts During Fastex

Roger Wakimoto UCLA Department Of Atmospheric Sciences

The Tennessee Valley Chapter of the American Meteorological Society will meet on Wednesday, March 21, 2001, in the private dining room of Clementine's Field of Greens Restaurant in the Market Square Mall just southeast of Clinton and Memorial Parkway in Huntsville. We will begin at 6:30 p.m. with a buffet dinner, then proceed with a brief chap-

ter business meeting, followed by the speaker's presentation. Note that this meeting occurs on a Wednesday, rather than on our customary Thursday, in order to better accommodate our guest speaker's schedule.

Our guest speaker for this meeting is Dr. Roger Wakimoto, Professor of Atmospheric Science at UCLA and a renowned Doppler radar analyst and severe storms researcher. An abstract of Dr. Wakimoto's presentation is given below.

The Tennessee Valley Chapter of the American Meteorological Society was organized to share and promote interest in meteorology in the areas of North Alabama, Middle Tennessee and Northeast Mississippi. Membership is open to anyone, professional or nonprofessional, who has an interest in meteorology and related fields. Membership dues for one year are \$5.00. Dues for the year 2001 are payable now for the current year.

At the March 21 meeting, we will accept final nominations for the four officer positions: president, vice-president, secretary and treasurer, and then hold elections. The president and vice-president positions must be filled by AMS members.

More information about the Tennessee Valley and the University of Alabama in Huntsville Chapters of the American Meteorological Society may be found on our world-wide web site at:

<http://vortex.nsstc.uah.edu/ams>

or you may sign up on our e-mail list by e-mailing:

mccaual@omega.nsstc.nasa.gov

**Guest Speaker And Program For
Wednesday, Mar 21, 2001:**

The Mesoscale Structure Of Oceanic Fronts During Fastex

Roger Wakimoto-UCLA Department Of Atmospheric Sciences

The finescale structure of fronts that develop over the North Atlantic Ocean are presented, based on data collected during the Fronts and Atlantic Storm Track Experiment (FASTEX). Dual-Doppler wind syntheses from NCAR's airborne ELDORA (Electra Doppler Radar) combined with dropsondes deployed by a C-130 provide a unique opportunity to reconstruct the kinematic and thermodynamic structure of the fronts.

The results from a warm front are particularly intriguing owing to the lack of prior observations on this phenomenon.

Dr. Wakimoto received his Ph.D. from the University of Chicago, studying under the late Dr. Ted Fujita. He has published numerous research papers on analyses of Doppler radar data and on tornadoes.

APRS News

The APRS program was very well attended last month at the meeting on 09-MAR-01. There were several APRS users and several APRS wannabes.

A few days after the meeting, a few new calls popped up on the APRS radar screen. KB3DXR was one of them. The list of call signs is growing on APRS in the North Alabama area. Our local Igate is getting those weather bulletins to our APRS screens in record times since we have most of the bugs ironed out on that system. I really like seeing the weather messages pop up on my Kenwood TMD-700 display as well as being able to send messages back and forth across the US from my mobile or handheld radio.

The list of call signs seen on APRS that come to mind are WA8INZ, AI4CW, KE4ROC, WB7VDN, W4GPS, KF4LFQ, KQ4VT, KF4YGT, AI4CW, KE4RNW, KF4BOG, W4SBO, KB3DXR, K4JCH,

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KT4XA, N8DEU, and probably several others where my brain fails me.

I continue to find new features hidden in the APRS+SA software that continue to amaze me. Just recently I came across a L. L. Grace DSP-12 TNC that I had always marveled. It was one of the early DSP modems that covered most all of the modems available on Amateur and a toolkit to develop your own stuff using the Motorola DSP processor. I just had to have one since I picked it up for a song. I quickly realized that it was not going to work with APRS+SA, because one of the commands hard coded in the software was simply not going to work with this TNC. Once I realized that APRS+SA had a KISS interface I quickly put the TNC in the KISS mode and it worked like a champ. In fact, KISS solves many problems with all the various commands on the TNC's in the market, because KISS works around the problem and lets the software perform all the TNC functions. This is when I learned that APRS+SA also supports KISS over IP. Yes, there is a God!!! After playing with this KISS over IP function I quickly learned that I could network several computers on a network as clients allowing several users to access the same TNC and allowing the clients to use different call signs independent of each other sharing the same TNC. Wow! This opens up some possibilities.

APRS is a great tool for teaching networking concepts and how to interface computers and Amateur radio in many different ways.

On one of my usual visits over to Gigaparts, I discovered they have a super deal going on the Kenwood TH-D7A handheld and the TMD-700 mobile radio that both support APRS very nicely. I have one of each and it would take a very long crowbar to separate me from my radios. I have used both successfully on APRS, APRS via satellite, and working the FM satellites as well. There a lot of fun packed in these little widgets.

Tim - N8DEU n8deu@amsat.org

Opposing Forces

Much has been written about Murphy and his Law over the years, but little is ever mentioned about his arch-nemesis, O'Reilly. Anyone who has ever used hand-tools or worked with things technical can vouch for the existence of Murphy. You know... the afternoon

when nothing goes right and you're convinced not only of the famous Law, but the fact the bum has moved in!

Case in point: A well-meaning friend rides his "motorcycle" over to the "house" (both terms are loosely defined at best). Nothing unusual about the fact that the "bike" was leaking large quantities of fuel. Except it was the tipoff that Murphy had hitched a ride and wanted to make a day of it.

- Scary music and lightning flashes here

The truck had just mysteriously belched a pint of oil out the rear-main seal. Just that one time. Sure, just a coincidence. "Hey, let's fire up the dirtbike", he said, foolishly. Keep in mind, the dirtbike is almost 23 years old but 100% restored/repared. All except the fuel-shutoff valve, of course. You guessed it! Drippy pre-mix all over the nice clean motor. That's when I noticed the street bike had a shiny spot on the header pipe. Yep....20W-50. Nothing serious, just a 59 cent O-ring gone bad. Should be here in two weeks, if the 102 year-old mechanic in Japan can whittle me one out of balsa-wood. Ditto for the fuel-valve. Thanks, Mr. M! And so, Murphy is alive and well. He was last seen leaving here on a Goldwing that was ready to ignite at any moment. He may be appearing in your neighborhood any day now...beware.

But who is this O'Reilly, you ask (if you haven't dozed off yet)? Well....all I can tell you is "O'Reilly happens". Really!

Case in point: Just the other day, after work, waiting in line at the grocery checkout; about as much fun as cleaning your ears with a drill bit. Can't believe there are over twenty folks wanting to check out their 3000 items and only 2 cashiers on duty. Lots of grumbling and nobody's paying attention. Then O'Reilly struck. YES! A fresh cashier was heading to a register. But which one? #6...perfect. Still, only a few folks had even noticed by that time. Just like in NASCAR, 6 milliseconds makes all the difference in the world. Just a little fancy footwork, and the old 7-10 split with centimeters to spare... Ah yes....the old #3 to #6 lane change. The idea is to be right at the chain when it drops. O'Reilly was there, cheering me on.

Of course, it all makes sense. Nature is all about opposing forces. Millions of years ago, (OK...hundreds. whatever.)

some wise old philosopher with hair down to *here* boldly declared "for every action in nature, there is an equal yet opposite ex-wife." (oops, wrong philosopher! sorry)

Yet we all knew that somehow, somewhere, there HAD to be an "Anti Murphy". So remember, for every ten times you try to solder your finger to a component or the whole experiment blows up in your face.... there will be that rare moment when a project works perfectly as planned. At best, once every few years. Just like sunspot cycles. As opposed to motorcycles or megacycles.

73, Chris, WB4UFQ

Upcoming Hamfests

- April 14, 2001. Marshall County ARC, Albertville, Alabama. Contact Buddy Smith, AC4B at (56)593-7741 or kc4url@belsouth.net.
- April 20-21. 5th Annual Southeastern VHF Society Conference, Nashville, Tennessee. Contact <http://www.svhfs.org/> or Bob Lear, K4SZ at (706) 864-6229.
- April 28. Bankhead ARC, Moulton, Alabama. Contact <http://www.n4idx.org> or Lee Creuzer, N8MHC at (256) 351-7916 or n8mhc1@cs.com.

73, John Farr, KC4ZXX

The Editor's Wastebasket

We find ourselves in the situation that usually arises about this time each year. Heath has gotten me a copy of the membership database current to the last day or two. The mailing list shows 209 paid up members and there are some 83 members whose dues ran out at the end of 2000 and who have not re-upped. It is time to delete those folks from the mailing list, but we hate to do it without giving them one last chance. This month and only this month, they are included in the list. They are included on the list so we can give them one last warning. **If your mailing label shows "Good Through 12/31/2000" this is the last Vox you will receive.** It's goodbye old friend -- and some of the names on the list are indeed old friends that we will hate to lose contact with.

Thanks to the group and especially to Bill richardson and John Morris for the example of Bills blacksmithing wizardry. I really appreciate it.

John and Paul (whatever happened to George and Ringo?) have been doing a

great job coming up with programs for HARC meetings. We need to make a point of complimenting them on the job they are doing.

Tim, N8DEU, has been a faithful "inputter" of information from AMSAT lately. Really enjoyed his presentation on APRS last Friday. There was one question I meant to ask but missed out

on -- Aside from APRS and DX Packetclusters, is there any other activity on packet nowadays? I haven't checked in some time.

I have a similar question on 2-meters. Except for drive-time QSOs is there anything going on on 2? If there is, where is it most likely to be found?

If you haven't signed up to help with Hoop Mania, it is most likely too late to do so, but if you'd like to help, I'll bet Woodie can find something for you to do. If you have signed up to help, be sure to show up and do it. It is one of the few events that the Red Cross asks us to help with and it behooves us to do what we can.

73, Frank Emens, W4HFU

NOTICE

***Look at your mailing label! If it says
"Member Through 12/31/2000"
this is the last VOX you will receive. Get right with the Treasurer
before time for the next Vox or it is "Goodbye"***

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