Volume XLIII January 2001 Number 1

The Prez Sez

Here we are at that time of year again, the post holiday letdown, followed by the scurry to get those station improvements completed. I myself am looking forward to the January contest, but it will be down to the wire to get only a few of my projects into final form. I guess this is why we have all this stuff in piles in the basement! The first part of the year begins the collection process, (hamfest season). Then we figure out what to do with the treasures, and collect those final parts at Hamarama. Then comes "crunch season", which gets interrupted by the holidays. Then the final stretch! Whatever doesn't make the cut gets into the "*pack rat pile*". Now I know why the "rat" storage piles are big… too little time!

I guess I could be discouraged by not meeting all my station improvement expectations, but not much broke and there will be *some* improvements here. As for the 10 gig project, it is in final assembly. It may only be a camera tripod setup, but there are still a couple of weeks to get a dish on the mast (if the snow and ice get off the roof). Even though there are stalled projects on most of our benches, we all have enough gear working to make a go of it. As Ben, WA3RLT, has analyzed: nothing beats time on the air. Also, if you feel your station isn't up to snuff, do what you can at your station and then hop over to a multi-op station to help out. I am aware of 3, W0RSJ—W2UR—K3EOD. Don't assume that they are well staffed and not in need of more help. Give them a call, and see when you could fill in. And look for the *rat rovers,* K1DS--N1XKT--AA2UK.

I hope everyone is well, and wish everyone a healthy and prosperous New Year! Let's boil the VHF+ airwaves in the contest, and let 'em know were still out there!

73, Ed - WA3DRC

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FM29JW Philadelphia, PA
50.080 144.284 222.065 432.298 903.071 1296.262 MHz
2304.034 2304.037 3456.220 5763.190 10,368.170 MHz

MONDAY NIGHT NETS

TIME	FREQUENCY.	NET CONTROL
7:30 PM	50.150 MHz	WA3EHD/K3EOD
8:00 PM	144.150 MHz	N3ITT
8:30 PM	222.125 MHz	W2SJ/N3EXA
8:30 PM	224.58R MHz	W3GXB
9:00 PM	432.110 MHz	W3RJW
9:30 PM	1296.100 MHz	WA3NUF
10:00 PM	903.100 MHz	N3AOG
10:30 PM	2304.100 MHz	W3KJ

COMMITTEE CHAIRMEN
JUNE CONTEST: N3ITT 610-547-5490
HAMARAMA: W3KJ 215-256-1464
VHF CONFERENCE: KB3XG 610-584-2489

K1DS Taking on Temporary Cheesebits Editor Duties

I have accepted the baton pass from W3IIT, at least on a temporary basis, in my quest to add service and assuming additional responsibilities as an active Packrat. This may also provide some additional diversion from my other work responsibilities, and help me to further my education in things microwave. During the past 31/2 years that I have been a club member, it has given me great pleasure to share the skills and talents and parts bins of other Packrats in addressing my station's needs. Most recently, I managed to obtain an excellent piece aluminum mast from W3IIT to facilitate my rover van antenna farm, a 5Ghz dish and 6m halo from WC2K to use for this January's VHF SS. Then a call from AA3GN alerted me to the fact that he had a spare 5Ghz feed, and I was able to mount that and optimize it to a lightweight aluminum dish I had in storage. N3NGE was kind enough to help me with a perfect length of LMR superflex with connectors to connect the rig to the antenna. This past weekend I caught a clear weather afternoon, drove up to the FN20he site, and managed to peak the feed position on the beacon and compare it to the borrowed set-up. It seems that the new feed and dish can hear a few db better!

I have learned that a shakedown rove is best done before the contest. Sure enough, there were problems spotted in the driveway, and remedied on the workbench, long before pulling out. It seems as though I forgot to place a bus to ground for the connectors of my new IF switching box, and despite all the correct connections to the batteries, the transverters were not getting any juice! Once that was solved with a few pieces of copper, I tried to raise a contact on 2m sideband. Despite excellent results on the Monday nets, the apparent lack of recent activity has caused the relay contacts in the 2m amp to attenuate received signals, and they will get cleaned up. I also was able to mount an auxiliary mast on the rear of the van for the halo to add flexibility and reduce the crowding of the main mast with the 2 through 10G antennas.

If you are interested in hearing about more than my exploits on the bench, on the air, and in the van, we will continue to need new submissions to Cheesebits for publication. Please feel free to email me material at: rick1ds@hotmail.com. Attachments are welcome as MSWord files, JPEGs and so on. It is also my intention to do some focus articles on some of the Packrat's stations with some photos and text. I believe that many would be interested in "seeing" other's set-ups and reading about their station's gear, capabilities, and obstacles overcome in achieving their capabilities. Let me know if I can swing by with the camera and get a shot of your antennas, gear and any unique aspects for Cheesebits. Questions and comments are welcome by calling me at home: 610-270-8884. Please leave a message if you get the answering machine. 73, Rick K1DS

Calendar of Upcoming Events—January 2001

1 Happy and Healthy New Year to all

8 Make sure that all of your gear is in prime shape for contesting.
Check in to the Packrats nets starting at 7:30 PM EST on 50.150; 8:00 PM on 144.150; 8:30 PM on 222.125 or 224.58R (FM); 9:00 PM on 432.110; 9:30 PM on 1296.1; 10:00 PM on 903.1; 10:30 PM 2304.1

11 Packrats Board of Directors meeting at 8:00 PM. This is an open meeting for all Packrat members, and counts toward your meeting attendance to meet the club participation requirements.

15 Try out the logging program and computer set-up. Make sure that the rotator is calibrated.
Check in to the Packrats nets starting at 7:30 PM EST on 50.150; 8:00 PM on 144.150; 8:30 PM on 222.125 or 224.58R (FM); 9:00 PM on 432.110; 9:30 PM on 1296.1; 10:00 PM on 903.1; 10:30 PM 2304.1

18 Packrats January Meeting at the Southampton Free Library at 8:00 PM. This will be the very last chance prior to the VHF SS to assure you have met the two meeting attendance requirement.

20-22 January VHF SS Starts at 1900 UTC on Saturday and runs through 0300 Sunday night.
Contest packets are available from your contest co-chairmen, Joe, AA3GN and Chris, N3PLM. These include sample paper logs, a contest clock, Packrat band capabilities for each station, a beam heading list, likely VHF DX grid list by band, and Cabrillo computer logging and reporting information. There are also copies of the team listings and competiton rules. Your entry is needed. You can get a Contest packet via e-mail by contacting landisj@notes.nad.com
Adobe Acrobat reader (free download) is required to read these files. VHF SS is also featured in the December 2000 issue of QST, p 112.

22 Packrats nets again starting at 7:30 PM on 50.150 as above. Check in and share your contesting triumphs with the other club members.

26-28 Go to the opposite end of the ham radio spectrum by participating in the CQ WW 160-meter DX Contest. Details available at www.cq-amateur-radio.com/160rules99.html

The ARRL Letter Vol. 20, No. 01 January 5, 2001

AO-40 COULD BE LEAKING AO-40 team member Peter Guelzow, DB2OS, says a small leak on AO-40 could account for the higher spin rate ground controllers have noticed since the satellite resumed telemetry transmissions on Christmas Day. Guelzow called on the amateur community to be patient during the AO-40 recovery. "The good thing is that AO-40 seems to be in a very stable condition, and there are no signs of further damage," Guelzow said this week in a posting to the AMSAT bulletin board. "However, there is a sign of a small leak." Ground controllers continue to look into the reason for the higher spin rate as well as into other items under investigation, Guelzow said, and the results will be reported when the AO-40 team reaches its final conclusions. He said the priority for now is to get AO-40 back to normal as soon as possible. AO-40 went silent December 13 while ground controllers were testing the onboard 400-newton propulsion system. Guelzow's posting did not indicate whether he thought that propulsion system fuel or some other substance was escaping through the suspected leak. A computer reset command Christmas Day brought the satellite back to life, but telemetry data suggest that AO-40 suffered some damage. Since Christmas, the AO-40 ground team has been analyzing telemetry sent via the 2.4 GHz beacon--the only transmitter now operating--to determine the status of AO-40's onboard systems. Guelzow said that once the AO-40 team has a handle on the antenna situation it might attempt to get the 2-meter and possibly the 70-cm transmitters working. Until then, he said, AO-40 will continue to use the 2.4 GHz downlink. Guelzow said that because of the currently limited downlink capabilities, uploading of new commands and analyzing the results is taking somewhat longer than it would under normal circumstances. The AO-40 team also is evaluating the satellite's magnetorquing attitude control system and wants to spin down the spacecraft and adjust AO-40's attitude for better sun and squint angles. In addition, ground controllers will be taking a close look at various other systems and experiments onboard, including the arcjet and the stabilization wheels. "Once this is completed and we have a complete overview, then we can declare the spacecraft to work normally and perhaps think about re-defining the mission of AO-40, whatever it will be," Guelzow said. AMSAT-NA President Robin Haighton, VE3FRH, this week said critical decisions would be made over the next week or two "based on the results of the analysis and much discussion among the command team."--AMSAT-BB; AMSAT-DL

SECOND ARISS SCHOOL CONTACT A SUCCESS! Students at the Armstrong Fundamental Elementary School in Hampton, Virginia, got to interview Space Station Alpha Commander William "Shep" Shepherd, KD5GSL, via Amateur Radio on January 5.The contact was the second successful Amateur Radio on the International Space Station--or ARISS--school contact. During the afternoon contact, about 10 students posed questions to Shepherd, who identified using the special NA1SS call sign. On the ground and using the Virginia Air and Space Center's KA4ZXW call sign, control operator Wally Carter, K4OGT, finally linked up with Shepherd about four minutes into the scheduled 10-minute pass. Signals were somewhat noisy but readable. Students seemed fascinated with the effects of launch and space flight. Being launched from Earth into space felt like "someone standing on your chest," Shepherd told Mandy, the first questioner. But after about eight minutes or so, he said, you become weightless and can go anywhere you want. Shepherd told another questioner, who asked if he'd gotten dizzy or sick during launch that being weightless was "a very nice experience." He told another youngster that keeping food down in a zero-gravity environment was not a problem. Students at Jan Sheldon Elementary School, Varysburg, New York, hope to complete their ARISS contact in the January 15-19 time frame, but all school QSO schedules are subject to change. For more information, visit the ARISS Web site, http://ariss.gsfc.nasa.gov/.--ARISS

ESCAPEES MAY HAVE STOLEN RADIOS; HAMS ASKED TO MONITOR According to news reports, the seven Texas prison escapees still at large and now wanted in connection with the murder of Irving, Texas, police officer Aubrey Hawkins, KC5USI, also may have stolen radios from a Houston Radio Shack store. The radios are said to include Amateur Radio 2-meter H-Ts as well as Business Radio Service (programmed for 156.400 MHz) and Family Radio Service (462.5625-467.7125 MHz) radios. Hams have been asked to monitor these bands and report any suspicious activity any hour of the day to the Huntsville Command Center, 936-437-6735, and to their local law enforcement agency. Police advise that anyone spotting these suspects not try to approach them but contact local authorities immediately. More information on the escapees is at http://people.txucom.net/tdcj-iad/ .--Jerry Karlovich, KD5OM

And from the ARRL Bulletin: Efforts continue to assess the status of AO-40 following a resumption of telemetry transmissions. AO-40 went silent December 13, but ground controllers successfully reset the main computer on Christmas Day and got the satellite transmitting again. Ground controllers now are analyzing the telemetry sent via the S2 beacon on 2401.305 MHz. AMSAT-NA President Robin Haighton, VE3FRH, says the command team worked through the holidays in an effort to determine just what went wrong aboard AO-40. Among other things, ground controllers would like to know what actually happened on December 13 and why, as well as which telemetry functions are known to be correct and which data are suspect and why. The satellite went silent during maneuvers to test its onboard 400-Newton propulsion system following an earlier orbit-shifting burn. Ground controllers also want to know the spacecraft's actual attitude with respect to Earth--and if it has changed attitude. Other parameters they'll be examining include spin velocity, the status of batteries, battery chargers and regulators, and what happened to the onboard computers, IHU-1 and IHU 2, and why. The AO-40 command team also wants to find out if all the antennas are operational and what can be done next to improve communications, and if there are any risks involved in attempting to restart onboard systems. So far, the 2-meter beacon transmitter has remained off the air since AO-40 was returned to ground control on Christmas Day. It's believed that problems with the 70-cm transmitter developed shortly after launch. The 2.4 GHz transmitter appears to be operating "nominally," however. "When questions such as these--and others--are answered, it may be possible to determine the working capability of the spacecraft, and, if appropriate, to start to try operation on other bands," Haighton said. He said critical decisions will be made over the next week or two "based on the results of the analysis and much discussion among the command team."

Rover Rumblings

W3IY/R:I just wanted to mention that I plan to be roving in the VHF contest. I should be carrying all bands through 10 GHz, and maybe low power on 24 GHz. Someone please convince me that it's worth mounting my 48cm dish for 24 GHz. Plans are pretty firm to start in FM26, then FM16,17,27 and maybe some 28 on Saturday. Then FM29,19,18,09 and FM08 on Sunday, if all goes well, and there aint too much freezing rain, snow, etc. I plan to try and coordinate uwave contacts on 144. Is 144.260 the best freq? Hope to work a bazillion of you crazy uwave freaks out there. best 73 es happy new year!! keep the bands alive! Bill W3IY/R FM19ha w3iy@fcc.net

ND3F/R: I'm planning on starting in FM09/FN00, heading east to FN10/FM19 on Sat. and heading south to FM08/09 early Sunday and maybe to the bridge (26/27/17/16) Sunday night. Brian nd3f@aol.com

AA2UK/R: Bill sent me a note that he was planning to do some roving in the FM 18,19,28 &29 grids if possible. His 10G gear is currently under repair, but hopefully will be on-the-air in time.

K1DS/R: Current plans include all bands from 6 thru 10G + laser. Current route not yet determined, but will most likely include FN10,11,21,20,31 and 30, and also FM 19, 29 and time and weather permitting FM18, 28.

N1XKT/R: Look for Leon in the family roving station with K1DS/R

N1MJD/R: Beau has not yet posted his plans, but he has been a regular roving through the area.

2001 SVHFS Conference Invitation & Call For Papers

Greetings,

The SOUTHEASTERN VHF SOCIETY will host its FIFTH ANNUAL CONFERENCE April 20-21, 2001 at the Holiday Inn Select-Brentwood, in Nashville TN.

The program will include presentations by antenna specialist L. B. Cebik W4RNL, EME enthusiast Bob McGraw K4TAX as well as many other VHF+ operators. Other activities In addition to the technical program/presentations and conference proceedings, there will be pre-amp noise figure testing (50-1296 MHZ.), antenna gain measurements (144-2304 MHZ.), a flea market, vendor sales displays, the SVHFS auction and annual business meeting. This year at our Saturday Night Banquet, we are honored to have as our guest speaker noted QST columnist, Emil Pocock -W3EP, author of "The World Above 50 MHZ". The evening activities will also include many door prizes, and the K4UHF Award presentation

For those wishing to present papers at the conference (or included in the proceedings), papers should be submitted to our Program Chairman Dick Hanson, K5AND <dhanson@southernstaircase.com> no later than Feb. 20, 2001. Papers may be submitted in hard copy, or preferably on diskette in MS Word 7 format. We can also convert Word Perfect; pictures are best in black and white. Be sure to number figures, graphs, drawings, and pictures so they may be matched with the references in the body of the article.

The SVHFS mailing address is SVHFS Inc., PO Box 1255, Cornelia GA 30531.

Reservations for the Holiday Inn Brentwood may be made by contacting the hotel at 615-373-2600. The hotel website is found at: http//www.hotel-nashville.com/holidayinn/

The hotel web page has a nice list of links to Nashville area attractions. The cut-off date for group rate of $80.00 per night is March 2nd, 2001. Mention the SVHFS 2001 Conference to get the group rate.

73' and see you at Nashville !

Bert Rollen - K4AR k4ar@arrl.net

Robin Midgett - KB4IDC rmidgett@bellsouth.net

Top Band McGinty

1

Top Band McGinty was a legend reknown,
His signals spanned the globe - sometimes twice around.
His Phased Bazookas were so long and his towers so high,
Flashing Lights and Orange Balls were required for planes flying by.

2

There was talk from the pokey across town,
When McGinty sent a "V", the jail doors would resound.
Then one winter it happened - the mill pond failed to freeze.
No ice skating or hockey for the children to please.

3

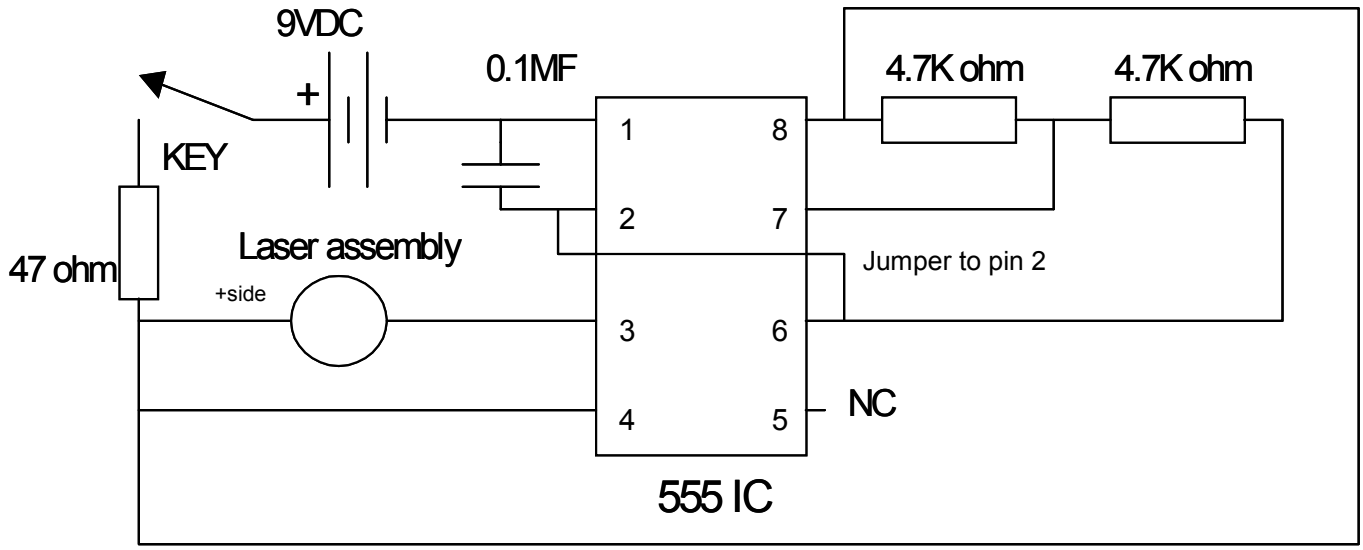
To McGinty's door the townfolks went swarming.
McGinty, they declared - you're causing global warming.
Now McGinty's towers stand rusting and ladder line dangles free.
Sad reminders of steel gray dawns and shouts of DX glee.

4

Unobtrusive to passersby, McGinty's chimney now does the trick.
A TV mast with no antenna ?? Oh no, a 12 db gain colinear stick.
Now McGinty smiles as the linear keeps his coffee warm.
High solar flux, sporadic E, he's racking' em up on 6 like a thunderstorm.

Are you QRU on LASER?

This simple LASER transmitter can be built easily and quickly, provides an 800 Hz modulated beam, and can easily be heard on the receiver diagrammed below. All parts readily available, and the beauty of this circuit is that power is off when the key is up, and the laser batteries themselves can be eliminated. Laser penlights can be purchased for less than $20. Try to get one that enables you to remove the switch and laser assembly from the tube that holds the batteries. I used the small perf-board about 2" X 1" that fits exactly into a slot of a small project box, and a pushbutton switch for the key. Everything except the laser easily mounts into the project box which itself comfortably fits into the hand to key the transmit button for CW.



If you are able to remove the laser guts intact, solder a small flexible wire to the circuit side of the pushbutton, and the other to the metal housing. Do not remove the circuitry from the laser diode. Be careful if you dissemble the laser pen, as some have small focus lenses which can be dislodged. Polarity is important, and make sure to bring the positive side (from the case) to the junction of the 47 ohm resistor and pin 4 & 8 of the IC, and the negative lead to pin 3 of the IC. As an alternative, you can drill a hole through the pen casing to where the spring for the batteries is located, and solder a wire to the spring, lead it out through the hole you drilled, and connect it to the circuit with a flexible wire. The pushbutton switch will need to be jammed into the ON position, and this can be accomplished with a small piece of copper or plastic force fit onto the button and spread into the button hole housing. The laser itself should be mounted in a fashion for aiming. The circuit and a small spring switch for keying can be mounted in a small box. I used a plug and jack between the laser and the circuit box. The easiest approach is a good quality camera tripod, but for better accuracy and distance, a set of 1/8" thick ¾" aluminum angles placed inside each other makes a channel for the laser pen, and then drilling and tapping for 4-40 screws allows fine aiming adjustment. The receiver is simplicity itself, taken from QST, Feb 1997, p 96. Use a photocell to modulate an audio amplifier. I use a 2" X 1" photocell, soldering a fine 22 gauge wire to the front and back, and leading those to a mini-jack that plugs into the input of the audio amp. I am using the ready-made $12 RS amp. The photocell is kept in the clear plastic box in which it is sold, and can be mounted any number of ways. Receiving area can be enhanced with the use of a large fresnel lens, or a 4" magnifying shaving mirror to capture the beam and focus it on the receiving cell in a fashion similar to parabolic dish use. I encourage you to visit: http://www.qsl.net/wb9ajz/laser/laser.htm for more information, descriptions and options. This mode has is gaining popularity with rovers, and offers a simple way to get started on a new 'band'. (from your editor)

Cheesebits Subscriptions

Cheesebits subscriptions are available to everyone interested in activities and information from the VHF through microwave frequencies. Subscriptions are for 1 year of 12 issues. For a subscription, send the following information:

Name:_____ Call:_____
Address:_____
City:_____ State:_____ ZIP:_____

Subscription rate: $10.00 per year (USA), $12.00 (Canada), $15.00 (Worldwide)
Send to: Subscription/Advertising Manager
Bob Fischer, W2SJ, 7258 Walnut Avenue, Pennsauken, NJ 08110 USA

Swap and Sell Shop:

For sale: Four(4): 17B2 antennas, One(1): Directive systems 4 port power divider, Four(4): Directive systems LMR400 phasing lines done on network analyzer 4 x 12ft. @' od .125 wall H-frame Harbach: six 8x10" plates Harbach: 24: 2" saddles My cost for all above is $ 1,400..make me a reasonable offer. MUST be picked up in Southern PA.
Brian w3eme w3eme@arrl.net (H) 717-227-8175 (W) 410-308-9107

For sale: FT101ZD HF tranceiver. Good Condition. $275 Down East Microwave 6 meter transverter (new version) $250 Both for $450 Frank, NC1I frankp@gcq.net

Tidbits

WA3GFZ, Paul, from FN20kc writes: I wanted to let everyone know that I will be on six meters through 3456 for the contest. I have been working very hard to accomplish this. Thanks and 73s.

AA3GN, Joe writes: Another disaster. I think I am being followed around by a dark cloud. If you haven't heard by now last Sunday morning I awoke to find about a foot of water in my basement shack, due to insufficient capacity of the gravity drain. One of the casualties was the HV supply for my 432 amp. Anyone have a transformer capable of making approx 2.2 KV at .5 to 1A, C input, for loan, purchase or donation/swap? The old unit was a UTC S-37 (I think), in a 1500-0-1500 full wave center tap configuration. Anything yielding something close in any configuration would be usable. 115 or 230V. The 5.7 and 3.4 GHz transverters were also underwater, but should dry successfully. Lessons learned are to always have a sump pump even with a "dry" basement and a drain. And always keep everything off of the floor. Other news - tower going up "Real Soon Now" to temporary 40 foot level with antennae for 6, 222, 903, 1296, 2.3 and 3.4. I may winch it up in the snow on Saturday. (Ed. Note: Was that the Saturday of the snowstorm?)