



A A R C Bulletin

Newsletter of the Albemarle Amateur Radio Club, WA4TFZ

April - May 1993



■ NOTES FROM THE ■ PRESIDENT'S DESK

As we dig ourselves out from the Blizzard of '93, we have a great deal to be thankful for. Once again Amateur Radio rose to the challenge. As the snowflakes began to fly, Skywarn weather watchers were busy relaying information about accumulation, wind speed and barometric pressure. When it became apparent that conditions were deteriorating the folks at the Virginia EOC declared an emergency and activated RACES.

In this area, hams were requested for deployment to 911, Albemarle High School and Scottsville Elementary. Under the direction of N4FWA, N0RDQ went to 911 and worked with Hein, N4PGS stood duty at the Albemarle High School shelter, KD4CUG handled communications from the Scottsville shelter and KB4YQC provided transportation assistance at that site.

Throughout the day and the night, information was relayed to 911 and to the Virginia EOC. Information flowed out of Central Virginia via two paths. On HF, KJ4OP provided reports to the Virginia Emergency Net Alpha operating on 40 and 80. KB4YQC provided the vital packet communications path to Richmond since WA4TFZ was down.

Now that the worst is past, what have we learned? Was your station ready for this emergency? Did you lose power or an antenna. How long can your station operate without commercial power on HF?... on VHF? The time to make adjustments in the aftermath of the Blizzard of '93 is now. My hat is off to all of you who pitched in during this emergency to help out.

73 de KM4DU



Public Service Notes

The Public Service season has started. The first Sunday in March we supported a bike race near Carter's Bridge. It was the first time we had the opportunity to operate from the police communication bus. It made the

communication among the various services, police, rescue, etc., and hams easier and much more efficient. There was no need for hams to ride as shadows in ambulances and police cars. Everybody seemed happy, including our police friend, Sgt. Martin. Sam Gentry, N4WJQ, who was net control, used headphones to cut out the confusing noise from the loudspeakers of several radios operating simultaneously in the bus. Apparently, the other services liked Sam's operation and plan to use headphones in the future. It was interesting to learn that the commercial radios used by the other services don't have jacks for headphones!

The "Storm of the Century" provided an unplanned opportunity for public service. Late Saturday evening it was decided to open two Red Cross shelters, one in the Scottsville Elementary School and one in the Albemarle High School. Kaye Harden, the Emergency Services Coordinator at the 911 center, called me late Saturday evening (actually close to midnight) and requested ham support at the two shelters and the 911 center, starting Sunday morning 0700. It was a pleasure (Hi!) to wake up Jeff Clark, KD4CUG, and Greg Faust, N4PGS, who both have told me "just call me any time if you need help." I first tried to get Greg using his "Long Tone Zero" system. He claimed that it performed as it was supposed to do, but that he didn't hear it. He promised to install a bigger alarm.

Early Sunday morning Pat Wilson, N0RDQ, showed up on the repeater and offered to transport Greg to the Albemarle High School. I (N4FWA) went to the 911 center with Pat following me, ready to help if I got stuck.

The 911 center is located in the basement of the Charlottesville Police Station (in a room that used to be a shooting range). Fortunately, we have an antenna installed on the roof of the building. Without this antenna, the 911 Center is a "black hole."

Jon Katz, KJ4OP, was home and served as liaison between us and the Virginia Emergency Net, with statewide coverage, which operated on HF (3910 MHz+/- QRM during nighttime and 7240 MHz+/- QRM during daytime.) And, with Pat operating as Net Control at the 911 Center, the operation had to be successful. It was, and the officials were happy.

Bob Villwock, KB4YQC, who lives near Carter's Bridge, offered to relieve Jeff in Scottsville later in the day. Just after Bob arrived in Scottsville, the shelter closed down, and he provided transportation back to Charlottesville for some of the shelter volunteers.

The Scottsville shelter received no "customers," and the Albemarle High School shelter received only 4 guests from Crozet. The operation ended early Sunday afternoon. The antenna on the 911 Center was essential for Sunday's operation. We now have antennas installed at the Red Cross building on Rose Hill Drive, the 911 Center, and Martha Jefferson Hospital. We need to install an antenna at Zehmer Hall, the designated Emergency Operation Center (EOC), if a large scale emergency occurs.

There are many interesting future events, and my clipboard is active. Here is a list of the events I know about:

Sign up and have fun.

1993 PUBLIC EVENTS

DIME *March of Dimes Walkathon.* Sunday, April 25.

911D *Disaster Drill.* Tuesday April 27, 1800 - 2100 EDT
City/County emergency exercise.

TRIA *Lake Monticello Triathlon.*

BSB1 (and **MSB2**) *Multiple Sclerosis Bike Tour.*

Saturday-Sunday June 12-13.

A 150 mile bike tour Charlottesville - Farmville - Concord. Start at Piedmont Community College. Overnight at the Longwood College in Farmville. (Air conditioned dorms!). Finish at the Stonewall Vineyards near Concord. (?Free samples?)

N4FWA *



HELPFUL HINT

For this edition of the AARC Newsletter Joe Giovannelli, W2PVY, has kindly submitted this article:

Rechargeable batteries of various kinds play an increasingly important part in today's electronic equipment. Some of this equipment utilizes lead-acid cells in one form or another. This discussion does not involve these cells or batteries, but with rechargeable nickel cadmium cells and batteries.

First, we must understand that a battery is a collection of cells. In the case of nickel cadmium cells, each one will, when fully charged, produce about 1.25 volts across its terminals. These cells have an excellent "voltage discharge curve." That is, these cells will discharge to very near their depletion point and will still maintain close to their fully charged voltage. After this low point is reached, however, voltage falls very rapidly as current is drawn from them. This is why your HT will seem to running fine on one transmission and will be virtually "dead" on the next.

If you have used nickel cadmium cells and batteries, you have doubtless noticed that, after many, many charge/discharge cycles, that the devices no longer run as long as they once did before they again need to be recharged. You've also discovered that some cells won't even take a charge. So you throw out the "dead" cells and buy new ones. Can we restore "dead" cells and batteries to almost perfect condition? I'll concentrate on restoring a single cell.

WARNING!! Please read this carefully! Follow these steps as described. Failure to do so will, at best, ruin the cell, and at worst, could cause the cell to blow up, scattering caustic materials and other debris around your work area!!

As a source of current, I use a high-current, 12 volt power supply. I find a battery holder works well as a suitable method of delivering current into the cell from this supply. Place the cell into the holder and be sure to note the negative and positive terminals on the cell. Connect the negative terminal of the cell to the negative terminal of the power supply. Connect one end of a test lead to the positive terminal of the cell. **CAREFULLY** touch the other end of the test lead to the positive terminal of the power supply. Hold this connection for no more than half a second.

Wait about 10-15 seconds, then touch the test lead to the positive side of the supply. Remember, no more than half a second. Wait another 15 seconds.

Touch the case of the cell being restored. If it is lukewarm, you're done. If the temperature has not risen very much, then again pulse the voltage into it as you have done twice before.

After three such treatments, stop this procedure, regardless of whether the cell is getting warm or not. Charge the cell as you would with any discharged cell.

If you are dealing with a battery, I recommend that, whenever possible, you find the "weak" or "dead" cell(s) within the battery and recondition those which seem to need it. This often involves removing the outer wrapping in order to expose individual cells. Some battery packs are constructed so that it is virtually impossible to get at the individual cells without destroying the pack. You'll have to try putting current through all cells, using the contacts on the pack which connect it to the device with which it is associated. There are some packs which appear to have a convenient jack for recharging. Do not use the jack when reconditioning! There may be protective diodes in those circuits; the very high currents we are dealing with will very likely burn these out, which would make it impossible to reuse the pack.

Many packs are designed to produce about 8.2 volts across their output terminals. The 12-volt supply may not provide enough current because the cells will charge to a point somewhat above nominal voltage during this process.

If you don't get the right results, use somewhat higher voltage. You have little to lose if the pack is "dead" already. Or, there is a different procedure which can be used for restorations of this kind.

Using a capacitor of 2,000 uF at 50 WV, charge the capacitor to about 30 volts. Discharge the capacitor into the cell or battery as described. Positive of cell goes to positive of capacitor. You need not be concerned about the length of time you hold the connections to the capacitor because it will quickly discharge. You may only need to treat the cell one time, rather than the three times I have previously suggested.

With careful attention to detail, keeping track of cell temperatures so they are not excessively hot, you can extend the lives of batteries and cells for many additional charge/discharge cycles. If you try this and the cell does not take a charge, well, it's time to give up on it. I've seldom had to do that, however.

W2PVY II



TREASURER'S REPORT

The amounts in each of the five separate club funds as of Feb 11, 1993, were as follows:

ARC CLUB ACCOUNT	\$1756.15
REPEATER FUND	1687.75
222 REPEATER FUND	366.00
PACKET FUND	153.39
LINK FUND	464.37
TOTAL	\$4427.66

Donations this year are: \$153.39 For the packet fund; and \$400.00 for the repeater fund, including "surplus donations."

Major expenses so far this year have been \$369.45 from the club fund for educational books; \$189.93 for the 450 repeater up-grade and \$556.00 for the new 146.76 transmitter, both from the repeater fund.

At present we have 121 paid-up members in the club, of which 33 are family members.

WA4UPI *

VOLUNTEER EXAM SCHEDULE

(Virginia Locations only)



- MAY 1 - AARC (ARRL-VEC) at NRAO. Contact John Gray, W6UZ 973-1094
- MAY 1 - Hampton Roads Radio Assn., Hampton,

VA (W5YI-VEC). Contact Bill Runyon, N4BDH (804)-487-8611

MAY 1 - Fredericksburg VE Team, Fredericksburg, VA (W5YI-VEC). Contact Kelly Shaw, AC4MB (703)-891-5581

MAY 15 - Roanoke (WCARS-VEC) (Up-Grades Only) at Roanoke Hamfest. Contact Fred Horton, KZ4Y (703)-366-6266

JUNE 5 - Virginia Beach ARC (ARRL-VEC). Contact Ed Robinson, WD4GOY (703)-468-0866

EVERY 2nd SUNDAY - Bedford (ARRL-VEC). Contact Bob Treacy, W2QZY (703)-297-5351

LAST TUESDAY OF EACH MONTH - Danville (W5YI-VEC). Contact Richard Marshall, WB4CCT (804)-793-0772

[Above information taken from *Autocall* and *SERA Journal*]



THE V-P's CORNER

This is the first entry in the "VEEP" column, so I guess I should think of something philosophical to say. Ok, here goes...

First, I want to thank all of you for allowing me to participate in guiding the Club. We are all responsible for the future direction our club takes, and I am grateful for your confidence and support. Second, I'll make sure I DON'T miss the meeting when nominations are made this time...(hi!).

As I write this, I am looking forward to the Thomas Jefferson Special Event we are sponsoring. I've worked the calling end of Special Event stations, now I get to send. Let me know if you are interested in working this event.

Some people have asked me what we are doing in the future as far as meetings are concerned, so here is what is on tap for the next few meetings. Please understand that this is subject to change without notification or interest penalty:

- April - Since we are entering the season when we will be engaging in lots o' public service events, Hein Hvatum, N4FWA will give a discussion concerning the 911 emergency drill scheduled in April. Also, Bud Beazel, KB4JN1, will have his 144 and 440 test equipment there, so bring your HTs, mobile rigs, etc., and make sure they are up to snuff. Also, the Field Day Committee will be appointed.
- May - This meeting is reserved for the Field Day Committee to present the Club's Field Day plans

for this year. Last year was so much fun I expect a very large turnout. Make your reservations early!! Also, the Picnic Committee will be selected.

June - We'll cover digital communications, i.e., RTTY/AMTOR, PACKET. No one slated yet to speak. Any volunteers?? Also, we'll have a rundown by the Picnic Committee on the upcoming Club picnic.

July - CLUB PICNIC!!!!

The other months have not been decided. If you have a topic you would like to learn more about, please let me know.

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HAMFEST CALENDAR

- APRIL 23 - Dayton Hamvention, Dayton, Ohio (special listing)
- MAY 15 - Roanoke Mayfest, Vinton, VA
- MAY 29 - Dur-HAM-Fest, Durham, NC
- MAY 30 - MD FM Assn Hamfest, Howard Co. Fairgrounds, MD
- JUNE 6 - Ole Virginia Hams Hamfest, Manassas, VA
- JUNE 12 - Winston Salem Hamfest, Winston Salem, NC
- JUNE 20 - Frederick Hamfest, Frederick, MD

[Above information taken from *Autocall* and *SERA Journal*]

1993 LIST OF OFFICERS

President - Bob Pattison, KM4DU
 Vice-Pres - Bill Bearden, KC4TQF
 Treasurer - Ed Bernet, WA4UPI
 Secretary - Melissa Lang, KD4GRM
 Director - Hein Hvatum, N4FWA
 Director - Sam Gentry, N4WJQ
 Director - Bob Ross, WA2MFI
 Director - Harry Dannals, W2HD
 Director - Greg Faust, N4PGS

1993 COMMITTEES



Awards Committee

Bill Bearden, KC4TQF

Recycling Committee

Ron Richie, K4RKA
 Sam Gentry, N4WJQ

Activities Committee

Hein Hvatum, N4FWA
 Greg Faust, N4PGS

Publications/Publicity Committee

Melissa Lang, KD4GRM
 Ed Lang, KC4Y LX
 Boris Starosta, KC4ZKA
 Harry Dannals, W2HD
 Bob Pattison, KM4DU
 Pat Wilson, N0RDQ

Technical Committee

Greg Faust, N4PGS
 Hein Hvatum, N4FWA
 Morris Jones, NM4R

Fund Raising Committee

Bob Pattison, KM4DU
 Ed Bernet, WA4UPI

Education Committee

Bob Ross, WA2MFI
 Bill Bearden, KC4TQF

ARRL Liaison Committee

Rick Berman, KO4WQ

If you would like to be included in any of these committees, please contact one of the officers listed on the previous page.



Tentative 1993 ARRL Contest Calendar

APRIL	13	220-MHz Spring Sprint
	21	432-MHz Spring Sprint
MAY	1	902-MHz Spring Sprint
	1	1296-MHz Spring Sprint
	1	2304-MHz Spring Sprint
	22-23	50-MHz Spring Sprint
JUNE	12-14	ARRL June VHF QSO Party
	26-27	Field Day
JULY	10-11	IARU HF World Championship
AUGUST	7-8	ARRL UHF Contest
	21-22	ARRL 10-GHz Cumulative Contest

SEPTEMBER	11-13	AARL September VHF QSO Party
	18-19	ARRL 10-GHz Cumulative Contest
NOVEMBER	6-8	ARRL November Sweepstakes, CW
	20-22	ARRL November Sweepstakes, phone
DECEMBER	3-5	AARL 160-Meter Contest
	11-12	AARL 10-Meter Contest

CONGRATS!



Congratulations to Boris Starosta, KC4ZKA, for the winning logo now being used on the AARC Bulletin! He will receive one year free membership in the AARC.

Visit to Green Bank

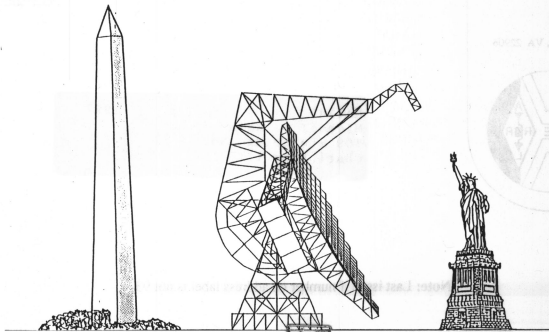
We are planning a field trip to the NRAO observing site in Green Bank Saturday, May 15. I have made the necessary arrangements with the appropriate observatory big-shots. They are ready to roll out the red carpet and show us many interesting things including, of course, the BIG new telescope.

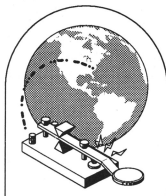
The construction of the new telescope is moving ahead nicely and by the time of our visit, enough steel will be in place to make it look very impressive. The telescope is scheduled to be completed sometime in 1995, and AA4TJ is looking forward to the "mother of all EME (moonbounce) operations." 50 dB gain at 432 MHz!! 60 dB at 1269 MHz!!!

How do we get to Green Bank? (119 miles on winding roads, almost 3 hours drive.) If only 8-10 people go, private cars. If we get a bigger group, maybe we should charter a bus. I would like to ride my bicycle, but it is too early in the year (still cold up there in them thar mountains.)

I am looking for a volunteer to make arrangements for the trip here in Charlottesville. I'll take care of the Green Bank end. Any takers?

■ N4FWA ■





AARC

WA4TFZ

The Albemarle Amateur Radio Club is a public service organization advocating amateur radio and service through regional and world radio communications. The AARC Bulletin is published bimonthly for the membership. Correspondence and editorial submissions are welcome.

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Melissa Lang, KD4GRM

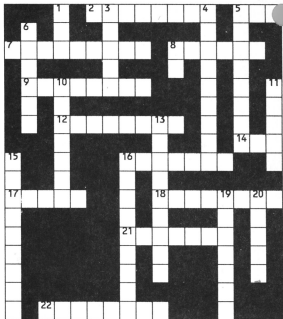
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AARC Bulletin
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- ACROSS -
- USED TO LISTEN TO OTHERS
 - GOVERNMENT BODY THAT ISSUES HAM LICENSES
 - USED TO MEASURE POWER
 - SIMPLE ANTENNA
 - ONE THOUSAND WATTS EQUAL
 - KC4YLX, KD4GRM, W2HD, KM4DU, NØRDQ ETC...
 - USED BETWEEN YOU RADIO AND COMPUTER FOR PACKET
 - CQ WORLDWIDE, NOVICE ROUNDUP ETC.
 - ALLOWS ANTENNAS TO BE PLACED UP HIGH
 - OPPOSES THE FLOW OF ELECTRONS
 - STORES ELECTRICITY
 - EXERCISE IN EMERGENCY PREPAREDNESS

- DOWN -
- CALLING ALL AMATEURS
 - 20 WPM REQUIRED FOR THIS LICENSE
 - 145.29, 146.76, 146.925, 444.250 ARE...
 - MAKES TUBES HOT
 - A FORM OF DIGITAL COMMUNICATIONS
 - LONG DISTANCE CONTACTS
 - YOUR TICKET TO HAM RADIO
 - YOUR EQUIPMENT IS HERE
 - USED TO POWER EQUIPMENT WHEN LIGHTS ARE OUT
 - USED TO MAKE TELEPHONE CALLS ON A REPEATER
 - N4FWA WOULD NOT BE WITHOUT THIS
 - WEATHER WATCHERS
 - ORBITING SATELLITE CARRYING AMATEUR RADIO



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1993

(Note: Last issue if number on address label is not 93)