

**SEPTEMBER CLUB MEETING**  
TUESDAY SEPTEMBER 12, 1995 6:00-7:00 PM

# SUMMER PICNIC

## MACINTIRE PARK Shelter #1

Just off the 250 ByPass near the Fire station  
catered by Big Jim's BBQ.

**TALK-IN ON 146.760 REPEATER**

### NEWSLETTER EDITOR WANTED

#### Probably Located

Two "individuals" have come forward to discuss doing the Newsletter. One approached it in terms of if software could be setup. After a discussion with him later accepted the suggestion to let the second group be submitted. The other (a husband and wife team) would do it; has the software; and has done a newsletter for a previous club.

All "applicants" are Hams and are currently members of the AARC.

I will be submitting the information to the AARC Board at the September Board meeting.

.....Joe (KD4RWX), Editor

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### WHAT IF...

Have you ever thought of how we alert the amateur community that we need to set up a service net without having you listen attentively to the repeater night and day? Well this has been brought up for discussion several times in the last month. The suggestion made and adopted is as follows:

Net control will get on frequency and ask for everyone to stand-by; that he or she will be calling up a service net. Then Net Control will push the 0 (zero) key down for about five seconds. Then Net will dial in a 676 from their key pad.

All right, what does this do?, you are asking. There is a feature called Long Tone Zero (LiTZ, I do not know where the abbreviation came from). A interface board will plug into the external speaker jack of your transceiver, receiver, or scanner. It will mute your audio until it sees the number zero (0) for three seconds or longer. The first two seconds of the five seconds zero tone is to wake-up sleeping receivers that have power saving features. The long tone has several ways to alert you once it has been activated. A simple audio connection to the speaker, or trigger some type of alarm, or tying to a computer interrupt and dialing your pager number. Greg - N4PGS and LeRoy - WA4MHP are working on packaging kits for those that would like to build a Long Tone Zero box. If you are interested please drop Greg or me a note. (Some radios come

already equipped for Long Tone Zero)

The second set of tones (676) is called a Dual Tone Squelch System (DTSS) or Dual Tone Squelch (DSQ). This is a feature that may or may not exist on your radio. The reader will need to refer to the radio's instruction manual to check and learn how to program this feature. But here is how it works: Like the LiTZ, the receiver audio is muted until the required three digits are seen and decoded, then the audio stages are opened to allow the transmission through. There are several rigs that will chime, or ring a bell to alert the operator the proper code was seen.

We will try to use this for the Northern Piedmont Emergency Net every Thursday night. This will allow your equipment to be checked once a week to see that it is in good working order. If you have any comments or suggestions, please send me a message.

Thanks,

LeRoy Sutter -WA4MHP  
E.C. Fluvanna/Louisa Counties

### THE PRESIDENT SPEAKS

Fall is just around the corner and it is time to have the annual picnic before summer runs out. This year the picnic will be catered and you need to let Rick - KO4WQ know if you are going to attend so he can make the proper arrangements. There will be several raffle items at the picnic so buy your raffle tickets early. The picnic will be on Tuesday evening, September 16, 1995 at McIntire Park.

October will be the annual meeting and committees and officers need to submit their yearly reports. We will also elect officers for the 1996 year in October. People that have agreed to be on the

nominating committee are as follows: Greg-N4PGS, Ernie-W2EIU, Jessie-KE4OJD, Pete-AD4TU, and Joe-KD4RWX. If you know anyone that would like to run for office please contact one of the committee members and let them know about the nominee. Please do not contact me, the By-laws exclude me from this committee.

I would like to thank Wal-Mart for their generous donation made to the club of \$300. I would like to thank those that assisted in the Madison floods and White Hall flood and clean up process. The donation made by Wal-Mart was made because of the effort that the amateur community made during these situations. The Board has ear-marked these funds to support items or materials needed for public service and emergency needs.

I also have a question of the amateurs in the community: Do we exercise our packet stations enough? I have been reading the manuals for my KPC-3 and PK-12 and I am amazed at the power of a TNC and packet radio. (I just wish that it was faster.) I know that we are working on installing the ARES database program on the BBS computer. Once this is done, I would encourage people to learn how to use the system and become familiar with it. I would also encourage people to learn how to use their TNC for things other than connecting to the local BBS. One may think about setting up some type of round table net among your friends. Some TNC's have weather FAX capabilities; you could investigate that and APRS which is a lot of fun to watch. At present, I am still a novice (and therefore dangerous) at what packet radio has to offer, but I plan to learn more. Maybe a packet keyboard net or a voice net to discuss packet features and training could be organized. Think about it. I would like to hear your comments. 73 for now.

Only 60 Molex Connectors left.

LeRoy, WA4MHP

### VEEP'S CORNER

Those of you who did not make the August meeting really missed a very interesting and exciting presentation about Dogs East, by Bill Dotson and his partner, a border collie, named Zephyr. Bill talked about the formation and function of Dogs East, a volunteer search and rescue organization, accompanied by an interesting slide showing of some of the disasters they have been involved with, and the training of the dogs. Zephyr really stole the show, making the rounds of everyone there and showing all what a loving and personable dog he is. He also baby sat the Duvall kids all evening. The photographic slides of their rescue efforts in the aftermath of the earthquakes in Albania and Columbia and the disaster in Mexico. not to mention the bombing in Oklahoma City were fascinating. We discussed their problems of communication while in the field, and how the AARC might be of help to them.

Next item of business. The Annual Picnic at McIntire Park on September 12th. We will be at Shelter #1 and the picnic will be catered by Big Jim's BBQ. The cost of the picnic is being picked up by the AARC and we are hoping for a good turnout. If anyone has anything they want for the picnic that will not be supplied by Big Jim, please feel free to bring it, such as special desserts and the like. Don't forget, Sept. 12th at 6.00 pm!!! I will try to draw up a map and directions for McIntyre Park for those not familiar with that

part of Charlottesville. (Ed. No room for Map. See Meeting Notice)

Item three. The fall classes for Novice/Tech and Gene. class licenses start on August 30th. The first class will be more of an orientation class so if you are reading this after Aug. 30th don't worry about missing the first class, we would still like to see you. The class will go on for 12 to 14 weeks and end with an AARC VE session for licensing in late November or early December. Date to be determined later.

That should do it for this month....73...

Rick (KO4WQ)

### Big Jim's menu for the picnic.

<b>BBQ Pork, and rolls</b>	<b>BBQ chicken</b>
<b>Baked Beans</b>	<b>Cole Slaw</b>
<b>Potato Salad</b>	<b>Pickles</b>
<b>Potato Chips</b>	<b>Tea and Lemonade</b>
<b>Cookies</b>	

### THE GLOOM AND TOMB BOYS

They're still at it! Yes, those "gloom and tomb" authorities (?) on Packet continue to write their well-considered predictions that Ham Radio is ready for the grave... if it isn't there now! It seems that these fellows enjoy beating the keys on their soap boxes telling one and all that the Amateur Radio world is just a short distance from oblivion.

Guess it would be better if I didn't read their words, but they provide just enough curiosity in my mind that wants to see if the tune is being played in a new key. But, NO, nothing has the least bit changed. In fact the old hands have been joined by a few n "experts." You know the definition of an expert, right? An expert is one who read the book just before you did.

Well, the tune goes something like this... Amateur Radio isn't the same as it used to be. People are just memorizing those long lists of questions and passing exams by the thousands...AND, they don't know Ohm's Law! We are licensing a bunch of "dummies" who will never meet the FCC Part 97.1 Basis and Purpose which states in part: "... contribute to the advancement of the radio art." "... advancing skills in both the communications and technical phases of the art." and "... reservoir... of trained operators, technicians, and electronics experts."

Nope, there is little question that there might be a diminishing of the numbers who will meet those points. However, the world of technology has changed over the years. No longer are their major breakthroughs in the sciences by the old fellow in the white lab coat laboring in his basement to produce the latest in technology with his own hands. Most of those big developments are worked on by scientists and engineers in the labs of gigantic industrial complexes with all of the latest equipment that money can buy.

Does that make today's Ham Radio license useless and of no value to the world? Not by a long shot! Read the other parts of FCC's Basis and Purpose and you will note words relating to emergency communications, public service and international goodwill. These are items in which most Hams truly excel.

However, even those are not the really true PLUS in Amateur Radio as seen by my eyes. The idea that one or more of those we bring

into our world of communications may someday become an engineer, scientist or technologist and fill the rapidly declining ranks in those important disciplines... that's really good news!

So, let's not spend too much time singing gloomy tunes. Rather than spend time moaning and groaning, let's get behind those who show an interest in Ham Radio and help and encourage them to find their place in the future of Technology. One in a hundred is all we need for success. 73...

### OVER THE HILL

Hello once again from balmy Stuarts Draft. As the summer slowly comes to a close and things start to wind down, its time to slow the pace and take a breather. The VARA's first Novice/Tech class ended on the 16th of August and the VE Session was held on the 19th. The final results of the class as of this writing are..25 enrolled, 15 made it through the entire 14 weeks and to date 8 are newly licensed hams and 2 more have passed elements, but haven't gotten their license yet. 3 were unable to attend the VE session due to vacation and work conflicts and will test later. By and large, we feel the class was a success and we learned much from trying a class during the summer months. The next VARA Novice/Tech class is being tentatively scheduled to begin in March. Alby and I will be taking a well deserved break during the fall. The over-all results of the VE session on the 19th were as follows: 20 elements were given and 18 were passed. 10 new hams joined our ranks..9 as Techs and 1 as a Tech Plus. Alby and I want to thank Randy Smith KN4KB for putting together the VE session for us. It went almost perfectly (thanks Bob, KM4DU and Harry, W2HD) and thanks to the fellows from the MARA VE group who also made this session happen.

On a sadder note, it is with regret that I announce that Marshall Cooper Sr., KC4YAR, became a Silent Key on July 2nd. Many of us knew Marshall as the person we contacted for the MARA VE Sessions. Marshall was also the Vice- President of the MARA Club. He will be missed.

By the time you read this, the Albemarle T-Hunt will be a thing of the past. I am sure all went well. Don't forget that the next VARA T-Hunt will be on Sept. 17th and Art Stockwell will be the Fox for that one. The next AARC Hunt will be on October 15th, and the co-sponsored November Turkey Hunt will be held in November. For more info on that, see the article elsewhere in this fine publication. Well, that's about it for me for this go round. I hope everyone is staying cool and healthy. 73 to all.

Bill, KC4TQF

### The November Turkey Hunt

The November Turkey Hunt is a transmitter hunt with a twist...registration is required for this one (you MUST be registered by November 1 in order to be eligible for any prizes)...speaking of prizes, we will be offering prizes for the 1st place finishers in each category. As of this writing the specific prizes have not been selected, but they will be appropriate for the upcoming Thanksgiving holiday. For this particular Hunt, we will be accepting entries in 2 categories - TEAM (2 or more people in a single vehicle)

and SINGLE (only one person in a vehicle).

WHEN - This Hunt will take place on November 12th. This is one week earlier than normal because we want to give all interested parties the chance to participate before anyone leaves for the holiday. Check-in time will be 10:00 at a location yet to be determined. At the Check-in, we will brief all Hunters on the specifics of the Hunt (i.e. types of transmitters, freqs, etc). Also Each Team and Single will receive their Transmitter Verification Card. The Hunt will begin promptly at 10:30.

Overview - The Hunt will use 3 different transmitters within Augusta County. These transmitters can be voice, CW, or data. If voice, the operator may or may not talk to the Hunters. Power levels can be fixed or variable, high or low. Antennas may be horizontal or vertically polarized or variable. As an added bonus, the station may be fixed or mobile (if mobile, it will be within a specified area and between specified points). The object will be to find each of the 3 transmitters and return to the check-in site. At each of the transmitter sites, a Hunt official will note the time and sign off on the Transmitter Verification cards as the Hunters check in. The Hunters will then proceed to the next transmitter. Your Hunt will be against time. the first transmitter will go on the air at 10:30. The second transmitter will go on the air as soon as the first Hunter checks in at the 1st transmitter site. Likewise the 3rd transmitter will go on the air when the 1st hunter checks in at the 2nd transmitter site. This is important each transmitter will only operate until each Hunter has checked in or for 3 hours, whichever occurs first. **ANY HUNTER THAT HAS NOT LOCATED A TRANSMITTER BY THE TIME IT GOES OFF THE AIR WILL BE ELIMINATED FROM THE HUNT AND WILL RETURN TO THE CHECK-IN SITE.**

Scoring will be the number of minutes it takes to locate a transmitter multiplied by its difficulty factor (i.e. if it takes 2 hrs to find transmitter A with a difficulty factor of 2 then the score for that transmitter will be 120 minutes x 2 = 240). The winner will be the Hunter with the LOWEST score. This means that if it takes a long time to find one transmitter, the time (and score) can be made up on the next transmitter. The easier the transmitter is to find, the higher its difficulty factor, and the harder it is to find, the lower the factor.

Hunters may use any antenna/equipment configuration they desire. Base stations ARE NOT permitted to operate in this Hunt and the use of any base stations by any Hunter for any reason shall immediately disqualify the Hunter. The decision of the judges will be final. This hunt will proceed rain or shine. If you have any questions, please call me at 540-337-5179 (Stuarts Draft).

73 de Bill, KC4TQF

## 10 METER NET

Waynesboro

Tuesdays 7-8 P.M.

28.360 MHz SSB

Alby (AD4KZ) is Net Control.

Informal rag chew - all are invited.

Will close early if no one shows.

**BITS AND PIECES****VIRGINIA SLOW NET**

The Virginia Slow Net (VSN) is looking for students and instructors. The net is a CW Net operating to teach traffic handling and to help operators increase their code speed. The net operates every night at 8:30 pm local time 3680 KHz. We run at 8 WPM on the Net frequency.

The course consists of 4 parts: Basic, Advanced, Liaison and NCS. The messages you take comprise a HOWTO booklet on Nets. After this course, you will feel comfortable acting in any (net) capacity you desire.

If you would like more information, you can reach me in several ways. By phone at home, 804-779-3351; at work, 804-560-3828; on my BBS at 804-779-0055 (up to 28.8 baud); or I monitor the 146.430 and 146.880 repeaters while traveling. My internet address is n0rdq@pplace.com, if you prefer that method.

Let me know if you would like an information package.  
Thanks.....**N0RDQ/Pat**

**VE EXAMS****VIRGINIA VE TESTING INFORMATION**

09/08/95,A,Galax	703-236-8672,Joseph A Kolb
09/09/95,A,Culpeper	703-547-3089,Bill Brown
09/17/95,A,Lynchburg	804-386-4651,Charles L Beard
09/17/95,A,Roanoke	540-890-6782,Terrance V Vlug
09/18/95,A,Coeburn	703-395-6595,Clinton W Hawkins, Jr
09/23/95,A, Virginia Beach	804-898-8031,Ed Brummer
09/29/95,A,Stafford	703-786-8012,Jim McCloud
09/30/95,5,Gloucester	804-693-2117,Fran Sterling
10/07/95,A,Toano	804-566-1435,Lawrence Boellhoff
10/13/95,A,Galax	703-236-8672,Joseph A Kolb
10/14/95,5,Newport News	804-595-3574,Bruce Young
10/14/95,A,Richmond	804-798-5048,Rick Cook
10/15/95,A,Lynchburg	804-386-4651,Charles L Beard
10/15/95,A,Roanoke	540-890-6782,Terrance V Vlug
10/28/95,5,Gloucester	804-693-2117,Fran Sterling
10/28/95,A,Spotsylvania	703-373-7076,Carolyn Cavanagh
11/04/95,A,Portsmouth	804-484-2857,Arthur A Thiemens
11/04/95,A,Sterling	703-450-2304,Michael Weber
11/10/95,A,Galax	703-236-8672,Joseph A Kolb
11/17/95,A,Stafford	703-786-8012,Jim McCloud
11/19/95,A,Lynchburg	804-386-4651,Charles L Beard
11/19/95,A,Roanoke	540-890-6782,Terrance V Vlug
11/20/95,A,Coeburn	703-395-6595,Clinton W Hawkins, Jr
11/25/95,5,Gloucester	804-693-2117,Fran Sterling
12/02/95,A, Virginia Beach	804-468-9166,Judy Rogers

The following individuals seem to be the regular contact persons for VE Exams in their area. If you wish to check on the availability of future exams in their area, please contact them.

Culpeper	Bill Brown	703 547-3089
Harrisonburg		
Richmond	Rick Cook	804 798-5048
Lynchburg	Charles Beard	804 386-4651
Roanoke	Fred Horton	703 366-6266
Roanoke	Gordon Garrett	703-268-1017,
Orange County	Kelly Shaw	703 891-5581
Spotsylvania	Carolyn Cavanagh	703-373-7076,
Charlottesville	John Gray	804 973-1094

We will always announce the Charlottesville sessions in plenty of time.

**VIRGINIA BEACH HAMFEST**

and

**ARRL Virginia State Convention****Saturday & Sunday****September 23-24, 1995**  
**Virginia Beach Pavilion****Tickets and Tables:****Manny Steiner (K4DOR)**  
**3512 Olympia Ln.,**  
**Virginia Beach, VA 23452****(804) HAM-FEST**

Source: "73 Amateur Radio Today", Sept., 1995

**WILLIAM JOSEPH LANG**

Son of

**Melissa (KD4GRM) and Ed (KC4YLX) Lang**

June 2, 1995

**CONGRATULATIONS**

Anyone interested in taking a SKYWARN course, please contact Joe-KD4RWX or Hein-N4FWA. We need 25-plus amateurs for the people from Sterling to come down and teach a course.

Internet address change for Joe (KD4RWX)  
**Bucoda@aol.com**



**FOR SALE  
Molex Connectors**

I have 200 60 molex connectors. These are the connectors that the local ARES group has adopted as a standard. They will be bagged in sets of 10 for \$5.50 per bag. If you would like to allocate a bag or two please contact **LeRoy-WA4MHP**.

**PUBLIC SERVICE EVENTS 1995  
CONTACT HEIN (N4FWA) TO SIGN UP FOR EVENTS**

**MSB3** September (CANCELLED) Multiple Sclerosis Harvest Tour (bike). Albemarle County. Start and finish at Broadus Wood School near Earlysville.

**DRL1** Thursday 7 September, (CANCELLED) Albemarle/Charlottesville/UVA disaster drill. Scenario will be earthquake and train derailment.

**HRS1** Saturday 16 September, Horse Trials at Wilton Farms in Greenwood.

**BKR6** Sunday 17 September, Bike race (sponsored by UVA) near Carter's Bridge.

**DIA1** Sunday 01 October, 1000 EDT American Diabetes Association Walk in Charlottesville.

**HRT1** Sunday 08 October American Heart Association Walk in Charlottesville.

**HRS2** Saturday 04 November, Montpelier Horse Race.

**AMATEUR RADIO CLASSES**

*Presented By The*

**ALBEMARLE AMATEUR RADIO CLUB**

**NOVICE/TECHNICIAN LICENSE CLASS**

Are you interested in serving your community while having a great deal of fun in the process? Perhaps the thought of making new friends both locally and world wide excites you. Amateur Radio operators do all of these things and much more. The Albemarle Amateur Radio Club is offering a free, fourteen week, introductory course that will prepare you to become a licensed radio amateur. No previous experience is required and all are welcome.

**Place:** Charlottesville Albemarle Technical Education Center (CATEC) on Rio Road.

**Time:** Wednesday evenings from 6:30 PM to 9:00 PM.

**Date:** Registration and introductory lecture on August 30, 1995.

**Fee for supplies:** \$23.00 (Textbook and Code tape)

**GENERAL LICENSE CLASS**

Do you wish to upgrade to all of those frequencies where a lot of DX can be found under these poor propagation conditions on 10 meters. Consider the General License Class which will provide instruction designed to enable you to pass the General Class theory exam. No code will be taught as part of the class. Students will need to devise a self-learning program on their own. Possible methods will be discussed: such as on-the-air practice sessions.

**Place:** Charlottesville Albemarle Technical Education Center (CATEC) on Rio Road.

**Time:** Wednesday evenings from 6:30 PM to 9:00 PM.

**Date:** Registration and introductory lecture on August 30, 1995.

**Fee for supplies:** \$12.00 (Textbook)

**For additional information call: Harry Dannals, W2HD, at (804) 974-7388**

SEPTEMBER 1995						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
3 <b>W3YBV</b> (1909)	4 INFO-NET 7:00 pm <b>HOLIDAY</b>	5 <b>AARC BOARD MEETING</b> 7:30 PM	6 Lunch Bonanza 11-1 <b>CLASSES</b>	7 ARES NET 8:00 PM <b>K4QKH</b>	8 <b>N4ZZB</b>	9 <b>KD4CUB</b>
10 <b>KO4EV</b>	11 INFO-NET 7:00 pm	12 <b>AA4KP CLUB PICNIC</b>	13 Lunch Bonanza 11-1 <b>CLASSES</b>	14 ARES NET 8:00 PM	15 <b>WA4OVD</b>	16 <b>KC4ZIH</b>
17 <b>T-HUNT</b> AUGUSTA County	18 INFO-NET 7:00 pm <b>KC4RRY</b>	19	20 Lunch Bonanza 11-1 <b>WB4CLN</b> <b>KD4IGU CLASSES</b>	21 ARES NET 8:00 PM <b>N4AYC</b> <b>KE4ZNO</b>	22	23 <b>AA4CN</b> Virginia Beach Hamfest
24 <b>KA4BMT</b> Virginia Beach Hamfest	25 INFO-NET 7:00 pm	26 <b>KD4KWJ</b>	27 Lunch Bonanza 11-1 <b>CLASSES</b>	28 ARES NET 8:00 PM	29	30
<b>VIRGINIA BEACH HAMFEST</b>						
<b>Saturday &amp; Sunday</b>		<b>September 23-24, 1995</b>			<b>Virginia Beach Pavilion</b>	

### FOR SALE or WANT

[If you wish to have something printed in this section please contact Joe (KD4RWX) ]

**WANTED: Johnson Viking II AM Transmitter**

I would like to obtain a Johnson Viking II AM transmitter with VFO, if possible. If you have one for sale contact me, Carter Elliott (WD4AYS) at 804-979-7383 (H) or 804-980-7698 (W)

**FOR SALE: 2 METER GAIN ANTENNA**

N6AAR is offering for sale a Butternut Super Trombone model 2MCV-5 2 meter gain antenna. 15 feet in length, all instructions included, for \$50. Call Bob at 977-1256 if interested.

**FOR SALE: 220 HOT ROD ANTENNA**

Brian, KE4HIA, would like to sell a telescoping 220 hot rod antenna, brand new, for \$20. Call him at (804) 823-5469.

**FOR SALE: Oak Hill QRP rig**

7/6/95

Oak Hill QRP Spirit for 30 meters, superhet receiver, including iambic keyer, \$210.

If interested in any of these, call Brian, KE4HIA at (804) 823-5469.

**FOR SALE: DIAMOND DIPLEXER**

7/13/95

LeRoy, WA4MHP, wishes to sell a Diamond dual band diplexer (2m/450). Call him at 804-589-3822 if you are interested.

**FOR SALE: CUSHCRAFT 10 METER BEAM**

7/13/95

LeRoy, WA4MHP, wishes to sell a Cushcraft 4 element 10 meter beam. Call him at 804-589-3822 if you are interested.

**WANTED: 50ft TOWER**

7/13/95

Earl, KE4UFP, is looking for a 50 ft or taller Rohn type sectional tower. If you have one which you wish to sell, call him at 804 286 2719

**FOR SALE: 2 AND 6 METER ANTENNAS**

7/21/95

Bob, N6AAR, 977-1256, offers the following for sale; KLM Model JV-6, 6 meter vertical for \$75; ASP Model 151.3 (Antenna Specialists) thru the glass 2 meter antenna, \$30

**FOR SALE: CHEAP 8088 COMPUTERS**

7/21/95

The AARC has several Sperry 8088 computers for sale CHEAP. Both color and monochrome are available. If interested, call Ron, K4RKA, 973-3640.

**FOR SALE: TH-225A 2m HANDHELD**

7/27/95

I have for sale in excellent condition, a 2 meter Kenwood TH-225A. It comes with wall charger, 2 Kenwood PB-12 battery packs and Kenwood SMC-31 speaker mike, \$275.00. Call 942-3272 or leave message at this BBS. Thanks for reading de Denny, N4XPW.

**FOR SALE: Various Items**

7/31/95

4 Foot spun aluminum dish with polar mount and mounting pole; Universal SC-100 SCPC receiver; 30 degree LNBF; Realistic 10 band stereo equalizer; 12 Ghz feedhom. Contact Ken Reitz, KS4ZR. Phone 703-967-2469

### CLUB BUSINESS

#### AARC Board Meeting: August 1, 1995

Joe (W2PVY) moved and it was seconded that the AARC obtain a Federal ID#. The motion passed. LeRoy (WA4MHP) will set the process in motion.

Joe (W2PVY) moved and it was seconded that the cash donation received from WalMart be designated for Public Service use. Motion passed.

Joe (KD4RWX) was named Chair of a committee to discuss and propose ideas related to topics related to emergency preparedness in terms of publications, workshops, etc. Joe will select individuals to assist in that process.

### AARC Regular Meeting Minutes-- August 8, 1995

Two new members were approved:

James Frawley Jr. (KC4WJU)

Scott Hooper (KT0P)

July Minutes were approved.

Things mentioned Club Picnic, September 12. Any interest in SKYWARN (@16 responded.)? WalMart donation to be used for Public Service. Classes will be starting August 30. Some members held a demonstration at the downtown library. Long Tone Zero usage and kits building mentioned.

The Emergency Drill scheduled on September 7 is canceled. Perhaps a local drill will be initiated instead.

Ron (K4RKA) submitted some money obtained from surplus disposal.

Treasurer's Report by Sharon (KO4OC). The expanded and up-to-date report is shown below.)

#### ALBEMARLE AMATEUR RADIO CLUB, INC. TREASURER'S REPORT MONTHLY REPORT

January 1, 1995 - August 28, 1995

Treasurer: Sharon Duvall, KO4OC

#### 1995 - INCOME

DESCRIPTION	TOTALS
Total Income:Dues	\$1117.50
Total Income:Miscellaneous	180.00
Total Income:Donations	2386.00
<b>TOTAL INCOME TO DATE</b>	<b>\$3683.50</b>

#### 1995 - EXPENSES

DESCRIPTION	TOTALS
Total Expenses:Equipment	\$ 715.07
Total Expenses:Miscellaneous	1721.89
Total Expenses:Special Projects	854.02
<b>TOTAL EXPENSES TO DATE</b>	<b>3290.98</b>

**1995 GAIN OR LOSS TO DATE** \$392.52

1994 Balance Brought Forward (1-1-95) \$4751.28

**CURRENT BALANCE** \$5143.50

The program which preceded the meeting was presented by Bill Dotson. He gave a very informative presentation concerning the role of dogs in disasters where persons need to be located.

The meeting was adjourned.

Submitted by Joseph D. Fritz, Secretary.

## J-POLE ANTENNA

(NOTE: See associated diagram on Page 9.)

From where I live, my handie-talkie and rubber ducky antenna will not reliably reach the local repeaters. Maybe you have the same problem, and wish you had lots of extra cash to buy yourself one of those fancy, high-priced, high-gain antennas you see in the ham radio magazines. If money is no object in your radio budget, those fancy antennas will do a very nice job for you. But likely you can boost your signal enough to do the job with relatively little cash - and have some fun doing so!

Recently I built a J-pole antenna from standard 1/2" copper pipes and fittings. I had wanted it to work well from about 145.05 MHZ to 147.52 MHZ, and, of course, I wanted it to reach the 146.76 MHZ machine. Its performance has proven satisfactory, the cost was reasonable, and it was not too difficult to build. I do not claim this antenna is the best antenna to be had anywhere, although I did some research in trying to make it an efficient design. I have no idea how much gain it has over whatever else, or what radiation patterns it has. My antenna reaches the local two-meter repeaters for me; I am not well qualified to evaluate it beyond that.

If you think you might want to build one for yourself, read this article a couple of times. That should give you an idea whether this is the kind of project you might want to tackle. There are some other ways to build a two-meter antenna, or even a J-pole, for that matter. Some really nice J-poles have been built using twin-lead antenna wire, for example. You have lots of options, and they each have advantages and disadvantages. Check them out.

Originally I had planned to build a discone antenna from directions which I had seen in a radio publication. It looked to be a fragile, so I planned to mount it in the attic to protect it from the ice and wind of winter, even though it undoubtedly would perform better as an antenna if mounted outside. I was in a local hardware store shopping for materials to build the discone antenna when I met Brian Fox, KE4HIA. He recommended that I instead consider a J-pole antenna made from 1/2" copper pipe and fittings. He had built one for himself, and found it tough enough to stand the outdoor weather, and it performed well for him. It seemed to me that the J-pole would do a better job for me than the discone antenna. We walked around to the plumbing supplies section of the store where he helped me choose the parts I would need. Unfortunately, he could not remember, on the spur of the moment, what lengths I should cut the sections of pipe, but I bought the supplies anyway. I felt sure that someone in the club would have the information I needed.

Soon afterward I had the needed information. Bob Pattison, KM4DU, loaned me an excellent out-of-print book for research, and an SWR meter for VHF. Bob also helped me get some 9086 low-loss coaxial cable to feed it (I used 51 1/2 feet length). Coaxial cable 9913 also should work well. (My research left me convinced that good low-loss cable should be used, if possible, at VHF frequencies).

My purchased pipe and fittings were the following:

- > Quantity two copper pipes, 1/2" diam. x 5 feet long (this pipe is actually about 5/8" outside diam.);
- > Quantity one copper elbow for 1/2" pipe;
- > Quantity one copper tee for 1/2" pipe; and
- > Quantity three copper pipe caps for 1/2" pipe.

You may already have the remaining things needed, but if not, also buy or borrow the following:

- > Resin-core solder;
- > A propane torch;
- > A tubing cutter (preferable; for a hacksaw leaves rough edges which must be smoothed before assembly);
- > Some sandpaper to clean the joints before soldering;
- > A couple of stainless-steel, continuous worm-screw, hose clamps which will fit the 1/2" copper pipe to terminate the coaxial cable;
- > Some materials to seal the coaxial cable terminations (I used "TV-RADIO CONNECTOR SEALANT" and electrical tape. It may not have been the ideal sealant, but it was available, and it has done the job for several months.); and
- > Some parts to mount the finished antenna. (Large stainless-steel, continuous worm-screw, hose clamps might mount it to a vertical steel pipe, or tie it to a tree limb; or maybe some other method seems best at your place).

The directions for cutting the pipe are next; but before we discuss the lengths to cut the pipe, we need to talk about the size of the finished product. You ask, "Why are we already talking about the size of the finished antenna when we have not cut the individual pieces yet?" The reason we need to "get the cart before the horse" here for a minute is that I have discovered that some manufacturers (at least in the past) have made some elbow and tee pipe fittings which were longer than the fittings which I bought. Check ahead of yourself - measure your pipe length and mark with a sharp pencil on the UNCUT pipes. (If you are planning to cut with a hacksaw, remember to allow for the width of the saw cut as you locate the mark, and later, the cut, in relation to your mark). Then lay your fittings alongside the pipe with the fittings and pipe overlapping as the pencil marks on the pipe indicates they would fit together. Now measure each segment this way, and compare with the respective sizes of the finished antenna segments which are given below. Note - the upper ends of the J-pole should have the pipe caps added in order to reduce sharp edges on the end of the antenna (to reduce static noise), and also to keep out the weather.

From one of the copper pipes, mark off a 58.75" (58 3/4") length of pipe to be the main radiating element, the "tall part of the J". That will use almost all of that length of pipe. Position the pieces which will make up the long vertical segment of the J-pole after assembly. Measure from the outside tip of the pipe cap to the top edge (nearest edge) of the short horizontal piece of pipe (which is fitted into the horizontal portion of the tee fitting and the elbow fitting). After assembly it should measure 58.84" (just barely over 58 13/16"). If the measurement looks about right, then 58.75" would be the length to cut that segment of pipe. If the measurement looks to be inaccurate, find what is wrong, and make adjustments before cutting.

Now mark off from that second length of pipe which you had purchased, an 18.17" length (that's about midway between 18 5/32" and 18 3/16" long, if you wish to be fairly precise). Position the pieces of the short vertical segment of the J-pole as they would be assembled, and measure them similar to the way we measured the long segment. The dimension from the outside tip of the pipe cap to the top edge (nearest edge) of the horizontal piece of short pipe (which is fitted into the elbow and the horizontal portion of the tee fitting) should

18.26" (just about 18 1/4"). If the measurement looks about right, then 18.17" would be the length to cut that segment of pipe. If the measurement looks to be inaccurate, find what is wrong, and make the necessary adjustments before cutting.

Finally mark off from the second length of pipe which you had purchased, a 1.50" length (1 1/2"). Following much the same procedure as we used for the previous two segments, check the size of this pipe before cutting. Position the pieces of the short horizontal segment of the J-pole as they would be assembled, and measure between the vertical segments of the J-pole. Center-of-pipe to center-of-pipe, the measurement should be 2.12" (2 1/8"). If the measurement looks about right, then 1.50" would be the length to cut the third segment of pipe. If the measurement looks to be wrong, make the necessary adjustments before cutting. That takes care of the parts needed to make the upper portion of the J-pole.

Whatever length of remaining long pipe you have can be added to the bottom of the tee fitting to provide you a means of support for the finished antenna. (This lower portions does not need to be insulated from ground, and I did not insulate mine at the mounting point. In fact, the horizontal short segment of the J-pole antenna rests uninsulated against the top of its steel support pipe to be sure the antenna does not begin slowly sliding down the support pipe, if it should loosen).

Clean the copper pipe and fittings before soldering with resin-core solder. Be careful to position the segments properly parallel and perpendicular as you solder the joints and let them cool. Note - it is easy for the heat which is soldering this joint to be loosening another joint while you are not noticing. Be sure that the two upper segments remain spaced the proper distance apart and parallel. (Did that sound like the voice of unpleasant experience)? While soldering, it would be wise to lay the antenna on some kind of support which will not be damaged by heat and dripping solder. (Dripping solder? Did that sound like more unpleasant experience)? After assembling and soldering each segment, and after completely soldering all of the antenna joints, use the measurements given in the paragraphs above to be sure each segment of your antenna is still correct and properly aligned. No, extreme accuracy is not required here, but it should be fairly close.

Now we are about ready to mount the antenna, tune it, connect to it, and seal the connections against the weather (if mounted outside). Strip enough insulation from the end of the coaxial cable to allow the braid to connect to one side while the cable is positioned between the two vertical antenna segments, while the inner conductor connects to the other side. Use approximately equal lengths of each from cable to connection point. (It does not matter which connects to which, I'm told, but I connected the inner conductor to the tallest vertical segment). I connected mine to a cleaned area of each tube by means of a stainless steel, continuous worm-screw, hose clamp around each tube. (Yes, I know that fancier methods of connecting could be found, but this was the method I chose). The actual connections were made by bending the inner conductor and the braid, respectively, to run along the length of the tube centerline of the tube to just beyond the far edge of the hose clamp. Slightly bending the end of the conductors back over the edge of their respective hose clamps helps to secure them mechanically. Be sure the connections will be on the pipe centerlines (about 2 1/8", center-to-center).

Where along the length of the pipes should the coaxial cable get

connected? We do best to make some SWR readings to discover the best place to make a connection, and it is necessary to have the SWR meter located as close as possible to the antenna connection point in order to get measurements which are valid. (I could tell you the place along the length of the pipes that proved to be the best place for me to connect to my antenna, but that may not apply in your case. Antennas are very much influenced by their mounting height, materials from which they are made, their size, surrounding objects, and probably some other factors as well). So let's prepare to make some SWR measurements before making the permanent connection of the coaxial cable. You will need to attach short, equal-length leads to the SWR meter which will reach over to each upper vertical antenna segment, one of the leads to connect to the inner coaxial cable conductor, and the other one to connect to the coaxial cable braid. Bend these short meter leads so that the end of each will touch the pipe in a perpendicular manner, 2 1/8" apart, and so that they each will touch their respective pipes on their centers. This allows taking SWR measurements at points which are about the same distance apart as the final coaxial cable connections. Get the J-pole supported before tuning it, and tune it while only using minimum power. Even so, do NOT touch the antenna while tuning it, or you could get a very bad radio-frequency burn. (Thankfully, I did NOT have a bad experience in this area!) Also, try not to have your head, or any sensitive-tissue part of your body too close to it, for even minimum doses of VHF radiation can be harmful to eyes, and other sensitive tissue. Then with low-power signals (of the frequency you prefer) transmitted through the SWR meter and its short leads to the supported J-pole, slide the short connectors from the SWR meter up and down the lower two or three inches of the upper two vertical segments of pipe. (Or, if you prefer actually use the hose clamps to make connections of the short meter leads directly to the vertical antenna segments at several different elevations, and recording the meter readings at each respective location). Take measurements on both vertical segments at the same elevation in relation to the horizontal pipe which joins the two verticals. Using either method of measuring SWR, it will not take you very long to find the elevation point which has the best SWR readings for your favorite portion of the two-meter band. That should be the location to which you connect your coaxial cable leads. Mark the location you have found to be best, make the connections, seal the connections, be sure the antenna mounting is secure, and you should be in business!

Best of luck with the project. If you do decide to build one, please let me know how it works out. Likely you can build it, and get it ready to use with no problem whatever. If some of the above tasks seem a little too challenging for you, even after carefully reading the above description a couple of times, do not let that stop you - just call someone to help you through those tasks.

Some of you may want to analyze the design (as I indicated, that is not my forte), or you want to make it more efficient, or design features to make it easier to connect to it, mount it, etc. Great! Give us the benefit of what you observe and learn. Your shared information will help us all. 73, Elwood Shrader, KB4DJN

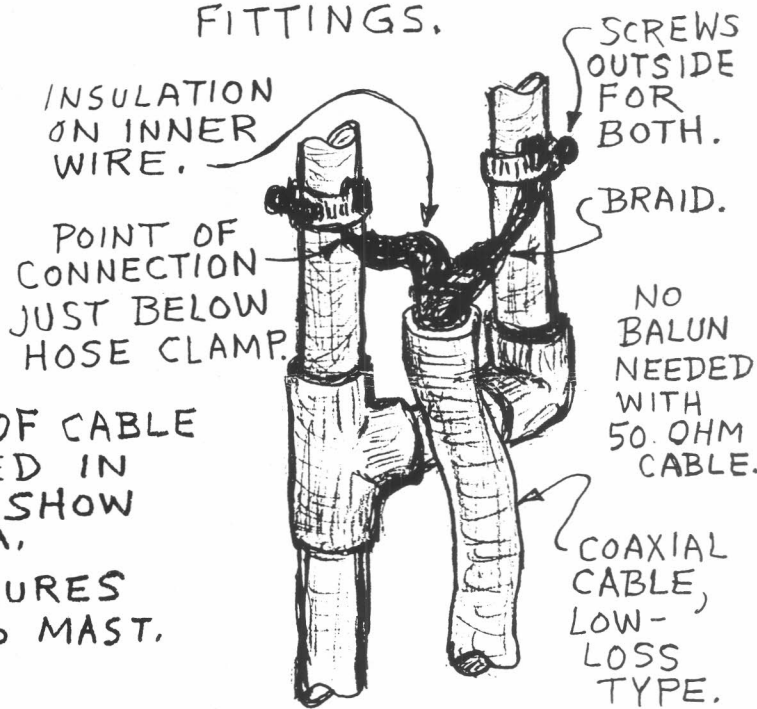
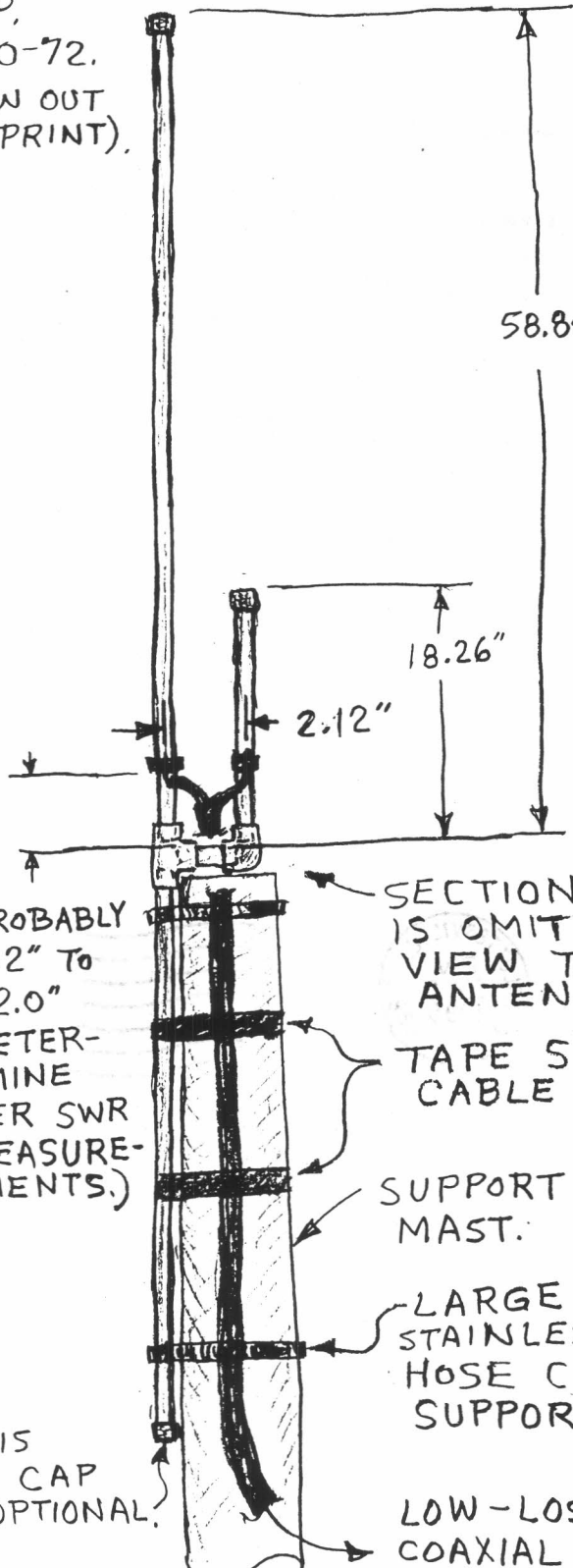


THIS DESIGN IS PATTERNED  
SOMEWHAT FROM A J-POLE  
ANTENNA DESCRIBED IN ARRL  
BOOK "FM & REPEATERS", CH. 6,  
PP.

70-72.  
(NOW OUT  
OF PRINT).

TWO-METER  
J-POLE ANTENNA  
TUNED FOR USE  
BETWEEN 145.05  
AND 147.52 MHz.

IT IS MADE FROM  
 $\frac{1}{2}$ " NOM. SIZE  
COPPER PIPE AND  
FITTINGS.



ENLARGED  
VIEW OF  
COAXIAL CABLE  
CONNECTIONS  
WITH TAPE  
& SEALER  
OMITTED  
FOR CLARITY

PROBABLY  
1.2" TO  
2.0"  
(DETERMINE  
PER SWR  
MEASUREMENTS.)

SECTION OF CABLE  
IS OMITTED IN  
VIEW TO SHOW  
ANTENNA.

TAPE SECURES  
CABLE TO MAST.

SUPPORT  
MAST.

LARGE SIZE  
STAINLESS STEEL  
HOSE CLAMPS FOR  
SUPPORT.

LOW-LOSS  
COAXIAL CABLE  
TO TRANSCEIVER  
(TWO-METER)

THIS  
END CAP  
IS OPTIONAL.

Elwood Shrader  
KB4DJN 8/26/95

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**DEADLINE FOR EACH ISSUE**

The 15th-17th of each month should be considered as the last dates to submit information for the NEXT MONTH'S BULLETIN. In some circumstances it may be possible to send information a week later. Check with me. Joe, KD4RWX

**CLUB MEETINGS**

**Regular Meeting:**

Second Tuesday of each month at 7:30 p.m.

**Board and Technical Meetings:**

First Tuesday of each month at 7:30 p.m.

Meetings are held at the National Radio Astronomy Observatory (NRAO) building, Edgemont Road (UVA area)

**WA4TFZ REPEATERS**

INPUT/OUTPUT	TONE ACCESS (if required, etc.)
146.160/146.760	88.5 Hz (If enabled, DTMF 325* will produce temporary Tone off and 326* will turn Tone back on)
Emergency Autopatch to access the 911 Center.....	DTMF 911*
Emergency Autopatch to access VA State Police.....	DTMF 918*
Autopatch exit.....	DTMF 0*
Time.....	DTMF 10*
Tone status of repeater.....	DTMF 700*

146.325/146.925	91.5 Hz (if enabled)	223.160/224.760	no tone
449.250/444.250	151.4 Hz (if enabled)	145.030	MACHO node
145.030	CHO	WA4TFZ	Packet Bulletin Board

**NETS**

**Northern Piedmont Emergency Net**

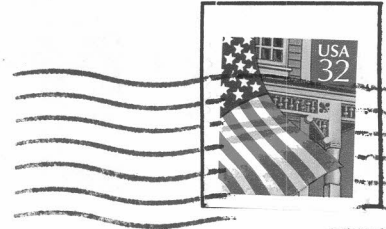
146.76 repeater Thursday 8:00 p.m.  
 Plus Swap/Trade & Technical sessions  
 Net Control: Morris, NM4R

**Information Net**

146.76 repeater Monday 7:00 p.m.  
 Newsline program and general news  
 Net Control: Mark, N4TZE

**Albemarle Amateur Radio Club**  
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**AARC BULLETIN**  
**September 1995**



Please check your mailing label for correctness of the information.. Notify Joe (KD4RWX) of corrections needed. It is time to renew membership.

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