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☞ **Next Meeting:**
 November 11, 1997 at
 7:30 PM
 NRAO Auditorium
 Edgebrook Road (UVa
 area)

Monday Night Nets

CALLING ALL YL'S

We're so happy that EVERY WEDNESDAY at 8:30 PM four to six YL's have been meeting on frequency 146.76 for Informal Net Sessions.

BUT we know there are many more YL's out there, so ladies mark the following dates as social events, and come join us. Mark Wednesdays Oct. 29th, Nov. 5, and 12 as a reminder it's YL night.

BUT WE ARE MAKING PLANS to change over on Nov. 17th - a MONDAY, same frequency (146.76), same time (8:30PM). We think we may have a better response on Monday nights!

ALL LADIES IN THE RANGE OF THE CHARLOTTESVILLE
 REPEATER ARE WELCOME, SO LET US HEAR FROM YOU!

Presently the purpose of this net is very simple: we just want to get to know one another better. We're looking forward to hearing some new voices.

June Giovanelli, KD4ATH

Youth Net Returns

We're back! The Youth Net is taking to the air again, this time on the Waynesboro repeater (147.075+). Check in is at 8:30 PM every Monday night. All hams of less than drinking age are welcome to join us. Net control is Brian Meadowcroft, KF4FRP. We're a rag-chewing net, and a chance for new (or experienced!) hams 21 and under to practice our operating techniques. (Aspiring hams without licenses yet can participate with a control operator present.)

Remember: Monday night, 8:30 PM, 147.075+

--J.L., KE4UKZ

And Don't Forget...

The Information Net on 146.16/76 is still going strong on Mondays, starting at 7:00 pm. Net control Harry, W2HD, will be listening for your calls, so tune in to the Charlottesville repeater for the latest in amateur radio news.



Greetings from the Kinda Rectangular Office. I want to start this month's column by first saying Thank You to the Don Bush - KE4DDR and the rest of the Nominations Committee. You all did a great job! I would next like to offer my Congratulations to the 1998 Board of Directors Elect. Go get 'em guys and gals!

I am sitting here trying to figure out what to write about this month and I'll tell ya, its a toughie. EJ and I just got back from the Weyers Cave Airport a little while ago and I'm still psyched. We got to see and climb into a Consolidated B-24J Liberator bomber and a Boeing B-17G bomber. Both were fascinating and, for me, it was like being a kid in a candy store. The neatest thing about it was actually getting to sit in the Radio Operators station in the B-17. All the original 1944 vintage radio gear was still fully in place. It was quite an eye-opener. We have truly come a long, long way in the past 53 years.

The day is nippy, the leaves are turning and that means we are well into fall and the holidays are fast approaching. On the Public Service front, things are getting fairly quiet and we have more weekends free. Now is a good time to make any last minute repairs to your gear or antenna's. I have heard that repairing the antenna in really bad weather makes the whole thing hold up better. For you new folks, I have YET to see any supporting documentation, so don't wait until January to repair your dipole or re-align your beams. Do it right now. Right this second. If you're still reading this then you're wasting time....I'll wait..... Making those minor repairs now can save you some major grief (and maybe save you from pneumonia also). Does this sound familiar? Yep, we discussed an equipment check-up in the Spring, so now's a good time to do a shack check-up. You never know when you'll have company to help you operate, like.....uh.....Chuck - W4SM. I suspect that after his girls get their licenses, Chuck will be looking for places to operate because his shack will belong to the Mill's YL's!

Speaking of the current classes (nice segway, huh?), it will soon be time for another VE session. If you know of anyone interested in testing, let them know. As of this writing, no date has been firmed up, so stay tuned.

That's all I have for this edition. I'll get back to you all next month.

73.

--KC4TQF

or

FRIENDS IN HIGH PLACES

It was a brisk but clear October morning, just the kind of day to be out somewhere. In fact, I was out. First, the four of us gathered for a nice but quick breakfast. When good friends get together like that, you know it's gonna be a good day all right!

When we were finished, we piled into our two vehicles and headed off--or should I say "up." It sure was up, higher and higher, with the road getting rougher as we moved onward. There were some quick dips which would challenge most cars to get through without bottoming. Our van was more than a match for this terrain.

As we neared the end of our ride, we came to a gate, which was opened with a key. Actually, the lock is a series of padlocks kind of in series. Any one of them could permit the gate to be opened. The reason for all the locks is that various services use the gate, and each one has his own lock. Clever, right!

We finally arrived at the top of Carter's Mountain, and Dave Damon, Hein Hvatum, Greg Faust and I were going to see the repeater site. Well, I wanted to see it; the other guys had work to do, if you call playing with your favorite toys work.

We were in front of a small rough building, almost a log cabin. It was perhaps 9 or 10 by 12 feet, and that's the size of your living room. Inside, however was a neat array of equipment. As we walk in, we see a long table, which is almost as long as the room is. It is on this table that our collection of repeaters is found. Each one looks almost like a standard mobile transceiver in size, except that the receivers are separate from the transmitters. There's little to say about each one because there are very few operating controls. I knew the repeaters were in use because I could hear relays faintly clicking. Otherwise the room was quiet. If Hein didn't have his HT running, we'd never know that the repeater was active, unless you knew that the relays "said" so. On this table are the '76, 220 and the 440 machines.

At the far end of the table I saw what to me looked like an orange crate with a couple of shelves in it. This is our packet gear: Machto, and the APRS equipment. (You'll hear more about that if you come to the November meeting.) (See *Friends*, p. 3)

Friends

(from p. 2) Under the table we could observe some really big batteries, the kind found on heavy trucks or busses. This pair of cells is our back-up in the event that commercial power fails. There were a few copper cans with hard line running around. These are the duplexers which isolate the transmitter from the receiver of each repeater.

The guys reconfigured some TNC's and we were done working. There was one thing I still had not noticed, which is hard to believe I know because it is the tower on which our antennas are mounted. This is a 90-foot, four-sided structure. Antennas are mounted on the tower at various heights, mounted on side arms. Ours is near the top of the tower. Naturally I had to climb the tower, at least part way up. It was quiet on the ground because the top of the mountain is well away from travelled roads. It was amazingly quiet when you consider that an Apple Festival was in full swing below us. If possible, it was ever quieter at my perch on the tower.

What? You don't believe I was really up there? Well,

Guess what! Anyone in the AARC can do what I did, see the repeater site. You just have to talk to Mike, AC4ZQ or Hein or a couple of the other "techs." I found the site to be impressive in its clean layout, with lots of gear readily accessible for repair as needed. So why not come and see it so you can join us and add to "friends in high places."

--Joe, W2PVY

Upcoming AARC Events

- ▶ November brings back a familiar face. This "face" will give us the latest "scoop" about APRS, GPS and packet. They all hang out together. If you come to the November meeting (and who would stay home), you'll find out how.
- ▶ In December, well, wouldn't it be nice if your rig had some feature or other which the maker seemed to have left out? I have. There are add-on units which often can perk up the performance of a good rig and make it a great one. Stay tuned for more.
- ▶ January is the first month of 1998, and that means it will be time for our Annual Holiday Dinner. Reserve space on your calendar for that. It's a great way to get to know your fellow AARC-ers better.
- ▶ February, well, I can only guess, but this meeting is usually reserved for public service and ARES information.
--W2PVY

AARC VE SESSION

The AARC VE team will conduct an ARRL Examining Session on **Saturday, November 15, 1997**, at 900 AM. The location will again be the Auditorium of NRAO, Edgemont Road, UVA grounds, in Charlottesville. **ADVANCE REGISTRATION IS REQUIRED.** To register send the following items to John Gray, W6UZ, 110 Carrsbrook Court, Charlottesville, VA, 22901.

1. A completed FCC Form 610 dated Nov. 1993 or later
2. A list of examination elements you desire to take
3. A check for \$ 6.25 made out to AARC VE Session
4. Photocopies of your current license and relevant CSCE's, if presently held
5. For written confirmation of your proper registration, please enclose a stamped self addressed envelope

Registration materials should reach the VE team on or prior to November 12, 1997. **SPECIAL NOTICE: ANY candidate requiring special accommodation because of handicap or disability should contact John (W6UZ) well in advance of the examination in order to discuss the arrangements necessary.**

Bring the following items to the exam session:

1. Your **CURRENT ORIGINAL** Amateur Radio License, if any
2. Original of CSCE's for element credit you wish to claim
3. At least one pencil (#2 lead) and suitable eraser
4. An ink pen
5. Two forms of positive identification (in addition to your original license) from this list:
 - A photo ID plus one of the following, OR two of the following:
 - non-photo drivers license or other ID card (school or employer)
 - Birth certificate with appropriate seal
 - Passport
 - any business or personal correspondence addressed to you

For a Form 610 send a Stamped Self Addressed Envelope to the above address. Any questions contact John, W6UZ, at 973-0194.

Need More Time?

For those of you who need a little more studying (or a second chance!), here's a reminder from the folks in Culpeper. They'll be holding a VE session on Saturday, December 6. For more information or to register for the test, contact John Berry (AF4CY) at 540/543-2580 or Buddy Nighswonger (AD4CG) at 540/948-3641.

Officers Elected for 1998

Though the nominations weren't ready in time for October's *Bulletin*, the election was held right on schedule at the October meeting. The results:

- President: Bill Beardon, KC4TQF
- Vice President: Chuck Mills, W4SM
- Secretary: Joe Fritz, KD4RWX
- Treasurer: Sharon Duvall, KO4OC
- Directors: Dave Damon, K4DND
- Greg Faust, N4PGS
- Hein Hvatum, N4FWA
- Jessie Preston, KE4OID
- Ernie Sardi, W2EIU

Congratulations to the 1998 officers, and thanks to all who were willing to serve. A special thank you to retiring Vice President Joe Giovanelli, W2PVY, who helped establish the Youth and YL nets during his term (and who *always* turned his *Bulletin* column in on time!)

AARC TREASURER'S REPORT

| | | |
|--------------------|---------|----------------|
| CLUB FUND | 485.29 | |
| REPEATER FUND | 2216.38 | |
| PACKET FUND | 195.00 | |
| TOTAL FUNDS | | 2857.77 |

| | | |
|---------------------|---------------|----------------|
| INCOME | | |
| Directory Sales | 2.00 | |
| Donations: | | |
| Packet | 5.00 | |
| Repeater | 95.00 | |
| Surplus | <u>211.00</u> | |
| Total Donations | 311.00 | |
| Dues | 1052.50 | |
| QST Renewal | 4.00 | |
| Raffle | 207.00 | |
| Total Income | | 1576.50 |

| | | |
|-----------------------------|---------------|-----------------|
| EXPENSES | | |
| Club Banner | 214.23 | |
| Refreshments | 318.95 | |
| Corp Fee | 25.00 | |
| Winter Dinner | 31.00 | |
| Equipment | 324.86 | |
| Insurance | 149.31 | |
| Pager Service | 225.60 | |
| Postage, publication | 974.44 | |
| Recreation | 50.00 | |
| Subscriptions(SERA) | 20.00 | |
| Telephone | 334.41 | |
| Textbooks | <u>118.75</u> | |
| Total Expenses | | 2786.55 |
| Total Income/Expense | | -1210.05 |
| Balance Forward | | 4067.82 |
| Overall Total | | 2857.77 |

Callsign Update

Have you been struggling to keep up with all the callsign changes since the vanity call program took effect? If so, you're not alone. Here, courtesy of club secretary Joe Fritz (KD4RWX) is a rundown of hams whose calls have changed.

| NAME | CURRENT CALL | OLD CALL |
|---------------------|--------------|----------------------|
| Robert Capon | W3DX | wa3ulh |
| Richard Dale | K8EV | ko4ev |
| David Damon | K4DND | ke4ylr |
| Francis Ellis | AA4FE | af4cx, ku4fn, kf4nou |
| Richard Florence | W4VY | w4ofr |
| Brian Fox | W1FOX | ke4hia |
| Allen Graves | W2CK | kb4jgo, ae4bn |
| Terry Henderson | KT4UO | ke4ssd |
| Ralph Irons | N7RI | aa6ul |
| David Jones | K4NZ | kb4pv |
| Robert Kelsey | K4RK | wb4cln |
| Kenneth Keysear | W4KK | wb4u |
| William Lakatosh | W4TJ | aa4tj |
| Roy Lane Jr. | K3RWH | w4otf |
| Francis Luck | AF4DU | kf4bdo |
| Jeffrey Luck | AF4DV | kf4bdp |
| Stacey Mills | W4SM | wb4qkt |
| Patrick Nighswonger | KR4FG | kd4rdv |
| Paula Nighswonger | KT4PT | kd4wye |
| John Oliver | W3KDR | wa3kdr |
| Robert Pattison | K4DU | km4du |
| Robert Ross | W2BR | wa2mfi |
| Carmella Sardi | W2HTJ | kf4frq |
| Frank Sola | AE4OW | w2bwr |
| Christopher Stroot | KB9OZM | ke4zxe |
| Charles Wildman | KE4OCK | kb4vnb |
| Peter Wildman | K4MW | ad4tu |
| Patrick Wilson | N5PW | n0rdq |

If your callsign has changed in the last six months and you're not listed here, let the editors know and we'll make sure to have your new and old calls printed in December's *Bulletin*.

DEADLINE for the December issue of *AARC Bulletin* is November 20!

Send your articles to Paul (WB9HGZ) or Eile (WD9EIA) at: 4300 Sylvan Lane, Charlottesville, 22914 (U.S. mail), or at wd9eia.zippo.com (email).



BORROWED SUGGESTIONS

While reading the October issue of "WorldRadio" an article really caught my eye. It was entitled, "Improving your operating techniques" and was an encapsulated version of a talk which had been presented at the Dayton Hamvention earlier this year by two Hams, husband and wife, W1SJ and KA1NRR. The forum had the intriguing title of, "Operating Techniques of the Best Operators."

Permission has been obtained from Mitch, W1SJ to provide you with highlights of the presentations...one basically on HF and Ronni's on Repeater Operating Skills. Pointing out that Amateur Radio is a learning experience, Mitch states in point one that we should listen, especially on HF SSB. He said that some find SSB to be strange sounding, but that isn't true if you have the signal tuned in properly.

The second point he makes is that we should learn now to speak... we should remember that Amateur Radio is not like the telephone. You are not guaranteed to hear and be heard 99% of the time. You have to learn to speak clearly and distinctly... and sometimes to even slow down. (That was a tough one for me to swallow!) He goes on to say that you "must" learn proper phonetics... it is not an option. You might be able to get away with cute phonetics on FM where the fidelity is better, but on HF SSB you should use the proper international phonetics when differentiating between F, S, or X; or V, G, B, E, C, or Z. Don't mumble when you're on the air. Get right up to the microphone at the proper distance. Have the microphone control set properly... too high and your signal will splatter, too low and people won't hear you well. When the conditions are bad, speak more slowly and emphasize the important words. This is true on HF and FM repeaters.

A third point, and W1SJ is directly quoted here, "Become a master of the frequencies. What's that? You should understand what propagation is all about. Do you want to talk to somebody 150 miles away on ten meters? That's almost impossible in springtime. If you want to communicate with a particular part of the world, there are probably only one or two bands that will do the job, and at particular times of the day. Look at and become familiar with propagation charts in the Amateur Radio magazines.

This even applies to VHF. If you want to communicate with a certain area, be sure you are using the right repeater."

Mitch continues, "HF operation is like a landscape filled with mines and booby-traps. They're called nets, windows and special operating frequencies. If you stumble on to them, what will happen to you is probably worse than a land mine... you will meet the "channel cop" who will waste no time in escorting you away from the net or the DX window or whatever. Be flexible... avoid this situation if you can. It's your job to co-exist."

Your next requirement is to have equipment that works properly. If you have a bad mike connection, a loose antenna connection, if your audio is distorted, etc, it makes operating a lot more difficult and more frustrating. If something is broken, fix it. Take every opportunity to teach others good operating habits. They call this being an "Elmer." Under any name, it's a good idea because in coaching others, you will learn new things yourself.

And finally, Mitch gives his last suggestion and that's practice. Get on the air often and practice, practice, practice. One way to get in a lot of practice is to get into a contest. There is an Amateur Radio contest of some kind just about every weekend. The best of these is Field Day. (W2HD: Sweepstakes is this month!)

Remarks by Ronni, KA1NRR, will be included in a separate column.

73... /s/ Harry, W2HD

Bits & Pieces

Sweepstakes time is here again! For CW, Sweepstakes runs from 2:00 UTC on Saturday, Nov. 1 through 3:00 UTC on Monday, Nov. 3. Phone operators, your chance is November 15-17. See the latest *QST* for details.

New Licences -The following have received their Amateur Radio licenses:

Elmer Scott KF4UCI Technician

Debbie Bush KF4UHU Technician

Ed Theobald KF4UJW Novice (with a 20wpm CSCE)

Debbie and Ed have been attending the current class.

--Joe, KD4RWX

Greet the New Folks- listen for Elmer Scott, KF4UCI, the most recent addition to the AARC membership.

What's happening with the 146.76 repeater being operated in different modes? I thought that it would be a good idea to review these different modes so we can all quickly recognize what might be happening on the repeater. Currently we have 4 modes, one that is identified by the normal courtesy tone that follows each transmission, and 3 modes that are identified by a "CW" character that replaces the normal courtesy tone.

1. Normal mode

- 2 min timeout timer.
- approximate 1-sec delay between release of your PTT until the courtesy tone sounds, at which point the timeout timer is reset.
- approximate 1-sec tail after the courtesy tone until the repeater transmitter drops.
- anytime you are using the repeater and can monitor your signal strength meter, see if you can see the length of these tails.

2. Battery mode

- automatically enabled and disabled.
- this was originally designed to indicate loss of commercial power to the repeater site, and subsequent operation of the 146.76 repeater on the backup batteries.
- this mode is now initiated by loss of our power supply, but not loss of power to the repeater site, since we switch over automatically to the emergency generator at the repeater site.
- indicated by the CW character "B" in place of normal courtesy tone.

3. Net mode

- enabled and disabled by tone codes.
- the timeout timer is disabled.
- indicated by the CW character "N" in place of normal courtesy tone.
- tails are the same as the normal mode.
- this mode is for use during controlled net activities, so the timeout timer is unnecessary.
- CW "N" should alert you that a net is in progress.

4. Cross band mode

- enabled and disabled by tone codes.
- the timeout timer is intact.
- indicated by the CW character "X" in place of normal courtesy tone.

- purpose is to allow use of crossband repeat to and from repeater.
- tail following release of PTT and tail following the CW "X" are made as short as possible to prevent the repeater from holding up the crossband rig.
- CW "X" should alert you that someone is working crossband into the repeater.

ARES/RACES

Dave Damon, K4DND

Now forgetting battery mode, which we don't have any control over, we really have the normal operating mode, the net mode and the cross-band mode. Having the repeater in net mode is fairly serious business and anyone who puts the repeater in this mode is responsible for assuring that the repeater is put back in normal mode at the

completion of the controlled net. The reason this is such a critical issue is that since the timeout timer is off, we could inadvertently violate FCC regulations for operation of the repeater.

With crossband operation, the person who puts the repeater in the crossband mode is also responsible for assuring that operation is returned to the normal mode. But in this case, accidentally leaving the repeater in crossband mode isn't as serious. The timeout timer is operating, so we don't run the risk of violating the transmission time. It just may be that someone is using crossband, but is not on the repeater right at the time that you try to find out what's going on. At any rate, the repeater was put in the crossband mode to help with a difficult operating situation, and there is certainly no harm done if the repeater is left in this mode after the need for it has passed.

I hope that gives everyone a clearer picture of additional capabilities of the 146.76 repeater. Come on by and join the Northern Piedmont Emergency Net on Thursday evenings 8:00PM local time and see what the net mode is all about.

Public Service Events - 1997

Contact Hein, N4FWA, to sign up.

HRS1 Saturday 1 November 1997

Montpelier Horse Races

Look for the 1998 schedule of events next month!

CLUB BUSINESS



AARC Board Meeting Date: October 7, 1997

No Motions were made.
John Gray (W6UZ) suggested that November 15th would be a likely VE Examination date.

AARC Regular Meeting Minutes Date: October 14, 1997

The tentatively scheduled SET exercise was announced to be canceled for this year by Dave (K4DND). He indicated that there would be one next year.

A second reading of the proposed change of the AARC Bylaws was read as follows:

Strike the first paragraph in ARTICLE VII Dues which reads as follows:

The annual dues shall be fifteen dollars (\$15), assessed of each Full and Associate Member, an additional five dollars (\$5) will cover the membership dues of all other adult members (eighteen years or older) in the same household. Membership dues are waived for members who are not yet eighteen years old on January first of the membership year.

And, substitute the following paragraph:

The annual dues assessments for the following year shall be presented to the membership at the Annual Meeting in October for a vote. The recommendation from the AARC Board shall include considerations for Full and Associate Members, additional Family Members (eighteen years and older), and Youth Members. If no recommendation is made, the current dues will continue for the following year.

A motion was made for the approval of this change. It was seconded. The motion passed.

Joe (KD4RWX) then moved a motion, approved by the Board, to change the Annual dues for Regular and associate members to Twenty dollars (\$20). After a

second and no discussion, the motion passed.

[NOTE: for the 1998 membership year the dues will be as follows.

Regular or Associate Member\$20
Additional adult family members in same household\$5
Youth members (not yet 18 on Jan 1).....no dues]

Elmer Scott (KF4UCI) was approved as a new member.

The following AARC members were named by the Nominating Committee for the positions as indicated. No additional names were nominated from the floor.

Those elected by written Ballot are indicated by an [x].

Albemarle Amateur Radio Club

1998 Officers and Directors: (X = elected)

President:[x] BILL BEARDEN, (KC4TQF)

Vice President:.. [x] CHUCK MILLS, (W4SM)

Secretary:[x] JOE FRITZ, (KD4RWX)

Treasurer:[x] SHARON DUVALL, (KO4OC)

Director: (X = elected)

RICK BERMAN, (KO4WQ)

X DAVE DAMON, (K4DND)

X GREG FAUST, (N4PGS)

X HEIN HVATUM, (N4FWA)

MARTY MAIT, (KF4FRO)

BOW OWENS, (K4QKH)

X JESSIE PRESTON, (KE4OID)

X ERNIE SARDI, (W2EIU)

MELLA SARDI, (W2HTJ)

An announced date for the next VE examinations was canceled due to a building use conflict.

(NOTE: after the meeting the exam date has been confirmed to be November 15th. Continue to listen to the Monday night information net for details.)

PROGRAM:

The program was presented by Jim Crosby (WD4HMW). He spoke about the U.S. Coast Guard Auxiliary and the communications procedures used. Ed Hinline (AG4N) was present and provided some assistance. The program was well received.

The meeting was adjourned.

Submitted by Joe (KD4RWX), Secretary of the AARC

New Ham Partner

Gerry Crenshaw, WD4BIS, returns with another in his series of articles for new hams. Gerry writes, "These articles deal with both technical and non-technical subjects and address many questions raised by the newer membership."

Test Equipment Stuff. Do I need it?

Gerry Crenshaw, WD4BIS, Garland, Texas

What's all this test equipment stuff anyway! Do I need Test equipment for the shack? What kind of Instruments do I need?

As we get into this hobby, sooner or later we are faced with the prospect of needing some basic test equipment. It's true that due to the complexity of our radios, the "State of the Art" has advanced to such a high degree that most repairs have been taken out of our hands. Do you still need any test and measuring equipment in the shack? You can always take it to the repair shop and pay \$50.00 an hour to get it fixed.

If your equipment runs on AC or DC there is still the need for a volt/ohmmeter in the shack. Many of the problems that are encountered with our equipment all have to do with power. We use Batteries, Power supplies and Connectors of all kinds. Being able to do GO/NO GO checks can quickly prove were the problem really is, and can save you lots in repair bills. There is nothing worse than a repair ticket with "No problem found" or "Operator in error" or "Loose nut in front of control".

More often than not, problems with a handi-talkie can be traced to a Mechanical connection between the battery and a radio. Being able to prove that the battery is good with a VOM (Volt-Ohm-Meter) or DVM (Digital Volt Meter) prior to looking for a problem like this helps with the troubleshooting process. For many of us who have base radios, when a problem occurs there are usually several test points in the radio that the manufacturer may want checked before they make a suggestion as to a repair action. Some manufactures such as Ten-Tech, when calling the technical support hot-line with a problem will ask for several voltage readings. If there is one "Must Have" in the shack, it's a basic VOM/DVM. Many manufactures make them and the prices vary from \$30.00 to several hundred dollars. Depending on your needs and skills the VOM/DVM can be of great asset in troubleshooting.

Analog Vs Digital

Of the Meters on the market what type is best for you? For

those of us who have used them awhile the older Meter Movement VOM is the instrument of choice. It can be used to check AC and DC voltages, AC and DC Amperages, Check continuity of conductors and connectors and Resistance's and will check most semiconductors with a "front to back" check. The DVM will do all of the above checks, The display reads directly and in plain numbers, but the semiconductor check is based on a front to back voltage reading rather than a resistance reading. Some of the high end meters by Fluke will even read capacitance and frequency to 10,000 hertz. Another difference with the DVM is the input impedance is very high so it won't load the circuit being tested. For most applications this is good. For others this can fool you in that it will read leakage voltages that don't show up with a VOM.

Power and SWR Meters

Another instrument in the shack that becomes a "Must Have" for most of us is the Power/SWR Meter. This meter is used to check the output power of a radio and also to check the Standing Wave Ratio (SWR) or Forward to Reflected power ratio of our transmitters. The name of the game here is to put Radio Frequency energy into the air. If you have a high standing wave, power is not being put into the air but the power is being reflected back toward your radio and that it has to throw off as heat. The better the SWR of your station radio and antenna system the more efficiently it is working.

Power/SWR meters come in a variety of sizes, shapes and prices from the inexpensive version sold by Radio Shack to the lab quality instruments built by Bird and Booton. Many of these instruments are designed for specific application or range of measurement such as VHF/UHF only or HF only. Depending on your use, care should be observed and follow the manufacture's recommendation. These instruments are broken up into two broad types, the Single meter and Dual Meter types. The dual meter shows forward and reflected power simultaneously and where the needles cross is the SWR. The single meter type has to a switch that changes the polarity of the sensing diode so forward and reflected power are shown as two separate measurements.

Before purchasing one of these instruments consider the highest power you will be running. Many of these instruments come in Low watt versions. Test instruments for many of the basic measurements will keep the station running at peak efficiency and can warn you to of degrading or marginal performance.

Keep that station running.

Gerry WD4BIS

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Amateur Radio Exam Dates for Virginia

- 11/01/97 (ARRL) Big Stone Gap. Walt M Sickmen KT4PI, 540-452-2363
- 11/10/97 (ARRL) Gate City. Jimmy L. Flanary K4LMP, 703-452-4592
- 11/12/97 (W5YI) South Boston. Charles D Lowery, 804-572-1581
- 11/13/97 (ARRL) Chesapeake. Pat Phelps KE4URC, 757-421-9598
- 11/13/97 (ARRL) Galax. Joseph Kolb, 540-766-3121
- 11/15/97 (ARRL) Charlottesville. John Gray, W6UZ, 973-0194
- 11/15/97 (W5YI) Richmond. Tony Amato, 804-717-2436
- 11/15/97 (ARRL) Sterling. Michael Weber, 703-450-2304
- 11/16/97 (ARRL) Lynchburg. Charles L Beard AD4ST, 804-386-4651
- 11/16/97 (ARRL) Roanoke. Terrance V Flug, 540-890-6782
- 11/22/97 (W5YI) Clintwood. Mark W Mullins, 540-926-8193
- 11/22/97 (ARRL) Spotsylvania. Carolyn Cavanagh AC4SK, 540-373-7076
- 11/29/97 (W5YI) Gloucester. Harry Kepley N4THN, 804-642-3517
- 11/29/97 (W5YI) Hayes. Harry Kepley, 804-642-3517

Remember, if you are interested in taking an Amateur Radio exam at any of these sites, CALL AHEAD for information. Not all test sites accept walk-in registrations.



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| NOVEMBER 1997 | | | | | | |
|---|--|---|--|--|---------------------------------------|--|
| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
| <p>☺ Congratulations to the November birthday hams!</p> | | | | | | <p>1 6-mNet 8AM 50.200</p> <p>HRS1</p> |
| 2 | <p>3</p> <p>INFO-NET 7 PM 220 Net 8:00 PM Youth Net 8:30PM ☺ KD4GRM</p> | <p>4</p> <p>Board & Technical Meeting 7:30 PM</p> | <p>5</p> <p>Lunch (11-1) Old Country Buff. Novice/Tech Class YL Net 8:30</p> | <p>6</p> <p>ARES Net 8:00PM</p> | <p>7</p> <p>☺ KD4TOR ☺ KD4ATI</p> | <p>8 6-mNet 8AM 50.200</p> <p>☺ W4CZY ☺ KC4UCK</p> |
| 9 | <p>10 INFONET 7PM 220 Net 8:00 PM YOUTHNET 8:30PM ☺ KE4NNT ☺ KE4UKZ ☺ W3DX</p> | <p>11</p> <p>AARC MEETING 7:30 PM</p> | <p>12</p> <p>Lunch (11-1) Old Country Buff. Novice/Tech Class YL Net 8:30 ☺ KD4NNL</p> | <p>13</p> <p>ARES Net 8:00PM ☺ KF4IPL</p> | <p>14</p> | <p>15 6-mNet 8AM 50.200</p> <p>VE Testing</p> |
| 16 | <p>17</p> <p>INFO-NET 7 PM 220 Net 8:00 PM YOUTHNET 8:30PM YL NET 8:30--NEW NIGHT!</p> | <p>18</p> <p>☺ N4WJQ</p> | <p>19</p> <p>Lunch (11-1) Old Country Buffet</p> | <p>20</p> <p>ARES Net 8:00PM</p> | <p>21</p> | <p>22 6-mNet 8AM 50.200</p> |
| <p>23</p> <p>☺ N2YDW ☺ KC4OVE ----- 30</p> | <p>24</p> <p>INFO-NET 7 PM 220 Net 8:00 PM YOUTHNET 8:30PM YL NET 8:30PM ☺ KD4CUA</p> | <p>25</p> | <p>26</p> <p>Lunch (11-1) Old Country Buffet ☺ WA3SMG</p> | <p>27</p> <p>ARES Net 8:00PM <i>Happy Thanksgiving!</i></p> | <p>28</p> <p>☺ W4LNT</p> | <p>29 6-mNet 8AM 50.200</p> <p>☺ KF4MEF</p> |

1997 ALBEMARLE AMATEUR RADIO CLUB

OFFICERS AND BOARD MEMBERS

| | | |
|----------------|----------------|--------|
| President | Bill Bearden | KC4TQF |
| Vice-President | Joe Giovanelli | W2PVY |
| Treasurer | Sharon Duvall | KO4OC |
| Secretary | Joe Fritz | KD4RWX |
| Directors: | Rick Berman | KO4WQ |
| | Dave Damon | KE4YLR |
| | Hein Hvatum | N4FWA |
| | Bob Pattison | K4DU |
| | Jessie Preston | KE4OID |

COMMITTEE LEADERS

| | | |
|------------------|---------------------------|-----------------------|
| | <u>Committee Chairman</u> | <u>Director</u> |
| Activities | Hein Hvatum N4FWA | Dave Damon KE4YLR |
| Education | Ken Johnson WA4GHY | Bill Beardon KC4TQF |
| Fundraising | E.J. Bearden KD4IGX | Sharon Duvall KO4OC |
| Publications | Joe Fritz KD4RWX | Joe Fritz KD4RWX |
| Public Relations | Janie Narducci KF4NOQ | Joe Giovanelli W2PVY |
| | | Rick Berman KO4WQ |
| Technical | Mike Duvall AC4ZQ | Hein Hvatum N4FWA |
| Youth | Noah Hillstrom, KF4JHB | Jessie Preston KE4OID |

OTHER POSITIONS

| | | |
|---------------------|--------------|--------|
| ARRL Liaison | Bob Pattison | K4DU |
| ARES/RACES Coord. | Dave Damon | KE4YLR |
| ARRL VE Coordinator | John Gray | W6UZ |
| Trustee (WA4TFZ) | Morris Jones | NM4R |
| Newsletter Editors | Paul Dean | WB9HGZ |
| | Eileen Dean | WD9EIA |

CLUB MEETINGS

Regular Meeting: Second Tuesday of each month at 7:30 PM
 Board & Technical Meetings: First Tuesday of each month at 7:30 PM

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

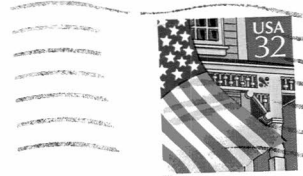
WA4TFZ REPEATERS

| | |
|---------------------|--|
| <u>INPUT/OUTPUT</u> | <u>TONE ACCESS</u> |
| 146.160/146.760 | 88.5 (if enabled, DTMF 325* will produce temporary Tone off and 326* will turn Tone back on) |
| | Door alarm OFF..... DTMF 100* |
| | Emergency Autopatch to access 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 | 88.5 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 | Information Net |
| Emergency Net | 146.76 repeater |
| 146.76 repeater | Thursday 8:00 p.m. |
| Plus Swap/Trade & Technical Sessions | Monday 7:00 p.m. |
| Net Control: Morris, NM4R | Newsline program & general news |
| | Net Control: Harry, W2HD |

Albemarle Amateur Radio Club
 P.O. Box 6833
 Charlottesville, VA 22906



AARC BULLETIN NOVEMBER 1997

TO CORRECT LABEL INFORMATION CALL PHONE 973-1738. Your License expires. Oct 31, 2004 D Y A
 KA4JJD G 1997 CURRENT MEMBER
 Michael F. Rein
 109 Sturbridge Rd.
 Charlottesville VA 22901