

CHARLOTTESVILLE (Albemarle County) VIRGINIA

Editor: Joseph D. Fritz, KD4RWX

BIRTHDAYS: OCTOBER		
KN4FM	Gerald	1
KE4UFP	Earl	4
KD4HBX	Steve	5
KD4KWE	Dick	13
KF4ZGD	Steven	24
KB4JNI	Bud	24
AC4ZQ	Mike	24
N7RI	Ralph	25
KF4APO	Marlene	25
K4APM	Linda	29
WB4RBW	Nancy	29
W3DXX	Howard	31

**OCTOBER CLUB MEETING**

**Tuesday October 13, 1998 7:30 PM**

**Topic:**  
Business meeting and License restructuring overview

**Location:**  
National Radio Astronomy Observatory Auditorium on the UVA Grounds off Edgemont Road

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6. AARC/ARES Telephone Tree	

**NOMINATIONS FOR 1999**

Don, KE4DDR, the Nomination Committee Chair, has reported the following results of their deliberations.

The Official Ballot will be written as follows:

**President (1 to be elected)**  
 \_\_\_\_\_ No nomination.  
 \_\_\_\_\_

**Vice President (1 to be elected)**  
 \_\_\_\_\_ No nomination.  
 \_\_\_\_\_

**Secretary (1 to be elected)**  
 Joe Fritz, KD4RWX  
 \_\_\_\_\_

**Treasurer (1 to be elected)**  
 Sharon Duvall, KO4OC  
 \_\_\_\_\_

**Directors (5 to be elected)**  
 {Listed alphabetically}  
 Rick Berman, KO4WQ  
 Ann Condrey, W0ANN  
 Dave Damon, K4DND  
 Grayson Dowell, KF4FYI  
 Mike Duvall, AC4ZQ  
 Hein Hvatum, N4FWA  
 Jerry Morgan, WD4CEN  
 Will Seay, KJ4XZ  
 Jim Walker, W2JIM

*Meeting in October, additional nominations from the floor shall be permitted.*

As can be seen in the box to the left, The Nominations Committee has reported its nominations. It should be noted that, apparently, no individual accepted an offer to stand for election as President or for Vice President. These two offices are CRITICAL to the proper functioning of the AARC.

In Section 3 : *The officers shall be elected by ballot to serve for one year or until their successors are elected, and their term of office shall begin on January first following the Annual Meeting at which they are elected.*

According to Section 5 *the President shall preside over all regular and special meetings, appoint committees, and call special meetings.*

And, *[t]he Vice-President shall assume the duties of the President during his absence, shall act as club program chairman, and shall perform other duties as may be assigned by the President.*

It would appear that Bill (KC4TQF) has tired of the extra effort he has given to attend the meetings from across the mountains. For his two years service as President, we are thankful. And, it looks like Chuck (W4SM) will not return to the Vice Presidency. Chuck has many other obligation with his profession and his efforts in other organizations. Thanks for your service Chuck.

Also, three Directors are not on this list -- Greg (N4PGS), Jessie (KE4OID) and Ernie (W2EIU). If you are not nominated at the meeting, then thanks for your service.

The nomination list for Director is filled with good names. To them we say thanks for stepping forward to do the Club's work, if elected.

There are others who could serve the Club well as a member of the Board. If you were inadvertently not asked by the Nominating Committee to stand for election, then step forth and suggest that you would serve the Club, if elected. If you are too bashful to nominate yourself at the meeting -- please ask a friend to do so.

Every position on the Ballot can have additional nominations regardless of the number of individuals currently nominated.

There is no provision for absentee ballots. Any nomination of a person who is absent from the meeting is not a good practice, unless the nominator can present evidence that the individual has indicated they will serve. It is assumed the an elected individual will be able to serve for one year beginning on January 1.

The Albemarle Amateur Radio Club is what we individually and collectively make it to be. Come to the meeting.

**Joe - KD4RWX**

**FOR YOUR INFORMATION**  
e-mail addresses phone numbers calls  
 Jan KE4NNT JTSutter@aol.com  
 Don KE4DDR ke4ddr@webtv.net  
 Tom AD4AD New work # 804 978-6356  
 LachenT1@gemischova.ge.com  
 Pat Wilson (formerly N0RDQ, N5PW, K4OW)  
 is now **W4PW**

**DID YOU KNOW?**

That we have a 146.925 repeater that does not have a gremlin to disrupt your conversation and it is normally NOT on tone control. Next time switch to 146.925 and enjoy clear communications.

**YOU NOW KNOW.**

The entire cost of the new 146.760 antenna was covered by an anonymous donation. Therefore, no AARC financial resources were involved in its acquisition.

**FRITZ On...**  
*The AARC and Its Leadership*  
 It is that time of year when our organization is directed by the Bylaws to elect the leadership for the following year. The first step is described in ARTICLE III Officers:  
*Section 2. At the regular meeting held on the second Tuesday in September, a Nominating Committee of five members shall be appointed by the President. It shall be the duty of this committee to nominate candidates for the offices to be filled at the Annual Meeting in October. Before the election at the Annual*

**YOUR HT'S ANTENNA, ETC**

At last month's AARC meeting, our President thought up a very interesting program involving "The Answer Guy!" Of the several questions that were tossed out at the audience was one involving HT's and their antennas and how to improve HT performance using a replacement or alternate antenna. N4FWA provided the answer and it was an excellent response. However, I'd like to put the reply in writing for two reasons: 1) You may not have taken notes, and 2) Not all members were present and the info is too important to miss high-lighting.

Hein mentioned the fact that a "rubber duck" is almost a dummy load for the HT. In fact, its gain is considered negative. Of course, there are lots of good reasons for using a rubber duck as the HT's antenna. They're compact, reasonably indestructible and they're compact and reasonably indestructible! There really is very little else to praise. Hein had two antennas with him that were obviously better. One was a collapsible true quarter wave and the other was a collapsible half wave... both better than the rubber duck. He also mentioned a "Tiger's Tail" which is a wire which dangles down from the HT connector and provides a better "image" quarter wave than the HT's physical enclosure. There is a flexible rubber duck, but much longer than that usually found, which can be purchased as an accessory.

However, let's also take a look at what you can do at home to let that 2 to 5 watt HT do its job better. There are ground planes, "J" antennas (Both rigid out of tubing and flexible versions made from ladder line or TV antenna ribbon), dipoles, coaxial (called a "sleeve" antenna in some places), a discone and even a fixed or rotary beam (two or three elements). Complete descriptions of these antennas can be found in various antenna publications.

Obviously, there are some restrictions or restraints related to the above antennas. You will need some place to mount them and some length of coaxial cable to reach them. However, some can be readily placed in the room from which you operate and can easily be transported from location to location, as required.

Some folks believe that amplifiers are the best solution to the weak signal problem. Yes, they immediately give you more power and that's a plus. But... and here's a big BUT... given a poor antenna, you are just making the power company richer and not

truly doing that much more for your signal.

An antenna does not "manufacture power." They have gain figures, but those gain figures are, for practical purposes achieved by distorting or changing the basic antenna pattern so that radiated power is increased in an advantageous direction. Thus, the same power gives a greater signal at a distant location. 73...

Harry, W2HD

**The President Speaks**

By the time this is published, Fall will be upon us and we'll be getting ready to meet the yearly incarnation of ghosts, goblins, and Power Rangers that appear for All Hallows Eve. We'll also be getting geared up for the annual business meeting. Officers for the 1999 Board of Directors will be elected and general Club business will be attended to. If you have not made a meeting this year, be sure you make this one. Exercise your right to vote!!

The coming of Autumn also signals the ending of another Public Service season. We still have one or two more events left, but by and large the season is winding down. I want to thank Greg -N4PGS who did a great job of coordinating the events this year. I've only tried to coordinate one event, and that was a fair amount of work, so to Greg, and Hein before him, my hat's off! I also want to thank everyone who turned out to participate and make this another great year for Public Service events.

I want everyone to think and see if there is any particular person you think is deserving of the Ham of the Year award this year. It's about time to get your nominations in to the Awards Committee Chairman (Joe - KD4RWX) so that they can be brought before the Board of Directors. Don't forget - this is also the time for you to submit the name of that special person who has helped ELMER you through some of your tough times, or even easy times. As of this writing, the program for the November meeting has not been finalized, so if you have a request, let me know by the end of the October meeting. The December meeting has been finalized and I am particularly looking forward to this one - Radio Astronomy. (Since we meet at NRAO, it seemed appropriate) It ought to be a good one. I really don't have too much to say this month, which is probably a good thing, so till next month.....

Bill, KC4TQF

**SPECIAL EVENTS CONTEST**

As you may remember, back in May I issued the rules for the Special Event Contest. The deadline contacts is October 31st and all QSL's received from these contacts MUST be brought to the December meeting for tabulation so that we can present the winner with a certificate at the January Dinner meeting. You still have some time left and we're getting into prime Special Event season.....GO FOR IT!!!!

Bill - KC4TQF

**Committee Reports**

Folks,

It's that time of year again -- time for Committee Reports. Please have your reports ready for the **October** meeting. You may also, if you so desire, write your report and mail it ahead of time to Joe, KD4RWX, just as long as it's in his hands by the time the October meeting rolls around. I think he'll even let you e-mail it to him at [kd4rwx@aol.com](mailto:kd4rwx@aol.com). Please let me know if there are any questions or problems. Thank you all in advance for the reports. Thank You for taking the reins in helping run the Club this year. All your efforts are most sincerely appreciated.

Bill, KC4TQF

**I AM NOT A REAL HAM**

I have no relatives who are hams.  
I have [had] my license less than ten years.  
I still have my original call sign.  
I am only a No Code Technician.  
I use simplex whenever possible.  
I do not use Q Signals.  
I sign off with my call sign only.  
I do not announce each time I enter my vehicle.  
HF would not make my adrenaline pump.  
Amateur Radio is a hobby, not my vocation.

Fred, KE4ZNO

**PUBLIC SERVICE EVENTS 1998**

DATE	EVENT	LOCATION
Oct. 4, Sun	Heart Walk	Ch'ville
Oct. 4, Sun	Diabetes Walk	Ch'ville
Nov. 1, Sun	Montpelier Races	Montpelier

Please sign up at meetings when the SIGN UP CLIPBOARD is passed around. You can also send an email to Greg (N4PGS) indicating your interest in working particular events. Greg (N4PGS) and (Hein N4FWA)

**BASICS: MORE ABOUT OHM'S LAW**  
by Joe Giovanelli, W2PVY

When we met last, I began leading you into math, and I said I really don't get along very well with it. Don't worry. I really did graduate from the eighth grade so I must have managed to get through arithmetic. That's all we'll use in this session, so let's not be scared. After all! We're all in this together.

I hope you kept last month's newsletter because it has all the little formulas we'll need. Well, there is one I didn't give you, but we won't worry about that right now. To work!

Before using any of those formulas, we need to know what a circuit really looks like, at least in terms of a resistor which is wired to a voltage source. For now we will say that this source is a battery. We have all used them, and we know just by reading the label that there is a certain voltage available from this battery. We also know that there are both a positive (+) and a minus, or negative, (-). Batteries come in all sizes and shapes, but no matter their configuration, you can count on there being these two terminals. Some batteries may also have another couple of terminals but those won't be of interest to us.

Like batteries, resistors come in a variety of sizes and shapes. Much of the reason for that is determined by the amount of current which can flow through them without their burning up. More about that later. A resistor may have a wire at either end. Some have terminals. In either type, these serve as the means by which the resistor is connected to a circuit.

Our simple circuit consists of nothing more than the battery connected to the resistor as follows: One end (wire) of the resistor is connected to the positive terminal of the battery. The other end (wire) of the resistor is connected to the negative end, or - end, of the battery. If you have made such connections, you have wired a simple electrical circuit.

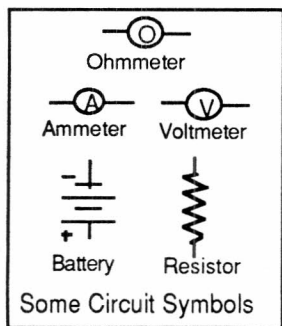


Figure 1  
Circuit  
Symbols

For clarity I have described this circuit verbally. Circuits are usually pictured in what is called a "schematic." Rather than the words "battery" or resistor," we use special symbols to designate these components, or parts, of a circuit. See Fig.1 I strongly suggest that you become familiar with them; that will aid you in more advanced work. With simple circuits, the reader can know at a glance what is taking place, as shown in the circuit of Fig. 2.

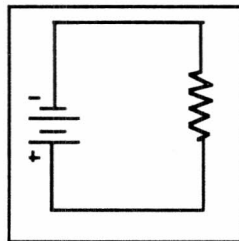


Figure 2  
Simple Circuit

Notice that we didn't connect just one end of the resistor to the battery. Nothing useful can happen by wiring our circuit that way. Doing that, is one way of saying that we do not have a "complete circuit." The circuit can be complete only when that other wire is connected to the battery. At this time please DO NOT connect any old resistor to any old battery. I need you to read on so you will avoid building circuits which could be dangerous.

We talked earlier about current flowing through a resistor. When the circuit we have described is complete, current will flow from the battery from its negative terminal, through the resistor and thence to the positive battery terminal. You may be asking why this is so, and you should. You have heard of electrons. The chemical compounds inside the battery will provide the supply of electrons. The force with which these electrons work to flow through the resistor is the voltage of the battery.

We could get seriously mired in the concepts of direction of current flow in the resistor, but that won't be useful now, so let's instead work out real examples of voltage, current, and resistance.

If you have a 12-volt battery connected to a 6-ohm resistor, how much current (in amperes) will flow through the resistor? You can peek at last month's newsletter now.

If you said "2 amperes," you're right. We divide the amount of volts by the number of ohms.  $12/6 = 2$  amperes.

What current do we have if our 12 volts is connected to a 150-ohm resistor?

0.08 Ohms. That makes good sense, too,

when we remember that if there is a greater amount of resistance, less current can be made to flow through it with a given amount of voltage.

Let's now say that we know the amount, or value, of the resistor and we know how much current is flowing through it, but we don't know the voltage forcing that current to flow. We have our 150-ohm resistor again, and there is a quarter (0.25) ampere flowing through the resistor. What voltage is connected to it in order for this amount of current to flow?

The answer is 37.5 volts. We got to that answer by multiplying the 150 ohms times the 0.25 ampere. It's reasonable, isn't it, that it takes more voltage to force that much current in the resistor than will be needed to force 0.08 amperes as in the previous example.

"Feel free to practice using any number combinations you like. You will see the relationship among resistance, current and voltage even more clearly.

To add to the mix, let's see if we can determine the amount of resistance which is present when we have a 12-volt battery and a current of 1.22 ampere.

We have a resistor whose value is 9.84 ohms. We divided the voltage by the current.

How do we know that all of these answers are true. Well, we can actually measure resistance, current and voltage by any number of different instruments. When we have our meter set up to measure voltage, here's how our circuit looks: We have our 150-ohm resistor connected to the battery as before. Our voltmeter is connected between the positive and negative terminals of the battery. We often say that the meter is "across" the battery, Fig. 3. This arrangement is referred to as a "parallel" circuit. In order for the meter to read properly, it must be connected to the battery properly. The meter has a + and - wire on it. The + is usually red; the - is usually black.

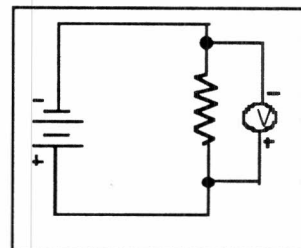


Figure 3  
Voltmeter's  
Parallel  
Placement in a  
Circuit.

22901+2132

Michael F. Rein  
 109 Sturbridge Rd.  
 Charlottesville VA 22901

CURRENT MEMBER

TO CORRECT LABEL INFORMATION CALL PHONE 973-1738. Your License expires Oct 31, 2004

**A LOOK AHEAD:**  
 November: - November - Phase 3D  
 Video and AMSAT by Chuck -  
 W4SM  
 December: - Radio Astronomy  
 January: - Winter Dinner

**AARC BULLETIN**  
 Vol 1998 No. 10  
 OCTOBER 1998

<http://members.aol.com/wa4tfz/aarc/>

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



**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)
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 if enabled
223.160/224.760.....	no tone
449.250/444.250.....	151.4 Hz (If enabled)
145.030	MACHO node
145.030	CHO Packet Bulletin Board

**LOCAL NETS:** (146.760 repeater)

**Monday night: Information Net** (each Monday) 7 PM  
 YL Net (1st Monday of month) 8:30 PM

**Thursday night: Northern Piedmont Emergency Net & Swap Net & Technical Session** (each Thursday) 8 PM

**LUNCHEON:**

**Wednesday:** Area Hams gather at the Old Country Buffet (OCB) next to TOYS R US on 29 North 11 AM - 1 PM

**ALBEMARLE AMATEUR RADIO CLUB**

**OFFICERS & BOARD MEMBERS**

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

**AARC BULLETIN**

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**DEADLINE FOR EACH ISSUE**  
 The 23rd of each month

**NOVICE - TECHNICIAN CLASS**

Began September 2  
 Wednesday nights 6:30 - 9:00 PM  
 Ten (10) weeks  
 CATEC on East Rio Road

Contact: Ann Condrey, W0ANN  
 804 589-8143  
[condrey@esinet.net](mailto:condrey@esinet.net)

*On The Fritz Publications*

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