

 The President Speaks 

**June Club Meeting**

Tuesday, June 11. at 7:30 pm  
National Radio Astronomy Observatory  
Auditorium, Edgemont Road  
(UVa area)

FIELD DAY is the topic on the agenda for June. Pete (AD4TU) and Pete (KC4UCK) will be providing details and looking for people to participate.

*See you there!*

**Club Jackets Proposed**

To paraphrase the old philosopher, the only constant is change. The club is growing, is very active in community affairs and members should be easily recognizable. With this in mind, it was proposed, at the May meeting, that jackets be made available to the membership. These would be the windbreaker type with the usual cotton lining. The club name and call sign would appear on the back with the individual's name and call sign on the front. The price will be \$25.00. All members wishing to order their jacket should contact Ernie Sardi (W2EIU) with jacket size, name to be imprinted and call sign either at the June meeting, on the 146.76 repeater or by phone at 985-4180. Judging by the response at the May meeting, this will be a large order.

If you've ever watched the David Letterman show on late night television you are no doubt familiar with his trademark "Top Ten List." I hope that NBC won't sue me for copyright infringement if I humbly present my own list! So here we go.

**Top Ten reasons to attend Field Day on June 22-23 at the Earlysville Fire Department**

10. You enjoy going for 24 hours or more without sleep
9. You can use Field Day as an excuse to look at all those cool fire engines
8. "QSL, we are 2 alpha Virginia" sounds like music to your ears
7. You've never seen anyone get excited about talking to someone in South Dakota
6. Sweating all Saturday morning putting up antennas and tents sounds like fun to you
5. Sweating all Sunday afternoon taking down antennas and tents sounds like fun to you
4. It's less embarrassing to send sloppy CW using the club callsign instead of your own
3. You haven't reached your monthly mosquito bite quota
2. You want to see if W2HD really can copy CW as fast as they say he can

*Drum roll please.....and the number one reason to come to the AARC Field Day is.....*

1. Because N4FWA hasn't signed you up for a bike race or charity walk that weekend!

All kidding aside there are a few very good reasons to come to the AARC Field Day. How about that Field Day is our yearly chance to brush up on our emergency communications skills? If that's not enough, consider the food, fun and friendship that you will enjoy while participating in the club's effort. Still not convinced? Well, if for no other reason come on by and enjoy the sunshine and fresh air. If the mood strikes and you see an unmanned radio, sit down and see what you can do with 100 watts and an impromptu antenna system. See you at Field Day!

73 de Pete, AD4TU



## Veep's Corner

Here comes June again! The busiest month will again live up to its reputation this year. It looks like every weekend is packed with Amateur radio activities. Hamfests, bike races and tours and of course, Field Day. Plenty of things to do this month, for just about any ham interest. When we first looked at the calendar and saw that the third weekend was empty, we put an end to that! The T-hunters will be out that weekend looking for a hidden transmitter. Listen on 146.76 at 1PM on that Sunday for more details, or attend the June meeting to get some advance information. Come out and have some fun.

We still need some help for some of the activities in June. Please give Hein (N4FWA) a call and come out and experience and enjoyable afternoon helping out with some of the public service events planned for June. The weather promises to be nice\*, and it's a great way to spend a few hours helping others with Ham radio.

73, Greg N4PGS

\*no guarantees! It will probably be hot, though. But with all the weather extremes, there is a likelihood of power outages. Are you ready? If not, come to Field Day and see how hams operate in the field WITHOUT POWER.



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September 1946 QST

## Greet the New Folks!

New Members:

Ann Condrey, KF4JHA  
Jeremy Clark, KF4JNC  
Martin Mait, KF4FRO  
Sandra Meadowcroft, KF4JHC  
Jerry Morgan, WD4CEN



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### Public Service Events

Contact Hein, N4FWA, to sign up for events.

**BKR4** Saturday 1 June 1996, 1330 EDT. James Madison Stage Race

**BKR3** Sunday 2 June 1996, 0730 EDT. Hill Climb. Time trial.

**BKR5** Sunday 2 June 1996, 1300-1900 EDT Criterium race.

**MSB1** Saturday 8 June 1996 MS 150-mile bike tour, first day.

**MSB2** Sunday 9 June 1996. MS 150 mile Bike Tour, 2nd day.

**DRL1** Thursday 19 September 1996, 1800 EDT Combined disaster exercise.

**MSB3/** October 1996. MS bike **MSB4** tour.

### Other Possible Events

Whilton Farm Horse Trials

Montpelier Steeplechase

Diabetes walk

American Heart Assn. walk

Martha Jefferson Hospital drill

## A Goodbye Note

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My Dear Friends,

Back in 1993 I got in touch with an old acquaintance of mine named Joe Fritz. I had taken a course in computer programming under his tutelage years earlier and grew fond of his easygoing manner. Having heard that he had recently suffered from a great personal loss and grieving from a loss of my own, I decided to get in touch with him to rekindle and perhaps enrich our friendship. After several meetings, Joe introduced me to his "therapy." It was a Kenwood TS-850S and a Realistic HTX-202. He told me of the hours of fun he had enjoyed talking with people all over the world. He showed me the QSL cards he had received from some of these contacts. He also told me of the dozens of friends he had made through the local radio club. Amateur radio was a real lifesaver for him and he encouraged me to join in on the fun.

I was interested. I can remember being fascinated with a straight key I had seen when I was a child and wondered at the sound of the code I had heard on some of the bands of my short wave radio. I even learned all the letters and numbers as a Boy Scout but not knowing an Elmer nor clever enough to seek one out the desire faded as other desires kicked in.

Joe gave me a call one afternoon to inform me of an upcoming class for novice/techs. They were once a week and free of charge so I decided I would give it a try.

On the first evening I met two teachers who were to become two of my closest friends. Bob WA2MFI and Bill KC4TQF were natural teachers with a wonderful sense of humor. Bob asked the class that night, "Who here is intimidated by the code?" I was the only one who raised a hand and he assured me that I was going to love it.

Love it I did! As soon as I got my hands on my instruction tapes I took off! The tapes went everywhere with me and I found the manual fascinating. Each license class was like eating pistachios. One set the palette for the other until I found myself with my extra class license after nine months of mind diverting joy.

Now came traffic work with NTS, fox hunts, kit building, bike races, picnics, emergency field service, field days, club meetings, and QSO after glorious QSO both locally and abroad. But more important, I bonded with a community of good people and established friendships which will last a lifetime.

Unfortunately, a 70-hour work week and a romantic interest made it necessary to put many of these activities on hold. I had thought I would be able to return to an active status with our club this summer but changes at my school have made it necessary to seek employment at another location. I have accepted a contract to teach at Randolph-Macon Academy in Front Royal and will be moving there by the end of July.

At this point it would be easy to allow the tone of this note to become maudlin so I'll end with a simple thank you to all the members of the AARC and a quick observation. We can be proud of our club. It is, if not well balanced, well focused. We should continue to work at infusing our ranks with youth via our classes and encouraging participation in such events as field day, bike rides, etc. By allowing our young people to develop an interest in our hobby we can always be confident of its continued growth and good health. Thank you for the camaraderie.

Goodbye and 73 to you and your families.

Brian Fox, KE4HIA

# PROFESSIONAL COMMUNICATORS ?

by Harry Dannals

Many of us have had the pleasure of utilizing our Amateur Radio skills and equipment by participating in public service events held in and around Albemarle County. They are one very fine way of "paying back" for the many hours of pleasure we enjoy as Ham Radio operators.

However, have you sat back and listened to the communications as reports flow back and forth from stations "on the scene" and the Net Control? As a non-participant in several recent events, your writer has sat in the shack taking in the many exchanges between the participating stations in the field. The view as a listener is far more revealing than actual participation because the rapid exchanges do not require anything other than ears... the need to respond does not exist when you aren't part of the action.

There is a tremendous feeling of pride when you listen to station after station handling situations with skill and efficiency...the calm, steady voice of the Net Control Station covering a myriad of requests...no excess chatter...just complete and absolute control of the matters at hand.

Yes, I've seen situations over the years exhibiting similar signs of efficient handling of communications. My first encounter with an "SOS" from a floundering ship at sea during my Naval career in the final days of World War II was an interesting "first hand" event. Listening to an air-traffic controller guiding a plane in trouble to a safe landing showed me the professional approach as the controller calmly directed the pilot.

However, these are examples of highly-trained "professionals" who usually have spent many hours in training and are paid to know their job. Amateur Radio operators are volunteers. We help out because we enjoy providing service. Helping others... whether it be in public service events or in the real tragic events which seem to be a part of today's life... is a Ham's job.

Don't let anyone ever say you are an "amateur" because you lack "professional" degrees or certificates. There is only one large difference between "amateur" and "professional" in my book and that is simply that the "professional" is paid for his services and the "amateur" is not. Carry your head high... be proud of your ham call sign. Those call letters you sign are part of a very proud heritage developed through many years of service to our communities and nation. I'm proud to be a Ham. Are you?

73... Harry, W2HD

# What is ESD?

by Chris Stroot, KE4ZXE

All of us are familiar with static electricity in some form or another, usually by way of a shock from a doorknob to the ever dangerous bolt of lightning. Objects become charged as a result of being separated. Atoms near the surfaces of separation will transfer electrons and upon separation will end up with either a surplus of electrons, which we call a negative charge, or a deficiency in electrons, which is a positive charge. Rubbing the materials together will increase the amount of charge as friction will agitate the surface atoms and bring greater numbers in close contact. Objects can easily be charged to potentials as high as 30,000 volts by such acts as walking or sliding.

## *Conductors and Insulators*

Materials that easily transfer electrons (or charge) between atoms are called conductors and are said to have free electrons. Materials that do not easily transfer electrons are called insulators. Both conductors and insulators may be charged with static electricity. When a conductor is charged, the free electrons give it the ability to discharge rapidly when it comes close to another conductor with a different potential.

Electrostatic Discharge or ESD is the spark we feel when we touch a doorknob. Your body, which is a conductor, becomes charged by transfer from your clothing or shoes as you walk across the floor. When your charged body comes close to a neutral doorknob, both of which are conductors, an ESD



event occurs which you feel as a spark. The potential required for a spark that can be noticed by most people is about 3,000 volts. ESD has been a nuisance in industry for many decades. Any process that involves the high speed separation of materials such as printing or plastic film processing may result in the buildup of static charges of very high potential, often in excess of 50,000 volts. This can create problems in handling materials such as paper and plastics and may often be dangerous in situations involving explosive material. ESD has become a special problem in electronics as electronic circuits have become smaller and smaller. The very tiny and closely spaced traces in modern microchips are susceptible to damage by ESD with low potential levels. (See ESD, page 5)



## ESD

(from page 4) Some devices can be damaged by ESD events caused by potentials less than 30 volts - one percent (1%) of the 3,000 volts necessary for human perception.

### *Dead or Wounded*

ESD damage to microchips takes on two forms: catastrophic failure, in which the ESD event destroys the microchip; and degradation, where the ESD event only wounds the microchip. Degradation is the worse situation because the finished product may pass inspection in the factory, only to cause problems or fail later in the field. During the past decade, ESD contamination has become accepted in the microelectronics industry and control of ESD is now an accepted practice in most modern facilities dealing with microelectronic products. ESD control is also standard practice in field service operations dealing with exposed circuit boards for computers, copy machines, appliances and automobiles.

### *Grounding*

Grounding works successfully on conductors. The most common form is the human body. The body generates static electricity, but is normally isolated from ground by clothing, flooring, and so on. By grounding the human body with devices such as wrist straps or footwear, we can drain off the charge as it occurs and thereby prevent the spark or ESD event from happening. We can also ground workstations and other items by providing a common path to the same electrical potential. This allows any charges to be neutralized by draining them to a common ground. Substances that are normally insulators, such as rubber or plastic, can be turned into semiconductors by adding certain compounds. These materials are not quite conductors and not quite insulators. They have the ability to drain charges slower than conductors so they reduce the possibility of the ESD spark. We call these materials static dissipative. Grounded static dissipative or conductive materials are used for work surfaces and material handling equipment.

### *Neutralization*

Neutralization is necessary because some insulators are a necessary part of the electronics manufacturing or repair environment and isolation is not possible. The most notable example is the circuit board itself. It must be part of the process, it can be charged by handling and movement. Grounding does not work because it is an insulator and does not have the free

electrons that make grounding practical. Neutralization is normally accomplished by ionization. Ions are simply charged particles that are ever present in normal air. They may be atoms, molecules, or groups of molecules such as water droplets. They are charged by natural energy events, including sunlight, lightning, open flames and even radiation. Ions that are close enough to a charged insulator will be attracted to it if they are the opposite charge. That is why a balloon rubbed against clothing and stuck on a wall by static charge will eventually drop off. After a period of time, natural ions in the air will be attracted to the balloon and will eventually neutralize its charge. This process can be accelerated by creating high volumes of ions and blowing them toward the charged insulators with moving air. This is accomplished in industrial ESD control by electronic ionizers which use high voltage to create billions of ions and fans to assist the air flow toward the object being neutralized. Ionization can neutralize insulators in a matter of seconds, thereby reducing their potential to cause ESD harm. Ionization reduces the window during which an event can happen from hours or minutes to seconds.

### *Shielding*

Shielding is a method of protecting components and assemblies during storage or transit when they may have to be moved through situations that are not ESD safe. Shielding involves enclosing the protected item in a conductive package which forms a Faraday cage. The Faraday cage causes any outside electrical currents or fields to be shunted across the surface of the protected item. Faraday cages can take many forms of common material handling devices, including plastic bags, totes and cabinets.

### *Conclusion*

Effective static-control programs depend on the deployment of the right control measures in the right place at the right time. Identification and isolation of these static discharges require an understanding of the nature of the process itself, which can be realized only through process auditing and analysis, location of problem areas, and informed and scientific application of static-controlled devices.

P.S. When you're in your shacks, remember to **ground**, **neutralize** and **shield** those potential hazards to our beloved radio equipment.

73, KE4ZXE

# MEASUREMENTS AND STANDARDS

By Joe Giovanelli, W2PVY

*The following was taken from the Swapfest/Technical Session, March 14, 1996*

This discussion involves measurements and how we measure things, a topic important to all of us but one which we probably have not thought much about. The question I now put forward is: *Why did the man take a yardstick to bed?* This one is so old that I'll be disappointed if you don't get the answer.

If you said that it was to find out how LONG he slept, you'd be right--well sort of. What is wrong here?

You'd be more accurate if you said that he took an inappropriate measuring instrument to bed. He should have used a watch, a clock, or maybe even an hourglass. Inasmuch as he did have that yardstick with him, what could he have done with it?

Yes, that's right. He could have measured the size of the bed. This is indeed an appropriate use of a measuring device.

That's lesson 1. Even when we have the right tools, we can still get into trouble. If, for instance, we want to get the area of a room and we multiply 10 feet by 13 meters, we will get erroneous results because we are, in essence, comparing apples with oranges. We should either have multiplied feet times feet or meters times meters to obtain the area of the room.

Let's assume that we have two yardsticks. Would each be of equal length?

Someone out there said that the odds would be 1 in 10,000 that they would not be, and I'll accept that; this is very good odds. In all likelihood, whether you bought one stick in California and bought the other one in Maine, they would indeed be of the same length. That's very important if two people made two, separate measurements of something. We want to know that the measurements would agree.

The question before us is how it happens that all yardstick are the same length? It is no accident that this is so. Somewhere in this world

there has to be a standard unit of length. Up to very recent times the unit of English linear measure was the foot, housed in the Bureau of Weights and Measures--a part of the National Bureau of Standards. I believe this standard 1-foot unit was made of platinum and some other alloy. This material was chosen because its length would not vary with temperature as would be true of most materials. Times have changed and we now use a laser beam of known frequency--a frequency probably derived from the motion of caesium atoms (about which more later). All that is needed to obtain a standard 1-foot length or a standard 1-inch length, a 1-centimeter length, et cetera, is to measure the appropriate number of wavelengths of this laser beam and we have our standard unit. I suspect, but do not know, that standard lengths are then made from these wave counts, and they would resemble the original platinum models.

I wouldn't at all be surprised if universities or manufacturers of rulers and tape measures have copies of these standards. In fact, our personal rulers are copies of the standards. Of course, they will be subject to the effects of temperature. Our personal "standard" will be accurate at only one temperature. It's lucky for us that the variations are not sufficient to cause problems for most applications.

Many standards exist for many applications. We weigh something. Our standard for doing that is not a ruler or yardstick; it is a scale of some kind. The BALANCE is one such device, but in order for this balance to be accurate, the weight placed in the balance pan must be accurate, based on a standard weight--one on which gravity exerts a known force. Spring-operated scales have their springs calibrated by means of these standard weights. I do not believe these are ever as accurate as a good chain balance might be. There are doubtless even more accurate weighing systems now, but this is what I understood a ton of years ago in my high school physics classes.

Even when we have an accurate measurement standard, we can run into trouble with accuracy. Everyone seems to be weight conscious these days, so the calorie is very important to such people. One calorie is defined as the amount of heat which results in raising the temperature of 1 gram (*See Standards, page 7*)

## Standards

(from page 6) of water 1 degree centigrade. Unless things have changed, such measurements are made in a device known as a calorimeter--a cylindrical container in which fuel is burned and temperature of water is measured. This sounds great, but is it accurate?

Not truly. Some of the heat which should have raised the water temperature was wasted by heating the surfaces of the container. Errors of this kind can only be offset by knowing how much heat loss there is and plotting a curve which takes that into account.

Now we have arrived at the heart of the matter of us amateur radio operators: electrical measurements. As with all other measurements, we must have standards from which to start. We know the ampere is a unit of measure of current flow so I can't see where there is a standard ampere. A resistor is just that, a device which resists that flow. We can, and do, have standard resistors, made from specific lengths of wire alloys. These can be counted on to be accurate ohmic measures.

We can say that the volt is the amount of pressure which forces a given amount of current to flow in a resistor. Pressure, even electrical pressure, can be measured and calibrated by means of a standard 1-volt reference cell. We recall that a cell made from zinc and carbon will supply 1.5 volts (more or less) when it is new. That amount of voltage is produced by atomic differences between the zinc and the carbon. Other combinations of elements yield different voltage levels. Weston, and I'm sure other manufacturers, produce cells designed to produce a known voltage--usually 1 volt. (When I was "playing with these things," I used Weston cells, but it is likely that better standards are now available.)

By knowing the amount of voltage and the amount of resistance in a conductor, we can calculate the amount of current which is being forced through it by the voltage. We call that "Ohm's Law." That could be the basis of another discussion.

At this point K4RKA muddled up the

waters by telling us that if we have one voltmeter, we know what our voltage is. If we have two voltmeters, we have no idea what the voltage is! So much for standards, right. We can have a standard by which to measure a quantity, but we have not set up, or calibrated, our test instruments in accordance with that standard, all of our discussion is meaning less, and so are our measurements.

When we operate our ham gear, it is often very important to know on what frequency we are transmitting. After all, we do not want to operate out of our assigned bands. This brings us to the matter of how we measure frequency. While we're at it, we will learn something about how we measure time. Why is this so?

It is because frequency is a matter of how many wavelengths pass the observer per unit of time. This unit of time is usually 1 second. If you could see the waves emanating from your transmitter and were fast enough to count the number of such waves which left your antenna in one second, you'd know the frequency of your transmitter.

**If you could see the waves emanating from your transmitter and were fast enough to count the number of such waves which left your antenna in one second, you'd know the frequency of your transmitter.**

Remember when we talked about using the number of wavelengths as a way of determining a unit of physical length? Measuring frequency is not too different from this. We count the motions of a caesium atom. According to LeRoy, WA4MHP, the long-term stability of such atoms is extremely great although their short-term stability is not. For this reason we do not use the frequency generated by these atoms directly. Rather, the actions of these atoms are locked via a phase-locked loop to a quartz crystal oscillator. The small deviations of the caesium atoms do not affect the frequency of the oscillator, so we have a very accurate time and frequency standard.

It is from this kind of "clock" that WWV produces its standard time intervals as well as transmits on very accurate, known frequencies.

This area of measurement is very complex, as is the field of measurements in general. Much of what I said to you is a drastic oversimplification. Still, I think it has given you a good idea of what happens when we measure something.

W2PVY



## Amateur Radio Exam Dates for Virginia

06/08/96 (ARRL) Harrisonburg Brown Snyder (N4ZHV)  
703-434-3133  
06/08/96 (ARRL) Manassas Harry Vorhauer, 703-368-6050  
06/08/96 (ARRL) Virginia Beach Judy Rogers (KD6JMA)  
804-468-9166  
06/14/96 (ARRL) Galax David Roberts, 540-773-2446  
06/15/96 (W5YI) Chester Anthony Amato, 804-330-0006  
06/16/96 (ARRL) Roanoke Terrance V Vlugg, 540-890-6782,  
06/29/96 (W5YI) Gloucester Harry Kepley (N4THN) 804-642-3517  
07/06/96 (W5YI) Ben Hur Charlie Poe, 540-546-2323,

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.

## Area Hamfests

**June 2** Ole Virginia Hams ARC, Manassas, VA.  
Kenneth Moan, KM4UH, 703-369-5287  
**June 8** Forsyth ARC, Winston-Salem, NC. Bill  
Patterson, KD4RGB, 910-723-7388  
**June 15** Bluefield Hamfest Assn., Bluefield, VA.  
Benjamin Mills, N8XXA, 304-425-6273.  
**June 16** Frederick ARC, Frederick, MD. Eric  
Gammeter, N8AAY, 301-865-0865  
**July 28** Baltimore RA TV Society, Timonium, MD.  
Robert Koblish, N3HAT, 410-467-4634  
**Aug. 4** Shenandoah Valley ARC, Berryville, VA.  
Irvin Barb, KD4BHV, 540-955-1745

### DEADLINE for the July issue of AARC Bulletin is June 20

Send your articles to either Paul (WB9HGZ) or Eileen (WD9EIA) at: 4300 Sylvan Lane, Charlottesville, 22911 (U.S. mail), or at 74146.446@COMPUSERVE.COM (email). To reach us through the club bulletin board, send your articles care of Mike, KE4UKX, our resident packet operator, who will pass them on to us.

JUNE 1996						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 BKR4
2 BKR3 BKR5	3 INFO-NET 7:00 pm ☛ N4PGS	4	5 Lunch Old Country Buffet 11-1	6 ARES NET 8:00 pm	7	8 MSB1
9 MSB2 ☛ W2LAP	10 INFO-NET 7:00 pm ☛ KD4WFX	11 AARC Meeting 7:30 pm ☛ KE4UKW	12 Lunch Old Country Buffet 11-1 ☛ WB4QKT ☛ WA4ZZB	13 ARES NET 8:00 pm ☛ N4YEQ	14	15
16 Father's Day ☛ AE4LS	17 INFO-NET 7:00 pm ☛ WD9EIA ☛ WB9HGZ	18	19 Lunch Old Country Buffet 11-1	20 ARES NET 8:00 pm ☛ KD4ATH	21	22 Field Day!
23 Field Day! ☛ KD4BCI ☛ W4OFR	24 INFO-NET 7:00 pm	25	26 Lunch Old Country Buffet 11-1	27 ARES NET 8:00 pm	28 ☛ KE4ZXE	29
30 ☛ WA4DWT	☛ Congratulations to the June birthday hams.					



## CLUB BUSINESS



### AARC Board Meeting Date: May 7, 1996

The Board approved by motion to donate \$100 to the Earlysville Volunteer Fire Department. This is to assist them with their projects in consideration of their exceptional generosity in providing the AARC with a Field Day site over the past few years.

Approved the submission of a letter to be sent to area Congressmen related to VE legislation. (NOTE: This action was later determined to be NOT PERMITTED by U.S. Tax Law cited in the A.A.R.C. Articles Of Incorporation. Therefore it is NOT a valid motion and NO action will be taken. The Motion is automatically rescinded.)

An invitation to cut grass and do some repairs and general upkeep work at the 146.760 Repeater site was made. If members are interested contact Mike (AC4ZQ) or Pete (AD4TU).

### **AARC Regular Meeting Minutes: May 14, 1996**

- o The program was presented by Greg (N4PGS). He discussed Radio Direction Finding and showed several pieces of equipment.
- o The following New Members were Approved:
  - Ann Condrey, KF4JHA
  - Jerry Morgan, WD4CEN
  - Jeremy Clark, KF4JNC
  - Martin Mait, KF4FRO
  - Sandra Meadowcroft, KF4JHC
- o The April Minutes were approved.
- o Pete (AD4TU) and Bob (KM4DU) spoke about the upcoming Field Day to be held on June 22-23 at the Earlysville Volunteer Fire Department site.
- o It was reported that their had been a recent break-in at the 146.760 Repeater site. No damage was sustained by any of the equipment.
- o The Treasurer's Report showed a balance of \$4,359.44. (At presstime, the Treasurer's Report was not yet available.)

- o W2HD reported that the next Novice/Tech Class will begin on August 28th ONLY IF SOME NEW INSTRUCTORS STEP FORTH. The time required to teach these classes does not allow most individuals to teach many classes term after term. Harry (W2HD) has been teaching for the last few classes and needs a rest. Since these classes are the vehicle which brings many new individuals into the Amateur Radio community, the volunteer instructors are important to that process. Many individual in our club are very capable of conducting the course or selected lessons in the course. If you are willing to step forth and volunteer, please contact Harry. Assistance will be provided to persons who have not taught the Novice/Tech Class previously.
- o Ernie (W2EIU) reports that he is looking into identifying a local source for jackets on which calls and names can be placed. If you are interested contact Ernie. The cost will be around \$25.
- o The Greene County Sheriff's Department is interested in an Amateur Radio antenna being located at their site.

The meeting adjourned at 9 pm. Submitted by Joseph D. Fritz (KD4RWX), Secretary of A.A.R.C.



### **CLASSIFIED COLUMN**

*To list an item in this section that is NOT on the WA4TFZ packet bulletin board, contact Paul, WB9HGZ or Eileen, WD9EIA.*

**WANTED:** 2 METER MOBILE (4/11/96) Richard, KO4EV, is looking for a 2 meter mobile, preferably an ALINCO. If you have something, give him a call at 804/973-3723.

**WANTED:** 2Meter/220MHz HT (4/18/96) Hi, I would like to buy a dual-band ht for 2mtr & 220mhz. If anyone has one and wish to sell it please drop me a line or give me a call on the phone. 73 and thanks. de Richard N4SIH (540)943-9968

**FOR SALE:** SB100 HF TRANSCEIVER. Richard, KO4EV, wishes to sell a Heathkit SB100 5 band HF transceiver with power supply and extra final tubes. Call him at 804 973-3723.

1996 ALBEMARLE AMATEUR RADIO CLUB

OFFICERS AND BOARD MEMBERS

President	Pete Wildman	AD4TU
Vice-President	Greg Faust	N4PGS
Treasurer	Sharon Duvall	KO4OC
Secretary	Joe Fritz	KD4RWX
Directors:	Rick Berman	KO4WQ
	Mike Duvall	AC4ZQ
	Hein Hvatum	N4FWA
	Jessie Preston	KE4OID
	Ron Richey	K4RKA

COMMITTEE LEADERS

	<u>Committee Chairman</u>	<u>Director</u>
Technical	Mike Duvall AC4ZQ	Hein Hvatum N4FWA
Education	Harry Dannals W2HD	Rick Berman KO4WQ
Fundraising	Bob Pattison KM4DU	Sharon Duvall KO4OC
Activities	Hein Hvatum N4FWA	Rick Berman KO4WQ
Awards	Joe Fritz KD4RWX	n/a
Recycling	Mike Duvall AC4ZQ	Ron Richey K4RKA
Digital	Greg Faust N4PGS	Mike Duvall AC4ZQ
Publication	Joe Fritz KD4RWX	

OTHER POSITIONS

ARRL Liaison	Brian Fox	KE4HIA
ARES/RACES Coordinator	Hein Hvatum	N4FWA
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

INPUT/OUTPUT	TONE ACCESS	
146.160/146.760	88.5 (if enabled, DTMF 325* will produce temporary Tone off and 326* will turn Tone back on)	
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 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  
P.O. Box 6833  
Charlottesville, VA 22906



AARC BULLETIN  
JUNE 1996

CORRECTION OF LABEL INFORMATION REQUESTED ---TO CORRECT CALL PHONE 973-1738 Y D  
KA4JJD N 1996 CURRENT MEMBER

Michael F. Rein  
109 Sturbridge Rd.  
Charlottesville VA 22901