Aug. '91

Ole Virginia Times

The OVH ARC Newsletter

"OLE VIRGINIA HAMS" AMATEUR RADIO CLUB, INC.
Post Office Box 1255, Manassas, VA 22110

Repeater: WA4FPM -- 146.97
WA4FPM -- 224.66

Digipeater: WA4FPM-1 -- 145.09
WA4FPM-3 -- 223.40

MINUTES OF THE JULY 15th MEETING

Meeting was called to order at 8:10 p.m. There were 25 Club Members and 7 visitors present.

The following items were discussed:

1. Applications read for Membership.
2. Board of Directors report regarding use of the Repeater, options available to the Board of Directors regarding Club Members behavior.
3. Treasurer's Report was read and accepted.
4. Motion made for proceeding with the repairs necessary on the generator was approved.
5. Repeater Committee gave a report regarding the installation of the computer interface to the Repeater. There will be a "Plain Jane" version of the repeater in use during installation. Committee will give a week's notice before commencing with the installation.
6. Various other topics were discussed which did not need motions.

Meeting was Adjourned at 9:30 p.m.

LET'S WELCOME THE NEW MEMBERS

New Members voted in at the July Meeting were:

Ervin Whalen (No Call)
Ronald Hoise (No Call)
David Harris (No Call)
Jean Clark (No Call)
Ron Keene (N4RKW)

WELCOME!!! WELCOME!!! WELCOME!!!

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UPDATES

Dean Parker has a new call sign -- KD4DAJ!!!

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~ ~ ~

Good listeners are not only popular everywhere but after a while, they know something.

~ ~ ~

Listen to the Newsline Report at 8:00 pm Thursday evenings during the OVH Weekly Bulletin.

OLE VIRGINIA HAMS AMATEUR RADIO CLUB

OFFICERS AND COMMITTEES

DIRECTORS

Bob McCann (N4RL)	703-361-7335
Tim Wayne (KB4NR)	703-494-2737
Butch Blasdell (W4HJL)	703-369-2877

OFFICERS

President - Joe Tutino (AB4QV)	703-369-5636
V. P. - Steve Frick (N4OGR)	703-361-0008
Secretary - Mary Lou Blasdell (KB4EFP)	703-369-2877
Treasurer - Jimmy Lascaris (WA2QEJ)	703-791-2932

REPEATER TRUSTEE

Art Whittum (W1CRO)	703-791-4330

FINANCE COMMITTEE

Tim Wayne (KB4NR)	703-494-2737
Jim Lascaris (WA2QEJ)	703-791-2932
Mary Lou Blasdell (KB4EFP)	703-369-2877
Steve Frick (N4OGR)	703-361-0008
Pete Stekette (KM4REI)	703-369-2436

OVH WEEKLY NET

Harry Vohauer (W4PVA)	703-368-6050

REPEATER CONTROLLERS

Art Whittum (W1CRO)	703-791-4330
Tim Wayne (KB4NR)	703-494-2737
Milt Warnock (N4SN)	703-369-7265
Jim Lascaris (WA2QEJ)	703-791-2932
Steve Meade (KB4OF)	703-368-6901
Russ Stevens (WB4HHN)	703-368-6435
Butch Blasdell (W4HJL)	703-369-2877
Mary Lou Blasdell (KB4EFP)	703-369-2877
Jack Gunsett (KI4VP) -- Digipeater	703-361-5255

SCHOLARSHIPS

Mike Hawley (KC4IRL)	703-335-1550

NEWSLINE REPORT

Jack Gunsett (KI4VP)	703-361-5255

EMERGENCY COORDINATOR

Harry Vohauer (W4PVA)	703-368-6050

TECHNICAL COMMITTEE

Butch Blasdell (W4HJL)	703-369-2877
Jim Lascaris (WA2QEJ)	703-791-2932
Tim Wayne (KB4NR)	703-494-2737
Bob McCann (N4RL)	703-361-7335

SUNSHINE COMMITTEE

Bernice Miller (KA4SCA)	703-791-3839

PROGRAM CHAIRMAN

OPEN

CLUB NEWSLETTER

Bonnie Frick (N4QPB)	703-361-0008

REFRESHMENTS

Rick Buongiovanni	703-791-5577

F.A.R. REPRESENTATIVE

Mike Squire (N4REI)	703-754-4875

GENERATORS

Tommy Watts (KA4AFU)	703-369-2741

PUBLICITY CHAIRMAN

MAIL LIST

Dick Miller (WD4AZG)	703-791-3839

CLUB PICNIC COMMITTEE

Bernice Miller (KA4SCA)	703-791-3839
Mary Lou Blasdell (KB4EFP)	703-369-2877

EDUCATIONAL COMMITTEE

John Fritsch (N4YOB)	703-791-5995

MEMBERSHIP CHAIRMAN

Jim McKinley (WD4OJY)	703-369-3940

HAMFEST CHAIRMEN

FIELD DAY CHAIRMAN

HISTORIAN

Greg Brunacci (N4RKV)	703-680-6425

COMPUTER COMMITTEE

Dick Miller (WD4AZG)	703-791-3839
Milt Warnock (N4SN)	703-369-7265
Tim Wayne (KB4NR)	703-494-2737

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HARRY'S CORNER

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As several members have requested the address for the Hurricane Tracking Charts, I have listed it below. These Charts are heavy-duty plastic laminated and come with an erasable marker and instructions. The Charts are available from Kornor Enterprises and they have agreed to sell the charts to ARRL Members at the special prices (which includes shipping and handling) as follows:

17" x 22"	$12.50
11" x 15"	$10.50
8.5" x 11"	$ 8.50

The address is:

Kornor Enterprises
Post Office Box 461
Cleveland, Ohio 44094

When order, identify yourself as an ARRL mber. Kornor Enterprises accepts American xpress, MasterCard and Visa charge cards.

NOTE: NOAA Radio, on 162.55, provides storm coordinates in 3 and 6 hour updates. Coordinates given are suitable for use with this chart. Of course, local severe weather causes SKYWARN to be activated and you can get local information there.

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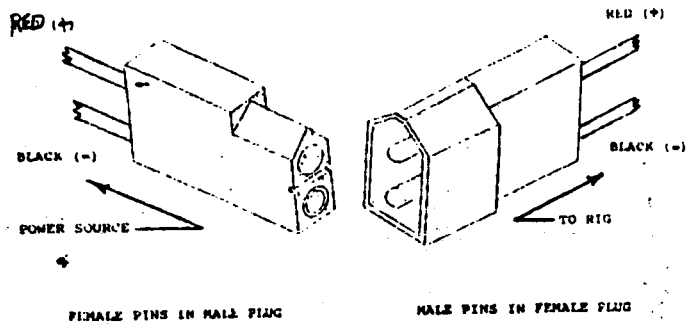
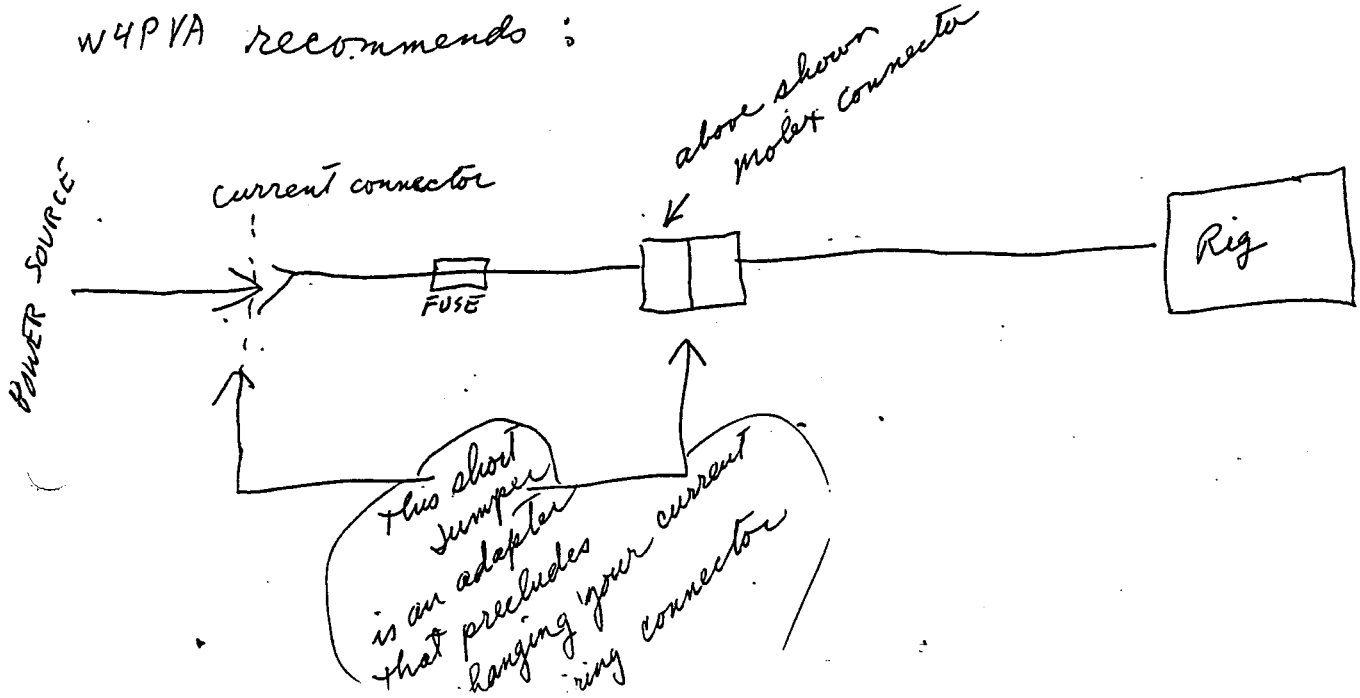
12-V Connector Recommendation

As a result of a study commissioned by the League's Volunteer Resources Committee last year, the Field Services Department is recommending the MOLEX Series 1545 connector for use in promoting compatibility and interchangability among personal VHF/UHF radio equipment at disaster and public event sites. Polarity should always be verified prior to connecting radios and power supplies. The 1545 connector is rated at 25 volts, 8 amps. Wire size requirement is #18 AWG or greater. An in-line fuse between the power source and first connector is recommended. The connector is available at Radio Shack Stores, part #274-222. **See diagrams below. (Field Forum)**



W4PVA recommends:



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HARRY'S CORNER, Continued

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A Memorandum of Understanding

A Memorandum of Understanding (MOU) exists which has been approved by the Virginia Department of emergency Services (DES), the Amateur Radio Emergency Services (ARES) and the Radio Amateur Civil Emergency Services (RACES).

The MOU provides for:

1. ARES may participate in its normal events and the DES is not required to include ARES in its activities.

2. ARES may supply services at its discretion to other services and Virginia State does not assume any responsibility unless DES has requested the activity.

3. Requests by DES for ARES or RACES services does not obligate the State for any costs or workman's compensation.

   Pursuant to section 2.1-558 of the Code of Virginia, a volunteer does enjoy protection from Liability to the same extent as a State employee, provided he acts within the scope of the mission assigned by DES.

4. When activated by DES, ARES/RACES operations will be under the direction of the DES Communications Officer, through the SEC, a District EC, Deputy RACES EC, or the Virginia EOC RACES Radio Officer. Normally, message traffic will be formal, written traffic following the ARRL/NTS format. However, at times the use of informal tactical communications may be required.

5. A list of all registered members of ARES/RACES within a locality will be kept updated by the local EC. The number of registered members will be forwarded to the DEC and SEC as provided in ARES procedures. The listing of local ARES/RACES membership will be made available for inspection by the Virginia DES Communications Officer or a representative of the FCC as required.

This MOU has been signed by all parties and is NOW IN EFFECT.

Another provision of the MOU:

Pursuant to FCC Rules and Regulations, the DES, as the Civil Defense organization for the Commonwealth of Virginia, formally recognizes any registered member of RACES in the Commonwealth of Virginia as being enrolled as a member of the organization for the purpose of providing RACES communications.

This Memorandum of Understanding formally recognizes any registered Virginia ARES member as also a registered member of RACES within the Commonwealth of Virginia.

The Virginia Section Emergency Coordinator is designated as the RACES EC for the Commonwealth of Virginia and is authorized to appoint and assign duties to (1) a Deputy RACES EC and (2) a Virginia EOC RACES Radio Officer. The remaining ARES organization will apply similarly to RACES in Virginia.

One should note that in the event of a declaration of State emergency or local emergency, the ARES stations automatically become RACES stations and can remain on the air as provided for by FCC Rules and Regulations (even though non-ARES/RACES stations may be silenced by the Rules).

An ARES Registration Form is located at the end of the *Newsletter*. If interested in becoming an ARES member, please fill out and return to me.

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STRAY COMMENTS CONCERNING FM

Since these are stray notes, no form of organization is attempted.

FM transmissions can be received by an AM receiver. The technique is called SLOPE DETECTION. To use this technique, one sets their receiver to AM and then tunes to the side of the FM signal (if you should tune to the center of the FM signal, a good receiver should lose the signal). It makes little difference which side of the signal you tune to. This is primarily true for narrow band FM such as one might find on HF and is not very effective on wide-band FM such as those found on 2 Meters.

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HARRY'S CORNER, Continued

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One of the old Radio Shack weather receivers had a tunable frequency control (most of the newer ones are crystal control and this item does not apply to them). It seems that this weather receiver can be modified by placing the correct size capacity across the tuning diode (in parallel with the diode). The result is the FM receiver will be shifted off of NOAA and, if the capacitor is of the correct size, it will tune in 2 Meters. Admittedly the front end of the receiver is still tuned to 162 Mhz, but a strong 2 Meter signal can be tuned in!

Occasionally one will hear a 2 Meter signal on the repeater which is very rough. This can be due to the transmitter being tuned off frequency, say by 5 Khz. This was common on the early synthesized transmitters -- these transmitters had a 5 Khz offset switch and sometimes the operator would have thrown the switch to the wrong position.

The 2 Meter band has become a channelized band due to the wide use of repeaters. Repeaters have to be arbitrarily spaced through the ectrum. To avoid interfering with each her, a coordinating counsel was set up in individual regions and repeaters are now spaced in the spectrum in local areas. The coordinators allow more than one station on a given frequency, but these particular repeaters are physically separated so as not to interfere with each other under normal conditions. An example: Our repeater on 146.37/.97 shares the frequency with Virginia Beach, Dover-Delaware, and York-Pennsylvania Repeaters (as well as several others). Sometimes an anomaly of weather causes 2 Meter skip and interference does happen -- but not for long.

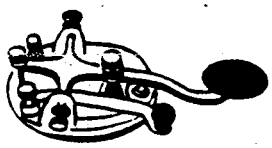
Since 2 Meter repeaters are channeled and local in nature, a long winded CQ is inappropriate. In fact, there is usually some one monitoring the channel. It is only necessary to give a "W4PVA Listening" and if someone is listening and WANTS to QSO, you will get an answer. One publication suggests the phrase "W4PVA Listening" or "W4PVA Monitoring".

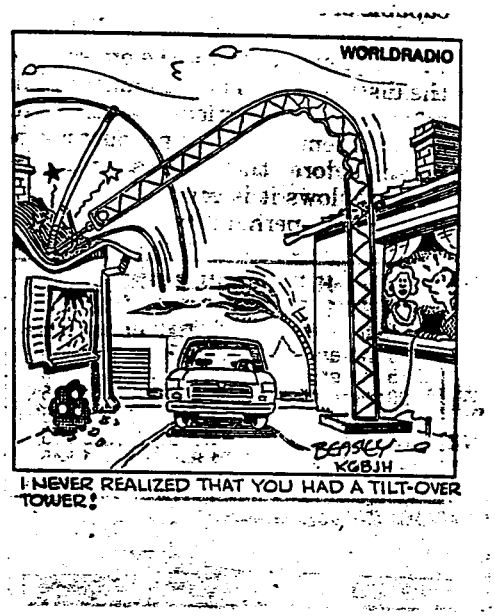
When you want to operate on a repeater, you should listen a couple of minutes before calling. This will assure you another QSO is not ongoing.

ergency Traffic ALWAYS has priority use of the repeater!!!!!!!!!!

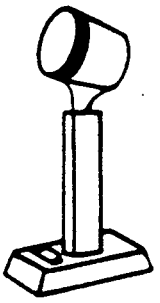
73

Harry (W4PVA)





SPREAD THE WORD ABOUT AMATEUR RADIO!!!



FROM THE MIKE OF OUR ROVING REPORTER

POLICE ! POLICE !
de
CP6GH / NS5N

What a cacophonous conglomeration of clambering signals! Scanning through the two meter band, you are liable to find a variety of conversations running from attacks on Iraq to zoological tours. Unfortunately, these are occurring from stations that have no license to operate in the two meter spectrum.

You can say all you want about the conditions in the U.S. on the bands, but I have to admit, after being exposed to some of the bands from this QTH, I feel that our methods of self-policing, although not perfect, are doing a good job. From what I can determine, there is no organized regulation or attempts at such on this end.

To add to this frustration, any radio that is purchased for any band, has been "opened up" so you can use the full spectrum. Most of the two meter radios here tranceive from 140 MHz to 160 MHz. It's more convenient that way to find a frequency that isn't too busy to run your taxi dispatch on. (144.750 / 145.010!! / 147.800) I can even use my handheld to call a taxi direct late at night if I can't find a telephone. (No, I have not done this, but others have.)

Within the club, there is control. The repeater had so many problems with unauthorized people using the autopatch, that they finally went to a subaudible tone and non-standard split of which both are changed on a regular basis to prevent illegal use. Fortunately I have a handheld that can do this magic without a major overhaul. By the way, the repeater controller does charge for modifications to your radio to keep it up to date with the changes. No comment.

The concept of an open repeater is non-existant in the land of no regulation. With the continual deregulation and expanded tolerance of improper band usage in the U.S., how far away are we from the same chaos? Chaos is a rather extreme term to use, but then again, I get a little incensed when I consider the time and effort that I invested in becoming a properly licensed amateur that operates within what I hope is correct protocol. When I was in error, there was usually someone present on the airwaves to let me know and I tried very hard not to let it happen again. No, I did not get upset that someone was telling me how I should operate. I did get embarrassed that I had done something, that when reflected upon, was stupid or immature or just plain bad operating practice. This type of guidance does not exist down here in the way that it used to be in the states. It is sorely needed. Who knows what HF will be like when these same unlicensed people step onto the airwaves with packet, SSTV, RTTY or other, more modern modes? There are no portions of the band set aside for these modes for the unlicensed operator. It's a situation of any frequency that is on the dial is available for use. So what if it is being used by someone else. They aren't in my country and I am going to use my two thousand watts to talk to the next city over. That foreign station won't cause any interference if I use enough power.

I'll be honest. I'm really scared that someday, we may not be able to work any bands reliably. We may be relegated to telephones for competent communications without interference. This is not a step forward for amateur radio in my book. How about yours?

Lightning Protection

Want some peace of mind?

by Frank A. Finger NU1A

We've all heard gruesome tales of damage caused by lightning. Many articles have been written about how to protect your valuable electronic equipment. All of the suggestions are valid, and if followed, will give some measure of protection. In this article, I'll cover some new methods as well as some of the accepted schemes. Anything to protect that expensive equipment is worth trying!

Believe It or Not

While reexamining one of my old physics books, I came across a formula for the discharge from a sphere. My attention was attracted to the following sentences. "It has been previously shown that the maximum charge that can be retained by a conductor in air is limited by the fact that the air itself becomes conducting at an electric intensity of about 3×10^6 volts per meter. $V_m = a \bullet E_m$. E_m is the maximum voltage; a, the radius of the sphere. For a sphere one centimeter in radius, $E_m = 30{,}000$ volts, and no amount of 'charging' can raise the potential of a sphere this size, in air, higher than 30,000 volts."

The implications of this are almost unbelievable.

Since the maximum potential at the sphere is directly proportional to the radius, suppose we make the radius very small? A pointed wire or rod is a sphere of very small radius. Now this pointed wire will discharge into air at a potential of a few hundred volts! This means that the area around the tip of the wire can not exceed a few hundred volts, and it will be impossible for a voltage buildup of the extremely high potential needed for a lightning strike. Boy, can we use something like that!

Automobile antennas used on cars in the early '30s were just a piece of hard wire mounted on an insulator. The wire would wipe electrons from the air, and as charges built up they would discharge into the air. The result was static. Using the above theory, an engineer came up with the idea of putting a small ball on the top. This increased the discharge potential so that discharges were no longer causing noise and we had quiet reception at last. Those little balls on the ends of our auto antennas are not just for decoration.

The Genesis of Lightning

As a thundercloud builds up, strong air currents form inside it, updrafts being the strongest. As particles of air pass particles of moisture, electrons are dislodged. In a short time, this creates large areas of negative charge and positive charge. Eventually, the voltage reaches the breakdown point, and lightning discharges the areas.

As the cloud moves across the sky, a charge of equal but opposite value follows along on the ground under the cloud, much like the shadow a low-flying airplane would make. When the charge builds to several million volts, we eventually have a lightning bolt, which discharges the area. Then it begins all over again.

As the ground charge passes under your tower, it charges up your tower and reduces the distance from the ground to the cloud by several tens of feet. If the charge reaches a critical value, we have lightning hitting your tower. The challenge is how to prevent this high charge buildup.

The Pointed Rod

Using the theory noted above, let's mount a very sharply pointed rod on a pipe extending above your beam or tower. Theory says the potential at the sharp point can not exceed a few hundred volts. This will NOT allow the charge to build up to the millions of volts needed for discharge. The result: no lightning strike! Why do you think they make lightning rods pointed? You guessed it—someone already thought of this, but failed to apply it to amateur radio! I am re-inventing the wheel, so to speak.

I live on a hill above a lake. I have two towers, the tallest being 60 feet. The beam support pipe sticks up another eight feet, and mounted to this is my sharply pointed rod. In 20 years I have never had a lightning hit, although trees around the neighborhood and some TV antenna towers have been hit.

The United States power squadrons say that you have a cone of protection spreading out from the point at about a 30 degree angle. Nice protection for the home and the trees in the yard.

Yes, theory really works.

Using Inductance

Often lightning strikes nearby, inducing large pulses of energy into nearby telephone and power lines. The large pulses find their way into our homes via the wires. Transistorized and integrated circuits are especially vulnerable. What can we do?

Again, let's go to theory. Remember the coil? It offers AC resistance called inductance. The lightning-induced pulses are half cycles of alternating voltage at very high frequencies, so a coil in the attachment cords should work quite well. Let's tie several plain knots in the cords and we have quite effective protection. Sounds silly, looks ugly as sin, but it works great.

I have seen receptacles blown out of the wall, and the equipment with knots in the cords undamaged. It works. Easy coils, I call them. The coiled cords on telephone handsets are good protection to a person talking on the phone during a thunderstorm. Lots of inductance there.

Those of us with computers and modems to the telephone line can protect our modems with knots in the cord, though it would be neater, and probably more effective, to wrap the cord a number of turns on a ferrite core.

At the base of your tower, it's a good idea to install a gas discharge tube in the coax line. Next, you can use inductance again by making a small coil of several turns in your coax cable, taping them in place with electrician's tape. It doesn't affect your RF energy. The coils impede the lightning pulse, and the gas discharge tube passes it to ground.

Of course, a good ground system will help immensely. Run a good ground wire from your tower to a good ground rod, then around your house to the telephone or power company ground rod. This wire buried under a few inches of earth will give a good ground. If you have several towers, adding a good ground wire to connect them all provides additional protection. I once asked an engineer how large a wire to use. He said, "The fatter the better." But I think a #6 or #8 guage wire gives reasonably good protection for the money.

A G.E. engineer discussing similar protection for their remote repeater sites on mountains said that measures like these probably provide about 90% protection. He said that someday the granddaddy of them all might come along and zap your installation, but the items suggested would be about as good as you can do.

Another suggestion was to run about two lengths of iron conduit up the tower leg and strap it tightly to the tower, then run the cables through the conduit. It will act as a one-turn short and prevent the pulses from propagating down the coax and into the house.

I never disconnect my radio equipment during storms, and I've never had any damage. It is nice to be able to so cheaply protect my equipment and home at such reasonable cost. A few knots, a pointed rod, a few feet of ground wire, and a couple pieces of pipe sure can give you peace of mind. ■

You may write Frank Finger at 9 Pressey Ct., New London, NH 03257. Please enclose an SASE if you wish a response.

Name:_____ Call: _____

AMATEUR RADIO EMERGENCY SERVICE
REGISTRATION FORM

Address: _____

City:_____ State/Prov.:_____ Zip/PC: _____

Bus. phone:_____ Home phone:_____ County:_____

License Class:_____ Primary radio interest:_____

Check (✓) bands/modes you can operate:

	160	80	40	20	15	10	6	2	220	OTHER
CW										
FM										
RTTY										
SSB										
MOBILE										
PACKET										
IF OPERATING PACKET, THE CALLSIGN OF YOUR PBBS IS: _____										

Can your home station operate without commercial power? [ ] Yes [ ] No

If yes what bands? _____

Signed:_____ Date: _____

Detach and send to ~~your EC (if known)~~ or the ARRL, 225 Main St., Newington, CT 06111.

To All Radio Amateurs: Harry W4PVA, 94 MEEKER CT. MANASSAS PARK, VA 22111

The Amateur Radio Emergency Service (ARES) is a voluntary organization of licensed radio amateurs who have registered their capabilities and equipment for providing emergency communications as a public service to the community. The purpose of the ARES is to furnish communications in the event of natural disaster, when regular communications fail or are inadequate. Sponsored by ARRL, the ARES functions at the local level to meet local communications needs.

The ARES has a long history of public service going back to its formal inception in 1935. Since that time the ARES has responded countless times to communications emergencies.

Experience has proven that radio amateurs respond more capably in time of emergency when practice has been conducted in an organized group. There is no substitute for experience gained *before* the need arises.

The ARES in each locality operates under the direction of the Emergency Coordinator (EC), whose function is to direct the activities of the ARES to maintain a state of readiness.

To register in the ARES, send the detachable Registration Form above directly to HARRY ~~your EC,~~ or to ARRL Headquarters for forwarding to your EC. *League membership is not required for registration.* Registration does not require possession of any specially designed equipment. All amateurs can be of assistance to the ARES. There is provision in the ARES for *every* amateur regardless of class of license, equipment owned, or personal circumstances.

Won't you join us in providing this essential Amateur Radio service?

Richard Palm, K1CE
Field Services Manager

FSD-98(687)

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NOTES FROM THE EDITOR

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The Ole Virginia Times is published monthly by the Ole Virginia Hams Amateur Radio Club, and is mailed free to members of the OVHARC. Permission is granted for use of material contained within this Newsletter, provided proper credit is given. This Editor will exchange Newsletters with other Clubs and Associations upon request. **Newsletter deadline for submission of articles is the 25th of each month for inclusion in next month's Newsletter**. The Newsletter is entered as First Class Mail at the Manassas Post Office, Manassas, Virginia.

We are always looking for interesting items for the Newsletter. If you see articles, have shack tips, items for sale, items wanted, brain teasers, etc., please send them to the Newsletter Editor c/o OVH, Post Office Box 1255, Manassas, Virginia 22110; or, give me a landline (703-361-0008). If it is interesting to you, chances are it will be nteresting to others!

73

Bonnie (N4QPB)
Editor

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NEXT MEETING

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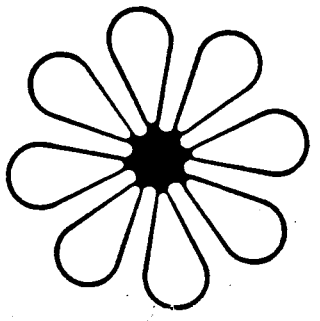
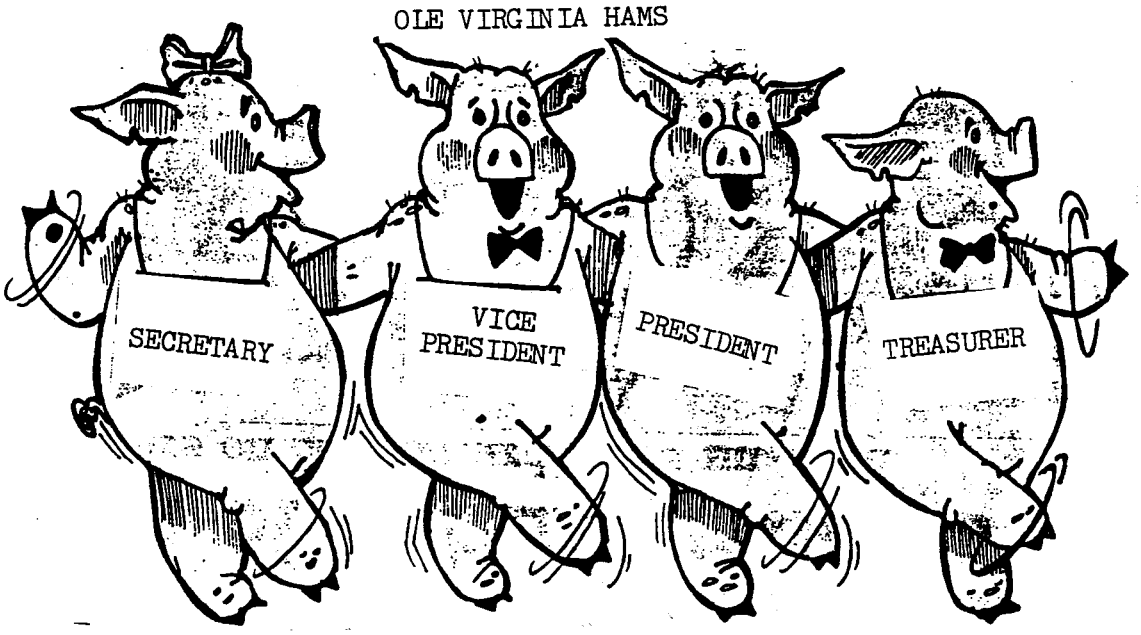
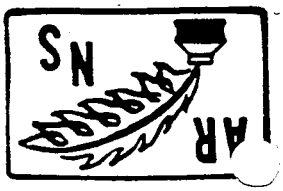
The next meeting of the OVHARC will be on Monday night, August 20th, 1991, at 8:00 p.m., in the basement Meeting Room of the Northern Virginia Electric Co-Op, 10323 Lomond Drive, Manassas, Virginia.

Looking forward to seeing YOU there!!!!







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HE EDITOR NEX

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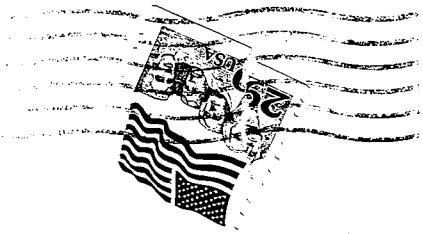
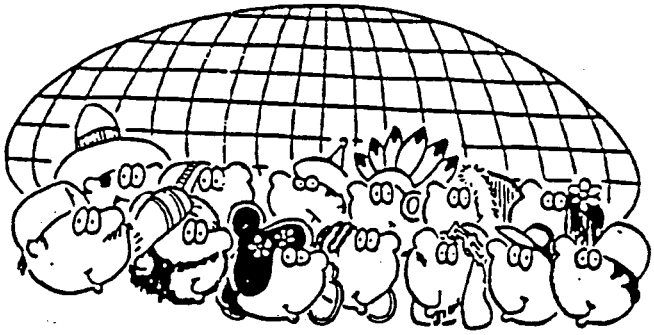
FIRST CLASS MAIL

Ole Virginia Hams A.R.C., Inc.
Post Office Box 1255
Manassas, VA 22110



AUGUST 1991



WORLD WIDE FRIENDSHIP THROUGH AMATEUR RADIO