

Remember encourage all hams to join the ARRL, it is our best voice to help our existence.

Some may love HF, others DX, some VHF and UHF, some packet, some satellite, some CW, some computers and repeaters; but if we don't work together to preserve our frequencies nobody else is going to do it for us.

There is considerable diversity within Amateur Radio. This is at the same time a great strength and our principal weakness. sometimes it seems as if we're 50 separate interest groups marching in 50 different directions, passing up opportunities for mutual support when it's needed and bumping into one another even when collisions could be avoided. We must work together better, and to do this we need to respect one another more. to do that, we have to understand one another, perhaps even ourselves, a little **better** .

How do I get a Newsletter?

Did you pay your dues to FVARC, P O Box 7541, Kalispell, MT 59901?

All new licensees and new members in the area will receive the newsletter free for at least two months. All first time licensed amateurs receive the newsletter free for one year. **If you're not getting the newsletter and you should be, or you are getting it and shouldn't, then contact Ed Mahlum at 300 Leisure Drive, Kalispell 755-6673.**

Silent Key

Don Ross will be getting a card for our next meeting so we can all sign it in memory of Carl Stoddard W7EQB. Carl had been hurting the last year or so and many of us had visited him. We will be getting the card off to his nearest family in Spokane. Carl passed away on October 9th around 5:30 PM.

Sick and Hurting:

Our treasurer, Harrold Schneider W7BKM had outpatient surgery on his throat on thursday October 27th. He is well on the road to full recovery and appreciates our thoughts. We should be seeing him at our net meeting.

Donations:

Rex Keeley has donated about 50 foot of Coax and two RG8 Connectors to the club for use at our club station and other events. It is excellent low loss coax.

Minutes Flathead Valley Amateur Radio Club October 27, 1994.

The Flathead Valley Amateur Radio Club meeting was called to order by President Mark Skeels KB7IPH at 7:30 PM. The meeting was held at our regular location in the basement of the justice center in Kalispell.

The minutes of the September meeting were approved as written in the club newsletter.

The treasurer's report was not given. Our club treasurer Harold Schneider W7BKM had just been in for outpatient surgery and was unable to attend the meeting.

Introductions:

Mostly skipped this time.

Word of the Month:

RACES was picked first, but since we are going to be having a lot of upcoming discussion on this and since Wayne Ristine KE9XR, our new emergency coordinator, has been preparing some notes on this we chose another word.

Touch tone microphone. Russ Larson, KC7HJ explained that on a touch tone key pad, that if you hit any key, there is a frequency for each row and each column. So when you push a button you get a mixture of the two that is a tone. This is the dual tone multifrequency. Two pitches are selected simultaneously. Receiving equipment decodes the tone. There are 12 keys and most now have 16 keys, the numbers and A,B,C, and D. This is sometimes built into a microphone for convenience.

Old Business:

Field Day report. FVARC K7LYY was 42nd in the nation in all categories. We were 20th in the nation in 1A. We were first in Montana. This should make us eligible for the Montana travelling trophy. George Hanson W7BKB will call Ken Kopp to see about the logistics of getting the trophy. Only fight will probably be about where the trophy will be housed and for how long. Ted Mikitia was 8th in the 1B, two operator category.

Nominating Committee:

Don Ross KC7AJT was appointed chairman. He will round up some other help. Harry Lovering WA7PHB, and more to get a list of nominees.

Video Presentation:

We watched and enjoyed "Last Voice from Kuwait". The value of amateur radio stood out in the heroic effort to let the free world know what was going on in the take over of Kuwait by Iraq. It chronicled the events from the invasion through the liberation and aftermath and the role of one amateur to provide clear information from inside Kuwait.

New Business:

Discussion of the KAL packet repeater. KAL went down last month. Rod Stickney W7VOS and Nick Poncelet W7HGM brought it down off Mount Aneas. It was determined that the transceiver was burned out but it was hoped that the TNC was OK. Carlos Aberra KD6WBD has volunteered to provide a transceiver. He will get together with Nick to see about getting KAL back on the air. There was some discussion about setting up a packet committee.

Vern Wheeler brought pictures of field day. Meeting was adjourned to coffee and cookies provided by Wayne Ristine KE9XR. Please donate a little in the cup. Those cookies taste real good.

KAL Packet Repeater:

Some follow up occurred on the October 31, Monday night information net. There seemed to be strong feelings that the club should be involved, so we don't find ourselves fragmenting into different groups. This will be a major topic for our November meeting. Can we get some dues in for the 1995 year to help pay for a new transceiver? Should we raise our dues? Should we ask for donations?

Club inventory????

Keep thinking about who, where and what the club might own. Lets get it to our property manager or librarian.

Club Station K7LYY

The club now has a transceiver, tower, rotator, antenna tuner and a dummy load. The club was given the go ahead to purchase 100 feet of coax, some ground wire and two ground rods for the club station setup. As was noted above the coax was donated to the club by Rex Keeley of KAL-COMM. We are putting in our vote to give Rex an honorary membership for the 1995 year.

Gary is our equipment trustee and so this will work out fine. We have our field day signs and other equipment on location at his site.

It was thought that a date would be picked for a Sunday in November to give it a second go around at the club station. All will be invited to attend. Keep listening to the nets.

Vugteveen Expenses

Ed has been in contact with John Vugteveen. John had asked us to donate \$100 to DXpeditions in memory of Joannie Branson in care of Gerry Branson AA6BB. Ed got this handled on October 30th.

From our Emergency Coordinator Wayne Ristine KE9XR

Emergency Communications:

This past summer the assistance of Amateur Radio operators was requested by the County to provide communications during the Little Wolf fire. Our response was dismal to say the least. A review of the incident has shown that our notification procedures are severely lacking. As a result I (Wayne Ristine) am attempting to put together a list of operators that would be willing to respond to an "emergency" call. Once an operator list is compiled a notification procedure will be developed. I will be contacting FVARC and FVRG members in late November or early December to discuss how you can participate in our emergency response efforts.

What is RACES?

The Radio Amateur Civil Emergency Service (RACES) is a part of the Amateur Radio Service that provides communications to local, regional, or national civil preparedness agencies, during periods of local, regional, or national civil emergencies. All of the authorized frequencies and emissions allocated to the Amateur Radio Service are also authorized to RACES on a shared basis. In the event the President invokes his War Emergency Powers, RACES operators using specially authorized frequencies would be the only Amateur Radio operators permitted on the air.

New Jobs:

Wayne Ristine KE9XR will be emergency coordinator for our club. His retirement is not lasting long. He is also providing coffee and cookies after our regular ham meetings. Thanks Wayne.

Gary Ax KB7KXE has assumed the position of club property master. He has good space and will be storing our antenna's, tower, rotator, and what not out at his place. Now is a good time to take an inventory and anyone who has any of the club's stuff, let's get a hold of Gary or a club officer. We should have pictures, history, and other stuff. Maybe now is the time to get it all over to Gary.

Roger Swearngen N7EYU is still receiving one tape a month from the ARRL. He copies these and then Ed AA7TN has been storing them for a rainy club night. Roger needs to get us a recap of his expenses so we can reimburse him.

Mark Skeels KB7IPH has become club librarian. Let's get him all of our extra magazines, books, history stuff, etc. Thanks a lot Mark.

10 meter net opening up on CW.

The 10 meter net that is meeting on Monday nights after the 146.76 net is having some fun. Not only are they getting some sporadic E contacts, but they are getting in some code practice. Anyone who wishes feel free to join in on the fun. We can just pass the CW around as on a regular net and if nothing else send your call sign.

The more CW operators the better. Especially in contests where often we can score twice the number of points.

Board of Director's Meeting

October 27, 1994
7:00PM at Justice Center

Present: Mark Skeels KB7IPH, Don Ross KC7AJT, and Ed Mahlum AA7TN.

1. It was agreed to reimburse Ed Mahlum for newsletter expenses.
2. We will have the 2nd Thursday of the month at 7:30PM for our November and December club meetings.
3. Mark Skeels has looked at the language of the by-laws and will be making some recommendations for changes that may free ourselves up a bit from any bureaucracy and have more fun.
4. Club history, where are the records? Club inventory, who has the files? Bring any history you might have to club meetings. It will be a riot going through that stuff and it will help us get it altogether too.
5. Agenda developed for Club Meeting. Presentation.
6. Bill for field day prize MFJ Versa Tuner II antenna tuner was approved to be paid.
7. Bill for copying 4 video tapes was approved for payment.
8. It was agreed to send \$100 to the DXpedition foundation as requested by John Vugteveen.

9. Nominating Committee was formed.

Highway Cleanup

Saturday, November 12, 1994 meet at Corner Kitchen for Breakfast around 10 AM.

Form 610:

Ed Mahlum (AA7TN) has new form 610 with expiration date of 8/31/96 via the W5YI VEC testing team here in the Valley headed up by Darryl Christopherson KG7MO. They will not process the old forms any longer.

Montana Callbooks:

The new 1994 Montana Callbooks are available at the meetings for \$5.00 each. If you missed your chance to get one contact FVRG PO Box 808, Bigfork, MT 59911. \$8.00 includes shipping and handling.

Ham Exams:

According to Darrel, KG7MO, the next exams will be held November 19th at 1PM at the Daily Interlake Building in Kalispell.

Bring a copy of your license for upgrading, a current photo id, \$5.75, and some pencils. If you have any questions about time and place call Darrel 756-8633 or Ed AA7TN at 755-6673.

For Sale or Trade:

Feel free to bring stuff to the Club Meetings that you would like to sell or trade.

Ed Mahlum AA7TN 755-6673 is looking for a buyer for his Hustler 4BTV vertical antenna for \$80. He also has a new Kenwood PB-8 battery for \$35, a PB-6 for \$20 with BC-6 charger.

Bill Brady AA7HM 257-2297 has a Cushcraft AOP-1 OSCAR Satellite antenna system. It contains the 416TB uplink, the A144-20T downlink, the A14T-MB mounting boom, and all necessary hardware. He is looking for about \$150.00.

QST DIGEST

Title: Schematics at Your Fingertips
Author: Schofield, Ken - W1RIL
Source: QST Oct 93, pp. 39-40

Many hams now have, or are buying, IBM-compatible computers that use an operating environment called WINDOWS. It comes equipped with a sub-program called PAINTBRUSH. Using PAINTBRUSH, one can draw lines, circles, or any other shape, in full color, on the computer screen.

Mr. Schofield, using WINDOWS PAINTBRUSH, prepared a complete set of electronic circuit symbols, and has them stored in his computer. Using the symbols plus the line-drawing ability of PAINTBRUSH, he can draw electronic circuit diagrams of almost any complexity on his screen. Once it is on the screen, with a dot-matrix- or laser-printer, he can print it on paper. In the article, he explains how he made the symbols and how he uses them to draw diagrams.

The author has made his file of predrawn symbols available for the asking. Anyone with a computer plus modem can call the ARRL telephone Bulletin Board System (BBS) at (203) 666-0578 and download the file into their own computer. Alternatively, send a blank floppy disk (either a 5-1/4" 1.2 MB. disk, or a 3-1/2" disk of either 720 KB. or 1.44 MB. size) in a suitable disk mailer, and enclose return postage, and the file will be mailed.

Title: The Earth Detunes My Antenna

Author: Hall, Jerry - K1TD

Source: QST Oct 93, pp. 41-44

Abstract: Report of a study of the effects of various types of ground on the resonant frequency of dipoles.

Most hams realize that the earth has a major influence on the radiation pattern of an antenna, but we tend to forget that its presence also affects the resonant frequency, as well. Mr. Hall has studied the effects of the ground on a half-wave dipole antenna using NEC2, a method-of-moments computer program. This article contains some of his findings.

Antenna reference books, such as the ARRL Antenna Book, tell us that the end effects in a wire dipole cause a "half-wave" antenna to be physically about 5 percent shorter than a free-space half-wavelength. Thus the common formula usually given for calculating the length of wire is to divide 468 by the frequency in MHz. to get the answer in feet. The author finds that, when modeling a 3.75 MHz. dipole in free space with a length calculated by the formula, the impedance at the center would be 67.5-41.8 ohms. But this is not resonant since, by definition, at resonance the impedance will be a pure resistance. For resonance, the antenna must be lengthened by about 2.5 percent so the formula becomes 479.6 divided by the frequency in MHz. The center resistance of the antenna at resonance is 72.2 ohms.

The author now brings the earth back into the calculation and models the dipole at 50-feet (15-meters) height over "perfect ground", meaning the approximate equivalent of seawater or an infinite copper plate. The antenna must be shortened so that the proper factor is 469.5 divided by frequency. Shortening the antenna lowers the radiation resistance, which is now 59.6 ohms.

"Real ground", meaning dry land, varies substantially in its characteristics as measured by dielectric constant and conductivity. What is defined, for radio purposes, as "very good land" is the rich soil typical of the area from Dallas, TX to Lincoln, NE; very poor to extremely poor is in the middle of cities, with heavy industrial areas or high buildings.

Analysis of the antenna at 50-feet (15-meters) over soil at the two extremes indicates that for very good ground the factor in the formula should be 470.8, and for poor earth it should be 473.9. For the 80-meter antenna with a total length of about 125 feet (38 meters), the range of differences is only about 10-inches (25 cm.), but that represents the same difference in length as would be caused by a change of frequency of about 25 KHz.

The author goes on to explore the effects at different heights and also studies the effect of ground conditions on the radiation patterns in the elevation plane. In his summary, he acknowledges that his work has simply verified what all hams have known from the beginning, that is that the only way to obtain a resonant antenna is to prune it on-site. But his work does give the reader a better idea of what specific effects are at work.

Q5R9
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