

How do I Join and get a Newsletter?

Did you pay your dues to FVARC, P O Box 7541, Kalispell, MT 59901? Club dues are \$20 for the year (January through December). They will be prorated after June according to the month you join. 15\$ is club fund, 5\$ is repeater fund. Many people use the club's repeaters but don't pay the dues that support the repeaters. If this describes you and you feel even a little guilty we could use your support.

All first time licensed amateurs receive club membership free for a year. Be sure and register with our Treasurer, Barbara Magone KB7YMS, at 862-4066. All younger than 18 receive club membership for half price. **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.**

Directions TO FIELD DAY!!!

Field Day will be at Wayne Ristine's KE9XR. There is lots of room for camping and all of us. There will be 4 main stations, SSB, CW, Novice/Tech, Satellite. We will use a lot of modes including RTTY. Emphasis is on learning and teaching this year. **Something for everyone.** The stations will be setup in Wayne's barn with tables and chairs donated by the county.

Bring your own beverages, and for all those who contacted Wayne in advance at 257-4162 food will be provided for 3 meals, Saturday lunch and supper, Sunday breakfast at \$1 a meal. We will have lots of chips, but you are encouraged to bring vegetables, fruit to share with others.

Go 2 miles North of Kalispell heading toward Whitefish and at the West Reserve Street junction (there is a light and Ole's store) go left and head West. After another two miles you will come to the junction of West Reserve Drive and Farm to Market Road (West Valley School is here). Now go North on Farm to Market Road .9 mile to the intersection of Rhodes Draw road. Go left (west) on Rhodes Draw Road. Go up Rhodes Draw road 2.9 miles and on the left hand side of the road look for silver mail box, Wayne Ristine, 1020 Rhodes Draw. Wayne shares a drive way so fork to the right into his place. SEE YOU THERE!!!

President's Letter

Sick and Hurting:

Ed Mahlum AA7TN wishes to thank all of you for your concern and support after the death of his father on May 23rd.

Minutes Flathead Valley Amateur Radio Club May 25, 1995

Meeting was called to order at 7:30PM by President Don Ross KJ7IZ. Motion was made and seconded to accept secretaries minutes as placed in newsletter. Motion was made and seconded to accept treasurer's report. The General Fund has \$410.83, the Repeater Fund \$601.55 for a total of \$1012.38.

Introductions:

Given with 27 in attendance.

Old Business:

The changes in the by-laws were approved. Wayne Ristine KE9XR moved to accept and George Hanson W7BKB seconded. Dick Lindeman KC7ALP called for question and was unanimous of all members present.

Wayne Ristine KE9XR gave a report on Field Day. We will all meet the Sunday before June 18th at 12:30 at Gary Ax's house. This will be announced on all of the nets. If you need directions to Gary's KB7KXE house get a hold of any of the officers. We need a 4to1 balun for novice dipole. Pretty much have everything else ready. Map for Ashley mountain in this newsletter. Wayne got a tent from Army GP Medium about 20x24. Get it up there the Friday night before. Have four tables inside and have all four stations up the same day. Then will also have food table inside for hot dogs and hamburgers. 1\$ a plate. We seem to be set for equipment, show of hands of those planning on attending. All plan to come, code users will be working code station, others can take turns working voice, and then will have the novice no code and technician station for extra points. Plus satellite/vhf station. Barb Magone KB7YMS is in contact with a television reporter who may want to take pictures for the TV station. Barb will need advanced notice on that.

Note on Food: As stated above enough will be provided so that if

you come up you won't have to worry about it (This is for people who have signed up in advance.) However we should all try to bring something also like cold vegetables, fruit, salads, but none with mayonaisse (might spoil). You will get three meals (each a dollar). Saturday lunch and dinner will be hamburgers, hot dogs, beans, chips. **Bring your own beverages.** Sunday breakfast will be sausage, eggs, and orange juice. A big hand to Barb Magone, Wayne and Barb Ristine for setting this all up.

Also the get together at Gary's will include a going through of Verdie Rognlie W7FDI's equipment. Verdie passed away and wished this equipment to be available to people through the club. About 5 receivers and a Drake TR4 and an FT225 Yaeus all mode 2 meter rig. Lots of tubes and parts.

Don Ross KJ7IZ will get the Field Day Award Plaque moved to be on display at Inacom The Computer Place.

Books were setup and on display along with other ARRL materials: Now You're Talking!, Instructor's Manual for Now You're Talking, Technician Class License Manual, Novice/Tech Class Instructor's Guide, General Class License Manual, General Class Instructor's Guide, Advanced Class License Manual, First Steps in Radio, Extra Class License Manual, You're Introduction to Morse Code (tapes), The FCC Rule Book.

Committee Reports:

Repeaters - W7VOS Rod Stickney will chair, WA7PHB Harry Lovering, W7HGM Nick Poncelet, N7SPI Tracy Robertson, KG7MO Darrell Christofferson (tower man) and KB7WIX Larry Magone.

None.

RACES - KE9XR Wayne Ristine, W7VOS Rod Stickney and WA7PHB Harry Lovering.

No report.

Field Day - KE9XR Wayne Ristine, KB7YMS/KB7QPS Barb and Gregg Magone, AA7TN Ed Mahlum, N7SPK Vern Wheeler, and KB6WBD Carlos.

Given above.

Education - KB7IPH Mark Skeels, and KC7HJ Russ Larson.

No report.

Presentation - N7EYU Roger Swearengen, AA7TN Ed Mahlum, KA6YSC/N6SLM Mark and Joann Miller, and WA9TAF Dennis Shaw.

Next meeting will be devoted to final field day preparations.

New Business.

Gregg Magone KB7QPS was asking about the packet station. We found away to make him happy.

Don Ross brought up about Ed Mahlum's dad passing away.

Paul Ahtorn will move onto the coffee and cookie patrol. Next meeting Mark and JoAnne Miller will show him the ropes. When we asked Gary and Priscilla Ross they decided to move to Mongolia. Thanks alot Paul.

John Blair KA5LXG encouraged us all to participate in helping with communications for the tour-de-cure, June 4th. It is a bicycle trek and fund raiser for the American Diabetes Association. Here is a chance to show how Amateur Radio really is a public service. Needed were 6 to 10 mobile units to roam the 80 mile course. This is also a great way to have some fun. He had a sign up sheet and some neat Amateur Radio service magnetic signs that we can put on the sides

of our cars. Thanks alot John.
More information on the 146.76 and 146.62 nets.

Presentation was Video on South Sandwich Island Dxpedition.

Reminder to **renew your ARRL membership** through the club. Each time we do this the club receives back \$2. See or call KB7YMS Barb Magone at 862-4066.

Raffle started at \$1 per ticket for the Swan 1200-X HF 400 watt amplifier. The amp is up and running at the club station according to Gary Ax KB7KXE. Tickets will be taken until the July meeting at which a winner will be drawn from the can.

Motion made to adjourn by Wayne Ristine KE9XR. Meeting adjourned for coffee and cookies. N6SLM JoAnne Miller got coffee water started and cookies. **Thanks JoAnne!!!** 2030MST. Respectfully submitted Ed Mahlum.

Coming Events:

June 24 Saturday ----- Field Day Wayne Ristine's
July 14-16 Fri-Sun ----- Glacier Waterton Hamfest
July 22 Saturday ----- "Adopt-a-Highway" pickup
August 4-6 Fri-Sun ----- WIMU Hamfest, Jackson Hole, WY
August 5-6 Sat-Sun ----- Spokane Hamfest
August ?? ----- Big Arm Picnic
September 16 Sat----- VE Exams, Daily Interlake, Kalispell
September ?? ----- Flathead Valley Bicycle Tour Huckleberry 100
February 96 ----- Race to the Sky

Club HF Station:

Club station up and running at KB7KXE Gary Ax's house. If you want to use it get a hold of Gary 755-9353.

Jobs:

Club Trustee: WA7PHB Harry Lovering
Emergency Coordinator: KE9XR Wayne Ristine.
Coffee and Cookies: N6SLM JoAnne Miller.
Property Manager: KB7KXE Gary Ax.
Movies: N7EYU Roger Swearngen
Librarian/Historian: KB7IPH Mark Skeels

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 it we don't work together to preserve our frequencies nobody else is going to do it for us.

Tour de Cure

Compliments of Greg Magone KB7QPS: Amateurs helped out with the Tour De Cure bicycle tour on June 4th. This tour looped around Lake Koochanusa, a man-made lake formed by Libby Dam. We came from Lincoln, Lake, Missoula, and Flathead Counties to provide a radio link between the cyclists, Libby Dam, and ambulance services. In case a cyclist was injured, Amateur Radio could notify EMS within seconds, and have an ambulance on the way.

The Tour De Cure is a nation wide effort to raise money for diabetic research. The cyclists had people sponsor them, and pledge money based on how far they rode. This pledge money went to the American Diabetic Organization. All participants (including Amateur Radio ops) received T-shirts with the Tour De Cure logo on them.

The Amateurs escorted the cyclists along the route, and notified traffic controllers when the cyclists were coming along dangerous turns. The traffic controllers stopped traffic as the cyclists came. During the Tour, a bicycle race was going on. The racers had no communications, but amateurs were not invited to assist. John Blair, KA5LXG, organized the amateurs. Thanks to all of who helped! (List courtesy of John Blair) Bob W7IPB, Priscilla WF7X,

Irv Ball K7MEA, Greg KB7QPS, Myrna NQ7D, Barb KB7YMS, Lorne KB7RCK, KB7WIX Larry, WA7PHB Harry, Mary Blair KA5QGJ. Mary became the central operator as she was at the main site and with some of the other race coordinators. John KA5LXG provided these great magnetic signs that we can put on the sides of our vehicles that let people know we are providing amateur radio communications for public events. Great idea John!!!

Board of Director's Meeting

Board of Directors:

President - Don Ross KJ7IZ - 7567171, Vice President - Wayne Ristine KE9XR - 2574162, Secretary - Ed Mahlum AA7TN - 7556673, Treasurer - Barb Magone KB7YMS - 8624066, Trustee - Harry Lovering WA7PHB - 7528388, Gary Ax KB7KXE - 7559353, Tracy Robertson N7SPI - 7551795, Mark Skeels KB7IPH - 7520073, Rod Stickney W7VOS - 7554850.

June 12, 1995

8:30PM after the 146.76 net.

Discussed relocating field day. Was agreed to relocate to Wayne Ristine's KE9XR's location due to extremely bad road conditions going to Ashley Mountain. Emphasis will be more on attracting newcomers and training.

June 18, 1995

2:00PM at Gary Ax's KB7KXE

1. Call for Bills and expenses needing to be Paid. Ed Mahlum will be paid for newsletter expenses.

2. Treasurers Report. Approved \$595.69 in general fund, and 576.55 in repeater fund.

4. Club dues. During Field Day we will send out a letter to every known amateur in the Valley. It will be our intent to have a half year membership drive. For \$12.00 we will accept new members with full privledges from July 1 through December 31 of 1995. Of the \$2 per month fees \$1.25 will go to general fund and \$.75 will go to repeater fund. Ed Mahlum has the list from the callbook of all amateurs in valley. Wayne Ristine will do the letter. Tracy Robertson will handle printing and perforating. We will all stuff envelopes. Dues will increase to \$24 a year in 1996.

5. Committee reports:

a. Repeater (resources repair and future direction). Rod Stickney, Harry Lovering, Vern Wheeler, Nick Poncelet. None.

b. Education (training of Hams). Mark Skeels, JoAnn Miller, Mark Miller, Russ Larson. None.

c. Field Day. Wayne Ristine, Barb & Greg Magone, Gary Ax, Tracy Robertson. We are going to try to work 2A. The main SSB station will be KE9XR's rig, with club tower, beam, generator, computer logging, inverted V for 40, 80, 160. The main CW station will be KJ7IZ's with generator, tuner. We need a power supply and an antenna for this station. Novice station will be club's TS520S with 10/15/40 dipole, tuner. We need 4:1 balun and CW key for this station. Carlos KD6WBD will be bringing Sattelite station. Need operators and to begin coordinating teams. All three stations will be run out of the tent Wayne got from the Emergency Services. If the weather is not perfect there will be a backup location at either Wayne Ristine's or Ed Mahlum's place. It was agreed to provide hamburgers, hot dogs, buns, beans, chips. Each person is to bring own beverage and eating utensils. There will be dinner for a buck a plate on Saturday afternoon and eggs, sausages, and bagels for a buck on Sunday morning. Barb Magone and Barb Ristine are heading this up. People will need to sign up for the food so we know how much to buy. There will be a gas grill setup and you can cook your own burger, dog, breakfast etc. Be sure and get in touch with Wayne Ristine KE9XR and leave word that you will be there. Each member coming should bring some type of salad to share with others. Don Ross KJ7IZ will get the

portable outhouse.

d. Emergency Communications. Wayne Ristine, Rod Stickney, Harry Lovering, Jon Rashleigh, Mike Tuszynski. No report.

e. Presentation (Program for Club Meetings). Roger Swearengen, JoAnn Miller. Ed will bring tape on DXpedition for May meeting. June meeting will be at Gary Ax's place for final preparation for field day. Plans for picnic in Woodland Park this summer and to get Dick Lindeman KC7ALP to give presentation on wiring in automobiles and setting up a rig in such.

6. Gary Ax is working on a list of the club equipment.

Flathead Flyer BBS

KJ7IZ Don Ross' bbs now has the current call book available. Just dial in and look up a callsign for information. The number is 756-1369. Don mostly runs the BBS for free but he has expenses. The suggested donation is \$10 a year.

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 Darrel Christofferson KG7MO. They will not process the old forms any longer.

Montana Callbooks:

The new 1995 Montana Callbooks are available from the Flathead Valley Repeater Group, PO Box 808, Bigfork, MT 59911. \$ 8.00 provides inserts for an existing book if you already have the cover and binders or \$10.00 includes shipping and handling.

Flathead Valley Repeater Group:

Please note that the FVRG maintains 3 repeaters, 146.62, 147.34, and 147.20. The membership is a modest \$15 per year to cover electrical/telephone/newsline expenses. All amateurs are welcome to support and join. The FVRG helps coordinate many amateur activities throughout the year from litter collection, bicycle race communications, the dog-sled race communications, and provides a phone patch on the 146.62 repeater. Contact the FVRG at P O Box 808, Bigfork, MT 59911.

Ham Exams:

The next exams will probably be held in July at the Glacier/Waterton hamfest. Locally they will probably be held September 23, 1995 at 1PM at the Daily Interlake Building in Kalispell. Bring a copy of your license for upgrading, a current photo id, \$5.90, and some pencils. If you have any questions about time and place call Darrel 756-8633, Ed AA7TN at 755-6673, Wayne KE9XR at 257-4162 or Harry NV7K 755-9658.

For Sale Wanted or Trade:

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

Ed Mahlum AA7TN 755-6673 has a new Kenwood PB-8 battery for \$35, a PB-6 for \$20 with BC-6 charger. MFJ Tuner \$30.

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 \$100.00.

Wanted JoAnne and Mark Miller N7SLM/KA6YSC are looking for a crank up tower get a hold of them at 755-2771.

Title>HK3:The Multi-Tuner

Author>Wilson, Curtis - W0KKQ

Source>QST Oct 93, p. 76

Abstract>Combining three antenna tuners into one assembly, used with three antennas.

Digest: The writer uses several antennas for receiving and transmitting on a single band, and finds it helpful to be able to switch rapidly from one to another. A simple selector switch is not enough because each of his antennas must be tuned, using an antenna tuner. His solution is to have three antenna tuners, one for each antenna so that each is always tuned and can be instantly switched.

He strapped MFJ Model 948 Deluxe Versa Tuner II antenna tuners together with aluminum straps, and interconnected them with short coax jumpers. He shows a block diagram indicating the electrical interconnections and a pictorial diagram showing the three tuners mounted one atop the next.

Title>TC1: Sense the Right Way to Go With the HANDI-Finder
Author>Moell, Joe - K0OV
Source>QST Oct 93, pp. 77-78
Abstract>Adding a delay line to the HANDI-Finder to convert the "figure 8" to a cardioid (i.e. heart-shaped) pattern.

Digest: The writer offers a modification to the "HANDI-Finder" described by B. Leskovec: "Build the HANDI-Finder!" in QST, May, 1993, pp.35-38.\

The writer has found the HANDI-Finder to be an admirable unit for "Fox-Hunting" except for the fact that its null is bi-directional. Mr. Moell offers a simple modification that converts the original "Figure 8" to a "cardioid" pattern with a single null.

The modification requires inserting a carefully trimmed piece of miniature coax as a delay line in the lead to one of the two antennas. His letter gives detailed instruction as to how the delay line should be dimensioned and trimmed, where in the circuit it is to be inserted, and how it is to be physically mounted on the circuit board of the HANDI-Finder. He also shows photographs of both sides of the circuit board with the jumper installed.

He reports that the operation is very effective in giving an unambiguous reading of direction in "Fox-Hunting". Its only drawback is that the unit is no longer usable over many bands; the delay line must be cut for an individual band and will only perform on that band.

Title>LN1: Printed-Circuit Board Circus
Author>Ford, Steve - WB8IMY

Source>QST Oct 93, pp. 79-80
Abstract>Preparing PC-boards at home.

Digest>Mr. Ford presents a simulated question-and-answer series that explains how printed circuits can be obtained for people interested in building electronic projects. He mentions that many projects written up in hobby electronics and amateur radio publications contain printed circuit patterns and, often, indicate sources where etched and drilled boards can be obtained. He then goes on to explain how people who are unable or unwilling to buy etched boards can design and etch their own.

He explains how to prepare boards for etching by applying wiring patterns through direct drawing by special resist-pens, by pressure-sensitive tape, or by dry transfer of patterns. He also explains the photo process by which printed circuit patterns can be applied via a photo-sensitive coating and photographic printing techniques onto the copper. Finally, he explains the etching process using a corrosive chemical, usually ferric chloride.

Finally, he gives the names and addresses of several sources where appropriate supplies can be obtained, including Radio Shack as well

as more specialized suppliers.

Title>NHC2:Nobody Talks to Me!

Author>Ford, Steve - WB8IMY

Source>QST Oct 93, p. 63

Abstract>How a beginner can "break the ice" and have QSOs on VHF/UHF bands.

Digest>Mr. Ford addresses the problem facing newcomers to the VHF/UHF bands who find it difficult to open a QSO with another ham. On repeaters, it is not the custom to call "CQ". Instead, custom dictates

that one announces their presence by giving their call sign followed with the word "Listening!" Often, other hams who are monitoring the repeater do not take that as a request for a QSO, hence do not reply.

The author gives a number of suggestions of how to open conversations, meet people, and form a circle of friends. He points out that many hams who spend time on VHF are basically shy and feel slightly uncomfortable talking with strangers. But they usually will welcome requests for information and advice from newcomers, so that offers the possibility of opening initial contacts.

Title>NHC3:Stalking the Fox

Author>Kearman, Jim - KR1S

Source>QST Oct 93, pp. 64-65

Abstract>Describing amateur "Fox Hunts", i.e. using radio direction-finding gear to locate hidden transmitters as a competitive activity.

Digest>Mr. Kearman describes the sport of "Fox Hunting" or "T-Hunting". It is the game of hide-and-seeK conducted on radio! A hidden transmitter, usually on the 2-meter band, is hidden somewhere and hams

with various kinds of direction-finding equipment try to find it.

Title>NHC5:LOWfing on 1750 Meters

Author>Ford, Steve - WB8IMY

Source>QST Oct 93, pp. 67-68

Abstract>Operating in the 160-190 KHz. band.

Digest>There is a radio band at frequencies between 160 and 190 KHz. that is open to everyone with no license required. It is not a very popular band because there are severe restrictions on the kind of equipment that may be used. First, the power input to the final amplifier must not exceed 1-watt. Second, the antenna, including transmission line, must not exceed 15 meters in length (about 50 feet).

Nevertheless, there are some amateurs who are experimenting and making contacts over respectable distances.

More information can be obtained from: The Longwave Club of America, 45 Wildflower Rd., Levittown, PA 19057

Title>RT2:Using an Autopatch to Report an Accident

Author>Regent, Richard - K9GDF

Source>QST Oct 93, p. 65

Abstract>Instructions for reporting accidents via mobile radio by using the telephone 911 through an autopatch.

Digest>If one comes upon an accident, report it via radio in this manner. Get on the air, give your call sign, and announce "Emergency patch". That gives you priority. Dial the access code, followed by "911". Tell the dispatcher who answers that you are a radio amateur reporting an accident; then give the exact location, extent of injuries, if any, whether there is a fire, or a spill of fuel or liquids, and whether traffic is blocked.

Then sign off but continue to monitor the frequency.

Title>GI2:Yagi: The Man and His Antenna

Author>Welsh, Robert H.

Source>QST Oct 93, pp. 45-47

Abstract>The story of the invention and development of the "Yagi" (more properly the "Yagi-Uda", or perhaps just the "Uda") antenna.

Digest>All hams today know what a Yagi antenna is, but many may not know how it got its name. Mr. Welsh tells the story of Hidetsugu Yagi and Shintaro Uda, the two Japanese engineering professors who were responsible for the development of the antenna. In the west, and especially in the United States, we are very careful to credit a discovery or invention to the person who actually conceived the idea and/or did the work. In some other countries, notably in Japan, the teacher or mentor of a researcher is often given the major credit for what his pupil discovers. Professor Yagi was a senior professor at Tohoku University in Japan, and Assistant Professor Uda was a younger man working under Yagi's supervision.

Uda conceived the idea of placing parasitic elements near a dipole radiator and discovered that making them slightly longer caused them to act as reflectors; slightly shorter, as directors. Working in the University laboratory, he made careful measurements with numbers of elements. From that, he obtained the complete engineering data regarding the design of antennas with one reflector and any number of directors, exactly as they are built today. Professor Yagi, in his subsequent publications and speeches always credited his young assistant with having made the actual discovery.

The first published article describing Uda's work appeared under his own name in the Proceedings of the Imperial Academy of Japan in February, 1926. The first publication in the United States was written by Uda in the Proceedings of the IRE in March, 1927. But Yagi applied for the Japanese patent December 28, 1925, and for a U.S. patent in September, 1926. Yagi's American patent was issued in May, 1932 as U.S. Patent Number 1,860,213. Now it is Yagi's name that is most commonly used to identify the antenna.

The author points out the surprising fact that hams paid little attention to the antenna until near the end of the 1930's. By then, the popularity of the W8JK wire beam had wakened the interest of hams to beam antennas, in general. But it was the advent of television immediately before, and especially after, World War 2 that made Yagi-Uda antennas the most popular of all antenna types.

>How can I determine the 'Amp-Hour' of a battery?

The amp-hour rating of a battery is the product of the current drawn and the time it will provide that current. In this case, you can draw 1 A for 10 hours, 2 A for 5 hours, or (theoretically) 10 A for 1 hour, or any combination in between. Generally, the batteries are what they say they are if they're in good shape. Some will get hot and be damaged at the high end (much current for short time).

>And how do you test for a charged battery? I set my Multimeter to 10Amp, and touch the probes to the + and - of the battery. (I hope I haven't been doing -The Wrong Thing-!)

NO, NO, NO! A current meter has a very low resistance. If you do it that way, you're virtually shorting out the battery. Remember this simple rule for how to hook up a meter- "VOLTAGE exists ACROSS gaps (meter goes in parallel), CURRENT flows THROUGH circuits (meter in series).

>I got some neat 6v no-maintenance batteries at the local Hamfest. They charge fine, and have the appropriate 6 volts. But If they say NP10-6 (or is it 6-10) 10 Amp-hour, how can I test that?

Set up a simple series resistor circuit to draw a moderate current. Make periodic measurements and graph the result. This is dirt cheap (meter and resistor), and gives a good idea of the rating for most ham purposes. (And don't get crazy about "deep cycling" the battery while doing this. That is exactly what most exercisers do; once in a while won't hurt it.)