



Arc Over

Fox River Radio League
PO Box 673
Batavia, IL
60150-0673

September, 2004

President's Traffic *by Bill Schaben, W9AX*

In the last two weeks, I have received two calls for ham radio help. The first came from St. Charles and wants to use the hams as back-up in case of an emergency. The other came from Aurora requesting ham operators to assist in a mock disaster drill. (See additional article on this page.) The first is something for the future that needs to be planned and organized. Aurora needed hams on a short (one week) notice.

This shows me there is a need in Kane County for an organized, trained and equipped ham radio response team. Again, we saw in Florida that hams with their portable/mobile gear can assist other agencies, both private and public, when their services are severely stretched. And, by virtue of dispersion, the hams are able to quickly assess the situation and summon help to the most needy areas.

Pardon the phrase, but this doesn't come to be by accident. In order to be effective we have an idea of what we are expected to do. We know how to operate the radios and how to rag-chew. But we need to know how their operation works and how we can fit in. The worse case is that we walk into their office or HQ and think we can take over. There is a lot of prep work and training involved.

Hopefully, in next few months there will be some changes that will be for the good of ham radio and emergency preparedness.

Now for some club business. As you know, the end of our year is rapidly approaching. The biggest item on our agenda is the nomination and election of new officers for the club.

Every office in the club is open with the exception of two of the four directors. Having been in many of the chairs myself, I can attest to the enjoyment and sense of accomplishment that one gets by being an officer.

This is your club and now is the time for you to come forward to help guide and govern it.

AH6EZ and W9XA, Dick and Kermit are serving as the nominating committee. Give them a call and let them know you'd like to run for a position of your choosing.

Aurora Disaster Drill

by Bill Schaben, W9AX

I received a note that the City of Aurora was holding a full scale disaster exercise. Larry Langston, Director of Community Safety, asked to have some Amateur Radio involved for backup communications. Conversations with Larry and Mark Flaherty, Director of the Aurora Office of Emergency Management provided only a rough idea of what was going to happen or what was required of the hams. It looked that they might need a radio link from the City EOC to the Command Post at the scene.

With this in mind, I called on some members that had some experience to come out. N9CHA, N9MCX and I were the crew. Although originally thought to run only an hour and a half, complications made our part run to about four hours.

A request as this is a good learning tool for all concerned. We proved to the OEM that we could provide an additional communications link where needed. Not only did we have the requested link but also had communications with Kane County OEM. Although we didn't help much, it was a great learning exercise.

I want to thank Greg and Rod for giving up their Sunday evening. Also I appreciate the confidence and support by the City of Aurora showed by asking that we get involved. I hope that this will continue in the future.

HF Challenge for September

Summer is almost over, and it did seem to pass very fast. The fall contest season is around the corner. Just in time to fill in those missing states and countries. One 4 or 5 hour stretch in a contest can do wonders for your challenge score. Conditions are still going downhill, towards that bottom of the cycle. There are still some great periods. Personally I haven't put my home station back together from field day. One of the main reasons is my mobile station is up and active.

Those of you that run HF mobile know that it isn't the best performing station, but it seems that MOBILE on the end of the call seems to do wonders. Many of us spend a lot of time in the car, so HF mobile keeps us company. In my case I find that I get my radio fix before I even get home. I don't mind sitting in traffic while working a M3 on 20 or a W6 on 40. Yes we get some strange looks, even some laughs (from family members?), but our mobile HF shacks are works of art.

This month there were a lot of battleship stations, lighthouse and lightship stations, and a ton of obscure special events. Working special events can

be a lot of fun. If you want to send them the large SASE and sometimes a green stamp you can get some very unique wallpaper. I seem to look for the most obscure special events I can find. The 30th anniversary of the Apple Core Park outside Madison Wisconsin may not be a desired one, but it can really be a lot of fun. You find out that the operator has had his license for about 2 weeks, running 5 watts on an FT-817 and a random wire some 300 feet long at 20 feet sitting in his car since it is raining. Why not!

Not a lot of scores turned in this month with vacation and summer activities. Don't forget to send me stories of your interesting or fun QSO's, we all enjoy reading what the other guy is doing.

See Page 5 for the standings.

73 de K9FE Mike Urso

ARRL SEEKS COMMENT ON DRAFT "BANDWIDTH" PETITION

From the ARRL Letter, August 28, 2004

The ARRL wants members' comments on a planned petition to the FCC seeking to regulate amateur subbands by bandwidth rather than by mode. The ARRL Board of Directors adopted the petition's guiding principle--to create a regulatory environment more accommodating to newer technologies--two years ago, and it wrapped up its review of a draft petition in late July.

"The main objective is to make appropriate provision for digital modes in the HF amateur bands, while preserving amateurs' prerogatives to use the traditional modes," said ARRL CEO David Sumner, K1ZZ. "Regulation by Bandwidth" is the title of Sumner's "It Seems to Us . . ." editorial in September QST.

The draft petition represents expert input from the ARRL Ad Hoc HF Digital Committee. ARRL staff also provided an interim report, and the Board reviewed a draft petition when it met last January. An ARRL Executive Committee review followed. The EC decided to make a synopsis and explanation of the petition available to ARRL members before it goes to the FCC.

"The regulation of emission modes in Amateur Radio Service allocations is a limiting factor with respect to Amateur Radio experimentation," the petition synopsis concludes. "It leads to attempts to put new technology into a regulatory framework that was designed only to deal with older analog emissions." To implement digital

(Continued on page 3)

Share the Excitement!

by Dick Illman, AH6EZ

Here is what I have heard of recently. If you had fun with ham radio, share it. If you have not been having fun with ham radio, why not?

Kurt, KC9CBY was thrilled to make several contacts to the East Coast on 6m SSB with 20 watts and an attic inverted vee antenna.

Lloyd, KC9DMS is the proud owner of the W4CEO tilt over tower. He is planning a nice Spring construction project.

Dick, AH6EZ worked 6 contacts on a single AO51 pass, including KP4 and VE7.

Did you know that the International Space Station is now operating as an FM cross band repeater? Uplink is 437.8 MHz +/- 10KHz doppler correction and downlink is 145.8 +/-3KHz.

Let me know of fun you are having with ham radio by email (AH6EZ@aol.com), on the Fox Repeaters, or telephone 630-584-4388. I will share it in the next Arcover. If I do not receive any input for this column, I may discontinue it.

September Program Notes

by Dick Illman, AH6EZ

During the September meeting, I am being called away on business to a BPL convention, representing Motorola. Sort of a delicate situation. Monday night there is supposed to be a field trip to see the Virginia pilot system.

Some of you may have heard that I am working on one or two programs about antennas. I will need to postpone them until October, but since I will have more time to develop them, they should be really good. I have been doing a lot of reading on this broad topic.

Although it has not been completely decided yet, I may arrange to have a video tape shown of the 2000 K5K Dxpediton to Kingman reef for the September meeting. There may also be a video of a live television broadcast made about ham radio showing AH6EZ and KC9CLR.

Comments Sought

(Continued from page 2)

technologies, an underlying assumption of the League's draft petition is to provide for an intermediate bandwidth--between what's needed for the legacy CW and phone modes--in the middle of certain bands.

As drafted, the ARRL's bandwidth petition would preserve double-sideband AM unchanged, but it would stop short of opening the phone bands to digital and other modes of the same bandwidth.

FCC rules now permit RTTY and data emissions throughout the HF CW subbands, although informal agreements typically keep RTTY and data signals out of those parts of the CW band generally used for CW. The ARRL's petition proposes to limit bandwidth in the CW subbands to 200 Hz, which also will accommodate data modes such as PSK31.

In addition, the League's proposal would limit bandwidth in the existing "RTTY/data subbands" to either 500 Hz or 3 kHz, with phone emissions specifically prohibited in certain subbands where 3 kHz would be permitted. Under the proposal, these would include 3650-3725, 7100-7125, 14,100-14,150 and 21,150-21,200 kHz.

"The reason for this is to encourage the development of higher-speed data communications in these subbands by preventing them from becoming de facto 'expanded phone bands.'" Sumner explained.

The new proposals take into account the ARRL's prior "Novice refarming" petition to expand some HF phone bands, included in the FCC Notice of Proposed Rule Making in WT Docket 04-140.

The ARRL proposal would eliminate bandwidth restrictions in the 222-225 MHz band--beyond a requirement to keep signals confined within the band.

Sumner encouraged ARRL members to review the synopsis of the petition and the specific rule changes the League plans to propose <<http://www.arrl.org/announce/bandwidth.html>>. Direct questions or comments--favorable or otherwise--via e-mail <bandwidth@arrl.org>. ARRL staff members will respond to any questions, while comments will be forwarded to your ARRL division director. Members also are welcome to comment directly to their ARRL directors <<http://www.arrl.org/divisions/>>, also listed on page 15 in QST.

WA9TPQ Estate Items For Sale

This list is current as of 8/17/2004. Contact Betty Erickson at 630-584-6183. (Numbers) in parenthesis are item numbers.

- 2M FM Mobile Xcvr, Yaesu FT-2500M w/MH-27 Mic. (#15) \$110
- 2M FM Mobile Xcvr, Yaesu FT-2600M w/MH-36B TTP Mic. (#16) \$125
- 2M FM Mobile Channelized Xcvr, ICOM 22-S w/mic. (#54) \$75
- 2M FM Mobile Channelized Xcvr, ICOM 22-A (#55) \$50
- 2M FM Mobile Xcvr, ICOM 255A w/TTP mic (#59) \$90
- 2M FM Mobile Xcvr, Kenwood TM-2530 w/mic (#56) \$90
- 2M FM Mobile Xcvr KDK "FM-240" 45 watt w/mic (#60) \$55

- HF Xcvr 160-10 meters, Kenwood TS-940S w/built-in power supply, antenna tuner and narrow CW filter. Includes Kenwood hand mic. (#4) \$750

- Oscilloscope monitor & Panadapter Kenwood SM-220 for TS-940 Xcvr (#9) \$200

- HF Xcvr Kenwood TS-180S with separate VFO-180 (#47 & #48) \$375

- HF Transmitter, XTAL Ctrl, Globe Scout Deluxe circa 1961 (#53) \$100

- Antenna Tuner, MFJ-945E, 300 watt w/meter HF plus 6 meters. (#40) \$75
- Antenna Tuner, Heathkit SA-2040 KW with balanced feed balun (#49) \$140

- Satellite Xcvr 2m/430/440FM Yaesu FT-726R all-mode except 440, 10watts out, with TS-32 encode/decode. (#6) \$450

- 2M HT, Kenwood TR-2600A with ST-2 base/charger. Battery is holding charge OK. (#7) \$60
- 2M HT ICOM IC-2SAT 5 Watt w/BC-72 Desk Charger. (#8) \$90
- 2M/40/6M HT, Yaesu VX5R, 5Watt with charger. (#N9YFC) \$180

- Power Supply, Astron RS-35M Non-Switching type, Dual-metered, 25A Cont, 35A Intermittent. (#30) \$100
- Power Supply, Kenwood 13.8V PS-30 15A Cont, 20A @ 50%. (#32) \$90

- TNC for DX Packetcluster AEA PK-80 1200 bps (#28) \$30
- TNC Multimode Top of the line HF/VHF with two simultaneous ports 9600/1200 bps Packet, Auto satellite correction AEA DSP-2232 (#24) \$300

- Bird Model 43 portable wattmeter with elements: 5W@100-250MHz, 25W@100-250MHz; 50W@100-250MHz; 100W@200-500MHz elements. (#17) \$275

- Drake Analog WATT/SWR meter, W-4 200/2,000 Watts with remote coupler (#22) \$50

- Headphones, Deluxe Kenwood HS-5 (#25) \$35

- Memory Keyer, Autek Research MK-1 CMOS (#50) \$40

- Iambic keyer Paddle, Bencher BY-2 w/chrome base and plastic cover. (#3) \$80

- Goldline Heil microphone GM-4 w/HC-4 DX element. With gooseneck arm and mic adapter. Wired for Kenwood but easy to change. (#26) \$95

- HF-SWR analyzer, MFJ-207 10-160 meters. Requires separate freq. Counter. (#57) \$25

- DSP Digital Signal Processor All mode noise filter, Timewave DSP-599ZX. (#31) \$200
- DSP Digital Signal Processor noise filter, JPS NIR-10 (#44) \$30

- Bandpass Filter, I.C.E. (Distributed by Array Solutions) Model 405 for 40 Meters. 250 watt 0.26 dB insertion loss. Great for field day and multi-radio setups. (#36) \$25

- Telephone RFI filter, K-COM Model RF-1 modular single line 3.0-30 MHz. (#39) \$12

- Scopemeter, Portable, Fluke 97 Combination dual-trace 50 MHz digital storage oscilloscope and digital multimeter. Scope provides 25 Ms/sec with 40 nS glitch capture. 15 cursor measurements. Multimeter reads 3 2/3 digits with Touch Hold feature. Measures ac to 5 MHz. Also measures AC-DC, resistance, frequency, and numerous other modes. \$2,195 new. (#41) \$1,100

Erickson HF Challenge Standings as of 6/15/04

Ragchew Class	States/Provinces	DX Countries	Total
K9COE	43	21	64
AH6EZ	29	18	56
K9FE	23		23
W9DTR	14		14
K9IH	12		12
NA9A	6/0	6	12

Operator Class	States/ Provinces	DX Countries	Total
K9JE	48/10	109	167
N9YA	50/11	93	154
K9COE	50/10	68	128
W9DTR	49/9	61	119
NT3J	40/6	65	111
KB9YSI	38/8	63	109
J68AR	33/8	62	103
W4CEO	37/4	47	88
W9XA	38/4	37	79
K9IH	39/6	23	68
KA9OBH	0/1	36	37
W9DNJ	11/1	3	15

Limited Class	States/ Provinces	DX Countries	Total
K9MMS	49/7	93	149
M/AH6EZ	3/0	28	31
MM/AH6EZ		11	11
KB9YYX	7	0	7

Full Tilt Boogie Class	States/Provinces	DX Countries	Total
NA9A	36/6	222	267
AH6EZ	50/12	178	240
WB90	38/4	101	143
K9FE	21/4	22	47
WOHED	36/2	2	40

A Message from Maurice!

by Maurice Schietecatte, W4CEO

Greetings from Florida! (as of 9/2/04)

Shirley and I moved into our new home Wednesday and still have a lot of unpacking to do. It's hard trying to do things as everyone is in panic mode over hurricane Frances.

Here is our new address and phone number:
Maurice & Shirley Schietecatte
9450 SE 137th Street Rd
Summerfield, FL 34491-8208
Phone: (352) 245-1038

Repeater News/Updates

by Dick Illman, AH6EZ

We had a complete failure of the IRLP computer hard drive less than a week before we were donated a nice fast rack mounted computer by a friend of N9CHA. It took a week of playing with Linux but our IRLP Node 4850 is back on the air.

The operational procedure is the same as before with the four digit node number to access and 73 to disconnect. Check out www.irlp.net for the present node numbers. There are presently 1431 IRLP nodes in lots of countries. I hope to be able to add Echolink capability to our repeater soon.

Solar Flux

by Bill Muhr, KB9YSI

The note from Maurice, W4CEO, that you see just to the left of this column was received just before Florida was clobbered by Hurricane Frances. I'm sure we all wish Maurice and Shirley well. We should have some follow-up news on how they made out in time for the next meeting.

Thanks to Greg, N9CHA, for the fine article on his satellite station. The web edition of the ArcOver will have several photos of his antennas and rigs. This is really a beautiful set-up that everyone should see. For those that don't have web access I will try to bring a couple of prints to the meeting.

It hardly seems like it, but Summer is over and the year 2004 is winding down. There is, however, a lot of operating left. Contest season is upon us, and you can use the ARRL Sweepstakes 'tests to grab a lot of states for the HF Challenge. And don't forget that the ARRL 90th Anniversary WAS certificate is available if you can work all the states by the end of the year.

I'd also like to second Bill Schaben's comments about running for one of the Club offices. It's a great way to serve your fellow hams and your local community. Please volunteer if at all possible.

73, and I'll see you at the meeting

Bill, KB9YSI

IMPORTANT DATES IN SEPTEMBER

The FRRL Board Meeting is Sep. 7, the regular Club Meeting is the 14th, and VE testing is the 21st.

The **52nd Annual W9DXCC Convention** will be held on September 18 at the Holiday Inn in Elk Grove Village. A full day of programs has been scheduled, followed by an evening banquet. The door prize will be an Icom 706MkII transceiver. For info call (847) 945-156, or visit the web site at <http://www.w9dxcc.com>.

Radio Expo 2004, the Chicago FM Club's September Hamfest will be held Sep. 18th and 19th at the Lake County Fairgrounds in Grayslake, IL. For more info call (630) 628-1501, or visit the web site: <http://www.chicagofmclub.org>.

About the FRRL

The Fox River Radio League, Inc., is a general interest amateur radio club serving the central Fox River Valley area. Records indicate the club has been in existence since at least 1924, and has functioned continuously ever since. We are an ARRL Special Service Club, an Illinois not-for-profit corporation, and a 501©(3) tax exempt organization as specified in IRS Statutes.

We sponsor training classes for new hams,

license examination sessions, an annual hamfest, and participate in various public service events. If you have a specialized amateur radio interest, chances are you can share it with one or more of our club members.

The Fox River Radio League meets on the 2nd Tuesday of every month at the Prisco Community Center in Aurora, Illinois. The meeting begins at 7:30 PM. After conducting business, coffee and

snacks are served while we socialize. Following the break, a program of interest will be presented. All persons interested in amateur radio are invited to attend. Families are welcome. *We hope to see you there!*



License Exams

The Fox River Radio League, Inc., in conjunction with the ARRL VEC, conducts amateur examinations on the 3rd Tuesday of January, Marcy, May, September and November in the basement of the Prisco Community Center, 150 W. Illinois Street, (South East corner of Lake and Illinois) in Aurora, IL. at 7:30 PM. No advance registration is required, but please be sure to

bring your license (if you have one) and a photocopy of it, original CSCEs and a photocopy (if needed), some form of photo identification, and the fee of \$12.00. (The FRRL receives no portion of this fee.)

The next exam session is scheduled for Tuesday, September 21, 2004, at 7:30 pm at the Prisco Center.

FRRL Dues

Annual dues are payable no later than the January Club Meeting each year. Persons joining during the year will have their first year's dues prorated to the nearest yearly quarter.

Regular dues are \$20.00 a year, Senior Citizen dues are \$12.00. Family dues are \$30.00. You can also help support the FRRL Repeaters by joining as a combined Club/ Repeater member for \$30.00. Repeater dues are \$20.00.

Check with the Treasurer for details and additional dues rates.

Nets

Net Name	Freq.	Day	Time
FRRL	147.210	Tuesday	7:30 PM Local
10-10 CW	28.150	Monday	8:00 PM Local
10-10 SSB	28.720	Monday	8:30 PM Local

Fox River Radio League

Founded 1924

Mailing Address:

Box 673
Batavia, Illinois
60510-0673

Email:

mail@frri.org

Web Site:

www.frri.org

President

Bill Schaben, W9AX
w9ax@inil.com

Vice President

Dick Illman, AH6EZ
ah6ez@aol.com

Secretary

Election Pending

Treasurer

Larry Shaw, W9OKI
DatecAviation@cs.com

Directors:

Jack Ekstrom, K9JE
jackk9je@aol.com

Dave Holdeman, N9XU
d.holdeman@att.net

Bob Roehrig, K9EUI
broehrig@aurora.edu

Maurice Schietecatte
W4CEO
815-786-2860
scat42@msn.com

License Trustees:

Kermit Carlson, W9XA
kermit@arr.com

Bob Dillon
bdillon@aurora.edu

Newsletter Editor

Bill Muhr, KB9YSI
arcover@frri.org

Webmaster

Mike Urso, K9FE
webmaster@frri.org

FRRL CLUB MEETINGS ARE HELD AT THE PRISCO COMMUNITY CENTER AT 150 WEST ILLINOIS STREET IN AURORA. PLEASE CHECK THE FRRL WEB SITE FOR A MAP TO THE MEETING LOCATION .

<http://www.frri.org>

Send Address Corrections to:
 Fox River Radio League, Inc.
 29-W-458 Candlewood Lane
 Warrenville, Illinois
 60555-2639

FRRL Event Calendar

September, 2004

FRRL Board Meeting 7
FRRL Meeting **14**
 W9DXCC Convention* 18
 Radio Expo Hamfest* 18/19
 VE Testing 21

October, 2004

FRRL Board Meeting 5
FRRL Meeting **12**

* More info on page 6, inside.

Handy Web Links

FRRL Web Site	http://www.frri.org/
ARRL Main Site	http://www.arrl.org/
ARRL Central Div. Site	http://www.central.arrl.org/
ARRL IL Section Site	http://www.central.arrl.org/illinois.html
ARRL IL Section News	http://www.arrl.org/sections/?sect=IL
ARRL Contest Page	http://www.arrl.org/contests/
Contest Calendar	http://www.hornucopia.com/contestcal/
Callsign Lookup (QRZ)	http://www.qrz.com/
Vanity Callsign Info	http://www.vanityhq.com/
IRLP Main Page	http://www.irlp.net/
AMSAT	http://www.amsat.org/
FCC Services	http://wireless.fcc.gov/services/amateur
SMC Contest Club	http://www.w9smc.com/

ArcOver FRRL Newsletter

Copyright 2004, FRRL

The ArcOver is published monthly by the Fox River Radio League, Inc. Articles and letters are always welcome. The normal deadline for material is six days prior to the end of the previous month. Articles can be sent by email to kb9ysi@arrl.net or via U.S. Mail. Contact the Editor for details and submission guidelines.

Prior permission is required to republish original ArcOver material.

The opinions expressed in the ArcOver are strictly those of the authors and do not necessarily represent those of the FRRL, Inc. or its sponsors.

There's More! Turn to Page 9 for extra Web Content!

Local Area Repeaters

W9CEQ—147.210 Mhz. *
 +600 KHz, 103.5 access tone
 Owned by FRRL

W9CEQ—444.300 Mhz. IRLP Node # 4850
 +5 Mhz, 114.8 access tone
 Owned by FRRL

W9ZGP—146.580 Mhz.
 +1.08 Mhz (147.660)
 Owned by NIARC

KC9OEM—145.470 Mhz.
 -600 KHz, 103.5 access tone
 Owned by Kane County OEM

W9XA — 224.40 Mhz, +5 Mhz, IRLP Node #4846
 — **443.65 Mhz, +5 Mhz**
 — **1292.00 Mhz, -20 Mhz (1272.00)**

* Weekly FRRL Net—Tues. Eve. at 7:30 pm local time.

More "Satellite Excitement"

by Greg Braun, N9CHA

In the August 2004 ArcOver I shared my excitement of Satellite operation due to the successful launch and provisioning of the AO51, Echo satellite. During the past few weeks I have been successful in making many contacts on this FM bird. My current antenna system is quite modest, but the tracking system has been built and tested to satisfaction.



Fig 1

This (Fig 1) is an overall picture of my "portable" earth station. Due to CCR's in my neighborhood, I am not able to install permanent outdoor antennas and my attic is not quite large enough to swing this array.

The two antennas consist of a three element 2 meter and three element 435 yagi mounted vertically. A five element 435 yagi is mounted on the opposite side of the fiberglass cross boom horizontally. I am using a 5400 series elevation rotor.

With a lot of help from Joe, KC9FPD we built and assembled this base for mounting the azimuth rotor (Fig 2). It is made from scrap aluminum plate with four aluminum outriggers equipped with adjustable feet. Joe has a very well stocked garage full of aluminum odds and ends. Thanks Joe!

A level was mounted on the base to help adjust the four outriggers for proper boom orientation. Here you can also see a small gel cell battery I am using to power a 435 pre-amplifier

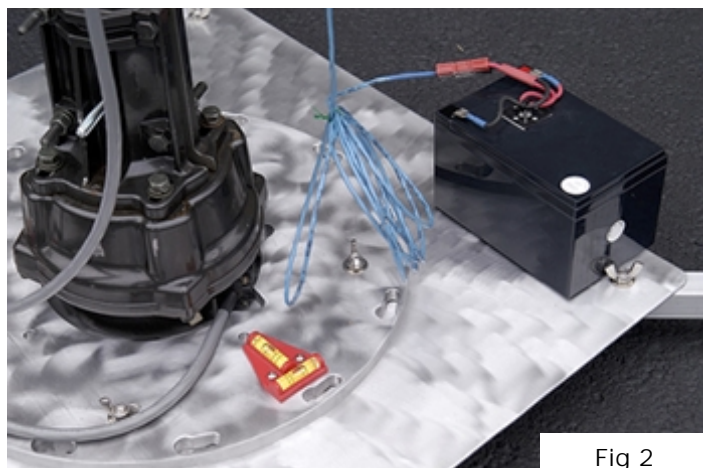


Fig 2

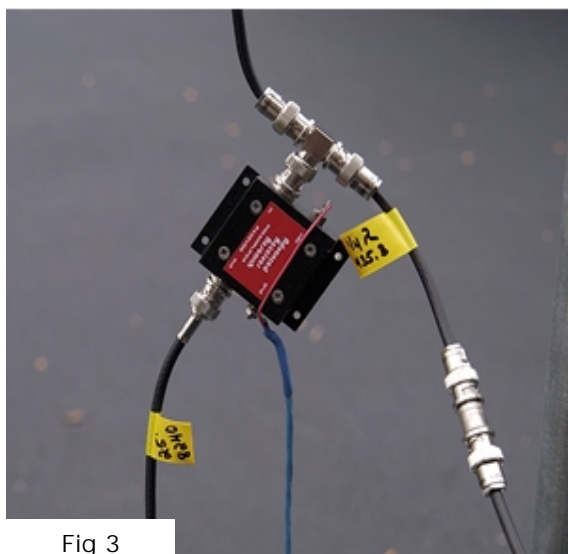


Fig 3

This (Fig 3) is an RO (Receive Only) pre amp which I have connected to the two 440 antennas. I made coaxial cable impedance transformers from 75 ohm RG-59 to increase the impedance match between the parallel yagis to 50 ohms. Also, I inserted a $\frac{1}{4}$ wave section of coax in one of the feed lines to place one yagi 90 degrees out of phase from the other. This has proven to be very helpful in eliminated deep fades as the satellites tumble, although just using dual polarization instead of circular polarization should be OK.

More "Satellite Excitement"

(Continued from page 9)



Fig 4

My ground station radio (Fig 4) is the Yaesu FT-847 all mode. I power it with an Astron 17 amp switching power supply when operating from AC. I can also power it from a gel cell for field operation. The rig has several memories for Satellite operation making it easy to change frequencies and modes from the FM AO51 bird to the SSB FO29 satellite. I am using the AEA ST-1 Satellite Tracker as my interface between the Yaesu 5400B rotors and my computer.

The laptop (Fig 5) is running NOVA for Windows from NLSA (ver. 2.1). The software graphically shows the position of the satellites you wish to track, and takes care of the antenna pointing by communicating to the ST-1. There is aWISP software driver for Nova that can control the Doppler shift of the radio if desired.



Fig 5

Operating this system (Fig 6) has been a lot of fun. I have found that when you are the most successful station to capture the AO51 FM satellite, other hams have a tendency to call you because they want to establish contact rather than just transmitting their call and grid square in the blind. Dick, AH6EZ is an excellent satellite operator and I've had the pleasure of hearing him make many QSOs in a single pass. I am trying to emulate his successful style.



Fig 6

On FO29 I had the chance to carry on a QSO for several minutes with a ham in Iowa. That bird uses a 100 KHz wide SSB inverting transponder allowing several QSOs at one time, including both voice and CW.

What's next? Rain and Winter weather proof installation. Better antennas! I am currently building matched dual band yagis. After that I will try single band cross polarized yagis.

Greg – N9CHA