

# PRINTED CIRCUIT

April 1999

Newsletter of the Joplin Amateur Radio Club

Vol. 9 Issue No. 4

## THE WORLD OF VHF/UHF

BY JOHN TUDENHAM WØJRP

**W**ith the new solar cycle rising here in the Midwest we are all waiting for some world wide DX openings on six meters. It was just after 1700 CST on March 12th, Jay KØETC and I started hearing some Spanish speaking stations in the DX portion of six below 50.125 MHz, finally around 1710 local time, LW3EJU in Argentina suddenly appeared with a good signal. KØETC worked him followed by WØJRP but then he faded out. The solar flux that day was only around 150, usually too low to support 50 MHz F-layer skip, the MUF rose to 50 MHz and dropped into the 40+ MHz range. The next week around 1400 local time, Jay called me and said he was hearing the HC2FG beacon from Ecuador. I also heard it and stayed in for over an hour but could raise no South American stations.

The good news is that things are starting to happen on six meters for long haul DX. We would like to see solar flux up to around 200 then we would see widespread DX openings, maybe by next fall.

There was some six meter sideband activity in NW Arkansas around Bentonville. I have worked several stations, even some with vertical polarization. Vertical polarization normally doesn't work to well on ground wave or Tropo against horizontal.

Also there is a lot of new activity on six FM mostly around 52.525MHz. Several VHF sprints are scheduled for April and May to promote activity on the VHF bands. Also in late April the Sporadic E-Skip season usually begins on six meters, and the warmer weather may provide several good tropo

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## FCC CRACKS DOWN ON REPEATER ABUSERS

### A GRIZZLY PEAK FOLLOW-UP

RICK LINDQUIST, N1RL

More information is now available on an FCC order issued last week to the owner of a San Francisco Bay area repeater. An order telling him to take the repeater off the air for 120 days. Rick Lindquist, N1RL, of the ARRL Audio News says that the repeaters control stations and some of its users are under scrutiny as well:

The FCC has shut down for 120 days the K7IJ Repeater Facility on Grizzly Peak in the San Francisco Bay Area and has told the licensee his ham ticket could be in jeopardy. The FCC took the action by modifying K7IJ's license to prohibit repeater operation starting midnight February 28th. The repeater system operates in the 146, 222 and 440 MHz bands.

The FCC also set aside recent license grants of four individuals accused of unlicensed operation on the repeater prior to obtaining their ham tickets and of other behavior. The case is marked the first major VHF / UHF enforcement action the FCC has taken in recent months. They were brought to the commissions attention by the Amateur Auxiliary.

The FCC's Riley Hollingsworth, K4ZDH said the commission acted after its

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## AERIALS AND WHERE TO STICK THEM

There are a great many types of antennas and most of them function best when they are erect. This is because of 'standing-waves' which produce energy in a vertical plane. Energy in the horizontal plane requires 'lying-down waves' and this is why most of the radiated and received energy is termed 'ecstatic' rather than 'magnetic'. (Kirchhoff's fourth and fifth laws of self-immolation present a heated argument on this subject.)

One of the most famous aerials is the diamond-shaped 'Ron Bick' aerial, named after its inventor Ron Bick of Watford, England. This aerial is very good but, because of its size, it has two main disadvantages - it is difficult to erect vertically and it is of limited use in fast-flying jet aircraft.

Another aerial that deserves a mention is the Log Periodic - so I have mentioned it.

I will now move quickly onto the three 'pole' antennas, namely the monopole, the dipole and the tripole. The last-mentioned can be disregarded as it is not now in use. The reason for this is fascinating, but I can't remember what that reason is. The monopole is very useful for LF, MF and HF but has limited usefulness at VHF frequencies where one should use the stereopole if maximum enjoyment is required.

At this point the reader may feel that there has been some neglect of the technical aspect of aerials. This is true and the author intends to deal with the dipole in depth technically, but at the same time try to satisfy the natural curiosity of the non-technical reader.

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openings on the VHF bands especially two meters, so watch the bands, the best is yet to come.

If you hear some new calls on the bands it may be someone you know. KBØWLD is now KIØPI, and KBØWEY is KIØPP. Also Larry, KCØAUY has applied for a vanity call KØAUY.

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The word 'dipole' is a composite of two Latin words, 'di' meaning 'six' and 'pole' meaning 'sticks'. So it can be easily seen, even by the most ignorant, that a dipole is made from six sticks. As the reader will already know from my in-depth study of the Log Periodic, six sticks will have a much wider aperture than only one stick. Now we come to the technical bit. Pushing these sticks into the ground at regular intervals will give a quasi-omniphysical deltoid stub-matching line-of-sight high incident ground-wave. If three of the 'sticks' are coated with an intensely ionised P material and the other three coated with un-ionised N material then Zowie! - it's instant Receivesville man. (It is hoped that the reader will forgive the author for occasionally lapsing into the vernacular, particularly when excited.)

Another thing about aerials that must be remembered is feeder independence. If the feeders of dipoles are spread apart it changes the natural independence of the aerial from 75 Ohms to 250 Megohms. As is commonly known it is impossible to hear anything with that sort of resistance in the aerial feeder. So best not to do it.

Other types of aerial in constant use are the 'Beverage' (called the 'T' aerial in Britain). This is also called a long wire and is 1.5 inches long at 16 Ghz. The Inverted X is also famous but not much in use as no-one can decide which way up it is supposed to be.

Finally, we move on briefly to microwaves where there are special considerations to be taken into account. Microwave and satellite signals can 'bounce around' all over the place and can become what is technically known as 'dirty'. However, fortunately there is one aerial which can be used effectively to 'clean up' these 'dirty' signals. This is, of course, the very well-known Carabolic Dish. ¶

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investigation indicted the K7IJ Repeater System was out of the control of the licensee.

"Somebody out there lost some pages out of their rule book that relates to control operators of repeaters. There was just no control of the repeater what so ever. There was apparently broadcasting of cordless phone conversations, obscenity, profanity, playing around with it. Apparently the licensee was not responding to complaints that there was no control over it. And apparently the control operator was encouraging and conversing with unlicensed stations on the repeater. So we had to come in and take action." Hollingsworth said.

The repeaters control operator was identified as Blake B. Jenkins, N6YSA. Hollingsworth said the situation was brought to the attention of the licensee, Bruce Walktell of Carson City, Nevada, but nothing was done.

Hollingsworth said Jenkins actions and omissions while control operator under separate FCC review along with those of the secondary control op, Steven R. Rossy, KA6LNH. Despite the serious allegations Hollingsworth said he hopes the situation can be resolved favorably.

"During the shut down, the licensee will have the opportunity to come in and say what he is going to do about this problem and provide some assurance, at least I hope he will, that it is going to be straightened out. I would like to hear from the parties involved to see what the explanations are and what can be done about it." Hollingsworth said.

In related actions the FCC set aside the recent license grants or upgrades of James C. Walker, KF6VAA, Gordon B. Reese, III, KF6QKA, Micheal J. Nichols, KF6UAS, and Eric B. Schuler KF6BMG, former KF6UJU pending further investigation.

The FCC has permitted Reese who just upgraded to Tech Plus to retain his Technician privileges while its investigation continues. The FCC also issued warns to two other individuals in

the case.

Late word is an unconfirmed report that the owner of the site where the K7IJ repeater was located has pulled the plug on the system and is denying the system owner and his control operators any further access to the site. This appears to be confirmed by the folks at Worldradio Magazine who have been monitoring the situation. They say that the Grizzly Peak two meter and 70 centimeter systems left the air sometime on Tuesday afternoon March the 2nd. They have not been heard from since.

## REPEATER OWNERS SUPPORT FCC

Meanwhile, it appears as if repeater owners around the nation generally support the FCC crackdown on the Grizzly Peak repeater and actually want more enforcement of this type.

Commentary on the Repeater Owners remailer ran at least 10 to 1 in favor of the enforcement action taken against the operators Grizzly Peak machine. Almost every comment was in favor of keeping all illegal activities off of repeaters, noting that any action is justified if it insure totally legal operation.

What about the threat of legal action from wayward users. We are talking about those users who have threatened civil rights suits against system owner tried to curb illegal activities. That worry also now seems gone. At least it is for one repeater owner who tells Newslite that from now on when he or his control operators hear profanity or someone they believe to be a bootlegger, they plan to remove that operators signal from the air.

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AMATEUR RADIO NEWSLINE  
CREDIT TO FCC, ARRL, WORLD RADIO

**Can you rearrange this phrase to solve the HAM's ANAGRAM?**

**HERE COME DOTS**

THE ANSWER WILL BE FOUND ELSEWHERE IN THIS ISSUE.

# AREA HAMFEST CALENDAR

Note: Listings are updated as information becomes available.  
Courtesy of Lonnie Allen NØTBO

**April 2-3, 1999** Mooreland, OK  
Tri-State AR Group, Tulsa, OK  
Green Country Hamfest Association  
Duane Henderson, KC5NID  
RR 1, Box 171, Mooreland, OK 73852  
580-994-2223  
E-mail: kc5nid@pdi.net  
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**April 4, 1999** Crane, Missouri 65633  
12:30 P. M. to 4:00 P. M.  
Location: Stone County Senior Citizens  
on Main Street Talk-in freq: 145.330 -  
Tables \$5.00 - first come first serve basis.  
E-mail n0tbo@gte.net  
\*\*\*

**April 17, 1999** Joplin, Missouri  
The Joplin ARC - HAMFEST '99  
John Q. Hammons Trade Center, next to  
the Holiday Inn, 3615 Range Line, Joplin  
(Exit 8B from I-44, right at 1st light, go  
past Sam's Club to Holiday Inn, next  
building north) Grand prize drawings  
at 2pm, plus hourly and XYL drawings  
(must be present for the hourly and XYL  
drawings, need not be present for the  
grand prize drawings) Open to the  
public at 8am. Talk-in 147.210+. Vendor  
setup Friday 6pm-10pm, or 6am-8am Sat.  
ARRL VEC exams, register at 9:30am,  
walk-in's okay, testing 10:00am SHARP!  
Tickets \$5 each, under 12 FREE. Private  
vendor tables \$10, Commercial vendor  
tables (includes 1 free ticket) \$20.  
Contact jjhannes@janics.com. for tickets  
Voice answering machine 417-782-9087.  
Web-site <http://www.joplin-arc.org> Joplin  
Amateur Radio Club, P.O. Box 2983,  
Joplin, MO 64803-2983 Thanks, and see  
you there!  
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**April 24, 1999** BENTONVILLE, AR  
Hamfest '99, 8:00 am. to 1:00 pm.  
Army National Guard Building.  
801 S.W. A Street, Bentonville AR.  
Food and drinks will be served.  
Tables \$5.00, call Betty N0XWQ at  
417-435-2332 after 5:30pm.  
Mail checks payable to BCRO,  
P.O. Box 883,  
Pea Ridge, AR 72751.  
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**April 23-24, 1999** Little Rock, Arkansas

ARRL Arkansas Section Convention  
Friday April 23 (4:00pm-9:00pm)  
Saturday April 24 (8:00am-4:00pm)  
A mall sized hamfest at the Little Rock  
Expo Center (100,000+ sq ft)  
sponsored by 10 Central Ark clubs  
Activities: CW Shootout at High Noon,  
Antique Radio show, Fox Hunt..  
TV Communication Vans, Several county  
OES vehicles, satellite/hf working  
stations, Radio controlled airplane and car  
displays, ADXA meeting, Earthquake  
Forum, NWS Storm Spotter's course.  
Over 80 flea market and 40 new equip.  
dealers. Admission \$7 (covers both days).  
Check great prizes soon on website.  
For more info call Jim Blackmon, K5VZ  
1008 Pine St., Arkadelphia, AR 71923  
Phone 870-246-7833  
email: lrhamfest@usa.net  
[www.aristotle.net/~ares/hamfest.html](http://www.aristotle.net/~ares/hamfest.html)  
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**June 12, 1999** Macon, MO  
Macon County ARC, Macon, MO  
Dale Bagley, K0KY  
PO Box 13, Macon, MO 63552  
Phone 660-385-3629  
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**July 10, 1999** Kansas City, MO  
Midwest Division Convention,  
Kansas City, MO  
PHD ARA Bob Roske, WA0CLR  
PO Box 28954, Kansas City, MO 64118  
Phone 816-436-0069  
email: wa0clr@worldnet.att.net  
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**July 18, 1999** Washington, MO  
Zero Beaters ARC  
Dave Neal, N0PNG  
1917 Powderhorn Pass,  
Wildwood, MO 63011-1717  
314-532-2477 (days)  
or 314-458-3254 (eves)  
email: Dave\_Neal@msn.com  
Web-site <http://zbarc.usmo.com/>  
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**August 22, 1999** Salina, KANSAS  
1999 Kansas State Convention  
8 am. to 4 pm.  
Bicentennial Center in Salina  
Ron WA0PSF - Hamfest Chairman  
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## Buy/Sell Trade

**For Sale - Repeater, 2 Meter, Aerotron  
100 Watt, w/RC1000 Controller**  
Make offer.  
John Miller, KBØTKL  
(417) 624-4903, email jbm0@janics.com.  
4/99

**For Sale - Numerous Items - FT -107M**  
Complete set, with matching tuner (not  
automatic), external vfo, Transverter with  
2m module, speaker. **Kenwood 2m FM  
rig**, early 80's model, **MFJ Versa Tuner  
2**, also **Keyer** for hf gear.  
\$800 or best offer  
Brandon Farmer, KCØAJH  
(417) 627-0730 or 626-0382  
2/99

**For Sale - MFJ 6m FM-SSB Transceiver**  
\$175  
Ralph Orahod, KBØZHC (417) 358-7540  
02/99

**Wanted to Buy - Laptop Computer**  
486/66 or better, will consider trade for  
radio gear. Desire that the laptop have a  
modem, CDROM, and 16MB RAM.  
Brandon Farmer, KCØAJH  
(417) 627-0730 or 626-0382  
2/99

**Wanted - Communications Receivers  
and Transmitters** (Esp. Hallicrafters)  
Military Gear, AM Transmitters,  
Components and Junk.  
Lloyd D. Williams, KAØZCX  
1/99

**For Sale - Realistic 202, 2m FM  
Handheld** w/battery and charger  
\$60.  
Frank Guodace, NØLEG (417) 781-7933  
1/99

**For Sale - ICOM 290-A 2m All Mode  
Transceiver** fine shape  
\$275 OBO.  
Ralph Orahod, KBØZHC (417) 358-7540  
11/98

**For Sale - Heath HW-24T Handheld  
VHF/UHF**, Needs charger.  
Ask \$200 Eric Gilbert (417) 623-2584  
10/98

**For Sale - 2 CushCraft DX-120 2m  
collinear beams.** Each array 20 elements.  
Total 40 elements, with phasing harness.  
Ask \$100  
Jim Scott, WBØIYC (417) 781-2211  
10/98

Anagram answer: The Morse Code

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**CALENDAR ON THIS PAGE**

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**ALSO UNUSED JUNK TO SAVE FOR  
FUTURE ISSUES**



## New Meeting Times, Testing, Events, other Club Information

**T**he Joplin Amateur Radio Club, Inc., a Missouri *not-for-profit* organization, meets on the second and fourth Tuesdays of each month at the Joplin Municipal Building, on the lower level, in the Civil Defense dining room at 7:30 PM. The facility is accessible to the handicapped.

The club supports and promotes annual operating events, assists area agencies with communications when requested, and offers training classes for advancement in amateur radio. It also sponsors the JARC HamFest each year in April, and maintains a wide area coverage OPEN 2m repeater on 147.21 MHz.

Club members often meet weekday mornings in Joplin for coffee at the Target Store (3151 East 7th St.)

around 8:30 a.m. Members also meet for breakfast on Saturday morning around 8:30 AM in the restaurant at the Ramada Inn (3320 RangeLine Road) in Joplin.

### **1999 CLUB OFFICERS:**

President: Ray	KBØSTN
Vice-Pres. Jackson	KBØWFE
Treasurer, Jim	NØZSQ
Secretary, Betty	KBØTKX

### **Amateur Radio VE Testing**

License testing by volunteer examiners takes place on the 3rd Thursday of each month (except July & August) at St. Paul's Methodist Church located at 2423 West 26th St. in Joplin. Sign up at 6:30 PM, testing begins promptly at 7 PM.

### **ABOUT THE NEWSLETTER**

This club newsletter provides an open forum for the Four-State area amateur radio community, and *your* comments and contributions are always invited. Items for publication, including classified ads and amateur radio related articles, may be sent to the **JARC Printed Circuit**, P.O. Box 2983, Joplin, MO 64803-2983, or send email to: **jim-scott@janics.com**

Deadline for submissions is the 20th of the month preceding the month of publication. Non-Commercial Classified ads are free and will be run on a space available basis whenever requested. Submissions may be typed, handwritten, ASCII text files attached with email, or on disks formatted for IBM. *All items* are subject to editing for spelling, content, and space limitations as required.

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Joplin Amateur Radio Club, Inc.  
P.O. Box 2983  
Joplin, Missouri 64803-2983