

# PRINTED CIRCUIT

January 1999

Newsletter of the Joplin Amateur Radio Club

Vol. 9 Issue No. 1

## CROSSBAND QSO CORDLESS PHONE TO SIX METER

BY JOHN TUDENHAM WØJRP

**Y**es it actually happened. I was talking to "Frank NØIGZ on the cordless phone when suddenly I heard single sideband QRM on the phone from my neighbor KCØAUY. He was talking to a ham in Girard, KS who wanted a signal report on six. Of course the sideband is unreadable on the phone, but he still QRMs our conversation. Larry KCØAUY next tried calling Frank and myself on the phone to get us on the air but got the busy signal. He then turned on his scanner and heard Frank and I loud and clear on the cordless phone, and then he tried to break in by transmitting on six meters. I could not understand the side band transmission but soon realized he was trying to tell us something. I kept asking for a repeat but the sideband signal without a beat osc was almost completely unreadable. Frank then tuned his receiver to 50.125 MHz and heard Larry say to get on six and give the ham in Girard a radio check.

Some amateurs may wonder if a cordless phone QSO is legal. There was an article in QST a while back about a ham using a cordless phone for a repeater. He used it to transmit from his yard to control his two meter radio in the house (not using phone lines). This is legal operation as long as an unlicensed person isn't controlling your transceiver.

A lot of cordless phones can be used as intercom systems without going through the phone lines.

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## FCC ACTS IN ALLEGED EXAM LICENSE FRAUD CASES

**T**he FCC has acted in several Amateur Radio cases where it appears that individuals attempted to obtain an Amateur Radio license or upgrade by fraud or misrepresentation.

On December 14, the FCC downgraded two amateur licensees and canceled the ticket of a third in Michigan. Busted from Advanced to Tech Plus were Lawrence A. Repp Jr., N8HFN, and Alan E. Quirie, KA8ZRR. The FCC pulled the Tech Plus ticket of Steven A. Penn, formerly KC8HUM. The FCC had not updated its database as of December 17.

The Commission said the three filed amateur applications claiming to have taken Amateur examinations at Oak Park, Michigan, on June 3, 1997, at an ARRL VEC session. The FCC says its evidence shows that the three did not sit for the exams. It says their names "were added and signatures forged, sometime after the tests were administered, by one of the four examiners." That examiner--the father of one of the exam candidates involved--reportedly forwarded the session package on behalf of the VE team to the ARRL VEC for FCC filing.

The FCC said that three of the examiners knew nothing of the scheme. The other three VEs brought the situation to the attention of the ARRL VEC and the FCC. The FCC said it would act in the case of the fourth examiner by month's end. The

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## LEAGUE FILES "RESTRUCTURING" COMMENTS WITH FCC

**T**he ARRL has filed formal comments in response to the FCC's proposed streamlining of the Amateur Radio rules. The League delivered its comments to the FCC December 1, the final day for comments in the FCC's Notice of Proposed Rulemaking in WT Docket 98-143.

The League's filing promotes the ARRL Board of Directors' restructuring positions, adopted last July and fine-tuned at a special meeting in October. It also takes the FCC to task on a few points. The ARRL said the FCC's NPRM failed to contain "a comprehensive license restructuring proposal or even an overall review of license restructuring" and generally "missed the mark."

The League called on the FCC to adopt the ARRL Board's restructuring plans as the centerpiece of its streamlining efforts. Among other things, the League plan calls for eliminating the Novice and Tech Plus licenses to reduce the number of license classes from six to four. The ARRL plan automatically upgrades current Novice and Tech Plus licensees to General. The General license would become the entry-level ticket to HF. Existing Novice and Tech Plus HF CW bands would be "refarmed" to provide additional phone spectrum for General, Advanced, and Extra class licensees.

The FCC also proposed a four-tier license structure, eliminating the Novice ticket

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**QRP for the Radio Amateur  
Club Happenings  
Hamfest Calendar/Classifieds**

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# SOLAR UPDATE

Sun watcher Tad Cook, K7VVV, Seattle, Washington, reports: Solar activity was down this week--no surprise, since on one day the previous week the solar flux reached a new high for the current cycle. But the drop in solar was quicker than expected. Our last bulletin projected flux values above 150 until January 12, but January 4-7 flux values were 146.9, 136.5, 125.8, and 115.1. This represents a drop in flux values of nearly 70 points in a little over a week.

For this weekend, the projected flux values for January 8-10 are 115, 120 and 120, with a planetary A index of 12, 12 and 8. At least while solar activity has been dropping, there haven't been any disturbed days from solar flares or coronal holes.

Beyond this weekend look for a rising solar flux, going above 130 by January 16 and to 150 around January 20. Conditions are currently expected to peak around January 24 or 25 with solar flux under 155. This will be 27 days, or one complete rotation of the sun after the recent high in solar flux for this cycle.

This week had some interesting VHF news. N5JHV in New Mexico worked several VK2 stations on 6 meters on January 2 after a long opening to the west coast of Mexico. On the same day CO2OJ worked a number of US stations on the same band.

Sunspot numbers for December 24 through 30 were 93, 84, 100, 156, 177, 136, and 186, with a mean of 133.1. The 10.7-cm flux was 139.4, 144.4, 144.9, 166.8, 184.4, 182.8, and 179, with a mean of 163.1. The estimated planetary A indices were 3, 11, 16, 3, 5, 16 and 6, with a mean of 8.6.

Sunspot numbers for December 31 through January 6 were 135, 121, 107, 113, 94, 87 and 70 with a mean of 103.9. The 10.7-cm flux was 174.6, 167.2, 160.1, 154.5, 146.9, 136.5 and 125.8, with a

# QRP FOR THE RADIO AMATEUR

BY JOHN TUDENHAM WØJRP

## DON'T LET YOUR ANTENNA TUNER FOOL YOU

Lately all the ham magazines QST, CQ, World Radio and others, have been full of articles of HF QRP rigs and operation. I have been asked the question "Why run low power like 5 watts or less, can anyone hear you"? The answer is yes. Running QRP improves your operating skills, and

mean of 152.2. The estimated planetary A indices were 3, 5, 7, 4, 7, 8 and 9, with a mean of 6.1.

Here are some path projections to Japan for the JA International DX CW Contest:

>From Seattle: Check 80 meters around 0600-1800 UTC, with best conditions around 0830-1000 UTC. 40 meters should be good from 0600-1900 UTC. Check 20 meters from 2100-0130 UTC, and 15 meters from 2230-0030 UTC. The best bet for 10 meters is 2300-2330 UTC.

>From Los Angeles: Check 80 meters around 0700-1600 UTC, 40 meters at 0530-1700, 20 meters at 2100-0300 UTC, 15 meters from 2200-0130 UTC, and 10 meters around 2230-0030 UTC.

>From the mid-US: 80 meters looks good from 0730-1430 UTC, 40 meters around 0630-1530 UTC, 20 meters from 2100-0030 UTC, and 10 and 15 meters around 2230 UTC.

>From Texas: 80 meters should open 0730-1400 UTC, 40 meters around 0700-1500 UTC, 20 meters at 2100-0100 UTC, and 15 meters around 2200-2330 UTC.

>From Ohio: check 80 meters at 0700-1400 UTC, 40 meters at 0630-1500 UTC, 20 meters around 1530-1730 UTC and 2100-2300 UTC, and 15 meters around 2200 UTC.

>From Boston: 80 meters should be open 0730-1300 UTC, 40 meters at 2030-2300 UTC and 0630-1430 UTC, and 20 meters around 1530-1700 UTC and 2100-2200 UTC. ¶

PUBLISHED WITH PERMISSION FROM THE AMERICAN RADIO RELAY LEAGUE. - THE ARRL LETTER, VOL. 18, NO. 2, JANUARY 8, 1999.

also makes you want to improve your antenna performance. There are so many 100 watt commercial transceivers on the market nowadays, that this is the *normal* power run on the HF bands. Many hams add an amp putting out from 300-1500 watts when they are not satisfied with the results they get with their 100 watt transmitter. Recent articles in various ham magazines have said many hams are fooling themselves, because using an antenna tuner they show their SWR is 1:1 and power output is 100 watts. The truth of the matter is that if they are using coax fed antennas, the losses in the coax may be so high they are not even putting half the power into the antenna. "Wait a minute" some hams may say, "there is very little loss even in small coax at HF frequencies". This is true if your antenna is *matched*, but some so called multi-band antennas are just a compromise, and while their performance can be fair to good at most frequencies it is not perfect. Remember the antenna tuner does not lower the SWR, it only *matches* the output of your transmitter so it sees something close to 52 Ohms.

Many articles have suggested using 450 Ohm ladder line instead of coax for a multi-band antenna with a tuner, this antenna will radiate well and put out full power. A half wave antenna cut for frequency will do an excellent job when fed with coax, but then the height of the antenna will determine it's performance. For good performance, a half wave antenna should be at least a 1/4 wavelength above ground. On 80 and 160 meters this may not always be practical, but get it up as high as possible. A vertical antenna will give you a low angle of radiation for working foreign dx, but may pick up more receive noise. Also most verticals require a good ground system with radials, while half wave dipoles or beams require no ground systems, so they are usually easier to match.

The next time you hear a good strong 5

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and melding existing Technician and Tech Plus licensees into a common database while allowing current Novices and Tech Pluses to retain their current operating privileges. The ARRL said the FCC was on "the right track" in proposing to eliminate the Novice ticket. But the League said its "instant upgrade" plan for Novice and Tech Plus operators is a better approach because it permits "refarming" the underutilized Novice HF subbands. The League called refarming "critical to any comprehensive license restructuring proposal."

The FCC's NPRM sought comments on the issue of Morse code testing and requirements but offered no specific proposals. The ARRL called for a reduction in the number of Morse code examination tiers from three to two--5 and 12 WPM--and changes in the written examinations to make them more relevant and with greater emphasis on current operating practices and newer digital technologies. The League also recommended that the number of written exam questions "increase incrementally" for all license classes above Technician.

The League said that Morse code should not be overemphasized in the licensing process, but should be continued as a licensing requirement above the entry level. It has proposed that General class applicants pass a 5 WPM code test, while Advanced and Extra applicants pass the 12 WPM code test. Subsequent to release of its original restructuring plan, the ARRL Board also decided to ask the FCC to permit Technician operators to use Morse code on the General class HF CW segments without passing a specific code examination.

The ARRL said acknowledged abuses of the CW disability exemption process were an enforcement, not a testing, issue. For those claiming a disability waiver for the higher-speed CW test, the League urged testing accommodations as a preferable alternative. The League also urged an end to multiple-choice CW exams and rules specifying that a passing grade for a Morse examination be either 70 percent correct answers to 10 fill-in questions or

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## CLUB HAPPENINGS

### SPAGHETTI DINNER PLANNED

The JARC is having a **free** (that's right, we're supplying everything) spaghetti party, at 6:30pm February 23rd. This event will preempt the regular second monthly meeting, and would be an excellent time to invite anyone who might be interested in amateur radio, or wants to be introduced to the club. There will be games, a door prize and lots of spaghetti to eat. Plan to come.

If you have any questions, call Betty Miller KBØTKX 624-4903, Mary Ann Phillips 624-3353, or Cherylann Dannelley 781-6739.

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Commission also is looking into possible enforcement action against another ham whose name was added to the list after the test session but whose application never was submitted to the FCC.

The FCC also dismissed two amateur applications in Puerto Rico after the applicants failed to reply to FCC inquiries. In the case of Jose R. Velez-Rivera, an FCC official said it appears that an imposter tried to change another amateur's call sign, address, and date of birth to his own to get a license without taking an exam. In the second case, the FCC dismissed the renewal and General class upgrade application of Hector A. Santiago, WP4DCB. An FCC official said it appears Santiago tried to renew as a General when he only had a Novice ticket.

Velez-Rivera and Santiago were notified by the FCC October 23. The FCC updated its database this month to reflect the dismissals. ¶

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ARRL BULLETIN 105, DECEMBER 18, 1998.

## THE WORLD OF VHF/UHF

BY JOHN TUDENHAM WØJRP

### METEORS HIT THE SKY

The big VHF news this month is the Lenoids Meteor shower which occurred around Nov 16-17th. Actually the shower peaked somewhat earlier than predicted and was not quite the major storm that damaged satellites etc. According to the old timers, it did produce the best VHF Meteor shower openings since 1966. Jay KØETC, in Joplin, made 26 contacts on two meter sideband as far away as MT and Canada. I made 11 contacts as far away as MA and ON Canada, and three new grids. Other area hams got in on the action, 144.2 MHz sounded like 20 meters at times, so it was wise to spread out up and down from that frequency. Some bursts were as long as three minutes. Six meters was also doing well if not better than 2 , but most of the stations were about the same distance we work regularly on E skip. Larry KCØAUY did pick up two new states on six, IL and IN.

The maximum range for meteor scatter appears to be about 1400 miles. NØLL in Smith Center KS, grid EM09, worked VT for his state #47 on two meters. This contact was close to 1400 miles. A lot of hams take off from work to operate the various meteor showers throughout the year. MS as they call it, is just another propagation mode that makes dxing VHF exciting.

### SIX METER FM NET

The weekly local six meter FM net meets Thursday nights at 9PM on 52.525 MHz. The net controls are KBØMSD vertical , and WTØY horizontal , so whatever your polarization you should be able to check in. Steve WTØY reports since this net started a few months back there have been 79 different stations check in. Many hams have rigs that only transmit 5 kHz off frequency at 52.520 MHz. Don't worry about it you can still be heard. ¶

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one minute out of five of solid copy.

The League also praised the "new dawn" in amateur enforcement undertaken within the Compliance and Information Bureau by Riley Hollingsworth, K4ZDH. The ARRL suggested that it would be "reasonable to withhold any further [rulemaking] action on amateur enforcement" for now and let the CIB continue its work.

The ARRL's comments stressed the value of increasing participation in the hobby and making it available to more people. "By increased participation, Amateur Radio can provide even more service to the United States than it does currently, with a simpler licensing structure," the League asserted.

A complete copy of the ARRL's comments in WT Docket 98-143 is available on ARRLWeb at <http://www.arrl.org/news/restructuring/> (see "ARRL's Comments to the FCC on WT Docket 98-143"). Reply comments on the FCC's rulemaking proposals are due January 15, 1999. The FCC is not expected to take action on restructuring at least until sometime next spring. ¶

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By the way, if you have ham QRM on your cordless, buy a 900 MHz cordless phone and six meters will not be heard. ¶

JOHN TUDENHAM IS A REGULAR CONTRIBUTOR TO THE JARC PRINTED CIRCUIT. HE IS A VERY ACTIVE HAM WHO PROVIDES THE AMATEUR COMMUNITY WITH A WINDOW INTO HIS FAVORITE HOBBY THROUGH TWO REGULAR FEATURES WHICH HE AUTHORS: THE WORLD OF VHF/UHF, AND QRP FOR THE RADIO AMATEUR.

ON OCCASION HE OUT DOES HIMSELF WITH ARTICLES THAT ARE UNUSUAL, INFORMATIVE, AND HUMOROUS! ED.

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watt QRP signal, this guy might be putting almost as much RF in the antenna as your 100 watt rig which shows full output and low SWR. For more information on this subject, I suggest you read several recent articles in various ham magazines.

# HAMFEST CALENDAR

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

**January 16, 1999** St. Joseph, MO  
Missouri Valley ARC & Ray-Clay ARC  
Contact John Winkler, WBØVRA  
Route 1, Box 53A, Gower, MO 64454  
816-424-6484 E-mail: WB0W@IBM.Net  
\*\*\*

**February 6, 1999** West Memphis, AR  
Dixie AR Group  
Contact Kellye Farris, KB5RCE  
432 Ross Ave., West Memphis, AR 72301  
870-732-8724  
E-mail: dixiefest@media-two.com  
\*\*\*

**February 6, 1999** Mound City, Kansas  
Mine Creek ARC  
Contact Bill VanKirk, WØPT  
P.O. Box 83, Mound City, KS 66056  
913-795-2080 E-mail: bvkirk@kanza.net  
\*\*\*

**February 7, 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  
\*\*\*

**February 20, 1999** Russellville, AR  
Arkansas River Valley AR Foundation  
Contact Margaret Alexander, KC5MCS  
1511 North Jackson,  
Russellville, AR 72801 501-968-7270  
E-mail: ealexand@cswnet.com  
\*\*\*

**March 13, 1999** Kansas City, MO  
Ararat AR Shrine Club  
Steve Dowdy, WJØI  
12411 Olive St., Kansas City, MO 64146  
816-941-3392 E-mail: sdowdy@qni.com  
\*\*\*

**March 13, 1999** Fort Smith, Arkansas  
Hamfest - Fort Smith Civic Center  
For information: Kelsey Mikel - KK5KU  
8604 Urban View Dr.  
Fort Smith, AR. 72903  
501-651-7003 E-mail: kk5ku@amsat.org  
\*\*\*

**March 14, 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 -

# Buy/Sell Trade

**For Sale - ICOM 290-A 2m All Mode Transceiver** fine shape  
\$275 OBO.

Ralph Orahood 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. Includes phasing harness.

Ask \$100

Jim Scott WBØIYC (417) 781-2211

10/98

Tables \$5.00 - first come first serve basis.  
E-mail n0tbo@gte.net

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**March 14, 1999** Tulsa, OK  
Oklahoma State Convention - Tulsa, OK  
Green Country Hamfest Association  
Merlin Griffin, WB5OSM  
P.O. Box 470132, Tulsa, OK 74147-0132  
Phone 918-622-2277

E-mail: info@GreenCountryHamfest.org

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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

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**April 17, 1999** Joplin, Missouri  
The Joplin ARC presents HAMFEST '99  
John Q. Hammons Trade Center,  
3615 Range Line, Exit 8B from I-44  
8am-3pm, Tickets \$5, tables \$10,  
commercial \$20. VEC exams 9:30am  
Hourly drawings, Grand Prize at 2pm.  
Talk-in frequency 147.210+.

For tickets or tables, contact Ray Brown,  
KB0STN, 417-781-4967

E-mail raybrown@ipa.net

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**April 23-24 1999** Little Rock, AR  
Little Rock Hamfest

# JANUARY 1999

## Joplin Amateur Radio Club Meetings and Events

<i>Sun</i>	<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thu</i>	<i>Fri</i>	<i>Sat</i>
					<b>1</b>	<b>2</b>  09:00 BREAKFAST -
<b>3</b>	<b>4</b>  19:30 JARC MON NITE NET 147.21 MHz WØIN REPEATER	<b>5</b>	<b>6</b>  19:30 -20:30 JARC SLOW SCAN NET	<b>7</b>  17:30 THURSDAY NITE OUT -	<b>8</b>	<b>9</b>  09:00 BREAKFAST -
<b>10</b>	<b>11</b>  19:30 JARC MON NITE NET 147.21 MHz WØIN REPEATER	<b>12</b>  19:30 JARC BUSINESS MEETING	<b>13</b>  19:30 -20:30 JARC SLOW SCAN NET	<b>14</b>  17:30 THURSDAY NITE OUT -	<b>15</b>	<b>16</b>  09:00 BREAKFAST -
<b>17</b>	<b>18</b>  19:30 JARC MON NITE NET 147.21 MHz WØIN REPEATER	<b>19</b>	<b>20</b>  19:30 -20:30 JARC SLOW SCAN NET	<b>21</b>  17:30 THURSDAY NITE OUT -	<b>22</b>	<b>23</b>  09:00 BREAKFAST -
<b>24</b>	<b>25</b>  19:30 JARC MON NITE NET 147.21 MHz WØIN REPEATER	<b>26</b>  19:30 JARC PROGRAM MEETING	<b>27</b>  19:30 -20:30 JARC SLOW SCAN NET	<b>28</b>  17:30 THURSDAY NITE OUT -	<b>29</b>	<b>30</b>  09:00 BREAKFAST -
<b>31</b>			<div style="border: 2px solid black; padding: 10px; font-family: cursive;"> <p><b>Don't Forget!</b> <b>Meetings are at City Hall.</b></p> </div>			

## 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 Smitty's (18th and Maiden Lane) 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: jimscott@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. '73 and Thanks. **Jim WBØIYC ¶**

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