

# PRINTED CIRCUIT

JAN/FEB 2010

Newsletter of the Joplin Amateur Radio Club

Vol. 20 Issue No. 1

## JARC President Has plans for 2010

First, I want to thank Andy, KAØTUD for his service as president for this club. He, has always supported the club, and this is not the first time he has been president.

Now that the gavel is passed, it is my turn to help the club along once again. Perhaps after one year of my efforts, others will feel empowered to take the helm and add their skills to the mix. As for me, I would like to see more hams involved with the club. To help accomplish this goal, I propose:

- 1) to build the club membership. Of course, we need active participation, which leads to the next items.
- 2) we reinstate a NET on the 147.21 repeater. The format can be anything, but it needs to happen each week. Buy/Sell works well.
- 3) we engage in more activities. The club has always had people show up for activities such as DF hunts. What a better way to get new hams engaged!
- 4) we start licensing classes for new hams.
- 5) we score well on Field Day. Nixa beat us? You have got to be kidding!

I am extremely positive about the club and its membership; their dedication, capability, participation, and vitality, all of which will affect the club's future. When the membership grows and more people get involved, it will demonstrate to others that the club has many desirable characteristics. Myself, I can't imagine joining any group that would make me feel bad or uncomfortable!

As president, it is important to recognize the positive virtues of an organization and build on them. Knowing that each person

*(Continued on page 3)*

## It's REAL CHAOS

**O**n Tuesday, January 12 at 4:53 PM Haiti time (2153 UTC), a magnitude 7.0 earthquake hit 10 miles (15 kilometers) west of Port-au-Prince, the island nation's capital. Communications in and out of Haiti have been disrupted. The ARRL encourages US amateurs to be aware of the emergency operations on the following frequencies: 7.045 and 3.720 MHz (IARU Region 2 nets), 14.265, 7.265 and 3.977 MHz (SATERN nets), and 14.300 MHz (Intercontinental Assistance and Traffic Net); the International Radio Emergency Support Coalition (IRESC) is also active on EchoLink node 278173. There was no firm estimate on how many people were killed by Tuesday's quake. Haitian President Rene Preval said the toll could be in the thousands: "Let's say that it's too early to give a number."

On Wednesday afternoon, Fred Moore, W3ZU, assisted Jean-Robert Gaillard, HH2JR, with a phone patch to his friend Ariel in Miami. "It's bad, it literally is bad," Gaillard told Ariel. "We don't know how many people are dead. We do not know what to expect. It's chaos, I'm telling you -- it's real chaos. We are really in a disaster area. It's really a war zone. Many, many buildings in the downtown area are stripped from the ground with many people buried underneath them - you name it, it's bad." Gaillard, who lives in Port-au-Prince, was using his neighbor's generator to make the contact. "It's really chaotic. I've never been in a war, but this is what a war zone would be like. Dead bodies all over the place, dead bodies buried. All I can tell you is that I'm okay, my house is okay. We've had 30 aftershocks, the main one yesterday. We are expecting some more shocks, so I'm a bit nervous to be inside the house."

"The scope of the disaster clearly shows that the  
*(Continued on page 2)*

## JARC - WØIN Antenna Site

Needless to say, the last year has been interesting for the club. The new antenna site for the 147.21+ repeater, is to say the least, surprisingly good. When it works, it works well! However, we have been plagued with a myriad of little problems with the machine itself.

Wayne, WBØAAN, the head of the technical committee, has managed to get a handle on most of them. It appears that there are only a couple of parts left that could be causing the issues with the machine. One is the controller, almost everything else has been swapped out!

The club has allocated money for the technical committee to obtain a power supply, and the funds are available for a replacement controller if they decide they need one. The remote location makes for difficult access when the WX is slick, or real wet, and with the extreme WX we have been having, the repeater has shown that it still has some issues, although much better than it has in the past.

If you are not aware, the antenna site is located 1120 ft ASL, and the antenna is mounted on the north west side of a 400 ft. tower at 390 ft. The tower is located about two miles east of MSSU, on Newman Road. The background noise level is very low, since there are no other transmitters of any size in the area. The feedline going up the tower is 1-5/8" Heliac with a total loss of about 1 dB.

No wonder, folks in Springfield, Neosho, and Nevada can hear the machine quite well, even though the transmitter is running only 25 Watts. ¶

**inside...**

**Locating Noise Sources**

**Upcoming Events / Hamfest Calendar/Classifieds**

**Page 2**

**Page 3**

# LOCATING NOISE SOURCES

**R**ecently I had a discussion with a fellow ham regarding how listening to the output of a repeater is different from listening to the input when trying to find the source of noise. This article is intended to explain to the new hams a little about finding noise sources.

Occasionally interference comes out of a repeater. The interference or noise can be intentional or unintentional. We all know what intentional jamming is, but the unintentional interference can be even harder to find.

Most of the repeaters around here are put on tall buildings or tall antenna towers. These places are also desirable to other uses of transmitters, so the good sites are usually crowded. Thus there is a good chance that there will be a lot of noise with the variety of commercial radio and television emissions nearby. With all of those transmitters in close proximity, their imperfections tend to be more of a

*(Continued from page 1)*  
 response to this is going to be a long term effort," said ARRL Media and Public Relations Manager Allen Pitts, WIAGP. "The ARRL has been in contact with communications leaders of the American Red Cross and Salvation Army, as well as other key Amateur Radio operators throughout the region. As teams from the hundreds of responding agencies worldwide are formed for deployment, many will have Amateur Radio components. ARRL is committed to providing communications aid to our served agencies and working with the international community in this time of crisis. At this time there are no known requests from agencies for amateurs to travel to Haiti, but this can change. If it develops that there are ARES assignments for a deployment in Haiti, these will be vetted and processed through each Section's Section Emergency Coordinators." Read.

FROM THE ARRL LETTER  
 PUBLISHED BY THE AMERICAN RADIO RELAY LEAGUE  
 JANUARY 14, 2010

problem. All transmitters emit imperfect signals. Usually these imperfections are so weak that they can't be received for more than a few hundred yards, but if another receiving antenna is just a few yards away, it gets heard, and in some cases, repeated.

A repeater's receiver can hear a weak signal close to it or a strong signal far away, but they **both** will sound the same coming out of the repeater. The S-meter reading of your receiver listening to a repeater *output* will always read the same, because you are listening to the repeater transmitter. If a very, very weak interfering signal is very close to the repeater's antenna, those of us on the ground will have trouble hearing it. But, if the signal is off in the distance, like Tulsa, then it will be strong in Tulsa and very very weak here in Joplin. Most of us here, probably wouldn't be able to hear it except through the repeater, but someone in Tulsa, where the signal is strong, would be able to hear it "direct" if they were to listen to the repeater input frequency, 600 kcs from the repeater output. In our case, the input frequency for the 147.210 repeater is 147.810, 600 kHz higher since this is a standard (positive) offset.

So instead of just complaining when you hear noise on the repeater, switch to the input frequency and listen to see if you can hear the source of the noise. Make a note describing the signal, your location and report either "yes" or "no" that it was heard on the input. The technical committee appreciates hearing any reports of reception of noise or distant stations.

On my rig, I have the repeater input frequency, 147.810 stored in a memory next to the output frequency and have the skip function ON, so all that I have to do is one click back and forth to listen to the input.¶

## ARTICLES NEEDED FOR PUBLICATION

Have you ever wanted to be published? Every month we print articles that are submitted with the hope that they pique your interest. We encourage you to share your experiences with others in the club so that we can foster the hobby in 2010.

Try it! You might surprise yourself! js

# 2 Meter Repeater Offsets Explained

It is interesting to see why the 600 kHz offset on 2 meters was established. It came about because receiver selectivity at 144 MHz was poor, or very expensive if you needed it. The technology was not advanced enough at the time when the 2 meter band became popular. Original band plans called for 2 meter FM operation at 30 kHz steps in the segment from 146 to 148 MHz. Repeater offsets were set at 600 kHz; negative in the 146 Mhz segment, and positive in the 147 Mhz segment. It followed that the simplex (direct) frequencies would be located between the repeater offset frequencies. Standardized on 30 kHz steps, they began at 146.430 through 146.580 MHz, and 147.420 through 147.570 MHz..

This list shows the **original** standard. The early popular pairs are shown in **bold** type.

### 146 MHz Simplex frequencies:

146.43, 146.46, 146.49,  
**146.52**, 146.55, 146.58

### Repeater frequencies are shown as Input/Output pairs:

146.01/146.61	<b>146.04/146.64</b> (#3)
146.07/146.67	146.10/146.70
146.13/146.73	<b>146.16/146.76</b> (#2)
146.19/146.79	146.22/146.82
146.25/146.85	146.28/146.88
146.31/146.91	<b>146.34/146.94</b> (#1)
146.37/146.97	146.40/147.00

**(Note: 147.00 can have both + or - shift)**

147.60/147.00 (std)	147.63/147.03
147.66/147.06	147.69/147.09
147.72/147.12	147.75/147.15
147.78/147.18	147.81/147.21
147.84/147.24	147.87/147.27
147.90/147.30	147.93/147.33
147.96/147.36	147.99/147.39

### 147 MHz Simplex frequencies:

147.42, 147.45, 147.48,  
 147.51, 147.54, 147.57

As the 2 meter band popularity increased and semiconductor devices became available with improved sensitivity and selectivity, the frequencies were split into 15 kHz steps. However, Texas did not follow this rule, and used 20 kHz steps. ¶¶

# ARES Update

Jasper County Missouri ARES® meetings are held the second Thursday of each month at 7PM at the Joplin office of the Ozark Chapter of the American Red Cross at 4th and Jackson St. in Joplin. Parking is in the rear of the building. All licensed amateur radio operators are invited to attend.

Jasper County Missouri ARES® Net is held each Monday night at 8 PM on the 147.210 repeater. Positive offset with no tone. If the repeater is non-operational then the net will be held on the 146.400 simplex frequency.

## OTHER ARES NEWS

February 5th and 6th, Newton County ARES is holding a Technician license class. The class will be from 6 PM to 10 PM on the 5th and 8 AM to 4 PM with the test given after the class. More info. contact LaVerne Wilson by email at lavwilson1941@yahoo.com

Thomas A. Zeller KBØORZ  
Emergency Coordinator Jasper County Missouri ARES®

Be sure to visit the new ARES website at:  
<http://www.jasperares/index.html>

*(Continued from page 1)*

brings with them unique skills often coupled with a willingness to help, the job gives you the ability to act as a catalyst to implement action.

Other organizations taught me how easy issues can get muddled, also I learned that implementing ideas required both pulling and pushing members. I'm not good at it, but that leaves room for improvement! Following through on a project requires careful attention to detail and effort, else the helpers can become a lost resource if they become discouraged. We don't want that, so good help is needed.

I encourage you to volunteer this year, and let's make the JARC even better!

'73 Jim Scott WBØIYC

# HAM EQUIPMENT FLEA MARKET

NOTE: INDIVIDUAL LISTINGS ARE \$1 PER AD, FREE FOR JARC MEMBERS. FS / WTB SPACE IS ALLOCATED BY DATE RECEIVED. COMMERCIAL AD SPACE IS AVAILABLE FOR A NOMINAL CHARGE.

**For Sale - Kenwood TS-60 6 Meter Mobile**  
All mode Transceiver. Fairly rare these days. Asking \$500. Ray Brown, KBØSTN  
email: kb0stn@arrl.net

01/2010



**For Sale - 72 ft. Motorized Crank-Up Tower**  
Mfg. by US Tower Corporation, this model includes tilt over capability. Rated for over 30 ft² wind load to handle large antenna arrays. Weight 1800 lbs. FOB Joplin. \$4000 O.B.O. John Stucka, N3JM 313-383-1743.  
Email: jstucka0@yahoo.com

01/2010

**Want to Buy - 80M AM Transmitter** Prefer Collins, but will consider anything. Contact Harry Petersen, KDØIWU. Pittsburg, KS.

01/2010

**For Sale - Alinco DR570T Dual Band Mobile** 2M/440 10 channels per band. Includes mounting bracket. Nice rig. Asking \$200. Ray Brown, KBØSTN  
Email: kb0stn@arrl.net

01/2010

**For Sale - iCom 551 6m All Mode XCVR**  
Nice little 6 meter rig with several add ons. Passband Tuning Unit, VOX, and FM modules (all are installed). Whopping 10W output to qualify for QRP operation. Includes a cut dipole with enough coax to get you started on the Magic Band. Table top unit, 120VAC / 12VDC In very good shape w/manuals. Asking \$350. Jim Scott 417-781-2211 email wb0iyc@arrl.net

01/2010

**Want to Buy - High Power Dummy Load**  
Must be rated for use up to 1kW. Intermittent service is okay, continuous preferred. Can-Tenna or any brand, if reasonable price. Contact Rob George, WØTTM, 417-673-9420  
email: rob.george@scottelectronic.com

01/2010

# Area HAMFESTS and EVENTS

NOTE: LISTINGS ARE PROVIDED AS THEY BECOME AVAILABLE AND ARE NOT VERIFIED FOR CORRECTNESS. SEE BACK PAGE FOR SUBMISSIONS.

## 30 Jan 2010 - Winterfest 2010

Gateway Convention Center, One Gateway Dr., Collinsville, IL Talk-In: 146.76 (-)  
Sponsor: St. Louis & Suburban Radio Club  
<http://slsrc.org> Contact: Bill Coby, KBØMWG, PO Box 223, St. Louis, MO 63139  
Ph: 314-504-1104 Email: bcoby@sbcglobal.net

## 6 Feb 2010 - Winterfest

Community Bldg., 204 Commercial St. LaCygne, KS; Talk-In: 147.285 (+)  
Sponsor: Mine Creek Amateur Radio Club  
Contact: Ron Cowan, KBØDTI, PO Box 36, LaCygne, KS 66040, Ph: 913-757-3758  
Email: kb0dti@arrl.net

## 12-14 Feb 2010 - Orlando HamCation

Orlando Fairgrounds, 4603 West Colonial Dr., Orlando, FL; Talk-In: 146.760 (-)  
Sponsor: Orlando Amateur Radio Club  
<http://www.hamcation.com>  
Contact: Mort Cohen, WA2ARS  
Email: hamcation@aol.com

## 20 Feb 2010 - LCARC Winterfest

Hoxie Community Center, 500 SW Lawrence St. Hoxie, AR Sponsor: Lawrence Cnty ARC  
[http://w5wra.org/winterfest\\_2010.htm](http://w5wra.org/winterfest_2010.htm)  
Open 8:00 AM-1:00PM, Talk-In: 147.045/645  
Contact: Glendal Floyd, W5WEC, 104 NW Larkspur Lane, Walnut Ridge, AR 72476  
Phone: 870-886-1360  
Email: w5wec@suddenlink.net

## 6 Mar 2010 - West Central Oklahoma ARC

Elk City Community Civic Center, E. Hwy 66 Elk City, OK. Talk-In: 146.76(-)  
Contact: Earl Bottom, N5NEB, PO Box 2023 Elk City, OK 73644, Ph: 580-821-0633  
Email: n5neb@waywireless.com

## 12-13 Mar 2010 - Oklahoma State Convention & Green Country Hamfest

Claremore Expo Center, 400 Veterans Parkway, Claremore, OK  
Sponsor: Green Country Hamfest, Inc., Talk-In: 147.090 + or 444.350 +5  
<http://greencountryhamfest.org>  
Contact: Merlin E. Griffin, WB5OSM, PO Box 470132, Tulsa, OK 74147-0132  
Phone: 918-520-7668  
Email: wb5osm@hotmail.com

# JANUARY 2010

## 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>
					1	2 <small>09:00 BREAKFAST - RYAN'S 7TH &amp; RANGE LINE</small>
3	4	5	6	7	8	9 <small>09:00 BREAKFAST - RYAN'S 7TH &amp; RANGE LINE</small>
10	11	12 <small>19:30 JARC BUSINESS MEETING</small>	13 <small>19:30 JARC WED NITE NET 147.21 MHz WØIN REPEATER NET CONTROL - WBØIYC</small>	14	15	16 <small>09:00 BREAKFAST - RYAN'S 7TH &amp; RANGE LINE</small>
17	18	19	20 <small>19:30 JARC WED NITE NET 147.21 MHz WØIN REPEATER NET CONTROL - WØJRP</small>	21	22	23 <small>09:00 BREAKFAST - RYAN'S 7TH &amp; RANGE LINE</small>
24	25	26 <small>19:30 JARC PROGRAM MEETING</small>	27 <small>19:30 JARC WED NITE NET 147.21 MHz WØIN REPEATER NET CONTROL - KG6ACI</small>	28	29	30 <small>09:00 BREAKFAST - RYAN'S 7TH &amp; RANGE LINE</small>
31			<b>Expose new hams to the club! Meetings at the Red Cross. 4th and Jackson, Joplin. Bring a fellow Ham!</b>			

# FEBRUARY 2010

## 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>	<b>3</b> <small>19:30 JARC WED NITE NET 147.21 MHz WØIN REPEATER NET CONTROL - NØZPD</small>	<b>4</b>	<b>5</b>	<b>6</b> <small>09:00 BREAKFAST - RYAN'S 7TH &amp; RANGE LINE</small>
<b>7</b>	<b>8</b>	<b>9</b> <small>19:30 JARC BUSINESS MEETING</small>	<b>10</b> <small>19:30 JARC WED NITE NET 147.21 MHz WØIN REPEATER NET CONTROL - WBØIYC</small>	<b>11</b>	<b>12</b>	<b>13</b> <small>09:00 BREAKFAST - RYAN'S 7TH &amp; RANGE LINE</small>
<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b> <small>19:30 JARC WED NITE NET 147.21 MHz WØIN REPEATER NET CONTROL - WØJRP</small>	<b>18</b>	<b>19</b>	<b>20</b> <small>09:00 BREAKFAST - RYAN'S 7TH &amp; RANGE LINE</small>
<b>21</b>	<b>22</b>	<b>23</b> <small>19:30 JARC PROGRAM MEETING</small>	<b>24</b> <small>19:30 JARC WED NITE NET 147.21 MHz WØIN REPEATER NET CONTROL - KG6ACI</small>	<b>25</b>	<b>26</b>	<b>27</b> <small>09:00 BREAKFAST - RYAN'S 7TH &amp; RANGE LINE</small>
<b>28</b>				<div style="border: 2px solid black; padding: 5px;"> <p><b>Remember! Meetings are 2nd &amp; 4th Tuesdays at the Red Cross. 4th and Jackson, Joplin. Bring a fellow Ham!</b></p> </div>		

## Meeting Times, Testing, and 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, except December, at the Red Cross building, 4th and Jackson Ave. at 7:30 PM. Enter from the back.

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 August, and maintains a wide area coverage OPEN 2m repeater on 147.21 MHz (+). Membership in the organization is open to all amateur radio operators, and is solicited.

Point your browser to the club website to get the latest information on upcoming events, photos of past events, and links to other ham sites.  
<http://www.joplin-arc.org>

Presently, on Saturday mornings, members gather for breakfast around 9:00 a.m. at Ryan's Restaurant 7th and Range Line Rd. in Joplin. For details contact Ray, KBØSTN on 147.21+, or by email [kb0stn@arrl.net](mailto:kb0stn@arrl.net).

### 2010 CLUB OFFICERS:

President: Jim Scott	WBØIYC
Vice Pres.: Ray Brown	KBØSTN
Treasurer: Jim Johannes	NØZSQ
Secretary: Mark Mitchelson	NØZPD

### VE TESTING SCHEDULE

License testing by volunteer examiners takes place on the 1st Monday January thru December (except holidays) at the St. Paul's Methodist Church located at 2423 W. 26th St., in Joplin. Sign up at 6:30 PM, testing begins promptly at 7:00 PM. Two forms of photo ID are **required**. For more information contact Mark Mitchelson NØZPD 620.856.2531.

### ABOUT THE NEWSLETTER

This club newsletter offers an open forum for the amateur radio community in the four-state area. *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 *ascii text* email to: [wb0iyc@arrl.net](mailto:wb0iyc@arrl.net)

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. Classified ad space is available at \$6/pg/month, pro-rated for fractional parts to 1/6pg. Submissions may be typed, handwritten, email ASCII text files, or on IBM formatted disks. *All items* will be edited for spelling, content, and space limitations as required.

Last Page

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