

PRINTED CIRCUIT

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Newsletter of the Joplin Amateur Radio Club

Vol. 14 Issue No. 1

JOPLIN HAM DIES AT AGE 51

Another of our fraternity, Mr. Hal Dannelley, WBØLJF, passed away at his home Monday November 17th, from a sudden illness. He was 51 years old.

Hal was well known around the area in



both the commercial RF and the amateur radio community. For several years he owned and operated a two-way radio shop - Direct Communications, along with his wife Cherylann, later working as an electronics technician with this editor at Scott Electronic Systems.

Over the years I came to appreciate Hal's skill as an excellent engineering electronics technician. He brought with him a solid background in the field, a wide variety of experience, and an uncanny "sixth sense" intuition which only comes from a thorough knowledge of the art. He

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WRC-03 IMPLICATIONS FOR HAM RADIO ON ARRL BOARD AGENDA

Draft proposals to implement changes in US Amateur Radio rules in the wake of World Radiocommunication Conference 2003 (WRC-03) will be up for discussion when the ARRL Board of Directors convenes later this month. The Board also will elect officers for the next two years. ARRL President Jim Haynie, W5JBP, has indicated that he plans to run for a third term. The Board will meet January 16-17 in Windsor, Connecticut.

Among other significant changes, WRC-03 delegates agreed last summer to leave up to individual countries whether to require a Morse code test for access to amateur high-frequency allocations. Several countries already have dropped the Morse code testing requirement for HF access. In the US, the FCC last year invited public comments on 14 Morse-related petitions for rule making, but it has not yet acted on the issue.

The ARRL Board is expected to discuss in detail recommendations in response to WRC-03 that were developed during last November's meeting of the ARRL Executive Committee.

Amateur Radio-related matters still in the pipeline at the FCC also are expected to be a topic for discussion. ARRL's 2002 "omnibus" Petition for Rulemaking <<http://www.arrl.org/news/stories/2002/03/22/4/>>, which includes a request to eliminate the current Novice bands and "reform" the spectrum, is among those proceedings seemingly stuck at the Commission. The FCC also has yet to act on other non-

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ARRL SEEKS OPINIONS ON THE MORSE CODE LICENSING REQUIREMENT

At the Board of Directors meeting next week, the Board will revisit the current ARRL position on the requirement of Morse code testing. The current position was formally adopted prior to WRC2003 and is this:

The ARRL will not oppose the elimination of the Morse code as an international requirement for amateur radio licensing, but supports retaining the Morse code requirement for amateur radio licensing in the United States.

Since Morse code was eliminated as an international requirement for licensing at WRC2003 this past year, many other nations have already dropped the Morse code licensing requirement and several proposals have already been presented to the FCC by other individuals and groups to do the same in the United States. Now is an appropriate time for the Board to revisit its position on this issue.

I apologize for the lateness of this request, but I am soliciting your opinions on this issue prior to the Board meeting on January 16-17. I know you will give me your most thoughtful inputs.

In preparing your comments, I hope you will keep two important things in mind:

- 1) Since there some extremely vocal groups on both sides of this issue, no matter what action the Board takes next week, it will be judged as wrong by a large number of folks.**

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"CW - THE WAY IT WAS" Part IV ...

ARES Update

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CW - The Way It Was - Part V

Looking over the previous copy on this subject I find that I recall things that were not up front when some of it was written. Suppose that is the way things turn out unless your pretty much used to writing - and I am not. You will also have to bear with me on grammar as that was definitely not one of my better subjects in school and school was a long time ago.

We closed PART IV indicating we would cover frequencies and some of the equipment in this article.

There were 9 frequencies assigned to the National Police Radiotelegraph Network and we always tried to get a tenth one that would allow us to operate at longer distances. The frequencies were in 3 bands. This was

SIMPLEX CW operation with a legal power limit of 1000 watts. The frequencies were 2804 kHz, 2808 Khz, 2812 Khz, 5135 Khz, 5140 Khz, 5195 Khz, 7480 Khz, 7805 Khz, and 7935 Khz. Considering that most of the stations in the Network were on 24/7 schedules those frequencies provided fairly decent coverage whatever the time of day. Daytimes would find the 5 and 7 frequencies in use where evenings and nighttime the 5 and 2 would be used. The frequencies 2804, 5195, and 7935 were "calling & working" frequencies, however, it was suggested that the other two frequencies in the group be used if at all possible as initial calling was done on the 3 that I mentioned. On the 7 Mhz frequencies the spread between 7480 and 7935 created some problems for most of our transmitters and instead of being able to have 3 crystal controlled drivers into a final we generally had to have a separate driver for the 7480 frequency. This also showed somewhat of a problem in the antenna arrangements and most of us lived with a slightly lower output power and range on the 7480 frequency. It could have been our set up but I found that 7480 was a very good clear frequency and I would

opt to go there after establishing contact on 7935 most of the time. The Illinois CW stations were very busy between themselves and it was almost a certainty that they would be on 2804 as soon in the evening as that frequency came alive. It was not a bad thing as we knew where to find them and the range was not that great then either so they did not interfere with other more distant stations. Indiana sat on 2808 with their traffic and Missouri, JC (Jefferson City) could be raised on 2812 as could KC (Kansas City PD). What this did



was to free up the 5 Mhz. frequencies for longer distance traffic handling. While on the subject of frequencies I will mention what our antenna system consisted of. We had cut dipole antennas for each of the bands. They were fed with hard drawn line and suspended about 40 feet above ground level at the feed point. The direction of radiation of our antennas had to be considered due to our location in the northern and central part of the country. Also who our traffic was usually directed to came into play. We always wanted to be able to get up on that 654' tower but never were allowed to do so. The 2 Mhz dipole had its ends east and west of the feed point. The 5 Mhz dipole had its ends north and south of the feed point. The 7 Mhz. dipole had its ends northeast and southwest of the feed point. All antennas were fed from the same 40' tower. Of course only one antenna would be transmitted on at a time so there was no interference and full break in operation was used. We had one other antenna, about 160' long, fed with 1/2" Andrews spiral foam line which could be utilized when we had problems with any of the dipoles. Strictly emergency operation but it worked and was used at times. The

tower site was subject to a lot of icing conditions. Build up on your antenna was bad but the worst part was when the ice that would build up on the 654' tower would start to melt and break off. Huge chunks, often over 6' and up to 10" thick, would start falling off and the frozen ground shook when they landed. Lighter icing conditions were common where it would effect the big tower but not our equipment until the ice started to fall. We requested a 14 Mhz. frequency be given us for reliable long distance contacts but the

FCC never did come up with it. I am sure it would have made things a bit easier on the hops between TX, FL, OH, CO, and the west coast stations.

I saw some very nice commercially made CW equipment over the years but as an operator I never got to

use anything very modern. The first WI. Chief of Police Communications, Raymond Hoffman, built the first CW transmitter the station operated. It was a simple design, had the 9 crystals for the 3 bands of frequencies, had 4 oscillator/drivers (one for the 7480 Khz frequency alone) and a pair of finals that produced about 350 watts (on a good day with good weather conditions). The unit was built into a cabinet that had metering and a small fan that operated whenever the finals were powered up. It was placed to the right and in line with the radiotelephone base station transmitter and receivers for the station. The CW operator console was rack mounted and placed to the right of the CW desk at eye level and an easy reach when sitting at the desk. There was a row of 9 white lights and one would illuminate indicating what oscillator/driver was selected. This was done by moving a toggle

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CLUB COAX AT COST TO CLUB MEMBERS

RG8X - \$0.31/ft. LMR400 - \$0.71/ft.
Contact Jim NØZSQ at the meetings.

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switch, located directly below each light, from the middle position to the down position. The toggle switch also coupled a receiver of the same frequency as the transmitter to your audio monitors. A second toggle switch, located on the base of the 6" speaker enclosure at your left side on the desk, allowed you to select the headset, the speaker, or both at the same time. I think you can see a potential problem here in that you MIGHT put more than one of the toggle switches in the down position at one time and select multiple frequencies. SO WHAT. You are a professional operator and should be aware of what your doing so DO NOT DO IT. To apply final power you had a 3" long lever switch, mounted just below the toggle switches and in the center of the panel, that had 2 positions. OFF and ON. Directly above that switch was a red jewel light that lit when the power was in the ON position. There was no question when the High Voltage was applied as the fan had a rattle and whine noise that was unmistakable. Quite simple and when conditions were good, you were not pressured or working alone doing both the phone dispatch and CW, things went along smoothly. Admittedly, when working alone the CW took a back seat to the fone dispatch and our good friends, the PD Milwaukee - MK - operators, would help us in any way they could. We had voice as well as CW contact with them and would often advise each other that someone was calling them/us on the Network over the radiophone mode. I have described CW Transmitter number 1, which was used from 1949 to sometime around 1957. It was called "The HOFFMANIVICH", affectionately named for our first Chief of Police Communications and the builder. Our receivers were commercially built WILCOX CW-3 Models. One for each frequency and one spare. They were crystal controlled, had a knob that allowed you to vary the BFO a bit so you could tune in the station, another knob for the level of volume you wanted, and a jack for the

audio output. We put the audio into a separate amplifier that, again, was built into the base of the speaker on the desk, and we could adjust the volume in that manner. The CW-3 was a rack mounted strip receiver. It had its own power supply, 5 or 6 tubes, not very selective so you didn't have to change the BFO much, and the sensitivity was not the best. The nice part of it was that you could put it on just about any frequency by selecting taps and pots that were internal to the receiver. If a unit died while you were on shift, it was your responsibility to fix it, or figure out how you were going to get it fixed. This was especially troublesome if one of the 3 "calling" frequencies were involved. This was not just a problem for us and stations would periodically send out an "OPERATIONS" message advising that they had no operation on such and such a frequency until further notice. With us as busy as we were on a normal shift it was almost impossible to repair anything. This created a condition where some operators tended to ignore that it ever happened. We knew among ourselves who was straight and who was not. Like I said there were only 4 Police Radio Operator II's and some carried their load others did not. Staffing was a continual problem for both CW and Voice operations. An FCC Restricted Radiotelegraph ticket was all that was required to operate the CW equipment and it eventually came to there being only one CW man qualified to make frequency measurements.

The frequencies used, what our original transmitter was like, the antenna arrangement, and the CW receivers have been covered here. I will get into the set up of the operator position and the subsequent equipment that was used in the next, and probably the final, article.

73 de Mac/W9NLA

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felt comfortable in any situation and never hesitated to tackle any electronics problem.

Hal liked operating on the HF bands. He mentioned to me that he especially enjoyed helping John Stucka (N3JM) with his tower and antenna installation, as well as working out some grounding issues. He spent several weekends as John's guest - tweaking the system then enjoying the fruits of his labor on 20m.

Hal also had considerable expertise in VHF/UHF systems, and taught me quite a bit about antennas, RF, oscillators, and receivers. His knowledge helped me avoid many of the pitfalls and common myths associated with RF circuits and antenna systems.

Over the years he had played an active roll helping to solve JARC technical issues. He helped both me (when I had the dubious distinction of being on the club's Technical Committee), and Bruce, KFØTD, on repeater related issues. He had participated in numerous club events, including Field Day, the Hamfest, and one of his favorite pastimes - DF hunting.

He enjoyed working with his hands, this gift kept him in demand by family, friends, and his church. Other diversions included woodworking, hunting, and feeding the ducks that followed him around the homestead. He was a fine gentleman, and a good friend to many of us. He will be missed.

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ARRL rule making petitions <<http://www.arrl.org/news/stories/2002/01/10/3/>>. The subject of Broadband over Power Line (BPL) also is on the Board's agenda.

Among other actions, the Board also will elect members to the Executive Committee and appoint three directors to the ARRL Foundation Board. ¶

**>>> The meetings have moved again! <<<
The JARC is now meeting back at City Hall
at 3rd and Pennsylvania in the basement Cafeteria.**

ARES Update

As everyone knows, ARES seems to be less active during the winter months, but we need not worry, it is still there if needed. In southwestern Missouri, we have only seen use for storms & some public service. Near future plans call for establishing the NTS system and making it active within our group.

A different mode of transmission will soon be implemented, called packet radio. It is being looked at mainly for the reason that a large amount of items can be sent in a small amount of time. At this time, two different locations are being considered. Soon, the locations will be shared with the group.

73 Andy Gabbert

OTHER ARES NEWS

The Jasper County/Tri-States ARES participates in drills regularly with other area agencies in order to supply a coordinated communications backbone in case of an emergency. All area hams are encouraged to join ARES and become familiar with procedures.

Regular ARES announcements are made weekly at 19:30 on the JARC Monday night net, and at regular JARC meetings. Andy can be reached at 417-673-8371, or email at agabbert_80@sbcglobal.net

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

Andy Gabbert, KAØTUD
Jasper County/Tri-State ARES EC

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2) If BPL is not defeated and soon, the Morse code/no Morse code debate will be moot.

Again, please let me know what you think about this issue.

73,
Wade Walstrom WØEJ
Director, ARRL Midwest Division
w0ej@arrl.org

HAM EQUIPMENT FLEA MARKET

NOTE: INDIVIDUAL LISTINGS ARE FREE TO THE AMATEUR COMMUNITY, AND SPACE IS ALLOCATED ON A FIRST COME BASIS. COMMERCIAL AD SPACE IS AVAILABLE AT A NOMINAL CHARGE.

For Sale - Radio Shack HTX-252 - 2 Meter FM Transceiver. Selectable 2.5 or 25 Watts. Generates PL Tones for repeaters, etc. Very good working condition. Normal wear on the case and DTMF microphone but no frayed cables, cracks, etc. Operator's manual available from the RS web site. Exact age unknown. Picture available. \$50 shipped in the US. Tim McDonough, N9PUZ, email: n9puz@arrl.net
11/2003

WTB - Working decent Heathkit HW-8 for a reasonable price. I want to buy one for a friend. Mike Sanders, KØAZ, 18169 Highway 174, Mt. Vernon, MO 65712-9171 Email: k0az@arrl.net
11/2003

For Sale - MFJ-986 Differential Tuner, 3KW MFJ-986 Differential tuner covers 1.8 through 30 MHz continuously. Cross needle meter. Outputs for two coaxial, one balanced line, and one dummy load. Excellent condition. John, N3JM (918) 786-8135. Email: n3jm@arrl.net
10/2003

For Sale - NYE VIKING 3KW Antenna Tuner MB-II-V-A Here's your chance to own a REAL high-power tuner with optional internal balun & SWR meter. Covers 1.8 through 30 MHz continuously. It will match just about anything you can hook up to it. John, N3JM (918) 786-8135. Email: n3jm@arrl.net
10/2003

For Sale - HEATHKIT SA-2040 Antenna Tuner 2KW. Covers 1.8 through 30 MHz. John, N3JM (918) 786-8135. Email: n3jm@arrl.net
10/2003

For Sale - DIAMOND Antenna SX-1000 SWR and POWER METER. For 1.8 through 160 MHz, and 430 MHz through 1,300 MHz. John, N3JM (918) 786-8135. Email: n3jm@arrl.net
10/2003

For Sale - 12V Sealed Lead Acid Batteries Unused stock, 12V/4.5AH 3.5"x2.75"x4"LWH Application: EXIT, Security light systems. \$5 (417) 781-2211, Email: wb0iyc@arrl.net
09/2003

For Sale - Rohn 25G Tower Sections - Used Serviceable condition. 15 pieces available at \$50 each. Hal WBØLJF (417) 781-6739
05/2003

Area HAMFESTS and EVENTS

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

10 Jan 2004 - Willard, MO
145.490 Repeater Group - WinterFest 2004 at the Willard Recreation Center
<http://www.qsl.net/49ers>
Michael Blake, NØNQW, Ph: 417-839-2071
Email: n0nqw@arrl.net

17 Jan 2004 - St. Joseph, MO
Missouri Valley & Ray-Clay ARC 14th Annual Northwest Missouri Winter Hamfest. Ramada Inn, 9 AM to 3 PM
Contact: Carlene Makawski, KAØIKS
P.O. BOX 1533, St. Joseph, MO 64502
Ph: 816-279-3406 Email: nem3238@ccp.com

7 Feb 2004 - LaCygne, KS Mine Creek ARC presents the LaCygne Hamfest
Info: Ron Cowan, KBØDTI Ph: 913-757-4455
Email: kb0dti@arrl.net

6 Mar 2004 - Russellville, AR The Arkansas River Valley Amateur Radio Foundation presents the Russellville Hamfest at the Hughes Community Center (Knoxville & Parkway). Talk-in 146.82- K5PXP, Adm. \$5; Tables \$10; ARRL sanctioned. DXCC/VUCC/WAS card checking, Forums, Door Prizes, Free Parking, Free Tailgating. Open 8am, VE testing 09:30
Margaret Alexander, KC5MCS 479-968-7270
email: ealexand@cswnet.com
<http://www.cswnet.com/~arvarf/hamfest.htm>

13 Mar - Harrison, AR North Arkansas Amateur Radio Society Hamfest. 8am-1pm

19-20 Mar 2004 - Claremore, OK
Oklahoma Section Convention sponsored by the Green Country Hamfest Committee
<http://www.greencountryhamfest.org>
Info: Merlin Griffin, WB5OSM 918-520-7668
PO Box 470132, Tulsa, OK 74147
Email: info@greencountryhamfest.org

20 Mar 2004 - Brenham, TX Brenham ARC Hamfest. Contact: Dan Lakenmacher, N5UNU
Ph: 979-836-8739 llakenmacher@yahoo.com
<http://www.alpha1.net/~barc>

27 Mar Weatherford, TX ARC of Parker County Hamfest. Info: James Adams, AD5KG
Phone: 817-341-1979 Email: ad5kg@arrl.net

JANUARY 2004

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>
<p>Don't Forget! Meetings are at City Hall.</p>				<p>1</p> 	<p>2</p>	<p>3</p> <p>09:00 BREAKFAST -</p>
<p>4</p> <p>14:30 -15:30 JARC SLOW SCAN NET</p>	<p>5</p> <p>19:30 JARC MON NITE NET 147.21 MHz WØIN REPEATER</p>	<p>6</p>	<p>7</p>	<p>8</p> <p>17:30 THURSDAY NITE OUT -</p>	<p>9</p>	<p>10</p> <p>09:00 BREAKFAST -</p>
<p>11</p> <p>14:30 -15:30 JARC SLOW SCAN NET</p>	<p>12</p> <p>19:30 JARC MON NITE NET 147.21 MHz WØIN REPEATER</p>	<p>13</p> <p>19:30 JARC BUSINESS MEETING</p>	<p>14</p>	<p>15</p> <p>17:30 THURSDAY NITE OUT -</p>	<p>16</p>	<p>17</p> <p>09:00 BREAKFAST -</p>
<p>18</p> <p>14:30 -15:30 JARC SLOW SCAN NET</p>	<p>19</p> <p>19:30 JARC MON NITE NET 147.21 MHz WØIN REPEATER</p>	<p>20</p>	<p>21</p>	<p>22</p> <p>17:30 THURSDAY NITE OUT -</p>	<p>23</p>	<p>24</p> <p>09:00 BREAKFAST -</p>
<p>25</p> <p>14:30 -15:30 JARC SLOW SCAN NET</p>	<p>26</p> <p>19:30 JARC MON NITE NET 147.21 MHz WØIN REPEATER</p>	<p>27</p> <p>19:30 JARC PROGRAM MEETING</p>	<p>28</p>	<p>29</p> <p>17:30 THURSDAY NITE OUT -</p>	<p>30</p>	<p>31</p> <p>09:00 BREAKFAST -</p>

Meeting Times, Testing, and other Club Information

The **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 (+).

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>

Saturday mornings, members gather for breakfast around 9:00 a.m. at the restaurant next to Smitty's Grocery located at 1820 Maiden Lane in west Joplin. For details contact Dave, NØKMP on 147.21+, or land line at 417.781.3154.

2004 CLUB OFFICERS:

President: Martin Matarazzo	WD6FIC
V. P. Andy Gabbert	KAØTUD
Treasurer: Jim Johannes	NØZSQ
Secretary: Mark Mitchelson	NØZPD

VE TESTING SCHEDULE

License testing by volunteer examiners takes place on the 4th Saturday in February, May, August, and November at the SW Missouri Bank building located at 7th and Duquesne, in Joplin. Sign up at 12:30 PM, testing begins promptly at 1:00 PM. For more information contact Dave Hill KIØPP 782-8762.

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@arri.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.

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