

PRINTED CIRCUIT

January 1998

Newsletter of the Joplin Amateur Radio Club

Volume 8 Issue No. 1

JARC PRESIDENT PASSES GAVEL

Now that I have observed the completion of my second term as your president, it seems appropriate to reflect on it and some of the things I learned and observed. First, let me begin by saying that it has been an exciting two years, and how honored I felt having had your confidence in my ability to handle this job.

I am extremely positive about the club and its membership; their capability, participation, and vitality, all of which will affect the club's future. When the membership grows and more people get involved, it would seem to demonstrate 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, to realize that each person brings with them a unique skill often coupled with a willingness to help, and then, act as a catalyst to implement action.

I discovered all too soon how easy issues can get muddled, also I found that implementing ideas required both pulling and pushing members. The follow through requires careful attention to detail and a **lot of time**, else the helpers become a lost resource as they become discouraged.

It is only because of the terrific support and help I received from everyone of you, without which many things could

never have happened. It's hard to describe how exciting it is to see people's ideas come to fruition, and know that you have had a hand in it. And working with people, what a learning experience!

So with the passing of the gavel to our new president goes the responsibility to guide the club toward the best organization possible, and to the membership - to support it, and stay involved.

Thank you for the opportunity to serve you. BTW, the plaque is beautiful.

'73 Jim Scott WBØIYC

Morse Code and Theory Classes Offered

This course begins January 8th and runs 12 weeks. There are still openings for additional students. Each class will be divided into one hour of theory and one hour of code practice. Those interested in attending should meet at St. Paul's Methodist Church at 2423 West 26th St. in Joplin.

Class meets every Thursday at 7pm. Contact Jack KGØVR for more information.

THE WORLD OF VHF/UHF

Lots of six meter news to report this month. December usually is the peak of the winter Sporadic E season, and this year has seen fairly good conditions, not only for the usual one hop limit up to about 1400 miles, but several instances of double hop and also possible linking of the E layer and F layer in the Southern Latitudes. The big news seemed to have occurred on December 28. Club member Jay KØETC worked PY2CC in Brazil for his best DX. Jay also had contacts with Puerto Rico, Dominican Republic, and



Grand Cayman Island. WØJRP also worked ZF2MU on Grand Cayman. Dan WØVD is back on six meters again and got in on the action. NØIGZ also worked a lot of skip contacts on 6 meters. It was also reported on "News Line" on our Monday night repeater net, that New Zealand was also worked from several areas of the Western US. Not all the action was on Sideband and CW. Larry Hiatt KCØAUY also has worked quite a few stations on Six Meter FM. He has a

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inside...

**ARES Incorporating New Changes
QRP for the Radio Amateur
Joplin Public Library Amateur Radio Display**

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ARES INCORPORATING NEW CHANGES

(Ed note: This article was originally submitted for publication in the October '97 issue and is published now because its content is still timely.)

Saturday August 23rd the ARES meeting was held in the less empty EOC, after the JARC had removed several items which had been stored there for many years. It just doesn't seem the same!

T-Bird NØNFZ, and Mike NØODY, members of the JARC, contributed their time to help make construction changes to the room. First they planned to rewire



the florescent lights. Before they started the lighting in the room had been terrible. Next, the ceiling tiles needed to be fixed, after which work would begin on a new wall. Plans for the improvements had been talked about for years, however with busy schedules, agreeing on a time to meet and work was difficult.

The last week of September a few of the local hams, Ray KBØSTN, Jack Huber KBØWFE, Mike NØODY, T-Bird NØNFZ and others, combined their talents to work on the EOC. At first the guys were instructed not to cut wires but to unhook them. The first console was then disconnected and moved. The next night, T-Bird and Mike were coming in to see about installing new lights. Tuesday evening just before completing all of the wiring for the lights, it was discovered that the wiring was supposed to be wired for 220V not 120V, wrong ballasts, so updating the lights had to be

put on hold.

But all in all, the appearance does not stand in the way of performance. I believe that over the years, we, I don't mean me, but all of us as a team have proved this to be true. In the near future, training will be the focus of our group. There is talk among the group of purchasing Jackets and maybe T-Shirts with the ARES, ARRL & maybe Skywarn logos on them. Jackets with patches, or dinners & coffee after meetings and other activities are good, but they won't make our group any better. What I'm talking about is training, learning to work more as a team or as a family. People ask, "Why doesn't the Emergency Preparedness or fire departments or other services call for our services?" Well, they might not know we are out there. Some ask me, "Why haven't we been asked to participate in County or City wide S.E.T.'s?" (Simulated Emergency Tests) My response, "We are not trained." This will be changing in the near future. I've recently was asked if we could participate in the disaster training for an Ammonia spill.

Andy KAOTUD
Jasper County Emergency Coordinator

WELCOME

ARES Welcomes Jack Huber KBØWFE to the ranks. He will be assisting with the Net control, and working on different approaches of controlling nets.

**Don't forget
to send in
your 1998 dues!**

QRP FOR THE RADIO AMATEUR

QRP VS QRO

Why QRP? This question has been asked by several hams. The same hams that laugh at QRP also don't like QRO operation. Actually the FCC regulation says use only the maximum power *required* for the desired communication. There are a lot of cases where the full legal power of 1500 watts PEP is necessary to be heard, however when conditions are good, a few watts will do the job. On VHF a lot depends on the gain of the antenna, a 10 db gain antenna can make a 100 watt station have an ERP of 1000 watts. On HF in the summer-time, there are many cases on 75 and 160 meters where the maximum legal power is necessary to get through (ask Larry NØMST). I work a lot of 40 meter CW and chase DX, only to find that I have to run my amp at about 800 watts to work the weak European and African stations. DX Signals are usually fairly weak on that band. On the other hand, working Amateur Satellites there is a limit to the power that can be used, as high power will overload the transponder. A lot of this depends on the ERP from the Antenna and *not* the power of the transmitter.

I entered the Ten Meter contest in December in the QRP class (5 watts into a dipole using a Kenwood TS670) and made over 60 contacts phone and CW. Conditions were very good that weekend, so you can see QRP does work.

Until next time,
73 John WØJRP

Joplin Public Library to feature HAM RADIO DISPLAY in March

The Joplin Amateur Radio Club has reserved the large glass display case at the Joplin Library for the month of March 1998 to promote awareness of Amateur Radio. This history display should generate interest to newcomers before our Hamfest in April. Additionally, I will put an article in the Joplin Globe in February reference our display.

The display case is about 6 feet wide, 4 feet deep and 5 feet high. There are also adjustable shelves 16" deep. Heavy

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surplus FM Rig purchased from Empire District Electric with a "Ringo Ranger" Vertical antenna and has worked about 8 states. He has become another grid square chaser. Larry and I live only about 100 feet apart, but it seems I can work side band and he FM with very little QRM.

Not much two meter DX activity to report, but area activity on side band continues to increase. The winter season usually brings very few tropo DX openings, but conditions out to about 250 miles continue to be good. There have been several Meteor showers where long distance contacts have been made.

Remember that the Monday Night Eastern Oklahoma S.W.O.T net is called on 144.250 MHz starting at 9 PM. Net control is Ed WD5GVP from Henryetta, OK, 50 miles south of Tulsa.

Until next time, CU on VHF.

73 John WØJRP

(Ed note: John Tudenham WØJRP, contributes news about happenings on both VHF and QRP regularly to this newsletter. He actively pursues his hobby, operating from HF thru UHF daily. He is a member of the Central States VHF Society, ARRL life member, and is often listed in the winner columns in QST. He is an active member of the JARC and provides us with many insightful and interesting stories.)

items (large radios, antennas) can be set on the bottom wood frame of the case, but we'll need a lot of "little" goodies for the shelves. We can hot glue posters pictures flyers and other items on the back wall. The case will be locked all the time so that no one will be able to "touch" your items. No fee will be charged for using the display case.

I need volunteers to provide different pieces of equipment, styles of mics, radios, keyers, antennas etc. to place in the case. I also need some brainstorming ideas of what items will make an effective display. Please make a list of what "you" would like to display by the **first** FEBRUARY business meeting. For each item you plan to display, provide a description with pertinent information that might interest to the reader. Include the size of each item to display along with your full name, call, and phone number on the list so that I may contact you.

Everyone providing equipment for this display needs to bring their goodies to the Joplin Public Library at 310 Main Street on Sunday March 1st from 1 to 3 p.m. so that we can put them into the display case. Be sure to put your name and phone number on the bottom of **each** of your items. Those bringing heavy items need to be there first since they must go on the bottom shelf before we can arrange the glass shelves.

Some examples of items to "show off" are listed below. These will only be displayed and don't have to work. They may be new, used, antique, modern, and even homebrew.

- Newsletter
- Walk-A-Thon - pictures/T-shirts etc
- ARES Classes - info - Brochures etc.
- Technical Classes - info - flyers and contacts
- Morse Code Classes - info - flyers and contacts
- Hamfest - info - flyers - posters and pictures from 1997 with contacts

- Plaques, Certificates and info concerning Public Service, Emergency Communications, and SkyWarn WX involvement over the years
- Field Day - pictures - equipment etc. ('97 fishing rod of KGØVR)
- lots of "little" goodies.
- Field Trips - i.e. Doppler System in Springfield
- KSN tour
- Crowder College Judges for VICA Electronics students' contest - Jim NØZSQ & John KBØTKL (pictures)
- KSN Sam Lane with Jim NØZSQ helping with "storm/weather info" (pictures)
- "List" of "famous" HAMS past and present from John WØJRP (like Barry Goldwater)
- Tubes, antenna's, and other parts, radios, mics, scanners, keyers, etc.
- Magazines, books, manuals, log books, QSL cards from both USA and foreign countries
- Repeater site (pictures)
- Hats, pins, badges, ribbons we have won over the years on projects by the club.
- Articles from newspapers and magazines (in picture frames) about Astronaut's Shannon Lucid and John Blaha, who set new American record for time spent in orbit aboard "MIR" - using their ham radio equipment to stay in touch for 4-6 months with their families & friends back home!
- Rabbit Hunts from past years (pictures)
- Tail-Gate parties with families (pictures)
- Chili Cook-offs with families (pictures)
- Christmas Dinner with families (pictures)
- "Trophy" - 1st place from the Christmas parade in Carthage won by the "4 States Club" would be nice to display pictures of the group/cars decorated that were in the parade
- Show and Tell learning programs (2nd meeting of the month) (pictures)

We intend to print information cards to place with those items displayed. These will provide an explanation and/or history of the item.

This Amateur Radio History Display should generate interest to youth and old alike, just before our Hamfest in April.

Thanks and have fun going though your "stuff" to display for the JARC display case. Now let's get out there and show Joplin and the surrounding area what we are doing!

Betty Miller/KBØTKX
Home phone: 417-624-4903

Code Practice Transceiver Interface

by Phil Salas, AD5X

I enjoyed the article by NWØA in the May 1997 issue of *Worldradio* entitled "CW using your HT!" Using Joe's ideas, I built a very similar version which I use as a CW interface for my keyer output into my Alinco DR-605T transceiver. Additionally, I wanted to be able to feed the output of my MFJ418 Pocket Morse Code Tutor into the transceiver. The purpose of all of this was to make it easy for me to run Morse code training on our local repeater, N5EG, at Alcatel Network Systems, in Richardson, Texas.

The circuit shown is very similar to Joe's. I liked Joe's 700 Hz twin-T audio oscillator since it does give a nice sine wave output. However, I keyed it a little differently as shown in the schematic. The output of the twin-T oscillator feeds a potentiometer that interfaces with the microphone input to the transceiver, as well as the LM386 audio amplifier, allowing me to monitor my sending. I also provided an input through a separate potentiometer for the MFJ418. The MFJ418 is also monitored by the LM386 audio amplifier.

The Alinco DR-605T transceiver uses an RJ-45 microphone connector. I mounted an 8-pin RJ-45 modular terminal block along with a small circuit board with all the components and a small speaker inside a Radio Shack plastic box. The RJ-45 terminal block provides a female interface for my microphone. A RJ-45 male-to-male cable is cut in half, and the

end of one resultant half is connected to the RJ-45 terminal block to provide an interface into the DR-605T. Different radios will use different interfaces, of course. I use a DPDT (Double pole, double throw) switch that selects either the normal microphone or the audio circuitry and enables the DR605T PTT (push to talk). A separate SPST (single pole, single throw) switch turns power on and off. You can add a 9V, 3-terminal regulator if you want to run this unit directly from your station power supply.

The way to adjust this unit is to first adjust the volume of the twin-T oscillator so that you properly deviate your transmitter. Proper deviation is easy to determine by listening to your radio output on a second radio. Compare the output tones on your radio when the oscillator is keyed to the normal voice level of the repeater. Now, adjust the pot on the audio amplifier so as to give you a comfortable monitoring listening level. Finally, adjust the external audio input potentiometer (for the MFJ418 or any other external audio source) so that the monitoring volume is about the same as the internal twin-T oscillator. If your external audio source has its own level control, the external audio input potentiometer can be replaced with a fixed resistive attenuator.

That's it. You can build this easily in a few evenings. Try running a little code practice on your repeater. You'll be amazed at how many people will listen to you!

Courtesy of Worldradio, September 1997. Used with permission, all other rights reserved.

Insert Schematic here

What am I?

I usually run hot, but sometimes cold.

I cost a lot, especially if I am old.

I'm full of nothing, of what you cannot see.

I am endeared by oldtimers, who relied on me.

answer: on last page

Buy/Sell/Trade

For Sale - KENWOOD TR751A

2m All Mode 25W output. Excellent sensitivity GasFet front end. \$450.00 will ship in the US. Jerry Martin NØBWA
jmartin@alt.net (417) 624-8918

For Sale - ICOM 761-AT

Asking \$850 or trade.
Frank NØLEG (417) 781-7933

A.M. Vacuum Tube Technology

Is there anyone (old timer) in this area that is interested in A.M. (vacuum tube technology)? 3885 kc.

Donald Hilliard WØPW (417) 451-5892

Computer Stuff - For Sale

Panasonic KXP-2123 Printer

A nice 24 pin dot matrix, with manuals, drivers in box. Two available, not hardly used. Kit still available for color.

\$150 OBO

ESS-1869 Plug-n-Play Sound Cards

New in the box, with instructions and driver disk for Win 95, Win 3.x, and DOS. I have several available, \$25 each.

S3 Virge DX 2MB PCI Video Card

3D Graphics/Video Accelerator

CD with drivers for Win 95, Win 3.x, Win NT, and os/2. New in the box with Instructions \$50

Jim Scott WBØIYC

(417) 781-2211

Calendar on this page

Meeting Times, Testing, Events, 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.

Club members often meet weekday mornings in Joplin for coffee at either Hardee's (804 S. Rangeline) or Target (7th St. East of Rangeline)

around 8 AM. Members also meet for breakfast on Saturday morning around 8:30 AM in the restaurant at Smitty's (18th and Maiden Lane) in Joplin.

1998 CLUB OFFICERS:

President: Larry NØMST
Vice-Pres., Jackson KBØWFE
Treasurer, Jim NØZSQ
Secretary, Mark NØZPD

Testing is offered for Amateur Radio

licensing by volunteer examiners on the 3rd Thursday of each month. The tests are given at the St. Paul's Methodist Church at 2423 West 26th St. in Joplin. Sign up at 6:30 PM, testing begins promptly at 7 PM.

Ans: A vacuum tube!

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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