PRINTED CIRCUIT

OCTOBER 2002 Newsletter of the Joplin Amateur Radio Club Vol. 12 Issue No. 4

NEWS ABOUT FIELD DAY 2002

BY JOHN TUDENHAM WØJRP

JARC Field Day 2002 at Dover Hill was a great success. We operated class 3A with David Hovland operating HF Digital modes. However, this year we did not set up a VHF station. There was less sporadic E-Skip than in past years which usually accounts for most of our contacts on 15, 10, and 6 meters. However, there was still enough to make 15 and 10 meter contacts at times. The absence of thunderstorms in our area made night time conditions good on both 40 and 75 meters. Of course the 20 meter band proved one of the best, and Jim Johannes and others made many contacts from inside his motor home. We also had visits from TV Channels 7 and 12.

WHAT IS FIELD DAY?

There seems to be a misunderstanding especially among newer hams on just what field day is. Many not used to the fast pace HF operating feel that it is just another contest. The ability to set up a station just like when an emergency occurs, then exchange information at a fast pace just as you would be during during a disaster, is what it is about. This requires skilled radio ops able to copy through QRM and not ask for many repeats. Of course those like myself being an air force radio op and 50 years of ham experience feel comfortable with this type of operation.

To give an example, if a tornado would hit Joplin as it did in 1971, long distance phone lines would be jammed and ham radio might be the only source of

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LEARNING CW SOME TIPS FOR THE NEW

GUEST ARTICLE BY STEVEN R. HURST, KA7NOC

WHAT DOES CW MEAN?

CW stands for "continuous wave", most hams refer to Morse code when they talk about "CW". So what does CW have to do with Morse code? Morse is the code used via the CW medium or "mode" of communication. Morse code can be created by means of a flashlight, signal flags, mirrors, even a stick hit against a water pipe can be used to communicate with Morse code, or any code for that matter! Telegraph operators used Morse code over the telegraph wires back in the 1800's to send messages. These messages were known as "telegrams". People of that time relied on the telegraph operators to pass information over great distance's. Telegraph operators also checked the current weather conditions across the country , making sure that the trains ran on schedule. So , it's no surprise that when radio came along at the turn of the century, Morse code became the standard in communication, as many telegraph office's went "wireless".

As the art of radio progressed, most ships became equipped with transmitters and receivers. Those ship to shore operators used Morse code as their only means to communicate with other ships and land stations. The R.M.S. Titanic used Morse code to send its ill-fated distress signal "C Q D".

Of course the amateur's were using Morse code all along. They used home made "spark gap", transmitters to send their messages around the globe. These primitive transmitters took up enormous amounts (by today's standard) of

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CITEL RESOLUTION LEADS TOWARD A WORLD HAM TICKET

Ham radio has moved another step closer to an internationally recognized license. Delegates to the Third Regular Assembly of the Inter-American Telecommunication Commission (CITEL) recently approved a resolution that would extend reciprocal recognition of the International Amateur Radio Permit (IARP) Convention to member states of the European Conference of Postal and Telecommunications Administrations (CEPT).

The resolution includes as a goal "to promote the development of a global Radio Amateur Permit working with other regional organizations within the framework of the International Telecommunication Union."

ARRL Technical Relations Specialist Jon Siverling, WB3ERA, attended the CITEL Assembly August 12-16 in Washington, DC, as a member of the US delegation. "In an ideal world, we'll one day have an international Amateur Radio permit that's like an international driver's license--good around the world," Siverling said. He conceded that CITEL-CEPT reciprocity will not benefit US amateurs, however. Only licensees elsewhere in the Americas would be affected, since US licensees already enjoy automatic or nearly automatic reciprocal licensing in many countries throughout Europe and the Americas.

Since the resolution requires modification of an existing agreement, the next step is approval by the Organization of American States General Assembly, which meets

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inside...

VHF REPORT
QRP and VHF

BY JOHN TUDENHAM WØJRP

On VHF most Amateurs think of their power as the output power of the transmitter, but true power is actually ERP (Effective radiated power). TV and FM broadcast stations are licensed by ERP. Your Amateur station antenna has a radiation pattern, and may have more or less power radiated by the antenna in a given direction. For instance, you have a 25 watt transmitter fed into a simple half wave antenna either vertical or horizontal, and you are using a very long length of ordinary RG-8 coax with a 3 dB loss in the transmission line. With that much loss, only 12.5 watts will reach the antenna. Since it is a dipole antenna, you will have an ERP of 12.5 watts. If the same coax is fed into a 5/8 wave antenna that has 3 dB gain over a dipole, you will now be back to 25 watts ERP. Let's now install an 11 element vertically polarized Yagi with 9 dB of gain. Figuring line loss at 3dB , the net gain will be 6 dB, that means your ERP will be 100 watts off the front of the antenna.

For fun, you QSY down to the sideband portion of 2 meters where most stations run horizontal polarization. A station in Tulsa hearing your 100 watt vertically polarized ERP signal, loses about 20 dB from cross polarization. You are radiating only about 1 watt to him. Your neighbor with the same antenna, same height, but running horizontal, will get S7 signal reports from the same station 100 miles away, while you will only be getting about S 3-1/2. Improving your antenna fed line with low loss coax would improve the signals some, but being cross polarized you still have about a 20 dB loss. In short, a 1 watt QRP transmitter running into a horizontal yagi would put out the same signal as a transmitter running 100 watts - cross polarized.

One lesson to be learned on VHF is that it isn't the power you run, but the antenna that gives you best results. ¶

KFØTD SILENT KEY

It is with deep regret that I announce the death of Bruce Cummins KFØTD, whom I knew since attending East Jr. High School in Joplin almost 40 years ago. Bruce graduated from Joplin High School in 1965, and it was about that time, because of a motorcycle accident that he lost the use of his legs. He had lived in Royal Heights for as long as I can remember, was very independent, and extremely talented as an electronics technician.

Although he was a year older than I, we shared a real interest in electronics. He had been an electronics technician for as long as I can recall and had a keen interest in RF and communications. He had worked in his craft in Lenexa KS for King Radio, and also with the City of Joplin.

Bruce had been a ham for many years and was well known by many of the amateur radio operators in this area, especially if they needed equipment tuned up or fixed, or if they failed to follow FCC rules while operating on the local repeater.

He had been active with the Joplin Amateur Radio Club, and for several years had maintained the repeater equipment for the club. He had built repeater controllers, and special gizmos needed to get things operational to his liking. He often taped and played Newsline for the Monday Nite Nets. He always volunteered to be the talk-in host for the Joplin Hamfest, and he also provided me with much of the graphics for the club website.

For those of us who knew Bruce, we will surely miss the technical input from our friend, the discussions and debates on FCC rules and regulations, the ribbing and heckling about conventional current, as well as countless other topics.

He also had a Website.
http://users.joplin.com/bcummins/index.html

Jim, WBØIYC
Joplin

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communication to other cities. We would have hundreds of welfare messages to pass, consisting of name, address, and phone numbers for persons living in the Joplin area. This would require fast pace operating similar to the field day exchange.

I recall in 1953 a tornado hit Waco TX. The Air force MARS station at Amarillo, where I worked, exchanged hundreds of messages with Waco even though we were 400 miles away! The local paper had a write up about the good job that we did.

I don't mean to be critical, but for some reason, many hams that come to our field day just refuse to operate. These newer hams need practice to become trained radio operators and should a least give it a try. If a real emergency would occur, most traffic would be handled in HF, not VHF.

To close, Field Day operating is also a lot of fun. Running up a big score is not as important as training operators, but it adds to the thrill of seeing how far you can work stations with simple equipment and antennas. ¶

ARES EVENTS AND SCHEDULE

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. Andy is asking that you contact him to "sign up" if you intend to participate. Generally, the only equipment required for ARES participants is a 2m radio. Certificates are often awarded for various activities and drills.

You can learn more about ARES by attending JARC meetings where ARES announcements are given. In addition, regular ARES announcements are also made weekly at 19:30 on the JARC Monday night net. Andy can be reached at 417-673-8371, on the air, or email at **ka0tud@arrl.net** ¶

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radio spectrum !

WHAT IS MORSE CODE ?

Morse code is named after its inventor Samuel F.B. Morse,1791-1872. Morse invented the code (and the electromagnetic telegraph) in 1836. The code consists of a series of dots and dashes. Each letter of the alphabet and numbers 0 through 9 have individual combinations assigned to them. For example, the letter "E", is a single "." , or "dit". Making it the easiest letter to learn ! The letter "O" is "- - -" , or "dah dah dah", another fairly easy one to learn. Most are not that easy, but with **practice** and **determination**, it can be done. Some people can copy code at speeds of up to 70 words per minute ! Of course that is more the exception than the rule, most ham's copy code in the 10 to 30 word per minute range. Once you get over the learning curve, Morse code becomes a second language, you begin to hear "words", not just each individual letter. You begin to recognize the rhythm of the words so you can easily pick them out and follow along with the conversation.

WHERE DO I BEGIN TO LEARN MORSE CODE ?

You already have begun ! You now know two letters, E and O ! Because Morse code (as used on the amateur radio bands) is an audio code, the best way to learn it is by sound, not by sight. There are many manufacturers of code tapes, some of these tapes simulate real life code as heard over the radio waves. Also, look for tapes which send the code characters at around 15 words per minute, but the actual word speed should be slower. This way you will become familiar with the sound of each letter and number sent at the higher speed. There is a big difference between the sound of code sent at 5wpm and code sent at 25wpm ! Software is available on the WWW that you can download and practice on your PC. I have found a couple of really neat programs from "PA3BWK's" web site. Once you have learned the alphabet and all the numbers, then it is time to purchase a good quality SW (shortwave) receiver. Nothing beats real live code practice, after awhile you begin to memorize the tapes! The ARRL conducts daily code practice on the HF ham bands, that information is published monthly in QST, as well as published on their Web Site ARRL.ORG.

WHAT EQUIPMENT WILL I NEED TO LEARN MORSE CODE ?

You will need (1) a cassette tape player, (2) code tapes,(3) a code practice oscillator, (4) a code key, (5) paper and pencil. Those items will get you started on your journey to learning Morse code! I will explain what each piece of equipment is for those of you who are unfamiliar with some of them. Everyone knows what a cassette player is, so I will skip over that as most people already have a tape player of some sort!

Code tapes are cassette tapes that teach you all the letters and numbers in Morse code. Some are better than others, try to find ones which are narrated, that is, ones which have someone explaining what is going on, some tapes assume that you already know the code and just send random letters and numbers. If you are a beginner, make sure you purchase beginner tapes, ones that take you from the start! Other sources for tapes include the public library. Even some hams and clubs will have tapes available.

A code practice oscillator is a device used to generate tones by means of a key, or switch. You can easily build one yourself (with the right parts) or there are a few companies that offer code practice oscillators for sale. If you are new to all of this, and don't own a soldering iron, just purchase a fully operational "CPO". Although building a kit or designing one for yourself is beyond the scope of this discussion, it is easily done and there are numerous books and web sites with information for you.

Most everyone is familiar with a code "key", you have seen them in the movies and on TV. This is the device used to close or open the circuit which generates the pulse to form the tones which make Morse code. Make sure you get one of good quality, avoid the "cheap" plastic base one's available at some of the electronics' stores in the malls. You may have to find a mail order source for these such as "Fair Radio Sales", they carry lots of neat things for the radio buff. Used ones are much more reasonable, as a new "straight telegraph key" will cost you over $75!

OK, I HAVE THE STUFF, NOW WHAT ?

Find yourself a quiet, comfortable spot and begin learning the Morse code ! Take it slow and easy, relax, put your feet up and close your eyes ! Don't worry about writing anything down at this point, just listen to the tape and get the feel of what's going on. Once you are familiar with the order of things, start to copy the letters and numbers down on paper. Don't worry about missing a few at first (it happens to everyone, even after they know every letter and number !) it will get better. Try to make each practice session no longer than 30 minutes, listen to the tape for 10 minutes without writing anything down, then rewind the tape and copy what you can down on paper. After the session is done, go outside and get some fresh air ! Try to practice at least twice a day, 15 - 30 minutes each. While you are at school or work, try to remember letters that you have learned, as they sound, not as they look ! This is important and will help you improve your speed on down the road.

WHEN CAN I START SENDING WITH MY CODE PRACTICE OSCILLATOR?

Don't worry about sending just yet, sending code is much easier than copying it once you know it. I have found that if you start sending first, you tend to think of letters as they "look", (trying to remember "dot" "dash") not as they sound. Also, try to avoid counting dots or dashes, code is a sound which has a rhythm to it, so you should get in the practice of hearing each letter as a rhythm, this is also very important ! Believe me, you will catch on to it a lot sooner than you think with just a little practice each day, you should also set goals for yourself and strive to meet those goals with each practice session. If you run into a block, where you just can't seem to reach the next level, take a break from it all. Take a few days off, play on the computer, work out in the yard etc. Get your mind off of it, but get back to it after a few days, don't wait to long!

Once you have learned all the letters and numbers, then it is time for you to start practicing your sending. Remember to practice, other people will need to understand what it is you are trying to say! ¶

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next June, Siverling explained.

The resolution builds on existing CITEL and CEPT arrangements. A CITEL convention already provides for temporary amateur station operations in one member state by individuals holding an IARP and licensed by another member state "without further review." A similar CEPT mutual-recognition arrangement in many European signatory countries--Recommendation T/R 61-01--makes possible operation by amateurs from CEPT countries during short visits to other CEPT member countries or to non-CEPT participating countries--including the US--without having to obtain a temporary license.

Among other things, the CITEL proposal, called Resolution 32, would encourage CITEL member states to adhere to the IARP convention. It further calls upon those member states to approve the draft protocol to the IARP convention to extend to CEPT license holders from countries that have implemented CEPT Recommendation T/R61-01 the same privileges IARP holders enjoy. ¶

HAMGUIDE

A BEGINNER'S GUIDE TO AMATEUR RADIO

Introducing a new web site
HTTP://WWW.QSL.NET/HAMGUIDE/
for newcomers to Amateur Radio. Whether you are a newly licensed ham or just thinking about getting that first license there is useful content here for you. Some of the content you will find includes:

- A.. What is Amateur Radio?
- B.. Amateur Radio Activities
- C.. How to get licensed in Canada and the U.S.
- D.. How to get started operating phone and CW
- E.. Operating various modes from SSB to IRLP

In addition you will find information on

- A.. QSLing, QSL bureaus and eQSLs.
- B.. How to make propagation work for you
- C.. Band plans
- D.. DXing
- E.. Contesting
- F.. Special Events and much more.

BUY - SELL - TRADE

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 - SIGNAL 1404-S 4 BAY DIPOLE Heavy Duty 21ft phased array. 140-160 MHz. Former club repeater antenna. Serious offers only. Contact: Martin WD6FIC (417) 623-6618 email wd6fic@arrl.net
10/2002

For Sale - Kenwood TS-660 All Mode four band transceiver. Cover 15, 12, 10, & 6 meters. 12VDC mobile 10W transmitter. Very good shape, complete w/orig. carton, OP & Service manuals. Asking $450. Ray KBØSTN (417) 781-4967, email kb0stn@arrl.net
10/2002

For Sale - ALINCO DR-570 2/440 FM 12VDC mobile rig w/20 memories. Good shape w/orig OP manual, mt. bracket, and mic. Asking $150. Ray KBØSTN (417) 781-4967 email kb0stn@arrl.net
10/2002

For Sale - ALINCO DRM-06H 6m 20W FM rig w/100 memories. Will recieve 40-60MHz Very good shape w/orig OP manual, and mic. Asking $150. Ray KBØSTN (417) 781-4967 email kb0stn@arrl.net
10/2002

For Sale - TEN-TEC 1209 2m-6m Transverter. 10W in 10W out, 12VDC. Good Shape. Kit assembled and tested. Operates okay w/kit manual (incl schematics). Asking $100. Ray KBØSTN (417) 781-4967 email kb0stn@arrl.net
10/2002

For Sale - KLM 2000A 2m All Mode Rig. Dual power 120VAC/12VDC, 5W transmitter. Collector's Item, (my second radio). Good shape w/orig. manual and hand mic. Asking $200. Ray KBØSTN (417) 781-4967 email kb0stn@arrl.net
10/2002

Wanted - Good 5 Element 6 meter Beam Ray KBØSTN (417) 781-4967 email kb0stn@arrl.net
10/2002

For Sale - several 386/486 CPUs Contact Wayne and make offer. WBØAAN (417) 438-0002 wgraham@4state.com
10/2002

DID YOU KNOW THE CLUB SELLS COAX AT COST TO CLUB MEMBERS?

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

AREA HAMFEST

NOTE: LISTINGS ARE PROVIDED FROM THE ARRL.ORG SITE AS THEY BECOME AVAILABLE. TO SUBMIT AN ENTRY, SEE BACK PAGE.

5 Oct 2002 - Joplin, MO - Joplin ARC
Annual JARC TailGater begins at 08:00 at the newly remodeled EWERT PARK Pavillion located just north of 7th St. and Murphy Blvd. Convenient parking and bathrooms available. The event, donuts, coffee, and sodas are FREE. Bring your items to sell, table, a chair, and money! Contact is Dave Ferguson, NØKMP 417-781-3154 or on 147.21 MHz (+)

5 Oct - Warsaw, MO - Twin Lakes ARC
First Annual HAMFEST 2002, Community Center 181 W. Harrison. NW Hwy. 7. Free parking, refreshments. Doors open 8a.m.-2p.m. Adm. $1, tables $5. VE Testing 1pm. Talk In 147.30+
Robert "Gene" Payne, KCØDRL 660-438-8650
Email: gpo@advertisnet.com

5 Oct - Belton, TX - Temple ARC
Ham Expo - at the Bell County Expo Center. This Swapfest held twice annually. Doors open at 07:00 - till 15:00. Admission $1.
Mike LeFan, WA5EQQ (254) 773-3590
E-mail: hamexpo@tarc.org

6 Oct - West Liberty, IA - Muscatine & Iowa City ARCs http://www.qsl.net/kc0aqs
Mike Hayden, KBØTFT 563-262-8790
Email: kb0tft@arrl.net

10-12 Oct - Denton, TX - Denton County ARC
Civic Center. Doors open at 08:00.
www.dentonhamfest.org

19 Oct - Grandview, MO - Southside ARC
12650 Manchester, Grandview Middle School
Donna Quick, KBØYJN, Phone: 816-537-7464
Email: kb0yjn@juno.com

26 Oct - Kirkwood, MO - 11th Halloween Hamfest. Kirkwood Community Center, 111 S. Geyer Rd. 07:30 till 13:00. Tickets $1 or 6/$5 adv., $2 at the door. Ken Craig, WAØIYY, 314-780-2959 wa0iyy@arrl.net
www.halloweenhamfest.org

9 Nov 2002 - Springfield, MO -
Ozarks Regional Hamfest. NEW Location & Date! New Expo Center at 2610 N. Glenstone, Springfield, MO. Lots of parking and 12,000 sq. ft. exhibtion area located near I-44/Glenstone Interchange. More details will follow soon.

October 2002

Joplin Amateur Radio Club Meetings and Events

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
		1	**2**	**3**	**4**	**5** JARC Tailgater - Ewert Park Starts at 08:00 09:00 Breakfast -
6 14:30 -16:00 JARC Slow Scan Net	**7** 19:30 JARC Mon Nite Net Net Control - WØJRP	**8** 19:30 JARC Business Meeting	**9**	**10**	**11**	**12** 09:00 Breakfast -
13 14:30 -16:00 JARC Slow Scan Net	**14** 19:30 JARC Mon Nite Net Net Control - NØZPD	**15**	**16**	**17**	**18**	**19** 09:00 Breakfast -
20 14:30 -16:00 JARC Slow Scan Net	**21** 18:30 VE Testing @ St. Pauls Methodist Church 19:30 JARC Mon Nite Net Net Control - NØKMP	**22** 19:30 JARC Club Meeting Program - tba	**23**	**24**	**25**	**26** 09:00 Breakfast -
27 14:30 -16:00 JARC Slow Scan Net	**28** 19:30 JARC Mon Nite Net Net Control - WD6FIC	**29**	**30**	**31**		

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 (+).

Some club members can be found weekday mornings around 8:30 a.m. meeting for coffee at the Ramada Inn at 34th and Rangeline Road. On Saturday mornings, area Hams also gather for breakfast around 9:00 a.m. at the resturant next to Smitty's Grocery located at 1820 Maiden Lane in west Joplin.
For details contact Martin, WD6FIC at (417) 623-6618

2002 CLUB OFFICERS:

President: Martin Matarazzo	WD6FIC
V. P. Dan Mouldin	KCØBBU
Treasurer: Jim Johannes	NØZSQ
Secretary: Mark Mitchelson	NØZPD

Amateur Radio VE Testing

License testing by volunteer examiners takes place on the 3rd Monday of each month at the 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 offers 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: **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 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.

PRINTED CIRCUIT

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Joplin, Missouri 64803-2983