

PRINTED CIRCUIT

October 1998

Newsletter of the Joplin Amateur Radio Club

Vol. 8 Issue No. 10

JARC OPERATING AWARD CONTEST

BY JOHN TUDENHAM WØJRP

HOW TO HEAR THE HURRICANE HUNTERS!

BY LARRY VAN HORN

The winners of the 1997-1998 operating award were as follows:

HF General/Extra Class

Jack Purdum KCOVR

HF Tech Plus Class

Brandon Farmer KCOAJH

VHF General/Extra Class

Jay Rupar K0ETC

VHF Tech Plus Class

Ray Brown KBOSTN

VHF Tech Class

Larry Hiatt KCOAUY

My congratulations to all that participated. I know log keeping and rules were difficult even for the contest manager, so we are going to make next year's a lot simpler.

THE JARC 1998-1999 OPERATING AWARD CONTEST

Begins October 15, 1998

Runs through October 14, 1999

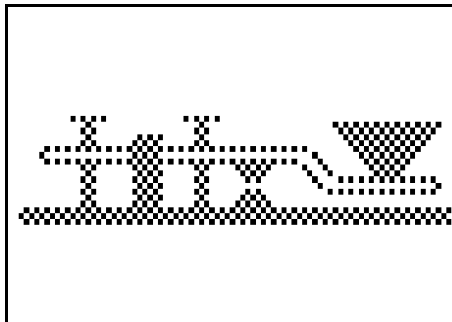
Classes - same as last years for both HF and VHF.

HF bands - General/Extra, Tech Plus, or Novice.

VHF Bands - Gen-Extra, Tech Plus, or Tech.

Rules for HF Operating

- ◆ 1 point is earned for each State or DXCC country worked on Voice.
- ◆ 2 points earned when CW or QRP is used.
- ◆ 3 points when CW and QRP (under 5 watts) are both used.
- ◆ 10 bonus points per band will be awarded for any station making at least one contact on each HF band including WARC bands. This



includes Tech Plus and Novice for contacts made on 80, 40, 15 and 10 meter bands.

Rules for VHF Operating

- ◆ 1 point for each grid square worked per VHF band
- ◆ 2 points when CW or QRP used, 3 points when CW and QRP used (under 5 watts)
- ◆ 10 bonus points will be awarded per band for each VHF band where at least on contact is made.

NOTE- Hawaii and Alaska count as

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After traveling around the net over the last couple of days to look at the various hurricane list out there, I've decided an update is definitely in order.

I just got off the phone with one of the pilots at the 53 WRS and interviewed him regarding the frequencies they are using for comms during their missions. Here is the scoop.

The 53 WRS uses the "Teal" callsign when they are on their hurricane hunter missions. When they are on an airlift mission they use "Hobby." The Swan and Gull callsigns are NO longer used.

Yes, they do use UHF milsat for DATA ONLY comms (no voice). I doubt it would be worth the time or energy to attempt to monitor since the Vortex and Recco messages sent via this data circuit are widely available on the net within minutes after they clear the aircraft.

From the HH website:

"A key part of the WRS is its ability to send data instantaneously via military satellite directly to the forecasters at the National Hurricane Center in Miami, or to another transceiver at Keesler Air Force Base, or a portable station which moves with the Hurricane Hunters wherever they go to chase the storms. The weather officer can also send written messages to the forecasters and staff on the ground, providing details of the storm and coordinating the mission."

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SOLAR UPDATE FOR OCTOBER SHOWS PROMISE FOR 10 METERS

Solar sage Tad Cook, K7VVV in Seattle, Washington, reports that Solar activity was down again last week, with the average sunspot number off by almost 54 points and the average solar flux down by 9 points. Average solar flux for the previous 90 days was 129, and flux values were well below this number on every day. The active geomagnetic days were October 1st and 2nd, and the following October 7th, when the planetary A index was 20 or more.

For the next few days expect a slightly higher solar flux, with flux values on October 9-11 predicted to be 135, 130 and 130. Solar flux should drop down below 125 until October 15, when it should begin to rise again, peaking around 140 from October 18-20, then dropping below 130 after October 23. Solar flux is expected to drop below 120 after October 26, then begin to rise around the end of the month. Expect unsettled conditions October 11, with a predicted planetary A index of 18, and again around October 15 and 24 due to coronal holes.

This fall is the season when we are starting to see 10-meter openings. October 10 is the 10-meter sprint sponsored by Ten-Ten International, so this band may show its stuff. From the author's QTH in Seattle, a path projection to New York City run on a popular propagation program shows a slight chance of a 10-meter opening from 1800 to 2030 UTC with a solar flux of 130. The MUF over that time varies from 21.8 to 22.8 MHz. Run the same numbers from Los Angeles to Atlanta, and the opening stretches from 1400 to 0200 UTC, and a period of excellent propagation from 1630 to 2200 UTC, with MUF as high as 35.2 MHz. The

southern path is about 500 miles shorter, but similar numbers are revealed when calculating a shorter northern path as well.

Sunspot numbers for October 1 through 7 were 47, 51, 38, 21, 49, 68, and 98, with a mean of 53.1. The 10.7-cm flux was 118.8, 112.7, 111.9, 114.8, 117.1, 117, and 124.2, with a mean of 116.6. The estimated planetary A indices were 21, 21, 14, 5, 7, 6 and 20, with a mean of 13.4. ¶

REPRINTED FROM THE ARRL WEBSITE

NEED A HAM PROJECT? DF THE OWLS

ARRL Amateur Radio Direction Finding Coordinator Joe Moell, KØOV, says Canadian Wildlife Service biologists again are seeking help from ham operators and monitoring enthusiasts in tracking the migration of the burrowing owl. Up to 40 radio-tagged burrowing owls will be migrating south from Alberta and Saskatchewan through the central United States in the next few weeks. These endangered birds are expected to find winter homes in southern Texas and nearby areas of Mexico. They are considered endangered in some places and "of special concern" in others.

Unlike other owls, burrowing owls don't roost in trees. They prefer to roost in cavities on the ground in the treeless grasslands.

If you have a scanner or extended range 2-meter receiver and live in the anticipated migratory path or in the wintering area of the owls, you can assist by listening for the radio tags, which emit pulsed signals near 172 MHz. They have greatest range at night when the birds are in flight. Your help is especially needed if you have portable direction finding equipment. ¶

THE WORLD OF VHF/UHF

BY JOHN TUDENHAM WØJRP

While few six meters openings have occurred with the close of the summer sporadic E season, good news is that with the solar flux increase in the new 11 year solar cycle long haul DX openings can't be far away. Talking to "Bill" WA0KBZ in Cuba, MO (northeast of Rolla), he reported a weak opening to Argentina one afternoon in late September. While Bill only runs 150 watts, he has an above average Antenna system. He has an 8 element beam (for six meters) about 70 feet in the air. I have visited his QTH and it is quite an array.

I missed the September VHF contest as I was in St Louis that weekend. However, KOETC and KCOAUY reported some short E skip openings to the east coast during the contest. Don Hilliard WOPW reported some fairly good morning tropo openings on two meters which I also missed.

The question frequently asked is "When can we expect some good worldwide DX openings on six meters?". I say it's coming. Looking back in my log of November 1989 I noticed QSOs with Europe, Africa, South America, Japan, and the Pacific. The average Solar cycle is about 11 years (plus or minus), so this puts the next peak around November in the year 2000. The solar flux peaked in late August at 177. It has dropped off somewhat since then but the trend is still up. October QST shows the Maximum Usable Frequency (MUF) for October and November on some paths peaking around 44MHz on 10 % of the days for a short time. This indicates it is possible to exceed 50 MHz for a short time on some peak days. For those interested, I would suggest looking at page 92 in October QST. Those of you that work 10 and 15 meters will notice that world wide DX has become a common thing. Still a little spotty on 10 and 12 but very good on 15 and also 17 Meters. The other day around

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LOCATING NOISE SOURCES

BY BRUCE CUMMINS KFØTD

I recently 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 the 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 desirable to other uses of transmitters, so the good sites are usually crowded. With all of those transmitters in close proximity, their imperfections tend to be more of a 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 our case, repeated.

A repeater's receiver can hear a weak signal close to it or a strong signal far away, and they **both** will sound the same coming out. The S-meter reading of a receiver listening to the repeater output will always read the same. 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 147.21 repeater is 147.810, 600kcs higher since we have a positive offset. For repeaters with

Buy/Sell Trade

For Sale - ICOM IC-3200 Dual Band 2m/70cm with internal Duplexer

Ask \$150.

Frank Goudace NØLEG (417) 781-7933

10/98

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

For Sale - Tower 50ft. Rohn 25G , 100ft. #9913 Coax

Make Offer.

Les Hovland AAØGY (417) 776-8420

4/98

For Sale - Kenwood TS-440S with PS-430 Power Supply, excellent condition, with manuals, has CW & SSB filters, auto antenna tuner built in. \$700

Billy Durham NØHNO (316) 251-4439

4/98

negative offsets, it will be 600kcs lower than the output frequency (i.e. Pittsburg 146.94 / 34).

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.

Remember, we're all in this together.

73's ☺

BRUCE IS A MEMBER OF THE JARC TECHNICAL COMMITTEE AND HAS EXTENSIVE BACKGROUND AS AN RF TECHNICIAN.

MISC NEWS ITEMS

CNN ANNOUNCES REPLACEMENT FOR JOHN HOLLIMAN

CNN announced that Miles O'Brien would replace the late John Holliman as co-anchor of the network's coverage of John Glenn's historic return to space. O'Brien will join CBS broadcast legend Walter Cronkite, KB2GSD, to report on Glenn's October 29 shuttleflight (STS-95). Sources at CNN said the coverage will be dedicated to Holliman, who was killed in a car crash September 12.

(From the New York Post/ShopTalk)

NEXT SAREX MISSION STS-93 IN JANUARY

The next Shuttle Amateur Radio Experiment (SAREX) payload will be aboard STS-93 with a scheduled launch date of January 21. Due to time constraints, and a long list of experiments and tests, the Amateur Radio payload had to be deleted from STS-95, scheduled for launch later this month.

The SAREX Working Group has asked not to be considered for flights involving construction of the International Space Station, due to heavy astronaut workload on these missions. This activity will lay the groundwork for the permanent Amateur Radio presence aboard the ISS, when it is completed and occupied. (From AMSAT News Service/This Week in Amateur Radio)

FCC RENEWS AMATEUR ENFORCEMENT EMPHASIS

Things may be changing for the better on the Amateur Radio enforcement front. The FCC announced this week that all

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They use primarily three HF nets for comms in addition to their normal VHF/UHF civilian/milair stuff.

GHFS: According to Colonel Peterson they use this when they need to talk to Miami or Keesler, etc. Look for them on the primary GHFS frequencies of 4724, 6712, 6739, 8968, 8992, 11175, 13200, 15016, and 17976 kHz. If the comms last any length of time or traffic is heavy they could move to a GHFS discrete, so listen for that frequency to be passed by the GHFS ground station.

MWARA: Used by the pilots for air traffic control purposes. Depending on where the storm is will determine which MWARA will be used the the HH folks. You will primarily catch them on the NAT or CAR freq families and when they are working the East Pacific storms look for them on the CEP family of freqs. According to the colonel they are using St. Croix in the Virgin Islands for a forward base in the Atlantic and Hickam as a forward base in the Pacific.

For an excellent list of HF MWARA channels a visit to WUN's Tony Orr website is a must. The URL is <http://patriot.net/~jetset/hf.html>.

The third HF net that Col. Peterson said they use, but rarely is the US Air MARS phone patch net. Some of the freqs that have been reported include: 7633.5 and 13927 kHz.

Bob Wyman and Allan Stern have been providing excellent coverage of the VHF/UHF freqs being used down their way and those freqs have also been confirmed by Col Peterson.

As for the Air-2-Air that Bob asked about I think the 304.8 is it. However, you might also want to check the following: 381.0, 283.7, 349.4 and 385.9 MHz. One of these could prove productive. Those of you within Keelser UHF range should watch the 53WRS CP freq of 349.4 MHz for comms. That freq was in use the last time I was down that way. Be sure to visit the 53 WRS website which has lots of great information at:

<http://www.hurricanehunters.com>

Have a great time out there and good hunting.

Larry Van Horn
Grove Enterprises
Assistant Editor/Staff Writer,
Monitoring Times Magazine
800-438-8155 in the US and Canada

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12 noon I heard Southern Europe stations very strong on 10 meters even with my Dipole Antenna.

Larry KC0AUY now has a 100 watt Amp on Six Meters to go along with his 3 element beam. Larry has submitted the paper work for his VUCC award from ARRL. All that done with 10 watts . I want to remind everyone of the weekly 6 meter FM net Thursdays at 9pm on 52.225MHZ (or close). Net control is WT0Y Horizontal, and KB0MSB Vertical.

Thats all from the World of VHF this month but hope we have more to report next month.

Send any reports to John Tudenham W0JRP at 624-8058, or email w0jrp@juno.com

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Amateur Radio-related enforcement investigation, evaluation, and processing has been transferred to the Compliance and Information Bureau. The change effective September 1, but not announced until more than three weeks later, was made "by internal arrangement" between the CIB and the FCC's Wireless Telecommunications Bureau. The Wireless Bureau handles amateur licensing and, for the past several years, has coordinated enforcement with the CIB.

The FCC said the main objective of the change was to "facilitate the

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HAMFEST CALENDAR

Note: Listings are updated as information becomes available.

October 17 Godfrey, IL
Lewis & Clark ARC Hamfest

October 23-25 Kingston, OK
Texoma Hamarama
Contact Herb Sleeper, WB5PHM
8144 Carriage Ln., Wichita Falls, TX
76306-4115 940-855-5820
E-mail: retmarine@cst.net
www.qsl.net/KC5SIG/HAMARAMA

October 24 Grandview, MO
THE OCTOBERFEST 1998 sponsored by the South-Side Amateur Radio Club Grandview Middle School, 12650 Manchester, same as last 5 years.
CASH PRIZES 1st-\$300.00, 2nd-\$200.00 hourly DOOR PRIZES. Adv.Tickets 4/\$5 Tables \$15 which includes one admission. Setup 6am, Doors open 8:00am-2:00pm TALK-IN 147.120+
LUNCH will be offered by the SSARC W5YI VEC exams start at 10:00am. MUST be pre-registered. Mail form 610 to P.O.BOX 12757
NORTH KANSAS CITY MO. 64116
For information Donna Quick KBØYJN (816)537-7464, email kb0yjn@juno.com or Mark Sevy KBØVWD (816)331-8948
Letters SSARC, P.O. BOX 701
GRANDVIEW MO. 64030

October 31 Kirkwood, MO
SLARC & GARA, Kirkwood (St. Louis County), MO. Halloween Hamfest 8:00a.m. to 1:30p.m. at the Kirkwood Community Center. For tables call Steve Welton at 314-638-4959. Talk in on the 146.91 repeater. For Info: Dennis McCarthy, AAØA 5022 Lansdowne Ave., St. Louis, 63109. 314-351-3568 or 314-533-0321 (Ext. 12) E-mail: mccardj@slu.edu

November 1 Des Moines, IA
Tivka Tracers ARC Hamfest

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Commission's pursuit of compliance," especially in the area of resolving interference complaints, a hot-button issue within the amateur community. "Amateur enforcement should have gotten more direct attention over the last few years," conceded Riley Hollingsworth, K4ZDH, the CIB's legal advisor for enforcement. "A lot of people think the FCC doesn't care."

Hollingsworth will be the FCC's point man in handling the complaints. He says FCC Chairman William Kennard "...wants greater respect with respect to enforcement" at the FCC. Putting enforcement in the CIB's hands should mean "a much faster, more effective response," he said.

ARRL General Counsel Chris Imlay, W3KD, says he's "cautiously optimistic" that the change will improve the dismal amateur enforcement situation. "Now, CIB doesn't have to just gather evidence and forward it to another bureau," Imlay said. "It can act on it when it is ready. That's a good situation compared to where we were."

The FCC's public notice said the CIB staff now handles Amateur Radio enforcement matters "from initiation to resolution." That includes complaints, amateur testing issues, warnings, monetary penalties, revocation hearings, and "in extreme cases" equipment seizure and prosecution through the Department of Justice.

The Wireless Bureau continues to handle Amateur Radio licensing, including new applications and renewals, as well as all Amateur Radio policy and rulemaking matters. The change is expected to have no impact on the Amateur Auxiliary. Hollingsworth said the change could, in fact, mean that the FCC will work more closely and more effectively with amateur volunteers in dealing with enforcement issues.

Under the new arrangement, all amateur enforcement questions and complaints should be directed to the Compliance and Information Bureau, Compliance Division, Attention: Amateur

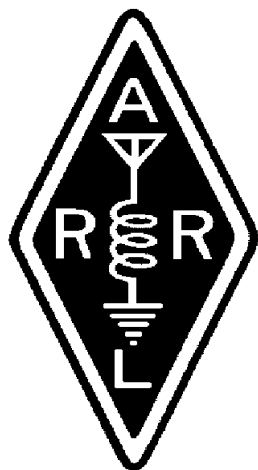
Complaints, 1919 M St, Mail Stop 1500E1, Washington, DC 20554.

The FCC also has instituted an "Amateur Enforcement Line" at 202-418-1184. The automated system prompts callers to leave a name, a number, and a brief message. The CIB will return the call within the next business day.

(From the ARRL Letter 10/2/98)

FCC'S NESS: ENSURE ADEQUATE SPECTRUM FOR AMATEURS

FCC Commissioner Susan Ness recently gave amateurs some cause for optimism. In remarks prepared for delivery September at the Personal



Communications Industry Association of America's PCS '98 in Orlando, Florida, Ness promoted the notion that some spectrum should be kept off the auction block. The value to the public of certain spectrum uses "does not always translate into pure

economic terms," Ness declared.

"For example, we need to ensure that adequate spectrum is available for public safety purposes, for unlicensed--that is, Part 15--uses, for the Amateur Service, and for experimental and scientific purposes," Ness said. "None of these needs would be met if auctions displaced judgment in the spectrum allocation process."

Addressing the topic "Blueprint for Spectrum Management," Ness said auctions work well but are not a substitute for the allocation process. The FCC, she said, must not back away from its fundamental duty to allocate "in accordance with the public interest." The

complete text of Commissioner Ness's remarks are available on the FCC Web site at <http://www.fcc.gov/Speeches/Ness/spsn815.html>.

(From the ARRL Letter 10/2/98)

ARRL ASSISTANT DIRECTORS

Assistant Directors (AD) are appointed by the Division Director. They are the local representative of the Director, and can answer many of your questions related to the League. They provide liaison with local organizations, and assist the Division Director in disseminating current information relative to Amateur Radio.

The following ADs have been appointed for 1998: (IOWA) K0AL, K0IIR, KD0BG, (MISSOURI) K0CA, K0GUG, KB0KK, KC0WX, N0TDW, K00Z, W0WC, KE0K, WA0CLR, (KANSAS) W0TQ, W0XJ, W0AFQ, W0CHJ, K0BXF, WD0BRZ. (NEBRASKA) K0GND, NF0N, W0AP and KK0DX.

ARRL MIDWEST DIVISION WEB PAGE

The Midwest Division now has its own web page on the Internet. Set up and maintained by Assistant Director Todd LeMense, KK0DX, newsletters, hamfests, conventions, and other items of interest are posted there. Check out <http://members.home.net/midwestarrl>

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DXCC country and as state, same as ARRL rules. DXCC country must be on official ARRL Country list.

Submit reports to contest manager

John Tudenham WØJRP

2824 Missouri

Joplin Mo 64804-2755

or email to w0jrp@juno.com

Any questions phone 417 624-8058

CALENDAR ON THIS PAGE

**ALSO UNUSED JUNK TO SAVE FOR
FUTURE ISSUES**

QRP FOR THE RADIO AMATEUR

BY JOHN TUDENHAM WØJRP



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 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.

1998 CLUB OFFICERS:

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

Amateur Radio VE Testing

License testing by volunteer examiners takes place on the 3rd Thursday of each month (except July) 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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