

OMIK TECH-TALK

OCTOBER / NOVEMBER 2015



<http://www.omikradio.org>

***An International Educational and Scientific Organization
Founded in August of 1952***

OMIK Tech-Talk is a monthly distribution of news and technical articles reviewed and chosen by our technical staff to provide you with timely ham radio-related topics collected from different sources on the Internet.

KØMIK

**OMIK Amateur Radio Association –
Net Schedule**

(NOTE: during Daylight Savings Time net times move back 1 hour)

	OMIK Nets meet on Sundays
20 Meter Phone	14.295 MHz from 16:00 - 18:00 UTC
40 Meter Phone	7.185 MHz from 12:30 to 14:00 UTC
75 Meter Phone	3.920 MHz from 12:00 - 13:00 UTC

Amateur Radio News

FCC Seeking User Comments On New Beta Website:

As part of an ongoing research and design project "to dramatically improve the usability and functionality" of its website, the FCC has debuted a new prototype website <https://prototype.fcc.gov/> and wants to know what users think about it. The FCC's 2011 website re-design was not well received, and the Commission has continued to maintain its previous, much older website design in tandem with the newer one.

Based on additional feedback the FCC receives during the beta website's "extended" testing period, "They intend to complete the switch to the new site fully later this fall." Users can submit their comments and suggested bug fixes by using a web form

<https://prototype.fcc.gov/eform/submit/feedback?destination=home> or e-mail WebFeedback@fcc.gov

Amateur Radio Parity Act of 2015 Now Has 100 Proponents in the US House

The Amateur Radio Parity Act of 2015 — H.R. 1301 and S. 1685 — now has the support of 100 members of the US House of Representatives. Two additional co-sponsors signed onto H.R. 1301 on September 24, raising the number of co-sponsors to 99. Those members plus the House bill's sponsor, US Rep Adam Kinzinger (R-IL), total 100 proponents, and the number is expected to continue growing.

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One of the newcomers agreeing to cosponsor H.R. 1301 was the congressman who represents the Connecticut House district that includes ARRL

Headquarters — Rep John Larson (D-CT). The other new cosponsor was Rep Kristi L. Noem (R-SD)

The Amateur Radio Parity Act of 2015 would direct the FCC to extend its rules relating to reasonable accommodation of Amateur Service communications to private land use restrictions. Kinzinger introduced H.R. 1301 in March, with 12 original cosponsors from both sides of the aisle. Sen Roger Wicker (R-MS) introduced S. 1685 in June, with Sen Richard Blumenthal (D-CT) as the original cosponsor.

Recently the League took steps to address objections and concerns raised by representatives of community associations about the legislation. “**Clarity on Amateur Radio Parity**,” makes it clear that the bill would *not* create new federal policy with respect to outdoor amateur antennas. As it points out, the FCC already recognizes a strong federal interest in effective Amateur Radio communication from residences and has adopted a limited preemption of state and local regulation of Amateur Radio antennas. The Amateur Radio Parity Act of 2015 would extend the limited preemption to private land-use restrictions. H.R. 1301 has been referred to the House Energy and Commerce Committee. Rep Greg Walden, W7EQI (R-OR), chairs that panel’s Communications and Technology Subcommittee, which will consider the measure. S 1685 has been referred to the Senate Commerce, Science and Transportation Committee’s subcommittee on Communications, Technology, Innovation, and the Internet, chaired by Sen Wicker, the bill’s sponsor. The ARRL continues to encourage members to write their US House and Senate members urging their co-sponsorship of the legislation. **Visit** the

Amateur Radio Parity Act of 2015 page for information on how you can get involved.

ARRL Executive Committee Presented with Draft Enforcement Improvement Plan:

At the ARRL Executive Committee (EC) meeting on October 3 in Bloomington, Minnesota, ARRL General Counsel Chris Imlay, W3KD, presented a draft plan for the improvement of timely and visible enforcement in the Amateur Radio Service. The ARRL Board had requested the draft at its July meeting. While no details of the draft plan were made public, Executive Committee members discussed actions envisioned in both the short and long term and offered comments that will be taken into account in the next revision of the draft plan. Regulatory matters were just one topic area on the wide-ranging EC agenda.

The Alan G. Thorpe, K1TMW, Memorial Scholarship Fund Established

Through the generosity of Alan G. Thorpe, K1TMW (SK), and the Stratford [CT] Amateur Radio Club (SARC), the **ARRL Foundation** has established the Alan G. Thorpe, K1TMW, Memorial Scholarship Fund. The fund will award \$1000 each year to an Amateur Radio licensee enrolled in a 4 year undergraduate program. Thorpe, who died in 2011 at the age of 65, was a member and long-time president of the SARC. “It was my pleasure and honor to know Alan G. Thorpe, K1TMW, for 20 years,” said fellow club member Bob Betts, N1KPR. “When he became a Silent Key, we learned that Al had left a significant trust fund designated ‘for the benefit of Amateur Radio.’” Betts said Thorpe also made a separate bequest to the ARRL in his will. “Al believed in the basic tenets of our hobby: Education, promotion, and community service, and he directed all his available efforts toward

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those goals,” Betts said. He noted that Thorpe had been involved in the Amateur Radio Emergency Service (ARES) and served as an Emergency Coordinator in the 1990s. Thorpe “strongly believed in the many and varied activities of the ARRL,” Betts added.

The ARRL Foundation will administer the Thorpe Memorial Scholarship Fund. Applicants must be US citizens. There are no requirements as to the field of undergraduate study. The first scholarship from the fund will be awarded in 2016.

“We, the trustees of the Alan G. Thorpe, K1TMW, Memorial Scholarship Fund, are very grateful to the ARRL for its help and guidance in achieving Alan’s wishes,” Betts said.

Use of 146.52 MHz FM Simplex Frequency Cleared for ARRL Contests

The ARRL Programs and Services Committee earlier this year unanimously adopted a recommendation from its VHF and Above Revitalization Committee to remove the rule prohibiting the use of 146.52 MHz simplex for making contest contacts. That change will go into effect starting on January 1.

The VHF and Above Revitalization Committee had concluded that the restriction was no longer necessary. The committee felt that permitting the use of 146.52 MHz would allow new/curious contesters possessing only FM-mode radios to stumble upon more contacts, increasing their chances of being drawn further into VHF+ contesting — the primary aim of the Revitalization Committee.

Advance notification of the rule change now has been communicated to the full Board, and the change becomes effective in 2016, starting with the ARRL January VHF Contest.

This change also will be incorporated into the

ARRL Field Day rules This change eliminates Rule 1.8 in the “**General Rules for ARRL Contests Above 50 MHz**,” with subsequent Rule 1 sections renumbered accordingly.

Amateur Radio Roundtable

Barry Fitchew N6VOH

Amateur Radio Roundtable is a live weekly amateur radio webcast, held every Tuesday night at 8 PM CDT (0100 UTC Wednesday) at W5KUB.com

ARRL November Sweepstakes

Two weekends of fun on CW and SSB, respectively — are just ahead. The CW event is November 7-9; the phone weekend is November 21-23. The contest period runs from 2100 UTC on Saturday through 0259 UTC Monday. Those planning to participate should check out the **2015 Operating Guide** (PDF).

For stations in the United States and Canada (including territories and possessions), the object is to exchange the required contact information with as many other US and Canadian stations as possible on 160, 80, 40, 20, 15, and 10 meters. There are several entry classes.

Affiliated Club competition continues to be a very popular aspect of Sweepstakes each year. Even members who cannot put in a full-time effort can contribute.

The Clean Sweep mug — for working all 83 ARRL/RAC sections — is available again this year, as are Participation Pins for anyone who completes more than 100 contacts on CW or phone during Sweepstakes.

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International DSTAR HF Testing Net – Winter Schedule

Archie Buchanan KD6OLH

Use your ICOM 9100/7100, or STAR Boarded non ICOM DSTAR HF, or the FLEX 6000 series radios with software 1.5 or better and the DV3000 card. They routinely have two-way communications coast to coast and North to South, South to Canada, Europe and Australia. They have had two-way contacts to Japan. And have been heard in South Africa.

They are on each band only for 5 min. or so as to spend less time, if the band is dead they move on earlier. You can go back to a good freq after the net. MONITOR REF030C to coordinate. They may need to move early or if the freq is busy. Since they do not want to step on any AM or SSB activity. They also use a web page to keep track of who and where we are at <http://hf.dstar-relay.net/> You also can check-in to this web site anytime 24/7 to find a DSTAR HF Ham to talk to. They will have a **PRENET** for 30 min. before the start of the scheduled time. This PRENET is for 'FREE FORM' contacts. One should check the web site <http://hf.dstar-relay.net/> sign in and find a working freq to work on. When the net starts at the scheduled time, please join the net and follow the freqs.

DSTAR HF VOICE SCHEDULES Sat PM 7:00 E (2400Z) Sunday AM 10:00 E (1500Z Sunday) (Spend more time on each open band, and start on 80m)

Sunday PM 7:00 E (2400Z)

**Tuesday and Thurs night at 8:30pm E (0130Z
Wed and Fri)**

Check USB/LSB on freq to make sure the freq is clear. SUNDAY AM, we start with 80m and work "Digital voice is defined in the Commission's rules as voice (i.e. phone), not data, per Section 97.3(c)(5) of the Rules

Electronics Refresher

What is resistance?

Electrons move through a conductor when electric current flows. All materials impede flow of electric current to some extent. This characteristic is called resistance. Resistance increases with an increase of length or decrease of cross-section of a material.

The unit of measurement for resistance is ohms and its symbol is the Greek letter omega (Ω). The resistance of one ohm means a conductor allows a current of one amp to flow with a voltage of one volt.

All materials are different in allowing electrons flow. Materials that allow many electrons to flow freely are called conductors such as copper, silver, aluminum, hydrochloric solution, sulphuric acid and saltwater. In contrast, materials which allow few electrons to flow are called insulators such as plastic, rubber, glass and dry paper. Another type of materials, semiconductors have characteristics of both conductors and insulators. They allow electrons to move while being able to control flow of electrons and examples are carbon, silicon and germanium, etc.

The resistance of conductor depends on two main factors as the followings:

1. Types of material
2. Temperature of material

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Classes & VEC Testing

None scheduled

*You can find an Amateur License Exam
In your area at ARRL.ORG*

http://www.arrl.org/exam_sessions/search

*Free Amateur Radio Practice Testing is
available on the Web*

Practice exams are for those people who would like to study for a new US amateur radio license class. The questions contained within are provided by the

Federal Communications Commission and are selected from the same sub-elements that would be used for an official license examination.

<http://aa9pw.com>

<http://www.qrz.com/exams>

<http://hamexam.org>

<http://www.eham.net/exams/>

Safety Tip

First Aid

Just like engaging in any other hobby that involves the potential for injury, having some elementary skills in first aid is important. Have a first aid kit in your home or shack and be sure other family members know where it is and how to use it. Training in first aid and CPR is always a good idea for you and your family, regardless of your hobby.

Digital Radio Info

The OMIK Amateur Radio Association has XRF185 reflector up and running. If you are a D-Star user and would like to use it, feel free. Contact Frank at k6fed@yahoo.com he will provide you with the information. The Dashboard is located <https://xrf185.dyndns.org> There is also a lot of activity of the following Dstar Reflectors:

General Rag chew

<http://ref004.dstargateway.org/>

Local and DX

<http://ref001.dstargateway.org/>

Late Night Rag chew

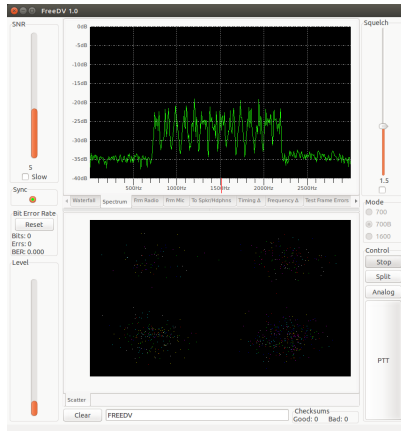
<http://ref030.dstargateway.org/>

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FreeDV



FreeDV is a Digital Voice mode for HF radio. You can run FreeDV using a free GUI application for Windows, Linux and OSX that allows any SSB radio to be used for low bit rate digital voice. Alternatively you can buy a SM1000 FreeDV adaptor that allows you to run FreeDV on any HF radio without a PC or sound card. If you are a hardware or software developer, you can integrate FreeDV into your project using the

LGPL licensed FreeDV API.

Speech is compressed down to 700-1600 bit/s then modulated onto a 1.25 kHz wide signal comprised

of 16 QPSK carriers which is sent to the Mic input of a SSB radio. The signal is received by an SSB radio, then demodulated and decoded by FreeDV. FreeDV 700(B) rivals SSB in its low SNR performance. At high SNRs FreeDV 1600 sounds like FM, with no annoying analog HF radio noise.

FreeDV was built by an international team of Radio Amateurs working together on coding,

design, user interface and testing. FreeDV is open source software, released under the GNU Public License version 2.1. The modems and Codec 2 speech codec used in FreeDV are also open source.

Arduino for Ham Radio Consider a Arduino Microcontroller Projects You Can build Today!



Arduino is a popular open-source single-board microcontroller, descendant of the open-source Wiring platform, designed to make the process of using electronics in multidisciplinary projects more accessible. The hardware consists of a simple open hardware design for the Arduino board with an Atmel AVR processor and on-board input/output support. The software consists of a standard programming language compiler and the boot loader that runs on the board.

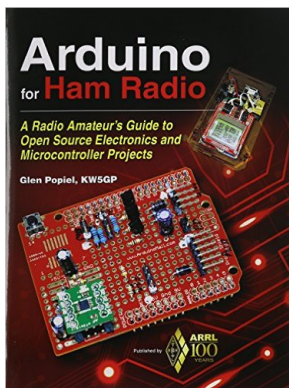
Arduino hardware is programmed using a Wiring-based language (syntax and libraries), similar to C++ with some slight simplifications and modifications, and a Processing-based integrated development environment.

The Arduino has become widely popular among hobbyists and ham radio operators. Hams are exploring these powerful, inexpensive microcontrollers, creating new projects and amateur station gear. With its Open Source model, the Arduino community freely shares software and hardware designs, making projects easier to build and modify.

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Do-it-yourself projects include: LCD shield
Station timer; general purpose panel meter;
dummy load and watt meter; CW automatic keyer;
Morse code decoder; PS2 keyboard; CW encoder;
universal relay shield; flexible sequencer; rotator
controller; directional watt and SWR meter;
simple frequency counter; DDS; VFO; and,
portable solar power source.



Arduino for Ham Radio introduces you to the exciting world of microcontrollers and Open Source hardware and software. It starts by building a solid foundation through descriptions of various Arduino boards and add-on components, followed by a collection of ham radio-related practical projects. Beginning with simple designs and concepts and gradually increasing in complexity and functionality, there is something here for everyone. Projects can be built quickly and used as-is, or they can be expanded and enhanced with your own personal touches.

For Sale or SWAP

For Sale:

ALS 600 AMP Solid State W/Pwr Sup...\$950.00
Kenwood TS 450 SAT...Excellant cond. 495.00
Kenwood SpeakersSP 31.....
ALS 500 Mobile Amp..... 495.00
Kenwood 870 Transceiver..Excel cond.1200.00
Icom 706 M2G HF, VHF, UHF.....\$600.00
MFJ 962C Verse Tuner III 175.00
GAP Challenger Vert. Antenna.....200.00

More items available, Pwr Supplies & Meters.
Better Price if Picked-up....

Hugh White,
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This space is reserved for anything amateur related you want to sale, swap trade, buy or get rid of. Send your list to K6FED@yahoo.com. Items are listed for one month. Additional time can be requested by email.