OMIK TECH-TALK

JUNE 2016

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

OMIK is now using Dstar reflector REF074C on Sunday mornings to assist the net controllers with check-ins. If you can't hear the net because of band conditions and you have the resources to communicate on Dstar try checking in on REF074C. You can view the reflector dashboard by typing the link below in your web browser. http://REF074.dstargateway.org. If you need assistance reaching the reflector contact Frank K6fed@yahoo.com.

ARRL "Strongly Supports" Petition to Drop 15 dB Restriction for Amateur Amplifiers

Source: ARRL

On May 26, the ARRL said it "strongly supports" a petition to the FCC seeking to eliminate an Amateur Service rule, spelled out in §97.317(a)(2), that amateur amplifiers not be able to boost the RF input signal by more than 15 dB. The *Petition for Rule Making* (**RM-11767**), was submitted in April on behalf of an amateur amplifier distributor, **Expert Linears America LLC** of Magnolia, Texas.

"The *Petition* proposes relief that is in the nature of eliminating unnecessary regulatory underbrush, and it continues an effort started by the Commission on its own motion in 2004…to do precisely that," the ARRL said in its comments. "The rule proposed to be eliminated is outdated; it constituted overregulation when it was adopted long ago, and it now substantially limits the flexibility of Amateur Radio operators to experiment with the current generation of software-defined Amateur Radio equipment."

The 15 dB provision came into the rules during an era when the FCC initiated various actions to rein in a major interference problem resulting from the use of illegal 11 meter amplifiers during the Citizens Band radio boom of the 1970s. "In its effort to address that problem, the Commission enacted a series of largely redundant and overlapping regulations that, in their overall effect, unnecessarily (and inappropriately) penalized the wholly innocent Amateur Radio operators," the League asserted. "There was created a plethora of restrictions on manufacturers of external RF power amplifiers."

The ARRL noted that while the FCC eliminated some of the unnecessary regulations in 2004, others remain, including the 15 dB gain restriction.

The rules adopted in 1978 also called for type acceptance (certification) of manufactured RF power amplifiers operating below 144 MHz, including a 50 W minimum drive power requirement and a ban on amplifiers capable of operation between 24 and 35 MHz.

"Indeed, precisely the same rationale for elimination of the 50 W minimum drive power rule in 2006 applies to the elimination of the 15 dB gain rule for amateur amplifiers," the ARRL said in its comments. "There is no continued justification for retaining the 15 dB gain limitation."

The League agreed with the petitioner that a current generation of low-power Amateur Radio transceivers, including software-defined designs, cannot drive an amplifier to full legal power given the 15 dB limitation. "It should not be necessary to configure an Amateur Radio station to include an additional amplifier stage in order to make use of current SDR technology in the Amateur Service," the ARRL said.

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Four New Section Managers to Take Office this Summer:

Source: ARRL

New Section Managers will take over this summer in four ARRL sections -- Alabama, Indiana, Oregon, and Wisconsin. In Alabama, JVann Martin, will become the new section manager. Martin is currently ARRL Emergency Coordinator for Jefferson County. He's been licensed for more than 20 years. Martin serves as the Director of Emergency Management and Facilities at UAB Hospital. He is a founding member and President of the Healthcare Community Amateur Radio Club. Martin will begin an 18-month term on July 1, rather than the nominal 2 years, because no candidates were nominated by the September 4, 2015, deadline, and nominations were re-solicited.

In Indiana, Brent Walls, N9BA, of Indianapolis, will take over as the new SM on July 1. He has been the Assistant SM under incumbent SM Joseph Lawrence, K9RFZ, of Fort Wayne, who decided not to run for a new term after serving since July 2014.

In Oregon, John Core, KX7YT, of Portland, will take the section reins from Everett Curry, W6ABM, of Hillsboro, on July 1. Curry, Oregon's SM since January 2014, decided not to run for another term. Core is currently a District Emergency Coordinator and Assistant Section Emergency Coordinator.

In Wisconsin, Patrick Moretti, KA1RB, of Dousman, will become the new Section Manager on July 1. He was the sole nominee for the post being vacated by Gary Sorensen, W9ULK, of Oxford, who has been SM since July 2013. Moretti has been serving as the Wisconsin Official Observer Coordinator, an Official Observer, and a Technical Specialist.

Six incumbent Section Managers face no opposition in this election cycle and have been elected for new terms starting on July 1: Ray Hollenbeck, KL1IL (Alaska); Tom Ciciora, KA9QPN (Illinois); Bill Crowley, K1NIT (Maine); Steve Szabo, WB4OMM (Northern Florida); Brandon Bianchi, NI6C (Santa Clara Valley), and Paul Gayet, AA1SU, (Vermont).

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2016 ARRL Field Day June 25-26

To work as many stations as possible on any and all amateur bands (excluding the 60, 30, 17, and 12-meter bands) and to learn to operate in abnormal situations in less than optimal conditions. Field Day is open to all amateurs in the areas covered by the ARRL/RAC Field Organizations and countries within IARU Region 2. DX stations residing in other regions may be contacted for credit, but are not eligible to submit entries.
Source: ARRL

(Repeat Article)
New Amateur Extra Question Pool Puts Greater Emphasis on Digital, SDRs, Propagation:

The new Amateur Extra class license examination question pool, effective from July 1, 2016, through June 30, 2020, now is available at the National Conference of Volunteer Coordinators (NCVEC http://www.ncvec.org/) website. The latest revision contains a few minor corrections that had been released in a February 5 errata of the initial January 8 release.
Source: ARRL Newsletter

(Repeat Article)
FCC QUESTION POOL REVISED FOR JULY 1, 2016

The FCC question pool for Amateur Radio Extra license exams has been revised and will be effective for exams conducted on or after July 1, 2016. ARRL will produce new study materials in preparation for the new Extra exam.

Source: ARRL News Letter

Classes & VEC Testing

None scheduled

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Ham Radio License Exam Practice

The ARRL has a online resource that allows users to take randomly generated practice exams using questions from the actual examination question pool. **ARRL Exam Review for Ham Radio™** is *free*, and users do *not* need to be ARRL members. The only requirement is that users must first set up a site login (this is a different and separate login from your ARRL website user registration).

http://arrlexamreview.appspot.com

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://www.qrz.com/hamtest/

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

http://arrlexamreview.appspot.com

Find and Exam in Your Area:

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

http://www.arrl.org/find-an-amateur-radio-license-exam-session/

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

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

Good Amateur Radio Practices

Every once and a while it is good to have a reminder of what are some good and bad amateur radio practices. Below is a suggested list of Do's and Don'ts.
Most hams have developed good operating practices and etiquette simply by listening to more experienced hams and you will as well. Here are some ideas for your consideration**.**

Source:
http://campus.murraystate.edu/org/msuarc/goodoperatingpractices.htm

Do Always be polite regardless of the circumstances. If not, avoid transmitting.

Do Set a good example especially for short wave listeners who may be thinking about becoming a ham.

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Do Be a good listener. It will help you better organize your thoughts before transmitting.

Do Reply to a CQ, or call CQ yourself. It helps keep alive the magic of ham radio.

Do Speak clearly and slowly, especially when giving your call sign to someone you have never worked before.

Do Promote friendship and goodwill to DX contacts. Look for ways to get to know each other rather than simply exchanging signal reports and 73s!

Do Try to keep track of everyone in the QSO. Hopefully someone has assumed the role of "traffic director" to make sure everyone has a chance to contribute to the discussion. If not, don't hesitate to do it yourself.

Do Make it clear at the end of each transmission which station is expected to transmit next. Try to do this even when operating VOX.

Do Operate on frequencies that are in whole KHz (e.g. 18.130 Khz). This alleviates ambiguity and makes it easier for everyone to be on the same frequency.

Do Openly praise other hams when you observe them doing something that you feel is especially deserving. e.g., helping demonstrate ham radio to a group of scouts.

Do Always be ready to quickly and calmly respond to emergency situations. Rehearse what you would do if presented with various scenarios.

Do Pause between transmissions. "Quick keying" gives the appearance that other hams are unwelcome in your QSO.

Do Consider using the Internet to enrich your QSO. Many hams have developed their own comprehensive websites which you can usually find through QRZ.COM.

Do Respect the privileges of hams operating in other modes on the HF bands including those who enjoy AM.

Do Make a point to try 17 and 60 meters. Good operating practices are especially prevalent on these bands.

Do Look for opportunities to "Elmer" newly licensed hams when you hear them on the HF bands. Welcome them, solicit their questions and give them pointers on good operating practices.

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Do Remember that no one country can proclaim to be the leader of the Amateur Radio world. Likewise, no one country's foreign policy is any more right or wrong than that of another country.

Do Develop good operating practices. You will be doing your part in helping insure the continuance of our long and proud tradition of self-regulation.

Don't Act like some sort of Broadcast Radio station. Your fellow Amateurs will most likely not appreciate such a blatant display of personal ego.

Don't Acknowledge the presence of deliberate interference. After all, that's most likely the overall objective of the person doing the interfering.

Don't Be excessively long winded especially when in a round-table discussion and during times when band conditions are changing.

Don't Just talk about ham radio. Most hams have many more interests.

Don't Operate when you are in a bad mood. You will be that much more vulnerable to losing your temper.

Don't Overuse Q-codes and other ham jargon on the phone bands.

Don't Claim or homestead any particular frequency for nets, schedules, etc. If your designated frequency is already in use, simply move up or down as necessary.

Don't Transmit before first determining that the frequency is clear. This includes transmitting within 3Khz of other known QSOs.

Don't Break into an ongoing QSO unless you can hear the majority of the participants.

Don't ignore someone new to a round table QSO. We should all do our part to make everyone feel welcome. Avoid making the discussion appear exclusive to your particular circle of friends.

Don't Test your transmitter over the air. It is far better to use a dummy load.

Don't Cough, sneeze or clear your throat into your microphone.

Don't Operate VOX except when in a QSO with three or less participants. It tends to foster "quick keying" which may give the appearance that you don't welcome breakers.

Don't Become a "Band Policeman" quick to tell others what you feel they are doing wrong. In instances where it may be called for, always be polite and constructive.

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Don't Turn up your microphone gain or resort to excessive speech processing in order to be heard. Such practices will most likely result in diminished audio quality and increased likelihood of interference to nearby QSOs.

Don't Use the word "break" when wanting to join an on-going QSO. Simply give your call sign between transmissions and reserve the use of the word "break" for more urgent situations.

Don't Join an ongoing QSO unless you have something to contribute to the discussion. It is especially rude to interrupt other hams with a request for audio checks, signal reports, etc.

Don't Operate in any fashion that is not in keeping with good amateur practice. Be certain to always comply with the provisions of Part 97 of the rules.

Don't Knowingly interfere with an ongoing QSO just because you are working DX, especially split frequency.

Don't Say that the frequency "is not" in use when you hear someone inquire. Refrain from responding at all unless you know for certain that the frequency or one nearby "is" in use.

Don't Ridicule other hams or express any negative views of the overall state of Amateur Radio. If you don't have something positive and constructive to say, avoid saying anything at all.

Electronics Refresher

Safety

Safe Soldering Checklist

http://www.dummies.com/how-to/content/safe-soldering-checklist.html

If you're tackling an electronics project, you're tackling soldering as well. Soldering poses a few different dangers: The soldering iron itself gets mighty hot; the solder (the material you heat with the iron) also gets hot; occasionally you even get an air pocket or impurity that can pop as you heat the solder and send bits of solder flying. Solder also produces strong fumes.

So, to stay as safe as possible, always follow these soldering safety guidelines:

- Always wear safety glasses when soldering.
- Never solder a live circuit (one that is energized).

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- Soldering irons come in models that use different wattages. Use the right size soldering iron for your projects; too much heat can ruin your board or components.
- Solder in a well-ventilated space to prevent the mildly caustic and toxic fumes from building up and causing eye or throat irritation.
- Always put your soldering iron back in its stand when not in use. Be sure that the stand is weighted enough or attached to your worktable so that it doesn't topple over if you brush against the cord.
- *Never* place a hot soldering iron on your work surface: You could start a fire.
- Never, *ever* try to catch a hot soldering iron if you drop it. Let it fall, buy a new one if you have to — just don't grab it!
- Give any soldered surface a minute or two to cool down before you touch it.
- Never leave flammable items (such as paper) near your soldering iron.
- Be sure to unplug your soldering iron when you're not using it.

Radio and Software Tech Talk

BrandMaster Technology

Source:
https://bm.pd0zry.nl/index.php/What_is_BrandMeister

Brandmiester Dashboard

http://brandmeister.network/

BrandMeister is an operating software for master servers participating in a worldwide infrastructure network of amateur radio digital voice systems.

- If you are a radio amateur working in digital voice modes like D-Star, DMR, C4FM, APCO25 or others (not all are supported yet!!), you do not need to know much about BrandMeister, you will easy operate on it's infrastructure.
- If you are a radio amateur operating a repeater for your local area, you may be interested in some more about BrandMeister and how you can take part with it.

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A brief overview of BrandMeister core features:

- Switching system for IP-enabled conventional DMR radio
- Supports the most known network-access and end-user equipment, easy expandable
- Performs switching on the Layer 3 (Call Control) of DMR stack
- Has embedded data stack (Layer 4)
- Has embedded data and voice applications
- Flexible routing based on data of global database, local in memory cache and Lua scripts
- Event notification using messaging queues (calls, connections, alarms, messages, locations and telemetry)
- Allows to build own network based on mesh technology

BrandMeister allows you to connect to MOTOROLA DMR-MARC and Hytera DMRplus networks, this means you can operate with DMR radio amateurs on both infrastructures the same time.

How to use Hose Brandmiester to monitor DMR QSO's

Try it Before you buy it.

http://hose.brandmeister.network/scan/

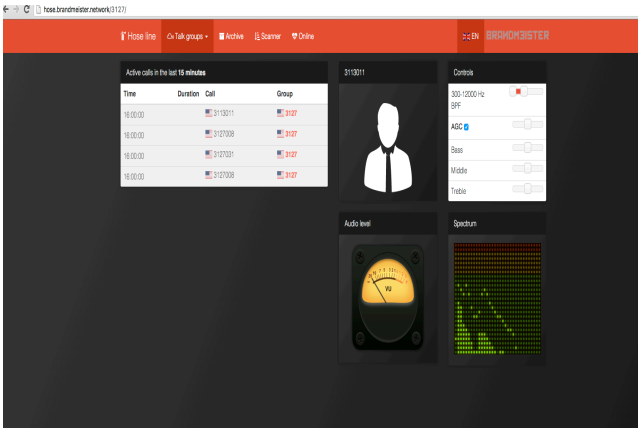
1. Click on the SCANNER menu

2. Under the duration column look for the seconds to change,

3. If you see activity Click on the number under the Group column

4. Wait a few seconds and if there is still activity you will hear the DMR QSO.

Repeat steps 1 thru 4 to listen to another QSO



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ThumbDVTM AMBE+2 Vocoder with USB Interface

http://nwdigitalradio.com/products/

The ThumbDVTM adds D-STAR DV capability to your computer or laptop. Allowing you to get on the D-STAR network without a radio.

For Sale or SWAP

For Sale:

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.