

# OMIK TECH-TALK

## NOVEMBER 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)

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

**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](mailto:K6fed@yahoo.com).

Here is a list of common D-Star **websites, Nets and dashboards** that we frequently use.

The Dashboards will tell you who is on the reflector and the last time someone transmitted.

**Link to Current Dstar Net Listings:**  
<http://dstarinfo.com/nets.aspx>

**This link tells you who is currently using the REF Reflectors**  
<http://www.dstarusers.org/>

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**Dashboard for REF001 = Daily Ragchew + lots of DX, International D-STAR Net Sun 19:00 CST**  
<http://ref001.dstargateway.org/>

**Dashboard for REF004 = Ragchew, Texas Dstar Net Tue 22:00 CST**  
<http://ref004.dstargateway.org/>

**Dashboard for REF012 = Ragchew PAPA System Dstar Net Thur 22:00 PST**  
<http://ref012.dstargateway.org/>

**Dashboard for REF030 = Daily Ragchew + some DX**  
<http://ref030.dstargateway.org/>

**Dashboard REF074 = OMIK net (REF074C) Active on Sun 8:00 - 10:00 am PST**  
<http://ref074.dstargateway.org/>

**Dashboard for XRF295 = General Ragchew module A thru C**  
<http://xrf295.dyndns.org/>

**Dashboard for XRF398 = General Ragchew module A thru C WARFA net on Sun, Tue and Thru 20:00 - 21:30 PST XRF398C**  
<http://xrf398.dyndns.org/>

**Dashboard for XRF555 = General Ragchew, DStar Roundtable (XRF555A) Thur 20:00 PST**  
<http://xrf555.w6kd.com>

### **Amateur Radio News Briefs**

#### **ARRL Gauging Impact of Revised California Distracted Driving Law:**

**Source: The ARRL Letter on October 6, 2016**

California has upped its game in cracking down on distracted driving, and radio amateurs there are concerned that a recent revision to the state's Motor Vehicle Code could affect Amateur Radio mobile operation. The old law, which included an Amateur Radio exemption, already prohibited motorists from using electronic wireless communication devices to write, send, or read a text-based communication while in motion, unless the device was configured for voice-operated and hands-free operation. The revised law does not exempt Amateur Radio.

Assembly Bill 1785, signed into law on September 26 by Governor Jerry Brown, prohibits a motorist from driving "while holding and operating" a handheld wireless telephone or a wireless electronic communication device, as defined by the code. But it authorizes a driver to operate

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such devices mounted on a vehicle's windshield like a GPS or on the dashboard or center console "in a manner that does not hinder the driver's view of the road," if the driver can activate or deactivate a feature or function "with the motion of a single swipe or tap of the finger."

The language defining devices covered by the law does not accurately specify what activity is prohibited, leaving its application subject to misinterpretation by individual law enforcement officers, but it does not specifically proscribe use of mobile Amateur Radio equipment for voice communication. The list of covered devices includes, but is not limited to, "a broadband personal communication device, a specialized mobile radio device, a handheld device or laptop computer with mobile data access, a pager, or a two-way messaging device." A first offense would incur a \$20 base fine and \$50 for subsequent offenses.

Initial wording of the legislation was not considered to be a threat to Amateur Radio operation, but the measure's language changed substantially as it worked its way through the California General Assembly.

ARRL General Counsel Chris Imlay, W3KD, said there are two principal ways to protect Amateur Radio in this type of legislation. "One is by sufficiently

narrowly defining prohibited activity so as to exclude Amateur Radio," he said. "The other is to create specific exemptions where the definitions are confusing. This new statute is an example of bad legislative draftsmanship. It creates a motor vehicle law with citations issued for certain activity that includes the words 'but is not limited to' in the language defining the violation."

In addition to scrutinizing the language of the revision, ARRL will be consulting with Field Organization officials in California to determine its next steps.

## **New Study Guide for Technician / General:**

Mark Kleine (N5HZR)

Source: The ARRL Letter on October 7, 2016

The Correct Radio Amateur Answers Manual (CRAAM) is produced to help people to obtain their Amateur Radio License. The Federal Communications Commission (FCC) requires that all amateur radio operators (hams) must pass a written test to obtain a license. As with all federal tests, the actual question pool, and answers, including distractors, are published for review. This new manual

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presents all of the questions, and **ONLY** the right answers.

The distractor answers have been removed, so all you'll see is the question, with the correct answer in bold type. For years, amateur radio trainers have suggested that you **NOT** look at the distractors, or that you should highlight the right answers, while ignoring the wrong ones. With this manual, you don't have to do that.

This new manual also contains all three amateur radio license classes of Technician, General and Extra. The general idea with this type of manual is that you can use your short term memory to help you pass your tests. Once your licensed, you'll have plenty of time to learn the different portions of our hobby that you enjoy. The Technician test information is valid until June 30, 2018, General until June 30, 2019, and the Extra portion is valid until June 30, 2020.

**Also note that OMIK also has its own version of study materials available free upon request.**



### *Classes & VEC Testing*

*None scheduled*

### **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>*

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### *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/>

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[http://www.arrl.org/exam\\_sessions/search](http://www.arrl.org/exam_sessions/search)

### **Electronics Refresher**

*What is a Repeater and Why is it Needed, and How Does It Work?*

#### **Source:**

<http://www.hamuniverse.com/repeater.html>

What: It's a two-way radio system that receives on one frequency, then re-transmits what it receives on another frequency; at exactly the same time. It's nothing more than a "dumb electronic machine" with some smart people behind it.

Why it's needed: Your mobile or hand held transceiver, has a limited range due to it's antenna height with respect to the radio horizon and rf attenuating surroundings. Repeater systems are used to "transfer" your transmitted and received signals to much higher levels electronically using large, very efficient high gain antennas, low loss feedlines and a transmitter and receiver that is rated for heavy or continuous duty. A repeater "gets out" your signal and receives the station you are talking to with a far greater range and coverage area! You take advantage of the repeater's higher elevation to increase your effective transmitting and receiving coverage versus your mobile or hand held transceiver!

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### **How do you make a call on an Amateur Repeater?**

First, LISTEN AND LISTEN SOME MORE..... to make sure that the repeater is not already in use. When you are satisfied that the repeater is not in use, set your transmitter power to the minimum and increase only as needed to make contact with the repeater, begin with the callsign of the station you are trying to contact followed by your callsign. e.g. " N4??? this is N3???". (The N3??? is your callsign). If you don't establish contact with the station you are looking for, wait a minute or two and repeat your call.

If you are just announcing your presence on the repeater it is helpful to others that may be listening if you identify the repeater you are using AND your callsign. e.g. " This is N3??? listening on the 84 machine or you could also say This is N3??? listening on 146.84 Dallas or the location of the repeater if known. This allows people that are listening on radios that scan several repeaters to identify which repeater you are using.

If the repeater you are using is a busy repeater you may consider moving to a simplex frequency (transmit and receive on the same frequency..... see more below), once you have made contact with the station you were calling. Repeaters are designed to enhance communications between stations that normally wouldn't be

able to communicate because of terrain or power limitations.

If you can maintain your conversation without using the repeater, going "simplex" (both stations on same frequency in a different part of the band) will leave the repeater free for other stations to use that can't establish simplex communications!

### **Repeater Etiquette and Reporting Emergencies**

The first and most important rule before using a repeater is to LISTEN FIRST. Nothing is more annoying than someone that "keys up" or DOUBLES in the middle of another conversation without first checking to make sure the repeater is free. If the repeater is in use, wait for a pause in the conversation (watch your S meter and wait for it to drop indicating the repeater is listening) and simply say "Emergency, Emergency, Emergency", and wait for one of the other stations to acknowledge your call. If for some reason you are not heard, then repeat the 3 "Emergencies" again...then if you are still not heard, try another nearby repeater.

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## Safety

### Working on Linear Amplifier

#### Source:

<http://www.w6kan.com/sb200.htm>

- Never work on the unit when it is connected in to a source of electricity.

- Use a “chicken stick” (if you have access

to the QST September 2003 check out the graphic) to make sure every contact that you intend to touch with your hands is not “alive”. This is especially important around the high voltage section where electrolytic capacitors could be still charged if the bleeding resistors have not dissipated the stored voltage. Often the “bleeder” resistors are non functional or the solder joints have come undone leaving the capacitor charged with very dangerous voltages. (Tim Reynolds WA9EEH suggested that a 10 ohm 20 watt resistor should be placed in series with the shorting wire to avoid damaging charged electrolytics.)

- I wear rubber soled shoes so that my feet are not grounded. I never stand on a wet surface for obvious reasons.

- If possible, I only use one hand keeping the other more or less behind my back. If

this is not possible I do a double grounding check with the “chicken stick” to once again make sure there are no voltages present on the areas that I may contact.

- I never work on amplifiers if I am tired.

- When possible I have a friend help.

## New Equipment

### **Baofeng DM-5R Dual Band DMR Digital Radio Walkie Talkie, VHF / UHF 136-174 / 400-480MHz Two-Way Radio**

DM-5R is BaoFeng's FIRST DMR DIGITAL radio. It is also the FIRST DUAL BAND DMR DIGITAL radio so far. Under DMR model, BaoFeng DM-5R is compatible with digital and analog model. Communicate with any other two-way radio using the VHF 136-174 MHz or the UHF 400-480 MHz frequencies, depending on your needs.

DM-5R features the latest in digital technology to bring you crisp, clear sound when transmitting and receiving.

Longer Life - With a high capacity 2000mAh battery and featuring an upgraded power-saving mode, and an upgraded standby feature, the DM-5R will be there when you need it. The DM-5R transmits for a total time of 14 hours on a

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single charge, and will stay powered on in standby for up to 30 hours on a single charge.

Featuring 128 channels and high-fidelity audio, the DM-5R ensures that your team can maintain clear and organized communications.

### ***For Sale or SWAP***

#### **For Sale:**

The following Items are listed by Fred, KD6DKH he can be reached at 951-756-1868

Comet CF 706 duplexer  
1.3-57MHz to 75-500MHz \$50 new \$75

MFJ Dummy Load 1000 Watts Dry  
dummy load model 262 \$15

(2) Astron 35 watt power supplies with meters \$100 EA new \$199

Hell Elite Gold Mike \$90 new \$139

(2) M C 60 Mikes one with cord for Kenwood TS 2000 \$65 with cord \$90 with cord. These are \$139 new

Kenwood 710 GA 2 / 440 APRS GPS built in. With separation kit. \$400 \$599 new at HRO.

MFJ 941 E Tuner HF \$60 \$129 new

The MFJ-941E gives you a 300 Watt antenna tuner that covers everything from 1.8 - 30 MHz -- plus you get a lighted Cross-Needle meter with on/off switch, antenna switch and a 4:1 balun! (The light uses 12 VDC or 110 VAC with MFJ-1312D)

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](mailto:K6FED@yahoo.com). Items are listed for one month. Additional time can be requested by email.