



*From our Club President...*

**Happy New Year to All**

By Ivy Nelson-Groves WA7IVY, President

Welcome to 2011 everyone! I hope everyone got through the chilly weather we had at the end of 2010 and beginning of 2011. Looks like I really need to get some new tires for my car... who knew "Aveo" really means "hockey puck on ice."

I like the new year... it's a time to start fresh, to get a new perspective on things – a time to consider the future instead of dwelling on the past. I've been spending a lot of time thinking about some of our upcoming events: March's Flea Market, Elections, & Awards Banquet; Field Day in June; the summer Picnic in August; the Holiday Party and bell ringing in December, and gosh, then we're already into 2011. In addition, there are a lot of things going on throughout the year: the year-long M&K In-House Contest, public service events, board and general meetings, etc. This is one busy Club!

I'd like to remind everyone that we need to get more people signed up for the Flea Market on March 11<sup>th</sup> and 12<sup>th</sup>. This is really the one time of year when we need everyone on deck and helping out. This event pays for all the activities we have during the course of the year, and also allows our dues to stay at the low rate of \$12/year. What a bargain!! So please sign up for a couple of shifts, if you would. They don't have to be in the same job. And I'd like the opportunity to ask for help for the Announcing area – the easiest job there is! All you have to do is sit and talk to people... something everyone in the club is qualified to do!!

On other important item is our Annual Awards Banquet. It is usually held between the March and April general meetings, and we need someone to set this up. If you would like to do this, please let us know at the general meeting. And remember that the key to being a successful chair is to DELEGATE! You won't have to do this alone; many in the club would be willing to help you out!

The tradition of making a resolution on New Year's Day and trying to stick with it for a whole year has been done for centuries. Although I'm a big fan of traditions, I generally try to avoid making New Year resolutions.

I generally only make headway on one or two, and then let the others falter.

Well, the eternal optimist in me reckons that I should try again, so here are my Ham Radio New Year Resolutions:

1. **Get my articles on time to Gary KG7KU on time!**
2. **Figure how to get APRS on the radio in my car.**
3. **Build a stealth antenna for the house.**
4. **Learn about digital modes and satellites.**
5. **Finally get serious about studying CW (at least 3 hours per week)!**

*-That is about enough for this year- see you on the 15<sup>th</sup> !*

**Fleamarket Workers Needed**

By Michael Dinkelman N7WA

*(Begging has commenced)*

Well, this is my annual *begging article*. At this writing, there are about 52 people signed up to work the fleamarket. That includes about a dozen chairpersons. We really need 100 volunteers (beyond the chairman) and 120 would be better. The areas in the worst shape are... well, actually the list of areas that are OK is shorter - Country Store and Pallet Crew. Everybody else stinks... Tickets, Announcing, Security, and Hospitality.

I'll say it again (probably for the zillionth time), this event generates the majority of our annual operating budget. Without this event, there will be no repeater and no Field Day. Social events would have to go away unless participants were willing to pony up quite a few more dollars. Dues would have to be raised simply to rent the building we have our meetings in.

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The *K7LED Relay*, published monthly, is the official newsletter of the Mike & Key Amateur Radio Club. Mike & Key ARC is an ARRL-affiliated club dedicated to the growth and betterment of Amateur Radio.

The club meets at 10 A.M. the third Saturday of every month at Salvation Army Headquarters, 720 S. Tobin Street, in Renton (near the southeast corner of Renton Airport). Anyone interested in Amateur Radio is invited to participate in the Mike & Key ARC and its activities. Annual dues are \$12 for individuals and \$18 for families.



**Postal Address:**  
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Renton, WA 98057-4234

**Web Site:**  
[www.mikeandkey.org](http://www.mikeandkey.org)

**Send dues to:**  
Mike & Key ARC  
P.O. Box 4234  
Renton, WA 98057-4234

**K7LED Repeaters:**  
146.82 output / 146.22 input  
(PL 103.5)  
Tiger Mountain  
224.120 output / 222.520 input  
(PL 103.5)  
Tiger Mountain

**Email:**  
info @ mikeandkey.org

**Send newsletter submissions to:**  
Gary Bryan, *Relay* Editor  
34033 33rd Ave SW  
Federal Way, WA 98023-7724  
kg7ku @ arrl.net

**Reflector:**  
<http://groups.yahoo.com/groups/mkarc>

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<b>No. 3</b>	Michael Dinkelman	N7WA	n7wa @ arrl.net	253-631-3756
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<b>VE Testing</b>	Scott Robinson	AG7T	ag7t @ arrl.net	425-788-0452

### Mike & Key Online -- Several Club resources are available online:

**On the Web** — The Club's site at 'www.mikeandkey.org' includes extensive information about Club activities and events, such as: VE testing, membership, past editions of the *Relay* and more.

**Reflector** — The Club's public message board offers an easy and free way to converse with Club members. To sign up, surf to: <http://groups.yahoo.com/groups/mkarc> .

**E-Relay** — To save the Club some money in printing and postage costs, send a message to the *Relay* Editor: **kg7ku @ arrl.net**.

January 2011

## M&K January Meeting & Activities

By Jim Aigner N7MU, Activity Chair

**The year 2010** was a busy and enjoyable year for our Club. With lots of helping hands we staged a very successful flea market and Field Day, enjoyed a fun awards banquet, and revived our summer picnic and holiday party. 2011 can be even better, but we will need a few more helping hands to pull it off. The winter awards banquet is on the horizon and we don't have a chairperson for the event. Here's your chance to contribute.

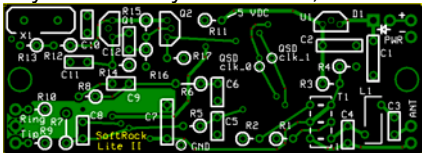
Grant Hopper's KB7WSD December program was a nice change of pace. His wide-ranging comments covered the ARRL organization and ways to make clubs more enjoyable. Judging from the number who kept Grant cornered after the meeting, we could use a little more time to dialog with our ARRL leadership.

This month our programs return to a more operational focus. Just in time for the Special Event contest, Mike Dinkelman N7WA will demo some free programs for determining propagation, show some Internet resources for using spotting networks, and show us the Reverse Beacon Network which can tell you just how well you are getting out. Mike is the driver behind our year-long Special Event operating contest. If you have HF gear, I invite you to join the fun.

The yearend door prize drawings were held in December with four happy winners. The first ticket drawn was for David Mitchell WA7DTM who won a VX-170 a few years back. He gracefully deferred explaining that "it seemed to be the right thing to do". Nice gesture, I thought. The next ticket was for KB7FGV, Steven Luke who has been a frequent winner in our monthly drawings. He chose the ICOM IC-2200H 2-meter FM mobile rig. Next up was David Baldwin KF7FYE who chose the Elecraft W2 SWR Wattmeter. Within a couple hours of getting home, he had it assembled and running.

Dave loves the idea that he can see power and SWR readings simultaneously, unlike the meters where you switch between the two. Lee Sherry KE7NBN had the next winning ticket and selected the Yaesu FT-250R 2M FM handheld radio. Sandy K7OZY had the last winning ticket and took the Byonics TinyTrak4 with GPS.

We have another batch of prizes for the January drawing, but no mystery box prize this month. I'm now accepting your donations of "valuable" ham stuff to replenish our inventory. This month's prizes include a hard hat and hi-visibility mesh short-sleeved shirt (large), #12 DC zip cord and Anderson Powerpole connectors, a SoftRock Lite II SDR receiver kit anonymously donated by a member, two sets of Yaesu



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hats and logbooks, 100' of 450 ohm ladder line, and the very popular Heil Traveler Single Side boomset. The winner of that item can choose the proper radio adapter cable which I'll order as part of the prize.



*Start the year off right. See you Saturday.*

## Fleamarket Workers Needed... [Cont'd from Pg 1]

Let's do the math (based on the \$11K we actually spent last year). If the Fleamarket was to go away (and it will if we can't get enough workers), it would be up to the members to raise that \$11K to keep services the same. We have about 150 full dues paying members and about 200 on the roster (lots of Life Members in there that don't pay dues plus family members who pay a reduced rate). \$11,000 divided by 200 people is about \$55 a year. \$11,000 by 150 people is \$73/year.

So figure your dues would have to fall somewhere between \$55 and \$73 a year. Granted, we could get rid of the repeaters, the newsletter, meet in a Fire Station someplace, and work Field Day from home to reduce that cost. But then, it really wouldn't be the Mike & Key ARC anymore. The Premier Amateur Radio organization we know would simply disappear. Oh, the Club would probably still exist, it would just be a run-of-the-mill organization with few resources or attributes that would make it stand out from the crowd.

I have a better idea! Wouldn't it be a lot more fun and productive to volunteer for the Fleamarket? You become part of event that is renown throughout the Pacific Northwest, you get first dibs on all that **stuff**, and you help keep your dues LOW (that's pretty important in the current economic reality).

I'll have the signup book at the January meeting. If you can't make the January meeting, please email me with your sign up request. Please let me know the work area, day, and time period. If you are a new member and you're scared to volunteer, talk to me. (In 30 years, we haven't lost, killed, or maimed a newbie yet). If you are an old member and haven't signed up, why aren't you showing the leadership we need? Already signed up? Maybe there is another job you could sign up for in a different area after you get tired of walking the aisles? **It's your club – you joined it – time to support it.**

*(Begging has terminated.)*

## VE Team Statistics for 2010

By Scott Robinson AG7T – VE Testing Coordinator

### **The VE team had a great 2010!**

I want to thank each of the VEs that helped during the year: KE7LLC, W7DUV, N7RHE, WT7I, KD7IQL, W7GIL, WU7J, K7TEA, WT0F, KG7MX, WA7IVY, NU6A, KL7WM, KF7VG, AD7CT, and AC7UR.

### **You again showed the best of Amateur Radio.**

We had 181 people taking 199 exam elements leading to 87 Technician, 46 General, and 22 Extra class licenses awarded.

The average session size was 13 people per session in 2010 down from the 16 people per session in 2009. Still keeps the VEs very busy!

# January 2011 The Mike and Key Repeater System - 2010 In Review -

By Hal Goodell N7NW – Radio Officer

In January 2010, we began a process to complete the vision of our previous Radio Officer, Paul Roth (N7DOH). That was to have a first class reliable repeater operational on 148.82 with coverage to serve our Mike and Key Club members.

For most of 2009 and the first part of 2010, the Mike and Key 146.82 repeater was operational from Cougar Mountain using loaned equipment, while our Motorola repeater was back and forth to the vendor. Previous testing of our 146.82 repeater on East Tiger Mountain had shown some possible interference issues with another repeater also located on E. Tiger Mountain. This is not uncommon when a new system is introduced to an environment high in RF levels from various commercial and amateur repeaters.

While continued operation from Cougar Mountain was a possibility, there were problems associated with that location. Mainly we had limited, if any access to that site, among other issues. So in January we systematically set about to resolve the issues on E. Tiger Mountain.

A controller was purchased and integrated with the Motorola repeater. By April we had the Motorola operational from our site on E. Tiger Mountain. Some of the *Intermod* issues had been resolved or at least reduced, but we still had work to do before we could proclaim success and become fully operational from E. Tiger.

Stormy weather and lightning hit in April and our Cougar Mountain repeater started to become very noisy. A report of a lightning strike might have compromised our system operation on Cougar. We continued the investigation of the E. Tiger intermod problem and found a 4<sup>th</sup> source, another repeater operating on E. Tiger, which finally explained how the interference to the 08 and 82 repeaters happened. We coordinated with the operator of the other repeater and he agreed to temporarily turn it off, since it was being little used. This solved the intermod problem. Both the 08 and 82 repeaters were clean.

As of the first of May we finally had a system fully operational on E. Tiger Mountain. Reports of its coverage were very good with very few bad spots. Still we had some tweaking to do with the audio and the controller and to add battery backup.

Steve Cook, KD7IQL, obtained replacement batteries and integrated them with the Argus Charger. These were installed on E. Tiger in mid August, as there was to be a planned 3-day power outage on E. Tiger in late August. Our repeater operated very well during this power outage by using the battery backups. This was an excellent chance to checkout our battery backup system prior to the start of the winter months.

By September, I believe that we had accomplished the goal, set by Paul, of having a First-Class repeater operating with very good coverage to serve our club members.

The complete system at E. Tiger Mountain includes a 146.82 repeater (PL 103.5) and a 222.12 repeater (PL 103.5). We are currently looking forward to 2011 to see what improvements we may make to both repeater systems that may benefit our members.

***I wish to thank the other control operators, Steve Cook KD7IQL, Dean Holtan N7NKO, and Randy Stagers KF7EKB, for their support and assistance throughout the year.***

***K7LED Relay***

***Special thanks to Steve for all the work he has put in to get the system operational. Also thanks to Alan Hughes, KB7SVU, for his antenna and tower work.***

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## **Celebrate our January Members!**

By Dave Smith KB7PSN, Treasurer

As of January 2011, these have been Mike & Key members for the number of years stated. Congratulations to all of you, and thanks for your participation and service.

***Each of you makes us who we are:***

<b>John Rehnstrom</b>	<b>WA7HQG</b>	<b>40 Years</b>
<b>Dick Lundstrom</b>	<b>WA7UEW</b>	<b>38 Years</b>
<b>Joyce Stroehler</b>	<b>N7JPW</b>	<b>24 Years</b>
<b>John Black</b>	<b>W7HIL</b>	<b>21 Years</b>
<b>Michael Hansen</b>	<b>KG7MX</b>	<b>20 Years</b>
<b>Mike Hansen</b>	<b>AC7UR</b>	<b>20 Years</b>
<b>Frank Henshaw</b>	<b>K7VMG</b>	<b>17 Years</b>
<b>Fred Lowell</b>	<b>N7PZ</b>	<b>14 Years</b>
<b>Mark Whitaker</b>	<b>KD7KUN</b>	<b>10 Years</b>
<b>Stephen Kangas</b>	<b>W9SK</b>	<b>6 Years</b>
<b>Ron Stein</b>	<b>W7GAX</b>	<b>4 Years</b>
<b>Edward Alden</b>	<b>KF7GBD</b>	<b>1 Year</b>
<b>Donald Cain</b>	<b>* no call *</b>	<b>1 Year</b>
<b>Scott Gilbert</b>	<b>KF7GGN</b>	<b>1 Year</b>
<b>Rich Hand</b>	<b>K7RFH</b>	<b>1 Year</b>
<b>Linda Jordan</b>	<b>* no call *</b>	<b>1 Year</b>
<b>Timothy Mauery</b>	<b>NT9M</b>	<b>1 Year</b>
<b>Carl Reynolds</b>	<b>N7CJR</b>	<b>1 Year</b>
<b>George Thornton</b>	<b>AE7G</b>	<b>1 Year</b>

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## **FWARC – ‘Extra’ Class Study Group**

Contributed by Sam Sullivan N7RHE

***EXTRA! EXTRA! READ ALL ABOUT IT!***

The Federal Way Amateur Radio Club (FWARC) is presenting an Extra Class License study group on ***Tuesday nights at 7pm*** at the Federal Way Church of Christ's Teen Center. The study group will run through the last Tuesday (inclusive) in February.

The cost of the study group is \$10 per person. Study books are available for \$25, and the VE testing fee is \$15.

For additional information or if you have questions, please contact the FWARC's training coordinator Daniel Stevens KL7WM: Phone: 206-228-9274, or send an Email to: [training@fwarc.org](mailto:training@fwarc.org). Check the Club website for other training opportunities: [www.fwarc.org](http://www.fwarc.org).

***[Ed. Note – This article is from FWARC distribution made by Mike McCoy N7VWD, who is Treasurer, Webmaster and a Trustee of FWARC –Gary KG7KU]***

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January 2011

## WANDERING - Odd Call Sign Occasions

By Fred Roberts - W6TKV

My first Call Sign was K2AMN which I held for 23 years or so, and my second (and present) Call is W6TKV which I have held for about 35 years or so. I suspect most hams have a story which relates only to their Call Sign(s), and I'm no different.

Kilo 2 Alpha Mike November never seemed to have much snap to it, particularly when I was calling a guy, i.e. DX or DX-pedition station, who was also being called by loads of other U.S. hams. Somehow, Alpha Mike November always seemed to me to be a little mushy. I gave a lot of thought over several years trying to come up with more sparkling phonetics, but never had any success.

About 10 years after being licensed, my XYL (Ann) and I were watching TV one evening, and a commercial came on for Fleishmann's Margarine (had to look on the Internet for the right spelling). If you will, picture Mother Nature dressed in a regal gown, holding a wand, and standing in a wooded area. Now, picture her being offered something to taste. After tasting, she says, "Ooh, Butter." and an off-screen voice says., "No, it's Margarine." Mother Nature then raises her arm and B-A-N-G, there was a huge lightning strike. And, then the words, "It's not nice to fool Mother Nature."

Immediately, I jumped up from the couch and excitedly told my wife, "That's it! *Angry Mother Nature!*" And, those words became my phonetics from that moment on, for a lot of years. I even put it on my QSL Cards. And, when ever I was chasing DX where American hams were in some rare place, I used those phonetics. I could usually tell when the DX operator was going to call me ... I always heard a little chuckle, just before I heard my call.

When we moved from New York to California in 1976, I filled my change of address with the FCC, their response in a couple weeks was to change my call to W6TKV which had very snappy phonetics - no complaint there. But, since there was a contest coming up that weekend, I put my new call on the shelf and made the change on the Monday following the contest.

There are two stories related that go with W6TKV, a re-issued Call Sign. I always had both a 2M and an HF rig in the car, so that when traveling, I always had somebody to chat with. On one occasion while driving through Arizona, I was chatting with a fellow, also in Arizona, and he asked if I was the original holder of W6TKV. I told him about my call change, and he responded saying, "Well, I have a QSL card in front of me which came from the fellow who was original holder of your call." I responded with, "I would sure love to borrow that QSL card so I could get a copy of it for my ham shack." Well, shortly after our QSO, an envelope arrived with my predecessor's QSL. I had a larger copy made and it hangs on a wall in my ham

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shack. Of interest, W6TKV was own by Ray Poyser, a resident of Bolder City, Nevada - this was the time when Arizona was a part of 6-land. The QSO was dated January 26. 1941 and logs a 40M CW QSO with the note, "*Enjoyed QSO vy much Carl - ursigs vy excellent as also your fist - hope to hook up agn soon.*" From the wording, my guess is Carl was a newly licensed ham at the time.

The other story relates to Dick Stepanian W6TK, who lives in Nipomo, CA. He's a fellow who became a good friend because of his call, and because he is a Contester. A few years ago, we both agreed to meet with our XYLs at the Visalia DX Convention - a regular well-attended April event. We all attended the Contest Dinner, and Dick was awarded a plaque for being the first Californian to work all 52 multipliers in the annual California QSP Party. When Dick returned to the table, he sat done with the plaque against his chest. He didn't look too happy. Then, he turned the plaque around. It was awarded to: "Fred Roberts, W6TK".

I told Dick he should share the plaque with me ... in fact, I should have it most of the time. *Why?* Well, the call just needed a "V" for the plaque to be all mine, whereas he needed 13 letters for his name. We just couldn't get over the odds of this happening to two hams sitting next to each other. A picture of the two of us is hanging in my Ham Shack.

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## A PLAN TO EXPAND GOTA SERVICES AT FIELD DAY

By George Thornton AE7G – FD – GOTA Chair

GOTA, or '*Get On The Air,*' is designed to encourage *non-Hams* to visit and participate at Field Day exercises. This is a great program designed to educate the public about Amateur Radio and to invite new people to take the Exam and get Licensed.

Mike and Key has for many years located its Field Day site at Ft. Flagler. The location is in many ways ideal for communication purposes and it also provides a great site for a party/vacation spot for members and guests.

The site is less than ideal for GOTA purposes because it is located in a rural location, a ferry ride from Seattle, and at the end of a rural road in a corner of a State Park. In short, this is not an ideal "walk in" location for casual visitors.

This year there will be a Boy Scout gathering in the Park that weekend and this may be an ideal opportunity to showcase GOTA and improve our visibility and public interaction.

It is my view that the GOTA presence can be considerably improved by reconfiguring the site and adding some promotional materials and signs.

I have looked at our site from the point of view of the general public. First, the site is located out on the bluff or down on the beach in a corner of the park. The hillside site is not visible from the main Park roads and I did not observe signs directing visitors to the site.

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**FD'11-Plan to Expand GOTA... [Cont'd from Pg 5]**

On approaching the site, a casual visitor sees an impressive array of antennas, towers, generators and trucks. The site looks military in nature, possibly dangerous and technical. The casual visitor is then going to be both curious and afraid to approach. There are no explanatory signs inviting visitors and the GOTA tent itself is small and private. Not inviting or open to visitors.

My vision of what the GOTA site could be, starts with large welcoming banners displayed at the bluff general entrance point. The banners should read: **'FIELD DAY – An exercise in Emergency Communications – VISITORS WELCOME.'**

I would then have some outdoor display boards that visitors could read over, and learn about who we are and what Field Day is. Perhaps the signs are inside a canopy with picnic and seating areas, even coffee and snacks and hosts to answer questions.

The GOTA tent itself should be more of an open (screened for bugs) canopy that allows the visitors the opportunity to either watch operations from outside, or come in and participate.

This is an ideal year to make changes because we could be a focus of attention for the visiting Scouts.

We welcome ideas on how to improve the GOTA experience. Give us your thoughts and suggestions.

- George AE7G

**Elmer's' Corner -- By Jim Aigner N7MU**



Please visit the Elmer Wiki at <http://k7ledelmerwiki.wikispaces.com/>.

Area	Elmer Coordinator	Email	Phone	Also...
Homebrew, DX, antennas	Jeff Wandling, W7BRS	<a href="mailto:dew7brs@gmail.com">dew7brs@gmail.com</a>	206-605-2278	New Hams, satellite work
Beams and Towers	Alan Hughes, KB7SVU	<a href="mailto:kb7svu@juno.com">kb7svu@juno.com</a>	253-840-4947	Beam antennas and towers, safety
Contesting	Mike Dinkelman, N7WA	<a href="mailto:mwdink@clearwire.net">mwdink@clearwire.net</a>	253-631-3756	Contest operations
CW	Mike Dinkelman, N7WA	<a href="mailto:mwdink@clearwire.net">mwdink@clearwire.net</a>	253-631-3756	Learn CW, operating proficiency
Digital Modes	Andy Lengenfelder KE7ZGR	<a href="mailto:ke7zgr@arrl.net">ke7zgr@arrl.net</a>	425-430-1804	All digital modes, software, TNC's
D-STAR	Steve Hatch, WA7DAD	<a href="mailto:stephen@hatch.net">stephen@hatch.net</a>	206-851-8842	D-STAR technology and operation
Emergency Comm	Tim Kane, K7ANE	<a href="mailto:k7ane@arrl.net">k7ane@arrl.net</a>	206-251-7467	CERT, ARES, organizations & Eq't
HF Operation	Dale Tongue AC7NP	<a href="mailto:dale.tongue@gmail.com">dale.tongue@gmail.com</a>	425-432-4254	Eq't, Antennas, best HF operating practices
New Members	Dick Radford, WA7NIW	<a href="mailto:wa7niw@arrl.net">wa7niw@arrl.net</a>	425-828-9791	Getting started, eq't selection and operation
QRP	Frank Qualls, AB7HA	<a href="mailto:franklin_qualls@hotmail.com">franklin_qualls@hotmail.com</a>	425-802-1837	Low power operation, design & construction
VHF/UHF Operation	Dave Smith, KB7PSN	<a href="mailto:kb7psn@yahoo.com">kb7psn@yahoo.com</a>	425-235-5095	6 meters and up; radios, antennas, modes

**K7LED In-House Contest Rules:**

- Only special event stations listed in the Relay will be worth points.
- Each QSO with a special event station is worth one, at least, point.
- Some of the special event stations each month will be worth bonus points.
- You can work a special event station with Voice, CW, and/or RTTY.
- QSO's with multiple modes is allowed and additional points can be earned for each mode.
- QSO's on multiple bands (same mode) will not count for additional points.
- A multiplier effect will generated by working states. (Points earned by working special event stations multiplied by the total number of states worked in the contest will equal the total points.) A maximum of 50 multipliers (each unique State worked) is possible.
- Participants are encouraged to report their progress to me (N7WA) each month so I can include them in the Relay.

## K7LED In-House Contest for February

By Michael Dinkelman N7WA

*Here are the special event stations for February 2011:*

Feb	Station	Time	Pts	Mult
05	K3HWJ	1400-2100Z	5pts	PA – mult
<i>Notes: Groundhog Day Special Event - SSB only 7.245 14.240</i>				
05-06	NI8G	1500-2100Z	5pts	OH – mult
<i>Notes: Thomas Edison's Birthday - SSB only 7.270, 14.270, 21.270, 28.370</i>				
12	NI6IW	1700-2359Z	2pts	CA – mult
<i>Notes: Boy Scouts of America Founded 1910, SSB 7.250, 14.320 PSK31 14.070</i>				
19-20	W0FSB	1500-2100Z	5pts	IA – mult
<i>Notes: Battle for Iwo Jima SSB Only 7.240, 14.240, 21.240</i>				
21-23	WS7G	0000 – 0400	10pts	WA – mult
<i>Notes: George Washington's Birthday, SSB 3.880, 7.230, 14.250 18.135</i>				
23	WA5DTK	0000-2359Z	5pts	TX – mult
<i>Note: Remember the Alamo SSB 7.240, 14.250 CW 7.040, 14.050</i>				
01-08	VP8ORK	24 hours	25pts	VP8 (South Orkney Islands)
<i>Note: All the usual CW/RTTY/SSB DXpedition frequencies 160M-10M</i>				

*Note: VP8ORK is a major DXpedition. VP8ORK will be on from Jan27 to Feb08 but only contacts in February count for this contest. There will probably be major pileups on these stations. It'll be a good learning experience but you'll have to work at it; and that is precisely why it is worth 25 points. Might be a good time to learn about cracking pileups ([http://wiki.contesting.com/index.php/Pileup\\_techniques](http://wiki.contesting.com/index.php/Pileup_techniques)). For VP8ORK info and frequencies list – see <http://www.vp8o.com/index.html>.*

Jim Aigner N7MU has updated the spreadsheet to support this contest. It should be available from him by Email and soon on the Club website. If you need to review the rules for this In-House Club contest, they appear just following the 'Elmers Corner' feature of this *Relay*.

Jim also asked if I could put on a program that might provide helpful tips in how to connect up with these stations. What I will do is review a couple of free and easy to use programs for determining propagation, show some resources for internet spotting networks, and show you the Reverse Beacon Network which can help indicate just how well you are getting out.

*Here is an example of the K7LED In-House Contest worksheet (contact Jim N7MU for the Excel file):*

2011		CW QSOs	SSB QSOs	RTTY QSOs		Multipliers		Score	Score with Multipliers		
Year-To-Date		0	0	0		0		0	0		
January	CALLSIGN	CW QSOs	SSB QSOs	RTTY QSOs	Mult ID	Multiplier	Weight	Score	Dates	UTC	Notes
	K1R	0	0	0	NY	0	5	0	Jan 1-2	1300-1900Z	daily
	W3M	0	0	0	WI	0	5	0	Jan 6-7	1000-2359Z	
	NI6IW	0	0	0	CA	0	2	0	Jan 8	1700-2359Z	
	VE8SUN	0	0	0	VE, NT	0	10	0	Jan 8	1800-2359Z	
	W9AML	0	0	0	IL	0	2	0	Jan 15	1500-2100Z	
	WSB	0	0	0	TX	0	2	0	Jan 29	1500-0400Z	
	KSOKS	0	0	0	KS	0	2	0	Jan 29	1600-2100Z	
	ZL50VK	0	0	0	ZL	0	25	0	Jan 1-30	0000-2400Z	
<b>Jan Totals</b>		0	0	0		0		0			
February	CALLSIGN	CW QSOs	SSB QSOs	RTTY QSOs	Mult ID	Multiplier	Weight	Score	Dates	UTC	Notes
	K3HWJ	0	0	0	PA	0	5	0	Feb 5	1400-2100Z	
	NI8G	0	0	0	OH	0	5	0	Feb 5-6	1500-2100Z	
	NI6IW	0	0	0	CA	0	2	0	Feb 12	1700-2359Z	
	W0FSB	0	0	0	IA	0	5	0	Feb 19-20	1500-2100Z	
	WS7G	0	0	0	WA	0	10	0	Feb 21-23	0000-0400Z	
	WA5DTK	0	0	0	TX	0	5	0	Feb 23	0000-2359Z	
	VP8ORK	0	0	0	VP8	0	25	0	Feb 1-8	0000-2400Z	
<b>Feb Totals</b>		0	0	0		0		0			
March	CALLSIGN	CW QSOs	SSB QSOs	RTTY QSOs	Mult ID	Multiplier	Weight	Score	Dates	UTC	Notes
<b>Yearly Totals</b>		0	0	0		0		0			

January 2011

## M&K General Meeting Minutes

Meeting held December 18, 2010

Meeting was called to order at 1002 hours by the President, Ivy WA7IVY.

Pledge of Allegiance.

Announcements:

The Mike & Key ARC is affiliated with the ARRL, which members are encouraged to join. Everyone, including visitors, should sign the rosters. Visitors are reminded not to vote on membership matters.

*Introductions.*

Alan KB7SVU thanked the membership for their support during the illness and passing of his wife, Tressie KC7BAL, and related the happenings of her last days. The Club observed a moment of silence in memory of Tressie.

### Officer Reports:

**President** – Ivy WA7IVY: Nothing to report.

**Secretary** – Robert KD7WNV: We received our general insurance form for the year, and a letter from the Salvation Army thanking us for the generous donation for use of their facility.

**Treasurer** – Dave KB7PSN: We will be voting on next year's budget today. Please see Dave if you have membership dues to pay or receipts for reimbursement.

**Activity Manager** – Jim N7MU: We have two sets of door prize drawings today—the regular monthly drawing (9 items), and the big annual drawing (4 big ticket items), with tickets from the last 12 months. The program today will be Grant Hopper (KB7WSD), Vice Director of the ARRL Northwest Division, discussing club fun and ARRL offices.

**Chairman of the Board** – George AE7G: We will be voting shortly on the budget, which was passed unanimously by the Board. It has been a good year. The Board has worked well together.

### Quorum present.

**Vice President** – Steve KD7IQL: Membership applications: Kenneth Whitman, N9PHW; Jay Walton, KE7OLG. Both approved by the membership.

*Is there a motion to approve the minutes of the previous meeting as printed in the K7LED Relay?*

*Sam N7RHE made a motion to approve the minutes; seconded by Gil W7GIL. Motion passed.*

**Radio Officer** – Hal N7NW: Not much to report. Repeaters are doing fine, seem to be functioning off of battery backup whenever power goes out.

**Relay Editor** – Gary KG7KU: Expressed appreciation for all the submissions to the *Relay*. Thanked Fred W6TKV for the “Wandering” article. Thanked Dick WA7NIW for his article on the Special People's Cruise, and Gene W7AKA & Fran N7FWZ for an article on the Seattle Marathon. Had all those present who participated in supporting those events stand for recognition.

**Webmaster** – Jim KD7BAT: Nothing to report.

## K7LED Relay

### Standing Committee Reports:

**Strategic Planning** – Daniel KL7WM: Will be conducting an Extra class Tuesdays in Federal Way in January and February; stay tuned for details. This year is the Club's 40<sup>th</sup> anniversary; there will be related events at various points in the year, including at the Fleamarket. Encouraged members to read articles and minutes in *Relay* to stay informed on Club happenings.

**Facilities** – Mike N7WA: Nothing to report.

**Education** – Tim K7ANE: The Red Cross is doing a series of their Basic Skills classes. They just covered mobile installations; coming up is antennas, HF, and others. See Tim to get on the mailing list. Robert KD7WNV mentioned that he is making plans for a General class to be sponsored by ESCA RACES (Brier). Details will be announced/posted when settled. Kathy KB7QMO asked how people can go about finding out about licensing classes. Robert suggested three ways: (1) read the minutes in the *Relay*—classes are usually announced in advance at both General and Board meetings; (2) check the Education page on the Club's website; and (3) look for classes that have been registered with the ARRL, on their website ( [www.arrl.org/find-an-amateur-radio-license-class](http://www.arrl.org/find-an-amateur-radio-license-class) ).

**Public Service** – Robert KD7WNV: The committee will meet today to finish dividing up responsibility for updating content and contacting advertisers for the annual booklet. There are no public service events until late February.

**Technical** – Alan KB7SVU: Nothing to report.

### Other Committees (as appropriate)

**Flea Market** – Hal N7NW: The signup book is going around again today. Please sign up for multiple assignments if you can; we're always short, especially in tickets. We need people to stay for cleanup on Saturday; the reward is a great Chinese dinner for a nominal cost afterward. Dates are Friday, March 11 for setup; Saturday March 12 is the Fleamarket. Mike N7WA thanked to everyone who helped with preparing the flyers for mailing last month. Special thanks to Kathy KB7QMO, who took about 4,000 home to prepare. The next committee meeting January 11<sup>th</sup>, 7:00 PM at Mike's; all interested are welcome.

**VE Exams** – Scott AG7T: Testing in November: 11 persons took exams. Awarded 4 Technician, 2 General and 3 Extra.

**Field Day** – Ivy WA7IVY: Getting things together. Already have re-commitments from band chairs. Field Day is June 25-26; setup is Friday, June 24; mark your calendar.

**By Laws Review** – Dave KB7PSN: Nothing to report.

**Audit** – Sam N7RHE: The Audit committee will meet just ahead of the January General meeting, at 9am. The committee is comprised of Sam, Scott AG7T, Randy KF7EKB, Alan KB7SVU, and George AE7G.

[Continued on Page 9]



January 2011

**M&K General Mtg Minutes...** [Cont'd from Pg 8]

**Bell Ringing** – Jim KD7BAT: We had two groups turn out for Salvation Army bell ringing, working at Walmart & Sam's. Thanks to Mike N7WA for being there all day as co-chair. The Sam's group was out in the rain all day (warranting a round of applause). Jim had all participants stand for recognition. We receive great appreciation from the Salvation Army. Our bell ringing brings in about 50% more than typical for their other kettles. These efforts are part of maintaining our good relationship with the Salvation Army, for which they give us nice breaks on the cost of using their meeting hall. Next year, we want to sign up early (September-October) for bell ringing and use of the hall for the Christmas party, to get our choice of dates.

**Christmas Party** – Mike N7WA: Had a good turnout, the food was great, a good time had by all.

**Club Contest** – Mike N7WA: Begins January 1. Target stations will be listed in the *Relay*. Mike can supply you with a spreadsheet for managing your participation; will also post it to the website. Michelle WA7PVE asked if we turn in the spreadsheets through the year. Mike responded that that is not necessary, but he would love to get feedback and be able to report progress.

**Old Business: (None)**

**New Business:**

**Budget for 2011** – Dave KB7PSN: Printed copies of the budget, as approved by the Board, were distributed to members. Gil W7GIL moved to accept the budget as presented; George AE7G seconded. Kathy KB7QMO asked about the overall net of the budget, and the level of the capital equipment line despite spending substantially less in 2009. John NU6A asked about barracks fees for Field Day, in light of likely fee increases at state parks. Discussion. Michael KG7MX moved to close discussion, seconded by George AE7g. Motion passed. Main motion, to accept budget, passed.

**Alligator Award** – Dean N7NKO: Not present.

**Good of the Order:**

Ivy WA7IVY noted that today is the birthday of Lee KE7NBN.

The next Mike & Key Board meeting will be on the first Wednesday of the month, January 5<sup>th</sup> at 7:00 PM, at the Salvation Army in Renton.

The next Mike & Key General Membership meeting is the third Saturday, January 15, 2011.

George AE7G made a motion to close the meeting, seconded by Scott AG7T. The motion was passed. Meeting adjourned at 1105 hours.

4 guests; 58 members, 41 ARRL members

**Attested: Robert Grinnell KD7WNV, Secretary**

**K7LED Relay**

**M&K Board Meeting Minutes**

Meeting Held January 5, 2011

**Officers present**

**X** President – Ivy Nelson-Groves (WA7IVY)

**X** Vice President – Steve Cook (KD7IQL)

**X** Secretary – Robert Grinnell (KD7WNV)

**X** Treasurer – Dave Smith (KB7PSN)

**X** Activity Manager – Jim Aigner (N7MU)

**X** Radio Officer – Hal Goodell (N7NW)

**Trustees present**

**X** No. 1 – Tim Kane (K7ANE)

**X** No. 2 – George Thornton (AE7G) (CoB)

**X** No. 3 – Mike Dinkelman (N7WA)

**X** No. 4 – Alan Hughes (KB7SVU)

**X** No. 5 – Daniel Stevens (KL7WMM)

**Other officers (non-voting)**

**X** Relay Editor – Gary Bryan (KG7KU)

**X** Webmaster – Jim Etzwiler (KD7BAT)

Visitors present: Michael Hansen, KG7MX; David Burgasser; KB7ISA.

Chairman of the Board George AE7G called the meeting to order at 1904 hours.

**Minutes:** A motion to approve the minutes of the previous board meeting was made by Ivy WA7IVY. Motion passed.

**Officer Reports**

**Chairman of the Board** – George AE7G: Have some suggestions for GOTA at Field Day, will discuss in the appropriate section later.

**President** – Ivy WA7IVY: Nothing to report.

**Vice President** – Steve KD7IQL: New member applicants: Kathleen Weiss, KF7MUD; Robert Cook, no call sign; David Burgasser, KB7ISA. All recommended for approval.

**Secretary** – Robert KD7WNV: Treasurer picked up the mail, it was all for him.

**Treasurer** – Dave KB7PSN: Final budget status for 2010 was emailed to Board members. Preparing for audit to be conducted just before the January General meeting. Daniel KL7WMM mentioned that the IRS has increased the revenue threshold for the 990EZ to \$50,000. We can file the 990N for if our revenue is under that threshold for 3 years. Daniel has forwarded the information to Michael KG7MX and the Treasurer. Dave mentioned that as per his email, the roster will be made available to members in February.

**Activity Manager** – Jim N7MU: December program was presented by Grant Hopper (KB7WSD), Vice Director of the ARRL Northwest Division. Several members cornered him for about an hour afterward. We gave out the 4 big prizes at the door prize annual drawing. The drawing went well, though there were several cases of a person's name being drawn more than once. However, our one-win-per-person rule took care of any issues with that. The February program is on the Fleamarket. We have no program arranged yet for January, maybe Mike N7WA on reverse beacons and propagation. Scott AG7T will present a program on NVIS sometime after February. We sold many tickets for the December monthly drawing, and enter the new year with a healthy balance in the fund. The Mystery Box is on hiatus until Jim receives more donations for it. This month's door prizes include an SDR kit, 100-feet of ladder line, and a Heil single-side Traveler headset.

[Continued on Page 10]

## January 2011

### **M&K Board Mtg Minutes...[Cont'd from Page 9]**

**Radio Officer** – Hal N7NW: Received a call from George Bisso, relaying that someone up north said our 2-meter repeater was splattering over into CB. George also indicated that PSE says they are hearing our repeater on one of their UHF channels. Hal has not received other reports of this. If accurate, it sounds like someone may be retransmitting our signal onto other bands. Hal is going to be working on pulling our equipment out of Cougar Mountain.

**Relay Editor** – Gary KG7KU: Not present.

**Webmaster** – Jim KD7BAT: Nothing new to report. Tim K7ANE noted that the Board meeting schedule on the website needs to be updated. Hal N7NW would like a reference set up so that repeater-related issues to come straight to him.

#### **Standing Committee Reports**

**Strategic Planning** – Daniel KL7WM: Nothing new to report.

**Facilities** – Mike N7WA: Jim KD7BAT has received an email from the Salvation Army (SA). They have plans to expand the building very soon (to the west). They expect to continue all programs. We will need to assess the impact to our antennas and storage cabinet. Their Community Supper program has been very successful, so they are expanding it to include dinner on Monday, Tuesday, Wednesday and Friday. The dinners run 5:30 to 6:30 PM; starting our Board meeting at 7:00 PM, we may not have much trouble. If we move a meeting to Tuesday, the quilting ladies will be here 7:00-9:00, but in a separate room. The Salvation Army has sent a rental agreement for use of the hall.

George AE7G reviewed the agreement from a legal perspective and it looks OK. Jim ran the numbers, it comes out to less than we donate now; their standard rate would be more. As President, Ivy WA7IVY signed the agreement at the meeting and Jim will supply copies to the Secretary and Treasurer after the SA signs.

**Education** – Tim K7ANE: Nothing to report. Daniel KL7WM is conducting an Extra class in Federal Way running January through February, details being posted to the website. Robert KD7WNV is preparing a General class in the north end for February and March, details to follow.

**Public Service** – George AE7G: We have made booklet assignments and members are working on their areas. The Redmond Cycling Club is buying a ½-page ad in appreciation for RAMROD support, and we should get Seafair back for a full page. Robert KD7WNV noted that the additional revenue may allow us to expand booklet by four pages.

**Technical** – Alan KB7SVU: Nothing to report.

#### **Other Committee Reports**

**Field Day** – Ivy WA7IVY: George AE7G is considering taking on GOTA. He has ideas for improvement—wants to make GOTA more open, with banners, info posters, tables and chairs. Might involve buying a different, more open and flexible shelter. Discussion. George will bring back a proposal.

**Logo** – Jim N7MU: The logo has been delivered to vendor for re-digitizing for small-scale use. Jim also checked into making a logo for 40<sup>th</sup> anniversary, using the current logo as a core. It would be about \$50-75.

## **K7LED Relay**

**Flea Market** – Mike N7WA / Hal N7NW: Hal indicated we mailed 12,533 fliers. The Post Office is now indicating that we need to put a return address on them in the future. Mike mentioned that signups are slow, we need more people. The next meeting is January 11<sup>th</sup>.

**Picnic** – Hal N7NW: Dave KB7PSN has reserved the South Shelter at Coulon Park shelter for August 20th 8:30 AM - 1:30 PM.

**By-Laws** – Dave KB7PSN: An item brought up in the budget approval process last month related to by-laws, so it will probably be incorporated into the committee's work.

**Old Business** - None

#### **New Business**

**Awards Banquet** – We need a volunteer to chair the event. It needs to be set before April.

#### **Good of the Order**

Jim KD7BAT reminded us that articles are due for the *Relay* this Friday, it's a "short month."

Alan KB7SVU may miss the March General meeting.

There being no further business, George AE7G adjourned the meeting at 2027 hours.

**Attested: Robert Grinnell KD7WNV, Secretary**

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### **ARRL Letter Excerpt - The K7RA Solar Update**

01/07/2011



"Tad "[Shining snow crystals rainbowed by the Sun](#)" Cook, K7RA, reports: The average daily sunspot numbers were up nearly 24 points this week to 50, while the average daily solar flux rose more than 9 points to 89.5. The lagging three month average of daily sunspot numbers was down 3.5 points from last month's average of the previous three months. The three month moving average of daily sunspot numbers --ending on June through December -- was 16.2, 20.4, 23.2, 28.9, 33, 35.6 and 32.1. The latest forecast from NOAA/USAF for the next 10 days has a solar flux of 88 on January 6-7, 86 on January 8-9, 84 on January 10, 82 on January 11 and 80 on January 12-15. Planetary A index is predicted at 7 on January 6-7, 10 on January 8-10, 7 on January 11 and 5 on January 12-15. There is a chance of a stiff solar wind and geomagnetic storms on January 7-8. Yekta Gursel, KJ6DRO, alerted us to an article in the February 2011 issue of *Sky & Telescope* titled "The Perfect Solar Superstorm." You can read most of it [here](#); click on "Preview" if you are not a subscriber. Your local library may also provide online access to the magazine. The article begins on page 28. Look for more information on the ARRL Web site on Friday, January 7. For more information concerning radio propagation, visit the [ARRL Technical Information Service Propagation page](#). This week's "Tad Cookism" is brought to you by Amy Lowell's [A Winter Ride](#)... *Amateur solar observer Tad Cook, K7RA, of Seattle, Washington, provides this weekly report on solar conditions and propagation...*"

**[Ed. Note – Source: Amateur Radio Relay League (ARRL) – 'ARRL Letter' online at [www.arrl.org](http://www.arrl.org). –Gary KG7KU]**

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## New Arrivals at the Club Library

Tim Kane – K7ANE




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### ***Special Note for 3<sup>rd</sup> Saturday Library Activity***

***At the request of our volunteer librarian, on the Saturday mornings of our regular club meetings, books may be checked out before the meeting starts at 10am, and only until 11am. This will allow others to set up for follow-on activities without conflict in the entry foyer area, e.g. VE license testing. Your cooperation is greatly appreciated.***

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Members have several newly acquired books to check out and enjoy from the Mike & Key library.

As part of our annual efforts to expand and improve our Club library we've just obtained five great new books, suggested by various members:

- **ARRL's Low Power Communications - the Art and Science of QRP, by Rich Arland K7SZ (2009)**
- **The ARRL Handbook for Radio Communications 2010 (including the entire volume on CD-ROM)**
- **ARRL's HF Digital Handbook, by Steve Ford WB8IMY, 4<sup>th</sup> Edition (2007)**
- **ARRL's VHF Digital Handbook, by Steve Ford, 1<sup>st</sup> Edition (2008)**
- **The ARRL's General Q&A, 3<sup>rd</sup> Edition, good through June 30, 2011 (2007)**

The Low Power Communications book includes sections on equipment and station accessories, antennas, operating strategies, emergency communications, and surplus military equipment. The complete assembly manual for the MFJ Cub QRP transceiver kit is also included.

This new QRP volume was donated by a member. Donations by members are always welcome, and gratefully appreciated.

The new 2010 Handbook, now over 1,250 pages, has great new sections on digital communications technology, solid state RF power supplies, switch mode power supplies, as well as projects for antennas, solid state amplifiers, and more.

The HF Digital Handbook covers assembling your digital station, RTTY, PACTOR, PSK 31, Winlink 2000, and other topics. The VHF edition includes packet radio fundamentals, APRS, D-Star, and much more.

The General Q&A will give you the entire Element 3 question pool, to aid in your license upgrade preparation and review.

Some additional volumes, mostly older, were donated by Universal Radio. Included are:

- **Listening to Longwave – the World below 500 KHz, by Kevin Carey, 1<sup>st</sup> Edition (2007)**
- **Discover DXing!, John Zondio, 3<sup>rd</sup> Edition (2006)**
- **Joe Carr's Loop Antenna Handbook, 1<sup>st</sup> Edition, (1999)**
- **RTTY Today, by Dave Ingram K4TWJ (1983)**
- **The RTTY Listener, Issues 1-25, Editor Fred Osterman, 2<sup>nd</sup> Edition (1991)**
- **Buying a Used Shortwave Receiver, by Fred Osterman, 4<sup>th</sup> Edition (1998)**

Thanks to the tireless efforts of Toku (AD7JA), who brings the library holdings to each meeting, any of these books can be checked out at any regular Club meeting. Members can retain a book for up to a month at a time.

Or you can check them out any workday at the M&K Club library in Toku's television service shop in the Skyway neighborhood of Seattle, not far from the Club's Renton meeting site.

The library is located in Skyway Radio & TV Service, 11818 Renton Avenue South, Seattle. It's just across from the Skyway Park Bowling center. You can't miss Toku's tower and multi-band HF Yagi!

It was also suggested that the library obtain some video DVD's or tapes of DXpeditions and other Ham events. Research found that most of these videos are available for free short term loan to Clubs, for only the two-way postage.

We'll coordinate with the program chairman, and schedule some for upcoming meetings. Let us know if any DXpedition has especially caught your imagination, and we'll see what we can do.

If you want the Club to obtain other particular books or have some volumes you'd like to donate to the library, contact Tim K7ANE.

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# 2011 -- Ham Nets & Events -- JANUARY / FEBRUARY

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<b>09</b> 1915 -- Kids Net 145.49 (Weekly) 2000 -- King Co. ARES Net 147.08 (Weekly) 2030 -- Snohomish Co. ARES Net 146.92 (Weekly)	<b>10</b> 0545 & 1645 --Weather Net 145.33 (M-F) 1730 -- Puget Sound Traffic System Net 146.82 (Daily) 1800 -- WA Emerg. HF Net 3.985 (Weekly)	<b>11</b> 2000 -- Seattle Red Cross Communica- tions Team Net (includes Elmer's Corner) 147.080 (Weekly) <b>M&amp;K FleaMarket/Mtg</b> 7pm - Mike NTWA's House (22222 148 <sup>th</sup> Ave SE Kent, 98042) <a href="mailto:NTWA@arrl.net">NTWA@arrl.net</a>	<b>12</b> 2000 --General/Tech Information Net 145.33 (Weekly) 2000 -- Educational Radio Net -- PSRG 146.96 (Weekly) 2000 -- HARC CW Net 28.055 (Weekly)	<b>13</b> 1900 -- M&K Public Service Net 146.82 (Weekly) 2000 -- Computer & Packet Net 145.33 (Weekly)	<b>14</b> 2000 -- Youth Net 145.33 (Weekly)	<b>15</b> <b>1000 -- M&amp;K Club                      Meeting, Renton</b> <b>1230 -- M&amp;K Ham                      Radio Exams,</b> Renton. Contact: Scott- <a href="mailto:aqZt@arrl.net">aqZt@arrl.net</a>
<b>16</b> 2100 -- LDS Net 146.82 (Weekly) 2200 -- NW Astronomy Net 145.33 (Weekly)	<b>17</b> 1830 -- WA ARES Net 3.985 (Weekly) 1900 -- Seattle ACS Net 146.90 (Weekly) 1930 -- PSRG Net 146.96 (Weekly)	<b>18</b> 2000 -- Snohomish Co. RACES Net 146.92 (Weekly)	<b>19</b> 2100 -- NWSOAR Net 146.82 (Weekly)	<b>20</b>	<b>21</b>	<b>22</b> 0900 -- WA ARES HF Net 3.985 (Weekly) 2000 -- Amateur TV Net 147.08 (Weekly) 2000 -- HARC CW Net 28.055 (Weekly)
<b>23</b>	<b>24</b> 2000 -- YL Net 145.33 (Weekly)	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>
<b>30</b>	<b>31</b>	<b>01</b> <b>FEBRUARY</b>	<b>02</b> <b>M&amp;K Board Mtg</b> Salvation Army Bldg, Renton, 7pm (Subject to change)	<b>03</b>	<b>04</b>	<b>05</b>
<b>06</b>	<b>07</b>	<b>08</b> <b>M&amp;K FleaMarket                      Meeting</b> 7pm - Mike NTWA's House - (22222 148 <sup>th</sup> Ave SE Kent, 98042) <a href="mailto:NTWA@arrl.net">NTWA@arrl.net</a>	<b>09</b>	<b>10</b>	<b>11</b> <b>Relay Articles                      Due - 23:59:59</b>	<b>12</b>