



Volume 41, Issue 06

Mike & Key Amateur Radio Club – Seattle

**June 2013** 

From our Club President...

## M&K Field Day 2013 - Need A Tow

By Robert Grinnell KD7WNV, President

There will probably be a notice about this from Ivy WA7IVY elsewhere in this issue, but I figured I would devote some of my primo front page space to help get the word out. We have identified a critical need for Field Day—someone to tow the second equipment trailer.

This is an enclosed utility trailer, about 15 feet overall length. It is smaller and lighter than a typical travel trailer, and narrower, too, so you don't need special mirrors. You should have a frame-mounted hitch receiver and standard trailer electrical/lights connection port. Pretty much any truck with a factory towing package should be capable. You would be picking up the trailer in Puyallup, and we need to have it brought up to Fort Flagler by Thursday night to be sure it is there in time for the earlier setup on Friday morning.

Our Field Day simply cannot happen without getting the trailers up there, so if you can help out the Club with this task, please contact either of our FD co-chairs, Ivy WA7IVY or Richard N7MER. Feel free to contact me with any technical questions.

### It All Begins With Field Day

I enjoy watching videos and reading about hams that have traveled to set up a temporary station for a particular purpose at some location. There is a whole spectrum of such activity, from expensive and exhausting DXpeditions to ultra-remote destinations, down to activating a lighthouse for Lighthouse Weekend or going mobile or activating a county for the 7<sup>th</sup> District QSO Party or Salmon Run. (Some of us in the Club have shared our experiences of doing the latter.)

An example on the high end of this spectrum was presented in the May issue of *CQ Amateur Radio* magazine. It had an article about the VooDoo Contest Group—hams from around the world that, for 19 years, have operated the CQ World-Wide DX CW Contest from various nations in West Africa (winning six times!).

Reading about their experiences got me to thinking about this spectrum of activity, and how it really all begins with Field Day. That is the training ground for the knowledge and skills that it takes to conduct such operations, from the logistics of setting up stations and antennas to operational skills like running a frequency and handling a pileup efficiently. Even if you don't have dreams of operating from distant lands, it is an excellent learning experience and a lot of fun, to boot. So come out and join us for a great experience this Field Day.

See you at the meeting on the 15<sup>th</sup>, then at Fort Flagler!

## M&K FD'13 - CW Beach Cometh

By Michael Dinkelman N7WA

Calling any and all CW ops. We're looking kinda short for ops on CW Beach. Any of you new-comers to the Club willing to brave the best CW station in Field Day? This is your chance. We have a full size 80meter vertical (yes, 66 feet). We have a 2 element 40M yagi... kinda wimpy compared to the 6 element monster on the bluff but it'll do. We have a 4 element flame thrower on 20M. And finally, we'll be trying out a new homebrew 4 element 15M beam to boost our sometimes dismal 15M totals. Add to all of that, the best view there is, 20 yards from the surf.

Yes, in two weeks, Field Day will be here. For me, it'll be my 27<sup>th</sup> consecutive Mike & Key Field Day. What about you? Have you done your first one yet? Now, the term CW Beach sounds pretty terrifying for some. However, that's not the goal down on CW Beach. Our goal is to come together as a team, to put together the best stations we can, to learn as much as we can, and to have as much fun as we can. You don't even have to be a CW op to be part of the team.

What is CW Beach? Well, the Mike and Key is unique in that we have a location that supports two radio sites within one. At Fort Flagler, on a 100' bluff overlooking the entrance to Puget Sound is the location of our SSB stations. Down in front of the bluff is CW Beach. There, we set up a big tent, two CW stations, the antennas I just mentioned and generally have a pretty good time of it.

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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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**K7LED Repeaters:** 

146.82 output / 146.22 input (PL 103.5) Tiger Mountain 224.120 output / 222.520 input (PL 103.5) Tiger Mountain Web Site:

www.mikeandkey.org

Fmail:

info @ mikeandkey.org

Reflector:

http://groups.yahoo.com/groups/mkarc

Send dues to:

Mike & Key ARC P.O. Box 4234

Renton, WA 98057-4234

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# Mike & Key Online – The following Club resources are available:

On the Web – The Club's site at <a href="https://www.mikeandkey.org">www.mikeandkey.org</a> 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, visit: http://groups.yahoo.com/groups/mkarc.

E-Relay – Help the Club save on printing and postage, send Email the Relay Editor: glbryan @ att.net.

## June 2013

## M&K Club - June Activities

By George Thornton AE7G, Activity Manager

#### **M&K FIELD DAY - THE FOCUS OF JUNE MEETING**

The June meeting will be less than one week before Field Day.

Our focus on the meeting will again be on that event.

We will have a final update on Field Day preparations and guidelines. We will also have a roundtable discussion on operating tips and tactics. We will also attempt to predict which bands will be open, when.

We expect that in the next month or two the Board is going to be proposing major revisions in the Club by-laws. Discussion has been ongoing and long. Once the work is finished, we will present the final proposal at the next general membership meeting. Out of concern that the business meeting may run long, I will not be scheduling a separate presentation for that meeting. The decision on the July program will not be announced until after the July board meeting.

I will see you all at the next Board meeting, and then at Field Day.

### **M&K June Door Prizes**

Prize List & Photo by Jim Aigner N7MU

Among the door prizes this month are a used coax switch and another LA Police Gear Go Bag. Here's the complete prize line-up for June:

- (2) Sets of Velcro straps
- 7" Wire Stripper tool
- 350-Piece Wire Tie Assortment
- MT-11 MicroTorch, Butane Powered
- Folding Desk Magnifier
- Rite in the Rain Book and All Weather Pen
- Hard Hat White
- MFJ-1704N 4-Position Coax Switch with 'N' connectors (used)
- QRP YoYo dipole antenna for 2m through 40m



## K7LED Relay

## **M&K Membership Committee Report**

By Kathy Martin KB7QMO and Gary Bryan KG7KU



The Membership Committee met at 'A Terrible Beauty' Irish Pub/Eatery in Renton following the May General Meeting.

In attendance: (photo, I-r) Kathy Martin KB7QMO, Ryan Martin N7TNI, Gary Bryan KG7KU, Rita Danielson KD7CNU and Ric Danielson K7RIC. Items discussed:

- Construction at the Salvation Army continues to have an impact on parking at the General Membership meetings.
- On-going Membership Greeters (Ivy, Gary & any others) meet & welcome visitors. Renewals (Rita). Photos of new members (Ric).
- Field Day Toku AD7JA will be providing an upgraded offer, including some light refreshments at the GOTA tent. Works well especially with visitors who stop by and review the information on exhibit there. Thanks Toku.
- Holiday Dinner(s) The Committee is continuing to consider options for the year-end social events.

Your input and involvement in the Committee is always welcomed. If you are unable to meet with us, you can give us your thoughts and suggestions: <a href="mileandkeymembers@qmail.com">mikeandkeymembers@qmail.com</a>.

## Let's Celebrate Our June Members!

By Dave Smith KB7PSN, Treasurer

As of June 2013, these have been Mike & Key members for the number of years stated. Congratulations to all of you, and thanks for your participation & service:

Dawn Humphrey	КС7ҮҮВ	22 Years
Calvin C. Doss	KC7GZL	17 Years
Terry Dettmann	WX7S	11 Years
Daniel Stevens	KL7WM	11 Years
<b>Guy Molinari</b>	N7ZG	10 Years
Phil Sheridan, Jr	KD7UXT	10 Years
Ross Laine	WORWL	9 Years
Ivy Nelson-Groves	WA7IVY	7 Years
Andrew Baze	AB8L	5 Years
Lee Sherry	KE7NBN	5 Years
Michael Mikuchonis	W7XTZ	2 Years
Ronald Snow	K7EB	2 Years
Bill Balzarini	KL7BB	1 Year
P J Hicks	N7PXY	1 Year

## Some Sad News - Ermanno Rusi N7VIQ, SK

David Smith posted in Mike and Key Amateur Radio Club (K7LED)
http://www.memorialobituaries.com/memorials/memorials.cgi?action=Ob
it&memid=211911&clientid=flint

Ermanno Rusi / N7VIQ, former member of the Mike & Key ARC became a Silent Key on May 24, 2013. He was 83. Always remember his jubilant voice on the local Seattle repeaters, talking about his "pride and joy", his garden, complete with arugula.

## M&K – Countdown to Field Day 2013

By Ivy Nelson-Groves WA7IVY, Field Day Co-Chair

Just one week from our general meeting this month, we'll all be at Fort Flagler! This year my tally has been running four field day related nightmares a week now. But it will be a great event and everyone is going to have a lot of fun!

I checked the *Old Farmer's Almanac* on line and it gives the following weather report for our Field Day:

20th-23rd. Sunshine and turning hot.

The Farmer's Almanac (a different publication) reports:

Jun 19-22: Rainy, cool; (bring the rain gear for set-up again)

Jun 23-30: Sunny, turning hot. (tear down should go well, bring sunscreen!)

Either way, I'm sure we will all be prepared for anything.

# WANTED!

Driver to take trailer up to Field Day.

The club will reimburse for gas and ferry fees. Need someone with a truck that can tow one of our Equipment Trailer from Puyallup to Fort Flagler.

Contact Ivy WA7IVY as soon as possible.

Thank You!!!

A big thanks to the following folks! As you can see from this list, it takes a lot of people to put on a successful Field Day, and the more the merrier!

#### Your 2013 Field Day Band Chairs are:

- Safety Officer Scott Robinson AG7T
- 10/80/Digital, Scott Robinson AG7T
- 15m, Steve Cook KD7IQL
- 20m, Robert Grinnell KD7WNV
- 40m, Dean Holtan N7XS
- CW Beach, Michael Dinkelman N7WA
- GOTA, George Thornton AE7G
- VHF, Steve Rehnstrom KE7KRT

- Information Table: Meredith & Dick Radford WA7NIW
- Food Chair: Rita Danielson KD7CNU
- Wagon Master: Dick Radford WA7NIW
- Barracks Mom: Rita Danielson KD7CNU
- Tower Pros: Alan Hughes KB7SVU, Hal Goodell N7NW
- Bonus Point: Monica Cook KF7QLX
- FD Co-Chairs: Ivy Nelson-Groves WA7IVY & Richard Pasquier N7MER

#### **Accommodations**

There are a couple of choices for members of the club: the Mike & Key Bed & Breakfast™ or the Wagon Wheel. **Rita KD7CNU**, is in charge of the B&B, completely and without equivocation; that is, you are expected to be on your best behavior and be considerate of your fellow residents. If you haven't made reservation, contact Rita ASAP!

For you campers, **Dick WA7NIW**, is our Wagon Master. Please check in with Dick when you arrive with your tent/RV. We expect everyone to be respectful to your fellow campers. Please remember that you, as club members, are responsible for the conduct of your guest. We want a happy, fun, and safe weekend for everyone!

Make sure you have a printout of the reservation or be prepared to pay for a Discover Pass.

When driving at the Wagon Wheel or near the B&B, please remember that many members have small children (future hams) who tend to run and play, so we need to keep the speed down! Watch out for the kids!!

#### Set Un

With the change in rules, we would like to get a start on setup around 10am this year. This is the where we need as much help as possible. As you veterans know, setup (and tear down) has jobs for all levels of skill and physique. We need help with everything from raising towers to running power cables and setting up tents. The more people we have the faster, better and safer we can get set up. **Scott AG7T** is our Safety Officer, and what he says goes for the entire weekend. **Alan KB7SVU** in charge of Tower Rats. Remember to bring your hard hat on Friday for setup and closed toed shoes. *It is imperative that all helpers follow directions precisely as the Tower Lead specifies*. **Safety is our first priority**.

The signup board for the operating shifts will be at the bluff during setup. This means that if you work at setup, you get your first choice of operating shifts. If you're at setup and aren't doing something, **Richard N7MER** will find something for you to do. After setup, the signup board will be taken to the potluck. **Mike N7WA** will handle CW beach as he usually does. ©

#### Friday Night Pot Luck

Held at the Wagon Wheel; in case of inclement weather, this event will be held at the B&B. Once everything is set up, join us at the Potluck for food, friendship, campfires, and stories of Field Days gone by. The club will provide the meat, general condiments and sodas. Please bring your favorite side dish or desert to share. Once we've enjoyed all of that great food, we will open the sign up lists for people to operate and log at the various stations. Rita KD7CNU (thank you so much for volunteering!) will be cooking and is looking for a few helpers. If we have anything left over, it will be available for Saturday evening's meal. Remember that you are responsible for feeding yourself for the weekend. After the Potluck Dinner, we will have bonfire at the Wagon Wheel. If everyone brings a little firewood, we have enough for both evenings.

#### Operation on Saturday and Sunday

We start operating on Saturday at 1800 UTC – 11am PDT – and continue for 24 consecutive hours. If you haven't been active on HF bands for the past year, or are a new Ham, or even a non-Ham, consider getting on GOTA first to learn/refresh your skills before going on to another station. **George AE7G** will need plenty of coaches for his operators. Consider taking an hour or two to sign up for GOTA coaching. Remember that if you are signing up for a shift at any station, please arrive a little early to ensure a smooth transition. If you have any questions at all, please ask the Band Chairs for more information.

Each band chair will have a sign-in sheet for you to fill in when you report in for a shift as a logger or operator. Please fill this out, and if you are under 18 years of age, provide your age. This will help me tremendously when it comes to time for submitting our points for this year.

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## **M&K – Countdown to FD'13...** [Continued from Page 4]

#### What to Bring

**Bug repellent**, firewood, **Sunscreen**, warm clothing, **Bug repellent**, rain gear, extra blanket, flashlights, handi-talkie, **Sunscreen**, spare batteries (don't forget extras for your HT too), **Bug repellent**, food for meals and snacks (you are responsible for your own lunches and breakfasts), ice, **Sunscreen**, drinks, pot-luck dish for Friday night, camping gear (if needed), **Bug repellent**, matches, first aid kit, xyl/om, and the rest of the family, **Sunscreen**. Did we mention **Bug repellent**? The State Parks have regulations in place prohibiting spraying of pesticides. So please bring your **Bug repellent**. And **Sunscreen**.

#### Tear Down

Similar to Setup, but reversed. What hasn't changed is the need for as many people as possible for teardown. Everyone can help and it will be greatly appreciated!

#### Getting to Fort Flagler

From the Hood Canal Bridge at the North end of Kitsap Peninsula:

- About five miles after crossing the bridge, turn right onto easily missed Highway 19 (Beaver Valley Road).
- Travel 10 miles to the Chimacum four-way stop. Turn right on Chimacum-Center Road.
- At the four-way stop in Port Hadlock, turn right onto Oak Bay Road.
- 🕲 Go about one mile and turn left onto State Route 116. Fort Flagler is at the end of the road, about 10 mi.

#### **Parking**

The park rangers have asked that we please park in the lot at the beginning of the road leading to the bluff. Only the Band Chairs will be allowed to park on the bluff for setup/teardown. Remember, we are guests at this park with a very long and very positive relationship with the Fort. If you have any questions, please ask your friendly local Field Day Co-Chairs or the Band Chairs.

#### Pets

For many of us, our pets are a part of our family and we want to take them with us when we visit a beautiful place like Fort Flagler. But like the children and the OM, we have to make sure they behave, and in the case of pets, that means they must be kept on a leash no longer than 8 feet and be under your physical control at all times (Do not tie your pet to a tree or shrub). I will have copies of the <u>Fort Flagler Pet Information and Rules</u> available at the June meeting, and the Wagon Master and FD Co-Chairs will have several copies available at Field Day.

#### Miscellaneous

I'm going to try the Twitter thing again, and any announcements we need to make will also be sent via our club Twitter site: <a href="mailto:@k7led">@k7led</a>. I changed the account name to K7LED Special Events so we could use the account for both Field Day and Flea Market.

#### Fort Flagler Rules: (from their website)

Please observe State Park rules so that all park visitors may enjoy their visit. Please note that the following general park rules are not customized for each individual park, so not all rules will apply to all parks (for example, "campsites cannot be held for someone who might arrive later" only applies to parks with campgrounds). Please report disturbances to park rangers; they are trained to help you resolve issues and concerns.

- Park hours vary depending on weather and season. However, all day-use areas close at dusk. Campers may enter parks until 10:00 p.m.
- Campground check-in begins at 2:30 p.m. Check-out is at 1 p.m.
- Quiet hours are from 10 p.m. to 6:30 a.m., unless otherwise noted at the park. Engine-driven electric generators may be operated only between the hours of 8 a.m. and 9 p.m.
- Please use the trash cans and dumpsters to help keep parks clean. Recycling is encouraged in all Washington state Parks. In parks with a
  pack-it-in/pack-it-out program, visitors must carry out everything they have brought in.
- Please do not harm wild plants or animals. Feeding of wildlife is strictly prohibited.
- Wildlife, plants and all park buildings, signs and tables and other structures are protected; removal or damage of any kind is prohibited.
- Horses are allowed only in designated parks.
- Pets are allowed in most state parks, but must be under physical control at all times on a leash no more than eight feet long. Owners are
  responsible for cleaning up after their pets. Pets are not permitted on designated swimming beaches.
- Smoking is not allowed inside vacation houses, yurts, cabins or other rustic structures.
- Glass bottles or metal cans are not allowed on swimming beaches.
- Alcoholic beverages are permitted only in designated campground and picnic areas.
- Fireworks are prohibited on all state public lands, including state parks and beaches that front state park lands.
- All Washington state laws are enforced in Washington state parks.

**Don't move firewood:** Please protect the Pacific Northwest from invasive species by obtaining or purchasing your firewood at or near your camping destination. Firewood can carry insects and diseases that threaten the health of our western forests. You can make a difference by buying and burning your firewood locally. For more information, visit online at <a href="https://www.dontmovefirewood.org">www.dontmovefirewood.org</a> or the Washington Invasive Species Council <a href="https://www.dontmovefirewood.org">website</a>.

# M&K—Field Day – Fort Flagler State Park – June 22-23 By Rita Danielson KD7CNU

The Mike & Key Field Day reunion is getting closer! Are you ready? Do you have your place at the Wagon Wheel or Camp Wilson reserved? Time is running out and Camp Wilson is filling up. There are 5 beds available in shared rooms in Camp Wilson.

The food and the company will be fantastic. I will be supplying breakfast Friday, Saturday and Sunday. You will supply your own dinner for Thursday and lunches and snacks for the weekend. There is a nice grill outside Camp Wilson for you to use. The club will supply the burgers, dogs and fixings for Friday and Saturday as well as soda and water. The soda and water will be available for the evening meal only. There will also be games in Camp Wilson for you to enjoy. Due to very limited space we will not have a jigsaw puzzle going. If you enjoy crafting such as beading or cross-stitch, please feel free to join Sally & Rusty in the lounge for a couple of creative days.

There is a fire pit behind the baseball backstop for you to use. Complete with benches. Bring firewood.

The recreation/dining hall is also available for our use. If the weather is wet, we will use it for a dining hall. Hopefully we won't be using it for that purpose.

We will be obeying State Park rules. No alcohol, firearms or pets are allowed in Camp Wilson. You can have alcohol and pets in the Wagon Wheel. The pets must be on leads and under your control at all times. Check with Dick Radford for the rules regarding pets. Helmets will be worn while on bicycles, motorcycles or motor scooters. The speed limit is 5 MPH and is to be obeyed. The rangers will issue citations to those deserving them. Quiet time is 2200 or 10:00 PM, both in Camp Wilson and the Wagon Wheel.

There is plenty to do at Fort Flagler. Just south of Camp Wilson is the ELC office. There is a museum and guided tours of the bunkers and gun emplacements available. I've heard it's a lot of fun to play flashlight tag in the bunkers. Hiking trails are abundant. Concerts have been held in the past, there may be something this year as well. If you like geo-caching, there's plenty to go around. Port Townsend and Port Angeles are nearby if you like a little urban exploring.

I have it on very good authority that there will be a large youth group staying at Camp Hoskins Thursday-Saturday. I've told one of the organizers that we will be there and it will be a wonderful opportunity for the kids to see why emergency communications is so important and offered them the opportunity to Get On The Air. So, be prepared, George. We should max out our youth points in the first half hour, of course the more the merrier. We won't turn anyone away.

For those staying at Camp Wilson, I have e-mailed the reservation confirmation form that can be used as your day pass at Fort Flagler only. If you wish to visit any of the other State Parks in the area, please purchase the Discover Pass. \$35.00 (on internet) is good for a year. \$10.00 will get you a day pass.

If you have any questions, please ask at the June meeting, or call me at 425-359-3764 after 7:00 please. Or, if it's not urgent, you can e-mail me, <a href="mailto:gamatoad24@comast.net">gamatoad24@comast.net</a>. If you have not yet paid your deposit of \$10.00 per person, per night, please do so or you will be removed so someone else can stay.

Looking forward to another great Field Day.

73's/88's Rita (AKA Mom) KD7CNU

## What to bring?

#### Personal items:

- Cell phone with charging cables
- Cooler
- Water/refreshments
- Warm coat
- o Boots
- o Gloves
- Changes of clothes
- Toiletries
- Lantern
- o Flashlight
- o Batteries
- Sleeping gear/bedding
- Alarm clock if needed
- Camera/film/extra SD card
- o Video camera
- o Cash

- Personal medications
- Reading material (QST)
- Sun glasses
- Sun screen
- Bug repellent (the fans work great!)
- Warm clothing
- o Rain gear (just in case)
- Extra blanket
- Handi-talkie
- Food for meals
- Snacks
- o Ice
- o Drinks
- First aid kit
- Matches
- Firewood
- Earplugs
- Good attitude

## M&K FD'13 - CW Beach Cometh... [Continued from Page 1]

All are welcome. It's not just about CW (though you won't find any microphones around). You can learn about what goes into setting up an efficient station and the antennas we use. During the operation itself, we have headphones for visitors and invite questions. If you feel up to trying some CW, we'll even sit in with you and mentor. At night, we watch cruise ships gliding by at 2AM in the morning.

The fun starts Friday morning, June 21<sup>st</sup>. If you find the action a bit slow on the bluff (it does take them a while to get going sometimes), come on down to the beach. Our goal is to have radios operational before the potluck starts on Friday evening.

At the May Club meeting, you heard plenty about how Field Day works for the Mike & Key ARC. At the June meeting, we'll open it up for last minute details and questions. Maybe give some instructions on how to manage the radios and what kind of experience to expect. It's a class act both on the bluff and the beach. But CW Beach... well, you just have to experience it for yourself to understand why I've invested so many years into it. See you there.

# M&K Radio Officer Report

By Hal Goodell N7NW

Well here we are on a Saturday morning getting ready for the June ARRL VHF Contest. Not a sunny day so far here on Fox Island. The view from our repeater site is even less appealing and looks a little rainy looking out in the westerly direction. See picture. This reminds me of my many outings to various mountain tops for the contest. Well at least I get to stay home in my very dry ham shack. Hi

You can access the view from our repeater site by going to <a href="http://www.wa7hir.org/">http://www.wa7hir.org/</a> and click on the link for live video.

Both repeaters are performing pretty good. We still have some noise on the 2 meter repeater which we are looking into. Now that the site is clear of snow, it seems that work and other activities are preventing us from putting together a good investigative effort. If I'd known I would have been this busy being retired, I may have stayed working. NOT!!



Michelle, WB7AYU, reports the 224.12 repeater is working great at her location up on Camano Island. Except the repeater is very lonely!! We need more 222 activity that's for sure. One of my projects this summer will be to reinstall the EchoLink on our 222 repeater. That was fun when I had it active before, you could talk to stations anywhere through our repeater. Hal, N7NW – Radio Officer

## **Good Deeds – Antenna Tower**

By Michael Dinkelman N7WA

Just after the flea market flyers had been mailed out in January, a letter came back from a *Ham-Widow* in Renton. Apparently her husband had died a couple years before and there was still a tower in the back yard. Did we know anybody who would take it down and away? I stopped by a couple days later and knocked on the door. She was surprised at the quick response. We went out into the back and looked at 40' of Rohn 25. There was a TH3 yagi on top. It wasn't guyed to specs but it looked like it would be safe enough to take down once it was guyed with ropes. I said we would take it down but it would have to wait for spring. No problem, she wasn't in a hurry and I said I would be in touch.

Fast forwarding to April; May was going to be a busy month so I scheduled for June 1. I asked many of you if you could help and there were a lot of yes's. Come June 1, there were even more people than I was expecting. The tower came down in a couple hours. The extra hands made for light work and I think it was fun for all.



The yagi is headed for the Field Day GOTA station if it can be resurrected. The four sections of tower will be added to our Field Day equipment but is slated for CW Beach. Doris, the widow, said her husband would have been pleased to see the equipment going to good use.

I want to thank all who came out to help. We even had one prospective member come out. That's the kind of involvement we like as a club. You'll find a picture in this Relay somewhere of the crew. Toku/AD7JA, George/AE7G, Hal/N7WA, Tim/K7ANE, Mark/KB7WAL, Michelle/WB7AYU, and Dave/KG7CQI - you all did a great deed and the Mike & Key thanks you. So does Doris.

## Ham Radio Podcasts of Interest Perhaps...

Contributed by Jeff Ellis K7GDE

This is not really an article but in the last meeting someone brought up a podcast he liked. It would be good to list some ham podcasts in the Relay. Here is some that I watch all the time!

## Ham Nation http://twit.tv/hn

This is a podcast hosted by Bob Heil (K9EID), Gordon West (WB6NOA), George Thomas (W5JDX), Don Wilbanks (AE5DW).

Bob is a great host and really fills the episodes with joy of ham radio. Everybody knows Gordon West who writes the books that many of us used to study for our ham exams. George Thomas does the "Smoke and Solder" segment where he builds projects and teaches some electronics theory. Don Wilbanks is from Amateur Radio Newsline and give a weekly newline segment. The shows are done live each wednesday at 6pm PST with IRC Chat room being part of it. They are available on iTunes and to watch on the website a couple of days later. They just produced their 100th show. They had guest appearances of Joe Walsh (WB6ACU) who also wrote the theme for the show, and Larry Junstrom (K4EB) of 38 Special fame. There is an after show net at 7pm PST each Wednesday on 20m, 40m, 80m, 160m, D-Star, and EchoLink.

## AmateurLogic.TV http://www.amateurlogic.tv/blog/

This is a show hosted by George Thomas (W5JDX), Tommy Martin (N5ZNO), and from Australia Peter Berrett (VK3PB)

This is more of a once a month show packed with lots of material of interest of hams including building projects. There are 54 episodes of this show. The show is available from the website, YouTube, and Roku

### Ham Radio Now <a href="http://arvideonews.com/hrn/">http://arvideonews.com/hrn/</a>

This show is put on by Gary Pearce KN4AQ

Gary is on episode 80. Much of what he does is interviews from places like Hamvention. You can watch the show from his website or iTunes.

## **Pacific Northwest Hamfairs & Events**

Source: PNW Hamfair webpage at http://www.n7cfo.com/amradio/hf/hf.htm. (Used with Permission)

July 13-14, 2013. SalmonCon. Pacific Northwest QRP Group annual weekend outing. Contact Wayne <a href="MB6M@Comcast.net">MB6M@Comcast.net</a> . <a href="http://valleycamp.org/page/salmoncon">http://valleycamp.org/page/salmoncon</a>

July 20, 2013. Coos County Radio Club Hamfest and Swapmeet. North Bend, Oregon. This is an ARRL sanctioned event. Contact: <a href="mailto:zane.albertson@qmail.com">zane.albertson@qmail.com</a> (541)404-6908

July 19-21, 2013. 4th Annual KUH Pig Roast & Campout. Springdale, WA. Contact Ray, (509)258-7078

<u>cdknray@wildblue.net</u> <u>Flyer in PDF</u> (700K) <u>Driving Instructions in PDF</u> (28K)

July 20-21, 2013. Glacier Waterton International Peace Park Hamfest. Montana State Convention. This is an ARRL sanctioned event. Glacier Meadows Campground, 13 miles west of East Glacier on MT Hwy 2. Flyer in PDF. (180K) www.gwhamfest.org.

July 27, 2013. KBARA 35th Annual Meeting and Picnic. Valleyford Park, Valleyford, WA. <u>Flyer in PDF</u>. (580K)

July 27, 2013. Chehalis Valley ARS 13th Annual Swap. Lewis County Fairgrounds. This is an ARRL sanctioned event. Contact John Ellingson, K7OSK. <a href="mailto:k7osk@boatanchor.com">k7osk@boatanchor.com</a>. <a href="mailto:http://www.cvars.org/">http://www.cvars.org/</a> Flyer in PDF. (262 K)

August 2013. Radio Club of Tacoma Hamfair. Canceled! <u>Announcement in PDF.</u> (11K) <u>http://www.w7dk.org/</u>

August 2-4, 2013. 58th Annual Pacific Northwest DX Convention. Spokane Valley, WA. <a href="http://sdxa.org/pnwdx13/">http://sdxa.org/pnwdx13/</a>

August 10, 2013. Northwest Citizen Corps Expo. North Bend, WA. <a href="http://www.nwcitizencorpsexpo.com/">http://www.nwcitizencorpsexpo.com/</a>

August 18, 2013. Antique Radio Swap Meet. Puget Sound Antique Radio Association. 9 AM to 1 PM. Shoreline Community College, Shoreline, WA 98155. Free admission. <a href="http://www.eskimo.com/~hhagen/psara/">http://www.eskimo.com/~hhagen/psara/</a> (Always the 3rd Sunday in August) August 24, 2013, Annual Clark County Amateur Radio Club (CCARC) Ham Fair, Vancouver, WA. This is an ARRL sanctioned

event. For more info: <a href="mailto:clarkcountyhamfair@w7aia.org">clarkcountyhamfair@w7aia.org</a> or <a href="mailto:www.w7aia.org">www.w7aia.org</a> .

August 24, 2013. Highline Amateur Radio Club SwapFest. DesMoines, WA. Always the 4th Saturday in August. This is an

August 24, 2013. Highline Amateur Radio Club Swapfest. DesMoines, WA. Always the 4th Saturday in August. This is an ARRL sanctioned event. <u>http://www.highlinearc.org/swapfest.html</u> or email <u>swapfest@highlinearc.org</u>

Mike & Key ARC – Elmer Contacts – By Jim Aigner N7MU

			= y c ;gc.		
Area Elmer Coordinator Email		Email	Phone	Description	
Stations, Equipment	John Robson, AC7LK	robson.j@comcast.net	253-984-6709	Station setup, eq't selection, antennas, digital	
Beams and Towers	Alan Hughes, KB7SVU	kb7svu@juno.com	253-840-4947	Beam antennas and towers, safety	
Contesting	Mike Dinkelman, N7WA	man, N7WA <u>mwdink@clearwire.net</u> 253-631-3756 Contest operatio		Contest operations	
CW	Mike Dinkelman, N7WA <u>mwdink@clearwire.net</u> 253-631-3756 Learn CW, operating		Learn CW, operating proficiency		
Digital Modes	Digital Modes Curt Black, WR5J wr5j@westseattlearc.org 206-755-4541		Digital modes, software, TNC's		
D-STAR	Curt Black, WR5J <u>wr5j@westseattlearc.org</u> 206-		206-755-4541	D-STAR technology and operation	
Emergency Comm	Tim Kane, K7ANE	k7ane@arrl.net	206-251-7467	CERT, ARES, organizations & Eq't	
HF Operation	Dale Tongue AC7NP	dale.tongue@gmail.com	425-432-4254	Eq't, Antennas, best HF operating practices	
New Members Dick Radford, WA7NIW <u>wa7niw@arrl.net</u> 425-828-9791 Getting started, Eq't sel		Getting started, Eq't selection and operation			
QRP	Frank Qualls, AB7HA	franklin_qualls@hotmail.com	425-802-1837	Low power operation, design & construction	
VHF / UHF Operation	Hal Goodell, N7NW	n7nw.hal@comcast.net	253-549-4178	6 meters and up; moon bounce, meteor scatter	

# VHF AND UHF STRONG AND WEAK SIGNAL MODES... IS THERE A DIFFERENCE? By John Robson AC7LK

#### Introduction:

VHF and UHF repeaters exist for the purpose of extending the range of mobile and portable stations. FM is the mode of choice for this purpose because it is relatively immune to amplitude noise or noise spikes that are commonly generated in your car or truck. Noise sources in your vehicle include ignition, alternator, fuel injection as well as various solid state devices commonly found on modern cars. Because mobile and portable stations use vertically polarized antennas, the repeater itself uses a vertically polarized antenna. If you attempt to use your vertical antenna on the lower portion of the 2 m band to make a sideband contact, you will be disappointed with the range of your radio. Cross-polarization losses can be as much as 20 dB. That means that your 50 W of transmitter power will be heard as if you had a half watt transmitter. If you were able to rotate your antenna 90° to a horizontal position and transmit an FM signal, what do you think the result would be compared to a standard sideband transmission on the same frequency?

#### Strong signal work:

FM requires a higher IF bandwidth than SSB resulting in the internal noise floor of the FM receiver being much higher. In fact the difference in noise floor between FM and SSB can be as much as 6 to 8 dB. There is another significant problem for FM and that is related to the way the way in which FM demodulates the received signal. What you will notice as a user is that there is a sudden drop off to FM as a signal becomes weaker. We have all observed that a fully quieting signal into a repeater can drop out entirely and only a few miles of travel by the transmitting station. I recently commented to a user of this clubs repeater that if all he was doing on 2 meters was FM work through a repeater that any effort to improve his signal by upgrading his antenna from a simple J Pole was probably not worth the effort. In other words, I explained to him, that from a practical point of view there would be no difference in his station observable to either him or to any station that he was QSOing with. Immediately upon making that statement a breaking station advised me that I was wrong and there was no long or short distance mode and that any difference in distance was a function of the band and not the mode. I chose at that time not to make further statements on the air but in hindsight it occurred to me that maybe the issue of strong signal work and weak signal work should be addressed. The fact is that FM dropout occurs at about a seven db signal-to-noise ratio.

#### Weak signal work:

SSB is the preferred mode for weak signal work and there are many reasons for this. First, most noise is vertically polarized so simply rotating the antenna to a horizontal position improves signal-to-noise and the difference is discernible to the human ear. Secondly a SSB signal is fully copiable down to less than a 3 dB signal-to-noise. Your SSB receiver is giving intelligent information that cannot even be detected as noise by the FM receiver. That is the meaning of "dropout". The FM signal has deteriorated and dropped out long before the SSB signal begins to fade.

How much difference does this make? The simple answer is "a lot". In researching this article I found published charts of range comparing FM to sideband at both 50% and 99% reliability. I will not attempt here to reproduce the charts I have found but I will give you an example. At 50% reliability, a 25 W FM transmitter has a range of 67 miles with a six dB gain antenna at a height of 30 feet. By contrast, the same station has a range of 123 miles using SSB.

All weak signals are not equal. While SSB has obvious superiority to FM anywhere other than repeater use, CW is vastly superior to sideband. Intelligence can be received using CW after the sideband signal has completely dropped out. But wait, there is more: The Use of computers with soundcards has made it possible for new modes to be invented, developed and improved in the field so that we now have the ability to receive intelligence from signals well below the noise floor. I first discovered PSK when I used a friends station to contact a station in Antarctica with a 5 W transmitted signal. Take that CW! I am certain that the limits of weak signal work have not been reached and that it will be possible, if it's not already so, to make contacts with voice well below the noise floor. This is an interesting subject and some of the club members who are into digital may well want to do some research on this and supply other articles or perhaps a program at a club meeting.

#### **Conclusion:**

FM is a strong signal mode and SSB is a weak signal mode. Each mode has a preferred use and purpose. I believe that weak signal work on 2 meters should be encouraged as most new hams have technition licenses and confine their operating to FM. 2 meter sideband would be a stepping stone not only to a license upgrade, but also an ideal training ground to improve operator skill. Perhaps someone who shares my opinion would be able and willing to begin a SSB 2 meter net. I would gladly participate in any activity that encourages new hams to move on in the hobby.

9

**K7LED Relay** June 2013

Ric Danielson K7RIC

# M&K Photos From Our May General Meeting Photo's by Ric Danielson K7RIC

## Welcome Our New Members!



Seth Mattox KF7YGP... was inadvertently overlooked as New Member in April. Our apologies, Seth. Great to have you in the Club. (Photo by Dave Smith KB7PSN)



Charles Anderson KG7AXM



Adam Bruckner KD7AUK



Jeff Ellis K7GDE



Susan McQuarrie KG7AXK



Ivy Nelson-Groves WA7IVY and Richard Pasquier N7MER gave the Club the presentation: An overview of Field Day location, setup and operations. (Picture above & below)



Door Prizes abounded at the Club's May Meeting.





Construction at Salvation Army, Renton. This photo [dated 05/24] shows the extensive amount of construction at the site. (Photo by Dave Smith KB7PSN).

# **M&K General Meeting Minutes**

By Ivy Nelson-Groves WA7IVY, Secretary

General Meeting Agenda - 18 May 2013

Meeting was called to order at 10:02 AM by the President, Robert KD7WNV.

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

#### **Officer Reports:**

**President** – Robert KD7WNV: no report.

**Secretary** – Ivy WA7IVY: no report.

**Treasurer** – Dave KB7PSN: The books are in order. Next month is the Flea Market audit.

Activities Manager - George AE7G: This month

**Chairman of the Board –** Tim K7ANE: The by-laws are being revised before their presentation to the membership

Radio Officer – Hal N7NW: The repeaters are working well. www.wa7hjr is the website to view the repeater location (points to the west). Hal will be making another trip up the mountain this week. There is still a minor noise issue.

#### Quorum present.

Dick WA7UEW made a motion to approve the minutes as amended. Michelle WA7PVE seconded the motion. Motion passed.

Vice President – Kathy KB7QMO: Membership applications: Adam Bruckner KD7UAK; Jeff Ellis K7GDE; Charles R Anderson KG7AXM; Susan McQuarrie KG7AXK. All were approved by the membership.

**Relay Editor** – Gary KG7KU: Gary thanked those who submitted articles to the relay. He invited others to submit articles.

**Webmaster** – Jim KD7BAT: There are a few new items on the website.

## **Standing Committee Reports:**

**Strategic Planning** – Kathleen KF7MUD: Nothing new to report. **Facilities** – John NU6A: no report.

**Education** – Jim K7JGM: <u>www.icqpodcast.net</u> has some good podcasts on ham radio.

**Public Service** – Robert KD7WNV: Gary KG7KU put slips on the tables of upcoming public service events. WA Special Olympic is coming up. This is a great way for new people to get involved and get on the radio.

**Technical** – Gil W7GIL: no report

**Other Committees** (as appropriate):

**VE Exams** – Scott AG7T: Had 13 people attend testing last month. Awarded 3 Technician, 5 General, and 4 Extra. Exams will be held today at 12:30.

**Field Day** – Ivy WA7IVY: defer report to presentation today. Robert KD7WNV mentioned that the field day apparel order is not scheduled until this coming Monday.

**By-Laws Review** – Dave KB7PSN: There was a lively discussion on the by-laws report at the last Board meeting; we will continue at the next board meeting.

**Logo** – Jim N7MU: See Jim if you need apparel embroidered with our logo and see Dan N7QHC for club badges.

**Membership** – Gary KG7KU: There is a short article on the membership committee in the Relay. During the upcoming field day, the committee is considering having some refreshments on the bluff.

**Picnic** – Hal N7NW: Our annual picnic will be at the August meeting.

Old Business: No old business.

New Business: No new business.

Alligator Award – Michelle WA7PVE retains the award.

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

**Mike N7WA** mentioned that he is helping take down an antenna on 1 June in the Renton Highlands. If you can help, contact Mike.

**Kathy KB7QMO** mentioned that we have club pins and patches available for sale. If you have any ideas for promoting the club, let Kathy know.

The next Mike & Key Board meeting will be on the first Wednesday of the month, June 5th at 7:30 pm, at the Salvation Army in Renton.

The next Mike & Key General Membership meeting is the third Saturday of the month, June 15th at 10:00 am.

Scott AG7T made a motion to close the meeting. Michelle WA7PVE seconded the motion. The motion was passed. Meeting adjourned at 11:05 hours.

9 guests; 53 members, 50 ARRL members

Attested: Ivy Nelson-Groves WA7IVY, Secretary

## June 2013





# **M&K Board Meeting Minutes**

By Ivv Nelson-Groves WA7IVY, Secretary 5 June 2013

Of	Officers present					
Х	President	Robert Grinnell	KD7WNV			
Χ	Vice President	Kathy Martin	KB7QMO			
Χ	Secretary	Ivy Nelson-Groves	WA7IVY			
Χ	Treasurer	Dave Smith	KB7PSN			
Χ	Activities Manager	George Thornton	AE7G			
Α	Radio Officer	Hal Goodell	N7NW			
Tru	Trustees present					
Χ	No. 1	Jim Monson	K7JGM			
Χ	No. 2	Kathleen Weiss	KF7MUD			
Χ	No. 3	Gary Anderson	KF7TBC			
Χ	No. 4	Gil Drynan	W7GIL			
	No. 5	John Marthens	NU6A			
Ot	Other officers (non-voting)					
Χ	Relay Editor	Gary Bryan	KG7KU			
	Webmaster	Jim Etzwiler	KD7BAT			
Vis	Visitors					
	Michael Hansen		KG7MX			
	Alan Hughes		KB7SVU			
	Daniel Stevens		KL7WM			

The Chairman of the Board called the meeting to order at 7:35 p.m.

**Minutes**: A motion was made to approve the minutes as published was made by George AE7G and seconded by Robert KD7WNV. Motion passed.

## Reports:

Chairman of the Board - Gil W7GIL: No report.

President - Robert KD7WNV: No report.

Vice President – Kathy KB7QMO: Membership applications for consideration: David Yarbrough KG7CQI. They were approved.

Secretary - Ivy WA7IVY: No report.

Treasurer - Dave KB7PSN: The Club's books are in order. The audit for the flea market books will be before the June general meeting.

## K7LED Relay

Activity Manager - George AE7G: This month's program will be on operating tips for Field Day, and a Q&A session on Field Day.

Radio Officer – HAL N7NW: not present.

Relay Editor - Gary KG7KU: The Relay articles get a bit sparse after Field Day, so Gary encouraged folks to write new articles for the August relay.

**Webmaster – Jim KD7BAT**: Not present.

**Standing Committees:** 

Strategic Planning – Kathleen KF7MUD: No report.

Facilities - John NU6A: Not present

Education & Training – Jim K7JGM: No report.

Public Service - Gary KF7TBC: Daniel KL7WM mentioned some upcoming classes which should be on the website already.

Technical - Gil W7GIL: No report.

Membership - Kathy KB7QMO: Gary KG7KU reported that there will be no meeting of the committee in June. The committee has been working on finding other things they can do for various club events: Field Day, Flea Market, etc. The committee is looking for venues for the Christmas Party.

Logo – Daniel KL7WM: no report.

Field Day – Ivy WA7IVY: We have some problems with the equipment trailer. Alan reported several problems to the board. On Saturday at 1pm we will be meeting at Alan's house to go over the equipment and see what we can do to fix this. We will have additional work parties as needed on Sunday and after the General meeting. George AE7G will be reimbursed for the new GOTA tent.

Picnic - Hal N7NW: Picnic will be at Gene Coulon Park for the August meeting.

#### Old Business:

By Laws. Dave KB7PSN presented the bylaws to the Board. Modifications were discussed from section 6.02, D1 to the end. Kathy KB7QMO and George AE7G will work on the language for one section and this will be reviewed at the next board meeting.

New Business: No new business.

Good of the Order: No Good of the Order.

There being no further business, the President adjourned the meeting at 9:34 pm.

Attested: Ivy Nelson-Groves WA7IVY, Secretary (\$\mathbf{T}\$)



# **M&K-K7LED Club Library**

By Tim Kane - K7ANE

Library open 8:30 AM to 11:15 AM (at Salvation Army – M&K General Meeting).

M&K Library Shop open Tuesday thru Saturday (<u>www.skywaytv.net</u>).

Library location: 11818 Renton Ave So., Seattle WA 98178. (Phone 206-772-2450).

Four new books have arrived for the Club Library. Based on suggestions from the members, we've acquired the ARRL's excellent set of three books on the basics of electronics, radio and antennas, along with the newest ARRL book on Software-Defined Radio (SDR). These four new books will be available to checkout at the general meeting in May:

- Understanding Basic Electronics, 2<sup>nd</sup> Edition, 2010, by Walter Banzhaf, WB1ANE
- Basic Radio, Understanding the Key Building Blocks, 2006-12, by Joel R. Hallas, W1ZR
- Basic Antennas, Understanding Practical Antennas And Design, 2008-09, by Joel R. Hallas, W1ZR
- The ABCs of Software Defined Radio, 2012, By Martin Ewing, AA6E

The Basic Electronics book discusses the basics of electricity, electronics, and simple circuits. Chapters cover components, DC and AC electrical circuit concepts, basic analog and digital circuits, series and parallel circuits, problem solving and applied math (by hand and calculator), frequency, active devices, semiconductors and integrated circuits. The book also takes a look back at vacuum tubes and their applications. A good glossary of electric and electronic terms is also included.

Basic Radio looks at the development of radio from the simplest crystal sets, early simple receivers through modern superheterodyne receivers. It then looks at the parallel development of transmitters, from earliest CW sets through the evolution of voice transmission from AM to SSB. Chapters also cover power amplification, wave propagation, transmitting and receiving antennas, radiolocation and radionavigation systems, and another glossary of relevant terms. The author also looks into his crystal ball to see what the future might hold. The appendix includes several build-it-yourself projects.

The third book in the series, Basic Antennas, looks at a wide range of communications antennas, starting with the venerable diplole, and continues through both verticals and horizontals, arrays, surface reflector antennas, yagis and log periodics, and loops. Also discussed are microwave and vehicle-mounted antennas. The author discusses antenna measurements and modeling, using EZNEC software. Instructions for some easy-to-build antennas are also included.

The Software Defined Radio publication is really more of a pamphlet than a book, and thus somewhat disappointing. It discusses the application of digital electronics and the road that has led to this new metamorphosis of radio and computers. However, it covers the basic concepts and suggests where the future of this new technology may take amateur radio.

We've still got some of our annual budget left for the library, and are always anxiously seeking good suggestions for editions to add to our shelves. Get in touch with me if you have a good idea. We'll order some more new books later in the year.

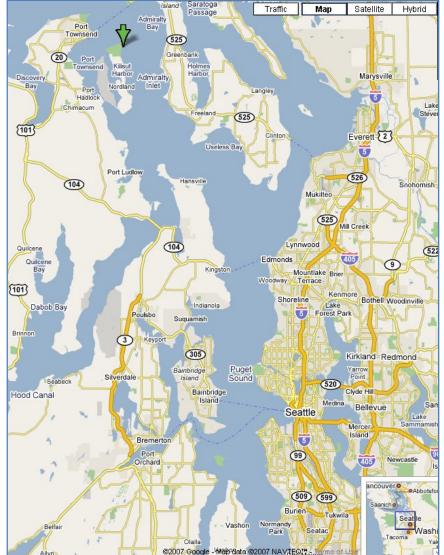




# Ham Nets & Events - 2013 - June / July

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1900 – NWWA-LDS Net 147.34 (Weekly) 2000 – King Co. ARES Net 147.08 (Weekly) 2200 – NW Astronomy Net 145.33 (Weekly)	10 0545 & 1645 – Weather Net 145.33 (M-F) 1830 – WA Emerg. HF Net-ARES 3.985 (Weekly) 1900 – Seattle ACS Net 146.90 (Weekly) 1930 – PSRG Net 146.96(Wkly)	11 2000- American Red Cross /SeattleTeam Net 147.080 (Weekly) 2000 - Snohomish Co. ACS/RACES Net 146.92 (Weekly)	12	13 1900 – M&K Public Service Net 146.82 (Weekly)	14	15  0900 - WA State Emerg. Net (WSEN) ARES HF Net 3.985 (Weekly)  1000-M&K Club Meeting, Renton 1230- M&K Ham Radio Exams, Renton. Contact: Scott—ag7t @arrl.net Public Service: Strawberry Festival Parade, Marysville. Contact: Liz N7ZXH hamsignup @seafairparademarshals.org
16	17	18	19	20	21 —M&K Field Day— Fort Flagler (Setup & Dinner)	22 M&K Field Day Fort Flagler (Operations)
23 M&K Field Day Fort Flagler (Ops & Tear-down)	24	25	26	27	28	29  Public Service: Rotary Auction, Bainbridge Island. Woodward School. Contact: Craig AC7BV CraigH@Blarg.net
30	01 - JULY -	02	M&K Board Mtg Salvation Army Bldg Renton, 7:30 pm	04 <u>Happy 4<sup>th</sup>!</u>	05	06  Public Service: Wallingford Kiddies Parade, Seattle Contact: Liz N7ZXH hamsignup@seafairparademarshals.org
07	08	09	10	11	12 Relay Articles Due 23:59:59	13
14  Public Service: Cornucopia Days Parade, Kent Contact: Liz N7ZXH hamsignup @seafairparademarshals.org  Public Service: See Jane Run-Half Marathon, Seattle Contact: Fran N7FWZ n7fwz @comcast.net	15	16	17	18	19	20 1000-M&K Club Meeting, Renton 1230- M&K Ham Radio Exams. Contact: Scott—ag7t@arrl.net  Public Service: Hi-Yu Festival Parade, West Seattle and Kla-Ha-Ya Days Parade, Snohomish and Waterland Festival Parade, Des Moines Contact: Liz N7ZXH hamsignup@seafairparademarshals.org  Public Service: Lakefair Parade, Olympia. Contact: Lee Ki7SS ki7ss@arrl.net

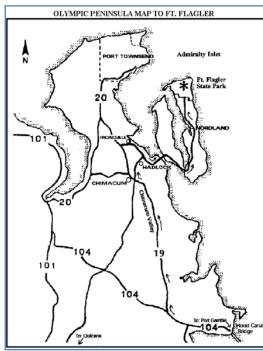
# Mike & Key ARC - K7LED Field Day 2013 - Fort Flagler State Park - June 22-23



For Google Search:

FORT FLAGLER STATE PARK 10541 Flagler Road Nordland, Washington 98358 The M&K Club Website

[http://www.mikeandkey.org]
also has this Map:

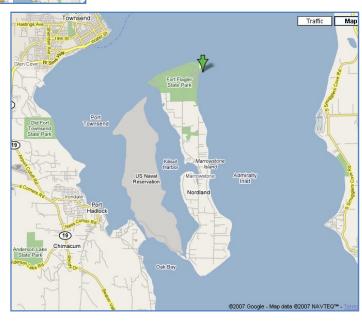


[Originating Source: Google Maps & Ft. Flagler St. Park website]

## Getting to Fort Flagler

From the Hood Canal Bridge at the North end of Kitsap Peninsula:

- About five miles after crossing the bridge, turn right onto easily missed Highway 19 (Beaver Valley Road).
- Travel 10 miles to the Chimacum four-way stop. Turn right on Chimacum-Center Road.
- At the four-way stop in Port Hadlock, turn right onto Oak Bay Road.
- © Go about one mile and turn left onto State Route 116. Fort Flagler is at the end of the road, about 10 mi.



June 2013 K7LED Relay
Mike & Key ARC - K7LED Field Day 2013 - Fort Flagler State Park - June 22-23

## **Alternative Aerial Orientation Guide**



