



August 2013

# ARCO *vet*

A Community Service Organization Dedicated to Amateur Radio Since 1970

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KD6LPA & KI6UPL in PV Hamming It Up !

**Summer is a GREAT time  
to get out and make  
some contacts**

E-mail: [W6SBA@arrl.net](mailto:W6SBA@arrl.net)



Website: <http://www.w6sba.org>

## President's Message

Hello W6SBA,

Wanted to thank KI6UPL – James for organizing this month's activity – a summer BBQ in the park with a bit of HF radio contacts. The food was delicious – hot dogs, salad, chips and salsa, and drinks to keep us cool. Thanks James! The bands didn't cooperate that day, so we only had a few contacts but it will still fun, and great to see a good turnout for the event.

James and I recently did an ad-hoc HF adventure near Malaga Cove in Palos Verdes over the weekend. Armed only with a small battery, an Icom IC-7000 and the Buddipole, we managed to talk to Romania, Ukraine, Puerto Rico and Russia. We had to crank up the power to 100 watts in order to compete with all the calling stations out there, but we succeeded with determination and a bit of persistence – trying to be heard over louder, more powerful stations. For the first time, I experienced what I believe was long-path propagation, because I was heard the original signal, and then a split-second later, a 2<sup>nd</sup> copy of the signal – almost like a digital reverb. The echo was the same signal coming across the other side of the world! The bands were absolutely crazy that day, so we took advantage of it and scored some major contacts. Being near the ocean also helped, as radio waves seem to love salt water. If you're interested in joining us for another ad-hoc adventure, let us know and we'd love to have you join us. The other positive was that several people stopped by and asked what we were doing. Some were able to guess it was amateur radio and showed genuine interest in our modern set up – including cell-phone QRZ lookups to illustrate how far our contacts were on the world map!

**Arduino Presentation:** I'd like to thank KK6BY – Paul, for putting together a 2<sup>nd</sup> presentation on Arduino project building. Paul walked us through a basic steps of creating a project from scratch, showed us some of the pitfalls, and provided the necessary background to create our own project. I left the meeting with a good grasp on how this technology works, and left the meeting saying to myself, "I can do this!" I really felt empowered to go out the next day, buy an Arduino, and give it a shot. Paul is an effective speaker, and as president, I need to figure out how to get him in front of our group more often. He has a knack for communicating information effectively, making the subject fun, and engaging the audience throughout the presentation. Great job Paul!!! – and thank you for taking the time for preparing this second presentation!

As a reminder, we're still planning to have another home-brew project bake off at our November club meeting. An Arduino project could be the big winner this year!

**Field Day 2.0:** As mentioned in last month's club meeting, we are actively brainstorming to re-invent how we do Field Day. Putting up the beam antennas and then taking them down has always been tedious, and somewhat dangerous. Every year, these tasks seem to produce the biggest headache and sometimes lead to safety issues. We want to change that. We're looking to find a better way to do these tasks. One solution is to consider using Dipole antennas in both a North-South configuration and another in the East-West position. Dipoles are certainly easier to set up (with a wrist slingshot, etc.), and may be a simpler, faster solution than our current methodology. Others have suggested automatic lifts that would enable us to raise the antenna safely – but at significant cost for renting equipment over the FD weekend. One of the aspects of Field Day is learning how to prepare for an emergency, so I feel it's important to consider new ideas, new solutions to the problem of getting on the air quickly. If we can do that with greater ease and simultaneous increase personal safety, I'm all for it! This is just one of the ideas stirring right now. But antenna set-up is just one aspect of FD. Anything that would improve the event is welcome! So I want to encourage all members to put their two cents in. Everyone has an idea in the back of their mind, waiting to be shared, so please share your suggestions and help make next year's Field Day even better.

**Kenwood TS-440 Raffle:** At our August club meeting, we will conduct the raffle for the club's used Kenwood TS-440. The radio is in good working order but is being raffled as-is. Tickets cost \$10 each. You must be a club member in good standing to enter the raffle - and there are no limits to the number of tickets each member can purchase. You will still be able to purchase raffle tickets at the August club meeting, but I encourage you NOT to wait to the last minute. For \$100, you can buy 10 tickets – which is an absolute steal for coming home with a nice radio with low mileage on it! Imagine yourself with this radio, or consider buying it as a backup to your current rig. We'd like to find this radio a nice home, and I hope each member decides to enter the raffle! Good luck!

Until next time, this is Alex saying 73!

### CLUB OFFICERS FOR 2013

#### President

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#### Vice-President

**Ray Grace** - WA6OWM  
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**Bruce Jackson** - KK6BJ  
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#### Past President

**Alan Parks** - KG6ZPL  
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**Raffle  
Time**



**Need Not Be  
Present to Win**

Come and join us at the August 15, 2013 meeting and this Kenwood TS 440 S 100w Transceiver can be yours including desktop microphone and power supply. Tickets are \$ 10.00 each. See Joe to purchase your tickets before the raffle starts at the August meeting.

Join us at Torrance Memorial Medical Center, in Room A at the 2nd Floor in the "West Tower". Meeting starts 7:30pm.

As I mentioned before at our last meeting, don't buy any other tickets and the odds for me will go up (ask an mathematician the odds) fantastically.

All joking aside, this is a good deal and everyone should get in on it. Even if you do not wish to keep it, if you win it you can sell it for much more than what you've paid for it on ebay or even the swap meet. Send Joe, check made out to SBARC, your check for as many tickets you want and he'll put your name on it and let you know your ticket number or numbers. Money must be in prior to the meeting for valid tickets or purchase at the meeting.

Good luck to those who join!

Joe-WB6MYD

### Two Free Amateur Radio Courses

FCC **"Technician"** course (entry level)

FCC **"General"** course (2<sup>nd</sup> level)

Each course is 2 sessions

The sessions are on 12 & 19 October 2013

**Technician** 9:30 AM to 1:30 PM both Saturdays (bring your lunch)

**General** 1:30 PM to 4:30 PM both Saturdays

The FCC tests will be 10:00 AM to noon 26 October 2013

The Palos Verdes Amateur Radio Club will give a 30 minute presentation at 9:30 AM at the start of the 12 October Technician class on how to get further involved with amateur radio.

The location is the Fred Hesse Community Park,  
29301 Hawthorne Blvd., Rancho Palos Verdes.

No pre-registration is required. There is no fee for either course.  
Taking the FCC test is \$15.

#### Optional Material (sold at cost)

Gordon West books with all the FCC test questions,  
\$22 for the Technician and \$26 for the General  
- Copy of the Power Point charts,  
\$20 for the Technician and \$20 for the General -

For courses sponsored by the Palos Verdes Amateur Radio Club, students thru grade 12 who pass their examination at a PVARC VE test session will, upon application to the Club, be eligible for reimbursement up to a maximum of \$50 to cover the cost of materials and the examination fee.

For more information contact Walt, K1DFO, at waltordway@juno.com

### MEETING SPEAKER —August 15th

Speaker: Howard Rogers, KF6NOR

Subject: The Care and charging of batteries

Our August meeting speaker is a natural expert for discussing batteries--especially batteries relating to Amateur Radio.

Howard Rogers, KF6NOR, will present how batteries work, their safety, and applications. Primary cells (alkaline and lithium), as well as secondary cells with nickel cadmium, nickel metal hydride, lithium-ion, and lead-acid chemistries will all be covered. Howard did research and development on the nickel-hydrogen battery for satellites (and other batteries) until retiring in 2002 from Boeing Satellite Systems, previously part of Hughes Aircraft. He received his B. S. degree in Chemistry from the University of Illinois and Ph. D. in Inorganic Chemistry from the Massachusetts Institute of Technology. Howard is still involved with disaster communications through the Torrance Amateur Radio Association, and a long standing member of the South Bay ARC.

## SATELLITE CONTACT



Use an Arrow 2m, 70cm beam antenna ( about \$100) and a Baofeng UV-R Dual band 2m/70cm radio (about \$50) and an antenna adapter (\$4.) and that sit. The trick of course is to be pre- pared. Little research will let you know when the in this case the Saudisat SO-50 satellite will come overhead and approx. where in the sky it will be and your done. Oh yes it helps if you program the radio with 7 memory channels for the Doppler effect in the 436.800Mhz region to receive and for you to transmit on 145.850 Mhz and now you're done except for waiting of course. Remember the Satellite pass window is only about 8 minutes so you have to be prepared. From the time you hear it coming up over the horizon to the time it disappears on the other end is fast and you and many others need to be quick with your call sign and grid designator. You can get a pretty good idea as to where it is going to be if you look it all up on HRD on your computer. That program tells you its path overhead and the time and more. The trick is to look for a path that s going to more or less straight above you which will make for a much shorter window but very interesting. If you need more info well Tom-KI6RC (in the picture) will be more than happy to talk to you about it. The contacts Tom has made are from Alaska to Tennessee and beyond using about 4 watts to transmit. The Suadisat SO-50 transmit 250mwatt, that's right 250mwatt, and has a nice clear FM signal for you.

Thanks Tom-KI6RC for showing us how it's done at the July 20th picnic at De Portola Park.

## SDR Dongles Hardware

Submitted by Bruce, KK6BJ



SDR dongles can be obtained from a variety of sources.

They can be made from kits such as the very popular Soft rock series from Tony Parks at 5 Dash.com . For about \$20 including shipping and handling he will send you a band specific receiver that can be set from 6 thru 160 meters and for about \$45 will send a transceiver that covers 3 contiguous band of choice. They use 1206 surface mount components and require some transformer and torrid winding but this is quite easy to do-WARNING these kits are very addicting and you probably cannot make just one.

The accompanying directions are a masterpiece of clarity and step by step directions and stage by stage trouble shooting, not unlike the early Heath kits of days gone by. I have made several and will be happy to show them off



Fun cube dongle is a pricey and frequently hard to get assembled kit that is made in small quantities and requites a bit of tweaking with persnickety software to work at its best. It is designed to work with small fun cube satellites and does so quite well. Once installed it will do the necessary frequency shifts to cover satellite Doppler shifts as programmed. The \$140 fee includes a substantial donation to the supporting educational fund. The fun cube is for receive only and does not have transceiver capability.

Affordable VHF TV dongles were featured in the January QST.

The Realtek RTL 2832U is about \$18 and available from a variety of vendors on Amazon and e-bay. It may be coupled with a FarCircuits Up converter available from the same source for \$43 to allow monitoring of the MF and HF bands.



# Boy Scout Jamboree Hosts Space Station Ham Radio Contact

07/24/2013 ARRL Article submitted by Joe Lanphen



European Space Agency Astronaut Luca Parmitano, KF5KDP, aboard the International Space Station spoke July 20 via ham radio with Scouts attending the 2013 Boy Scouts of America National Jamboree, July 15-24, at the Summit Bechtel Reserve in Mount Hope, West Virginia. The Amateur Radio on the International Space Station (ARRISS) program arranged the 2 meter contact between the Scouts' K2BSA and NAISS.

"What really matters is to be good at what you do," Parmitano told the Scouts, "so, pick something you like, love it and be really good at it." Parmitano also said that the stars look different — more natural — from the ISS but appear the same size as on Earth. Ditto for planets.

ARRISS Technical Mentor Bob Greenberg, W2CYK, coordinated the contact with the Jamboree. Some 40,000 attendees were anticipated at the National Jamboree over its 10 day run. Amateur radio has been a part of the Jamboree experience since 1953, when K6BSA was on the air from Irvine Ranch in California. An ARISS direct contact with Space Station Commander Doug Wheelock, KF5BOC, was a highlight of K2BSA's activities during the BSA's centennial National Jamboree at Fort A.P. Hill, Virginia, in 2010.

On July 22, students at Colegio Uruguá, in El Pinar, Uruguay, spoke with the ISS crew via LU8YY. An ARISS contact also was scheduled this with students at the Scuola Italiana di Montevideo in Uruguay.

Visitors to the European Space Agency's Space Camp 2013 in Radstadt, Austria, spoke July 24 with the ISS crew via a telebridge between IRØISS and VK4KHZ in South Australia. The theme of this year's camp is "Space Exploration."

Early next month the ISS crew will speak with Scouts attending the 2013 Space Jam 7 at Octave Chanute Aerospace Museum in Rantoul, Illinois. Some 2000 Boy Scouts, Girl Scouts and their leaders from 20 states are expected to be on hand for Space Jam 7.

Also in early August the ISS crew will speak via ham radio with students attending the 2013 AirVenture Oshkosh air show in Wisconsin. Some 500,000 visitors attend the air show each year. The organization has a student membership of more than 20,000. On the day of the contact 125 young women and their mentors involved in the aerospace industry in some way with the EAA's Women Soar program are expected, in addition to groups from aviation high schools from Florida and California.

The ISS crew has been using a 5 W Ericsson hand-held transceiver for contacts in recent months, because of problems with the higher-power Kenwood radio on board. This can make terrestrial copy difficult, and ARISS volunteers have had to beef up ground-station receiving capabilities to ensure a successful contact. ARISS has recorded more than 800 ISS school contacts since the program began in late 2000.

ARRISS is an international educational outreach with participation from ARRL, NASA, ESA, the Russian Space Agency (ROSCOSMOS), CNES, JAXA, CSA and AMSAT. — *ARRISS*

*I would like to draw your attention to this since it seems that the BSA, Los Angeles Counsel is preparing to request a date with the USS Iowa again for this year's JOTA. You'll remember we played a part in that activity last year which was the first JOTA planned for our area in a long time.*

*While the result of all our hard work may have been somewhat disappointing we played a role in this which is as always a whole lot better than nothing. So I hope we can talk about this and see what if anything we want to do with this. Remember this is your club and as we all know "any club is only as good as it members participate" so let us know what you think? be part of it and above all participate. Joe-WB6MYD*

## Perseids Should Be Fun for Meteor Scatter Enthusiasts and Viewers Alike

Taken from ARRL

On the night of Saturday, August 11 and well into the next day, Earth will make its annual passage through the bulk of the debris shed by a comet known as Swift-Tuttle. Much of the debris is composed of dust-sized grains, but when these fragments come plunging into our atmosphere they can create a dazzling meteor display. Not only are the meteors fascinating to watch, they also leave short-lived streams of ionized gas in their wake. As hams have known for years, these meteor trails are excellent reflectors of radio waves. The Swift-Tuttle meteor showers are known as the Perseids because they appear to come from a point in the sky that lies within the constellation Perseus.

This year's Perseid meteor shower occurs when the Moon is at a waning crescent phase, which means bright moonlight won't diminish the number of visible meteors. According to Spacedex.com, the lack of bright moonlight means that the fainter meteors should not be concealed from view: "It is advisable to observe the meteor shower during the predawn hours on the mornings of August 11, 12 and 13. With up to 60-100 meteors per hour predicted, observers may catch plenty of bright meteors streaking along in the light of the Moon.." As an added treat, the Moon will be sweeping past Venus and Jupiter in the eastern predawn sky.

While the meteors are certainly bright, they are typically not much larger than a grain of sand, however, as they travel at immense speeds, these tiny particles put on an impressive show. Due to the way the comet's orbit is tilted, dust from the Swift-Tuttle falls on Earth's northern hemisphere. Unfortunately, this leads to extremely low visibility for those in Australia, New Zealand and portions of South America.

### Amateur Radio and the Perseids



If you own a 6 or 2 meter SSB/CW transceiver, you can get in on the action, bouncing your signals off Perseid meteor trails and making quick meteor scatter contacts over hundreds of miles, and possibly even as much as 1200 miles. Meteor scatter operation is particularly

easy on 6 meters where 100 and an omnidirectional antenna will do the job. On 2 meters, a directional antenna (such as a multielement Yagi) usually yields better results.

Some meteor scatter operators prefer to use SSB, making rapid exchanges of signal reports and grid squares. In recent years, digital meteor scatter has been increasing in popularity. With the free sound-card-based WSJT software suite by Joe Taylor, K1JT, it is possible to make digital meteor scatter contacts almost any time of the day or night, not just during annual showers. Most WSJT scatter operators use a mode known as FSK441 and center their activities on calling frequencies 50.260 and 144.140 MHz. They also announce their availability by using Web sites, such as N0UK's Ping Jockey Central.

## Mark Your Calendar: Perseid Meteor Shower to Dazzle

Viewers should be able to observe around 60 shooting stars per hour during this year's Perseid Meteor Shower.



The Perseid meteor shower is already underway and will continue through Aug. 24. The peak viewing will be Aug. 11 – 12. Stargazers could see upward of 60 meteorites flash before them per hour.

According to Astronomy.com, the Perseid Meteor shower has added bonuses this year: it will occur on a night when the moon is in its waning crescent phase, which means the moonlight will interfere only slightly with your view of the meteors.

You don't even need a telescope. Just spread out a blanket, maybe a late-night picnic, lay back and enjoy!

### Perseid Meteor Trivia:

- Mankind has looked up at the Perseids for nearly 2,000 years
- The Perseids are remnants of the Swift-Tuttle comet, which orbits the sun every 133 years.
- These bits of comet "ice and dust" are more than 1,000 years old
- These meteors travel 37 miles per second
- The Perseids can be seen all over the sky, but the best viewing opportunities will be across the northern hemisphere.
- Those with sharp eyes will see that the meteors radiate from the direction of the constellation Perseus, which forms an inverted "Y" shape and is in the northeast.
- Some of the meteorites are as small as a grain of sand, but they have the kinetic energy of a nuclear bomb!
- If you see a very slow, bright object sailing across the sky, it's either a satellite or a Space Station.

See what contacts you can make.  
How far away did you reach?  
Send in and let us know.

**NOTES FROM THE SECRETARY - JOE-WB6MYD**  
**e-mail - jlanphen@ca.rr.com · 310-328-0817**



1. Attendance drawing: Our lucky member was none other than Bill-N6ES at our July meeting. Bill being out of town will have to forego his 20 dollars. The August meeting kitty will be 25 dollars. Remember you must be present and a member in good standing to collect your money.
2. Thank you: Yes we are so lucky to have Paul-KK6BY in our midst. Thank you Paul for your excellent presentation on "Arduino part 2". This is an continuation on several projects Paul is working on and wanted to share his findings with us. Thanks Paul.
3. Satellite Contact: As you may have heard Tom-KI6RC has been making several satellite contacts. Tom demonstrated his technique in making these contacts and actually managed to make a contact right from De Portola park after the picnic. He has to look at a proper pass, one preferably in this part of the world of course. The Saudisat S)-50 will do that but you have to know its path which you can get from a computer program. Any way, so he knows its path and from there it all seems a piece of cake. Point the antenna up at the expected path and call CQ when it is clear to talk. Right, well you only have 10 or 15 min. window to get in there which is long enough as long as you're the only one trying to make contacts (never happens). Any way, it is kind of tricky but he has it down pat. He's got his radio programmed to the right frequencies and so all he has to do wait for the right moment and away he goes. Great stuff, thanks Tom for showing how it is done. Thanks Tom.
3. Thanks to James: James-KI6UPL organized the picnic at De Portola park on Saturday July 20, 2013. Alex-KD6LPA set up the club radio and buddy pole antenna and away it went also. This too was very successful in that several contacts were made, everything worked as it should and so another radioactivity under our belt. Plenty of food and thanks to James all that worked as well. The combination of food and radio does do something for us attach that to the very social type of activity and you sure have a winner. Thank you James, Alex and Joe-WB6MYD for making all this possible (Joe set aside all the equipment since he had to attend another meeting till 12:00pm). The weather was also just right, all and all a good event. Thanks everyone.
4. Arc Over articles: I am appealing to your "Esprit the Corp" as members of the SBARC. We all know how things are supposed to work for any organization. Being involved is sometimes very difficult to bear. We all know Family and Work come first but we hope to appeal to your senses and say "wow this is something I would like to share with my fellow club members". This is exactly like I am telling you to. we have so much in common and why would you not share this with your fellow club members. It is really not all that difficult put your thoughts and or experiences on paper and submit this to the club officers, jlanphen@ca.rr.com, for publication into the Arc Over which we will be happy to do at no cost to you.. Please we wish to keep this up which is one way of correspondence or communications. We really need your support with this and will be seen by one and all.
5. Swap meet: We've heard about this over the years but something needs to be done about this. We have so much fun talking to everyone that stop by and especially the luncheon type thing afterwards that we need to re supply our stock. The swap meet has proven to be a good source of income the only thing is you need stuff to sell. At this time we are really running short on stuff. So if you have anything you want to donate to the club and or for us to sell for you or for you to sell it at our spot would be greatly. So if you could help us out which will be greatly appreciated. Please see Joe for all your swap meet needs.

Thank you Joe-WB6MYD

## CALENDAR

**Council Meeting** - 1st Wednesday of the month  
Call Joe - WB6MYD (310) 328-0817

**Club Meeting** - 3rd Thursday of the month  
**August 15, 2013 - 7:30 p.m.**  
Torrance Memorial Med Center  
West Tower, Room A

**Club Nets** - **W6SBA WEEKLY NET**  
Every Thursday @7:30pm  
(except the night of club meetings)  
**PVUSD EMERGENCY NET**  
1st Tuesday of the month  
09:30 Hours on the W6SBA repeater

**TRW Swap Meet** Saturday,  
**August 31, 2013**, 7-11 a.m.

**VE Session** - Contact: Joe WB6MYD  
Phone: (310) 328-0817  
jlanphen@ca.rr.com or w6sba@arrl.net

**Social Event** - Contact: Joe WB6MYD  
Phone: (310) 328-0817  
jlanphen@ca.rr.com or w6sba@arrl.net

Answers to Mr. Wave's face on page 5: Eyes = Amplitude modulation;  
Mouth = Frequency modulation

## CLUB SERVICES

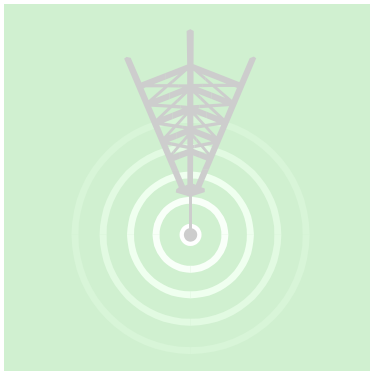
Awards Manager (HF/VHF)	Cliff - K6LH
Health & Welfare	Joe - WB6MYD
Swap Meet Chair	Joe - WB6MYD
VE Test Liaison	Joe - WB6MYD
VE Test Sessions	Joe - WB6MYD
Webmaster	Alex - KD6LPA
Editor	Glenda - KF6QFE
Proofreader	Alex - KD6LPA

**South Bay Amateur Radio Club Repeater**  
224.38 MHz · PL - 192.8 Hz Offset -1.6 MHz  
(See Calendar for Weekly Net Times)

## NEWSLETTER SUBMISSION

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TO:



Address Correction Requested

*A COMMUNITY SERVICE ORGANIZATION*

W6SBA

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