



May 2014

ARCO *ver*

A Community Service Organization Dedicated to Amateur Radio Since 1970

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55th Annual **A** Armed 2014 **F** Forces **D** Day CITY OF TORRANCE *Celebration*



E-mail: W6SBA@arrl.net



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

President's Message

Hello W6SBA,

First off, I'd like to complement Tom - KI6RC on his excellent presentation on Satellites last month. I learned a lot and had a good time doing so. Tom found the right balance of humor, information and motivation, making me believe I could do this as well! During his presentation, Tom offered to organize a follow up session showing us how to build our own satellite antennas for approximately \$20-\$25. That's a bargain if I ever heard one, especially since the commercial versions can cost over \$100. And according to Tom, the homebrew version has better gain making it easier to make a satellite contact. If you're interested in building one, please contact Tom. I'd really like to get an antenna workshop put together this year - and this sounds like the perfect project!

Armed Forces Day:

Mark your calendar for Saturday, May 17, 2014. That's right - it's the 55th annual anniversary of the Torrance Armed Forces Day parade. As you may know, our club has a long standing tradition helping the city out by getting all the parade participants lined up in the correct order. We usually have a team of 8-10 hams split up into several groups (since the parade is broken up into 2 to 3 divisions). We also communicate with TARA and inform them of no shows, as well as upcoming flyovers so the parade attendees know when to look up and snap some pictures of our nation's pride and joy flying overhead. Usually there are helicopters, historic prop planes, and occasionally some F-16's, and if we're lucky maybe a flyover of the B2 stealth fighter!!! It's a lot of fun and also serves as a good training exercise while we practice communicating information with other hams. If you can help out with this event, please contact Tom - KI6RC, who is organizing this event. Tom's contact information is posted on the club web site (www.w6sba.org).

Buddipole Fun:

Two weeks ago, James KI6UPL and Mike KI6LJM accompanied me to Alta Loma park where we set up a portable station with my Icom IC-7000 radio, portable battery and James' buddipole. In a few minutes we had 20 meters tuned up (props to James for getting the antenna set up so fast) allowing me to make some contacts. Most notable was the 5th largest island in the Caribbean - Jamaica!!! Best of all, we were able to beat some of the stronger signals out there by saying the magic word, "Portable". Sometimes, when the world is calling a specific station - and you're mobile or portable - the operator will give you priority. That was certainly the case here, and we were excited to make the contact! We try to get out on the weekend when the weather is favorable once or twice a month. Contact me if you'd like to join us on our next outing.

That's all for now. Until next time, this is Alex saying 73!

CLUB OFFICERS FOR 2014

President

Alex Marko - KD6LPA
kd6lpa@socal.rr.com - 310-530-6614

Vice-President

James Murakami - KI6UPL
katsu442@yahoo.com - 310-480-7794

Secretary/Treasurer

Joe Lanphen - WB6MYD
jlanphen@ca.rr.com or w6sba@arrl.net
310-328-0817

Activities Council Member

Bruce Jackson - KK6BJ
bjackson@ucla.edu - 310-372-1156

Events Council Member

Tom Carter - KI6RC
ki6rc@jaol.com - 310-326-2731

Information Council Member

Steve Wojtak - KJ6VWN
swihtaj@juno.com - 310-755-1688

Past President

Alan Parks - KG6ZPL
thermic72@sbcglobal.net - 310-558-8718



This Month's speaker will be Bruce Thorson, AF6NA. He is currently a EMF/RF Technician Specialist working for Southern California Edison. In order to have a safe and sane, Field Day, the topic for May's presentation is:

"Staying Safe On Field Day" - A Serious Look at Precautions Around Utility Wires

Safety is paramount when it comes to our hobby. Hope everyone can attend so that we can stay safe.

Field Day T-Shirts: Order Now



If you would like to order a 2014 Field Day shirt, please contact James, K16UPL. He will be placing an order very soon so contact him ASAP!

Last day to order is on May 15th at the club meeting. Prices are as follows:

Regular sizes (S, M, L, XL) — \$14;

Larger sizes — \$21



S
A
M
P
L
E

Quiz Column

Remember to show your work. Send answers to Alan at thermic772@sbcglobal.net. Please include your name and call. Thanks.

This month's questions:

- 1) What is the impedance of an inductor of 47 micro henrys at a frequency of 4.468 MHz?
- 2) What is the impedance of a capacitor at 47 micro farads at a frequency of 4.468 MHz?
- 3) If the two circuit elements described above are in series, what is the total impedance?
- 4) What is the Q of a parallel R-L-C circuit consisting of an inductor at 47 micro henrys, a resistance of 180 Ohms, and a resonant frequency of 4.468 MHz?

The answers to April's quiz:

- 1) Given 2 resistors, one of 100 Ohms, the other at 200 Ohms, what is the combined resistance if they are in parallel, in series?

The formula for resistors in parallel is $1/R_{total} = 1/R_1 + 1/R_2 + 1/R_3 + \dots + 1/R_n$ which for two resistors is $1/R_{total} = 1/R_1 + 1/R_2$. This simplifies to the well-known equation $R_{total} = (R_1 \times R_2) / (R_1 + R_2)$. So, $R_{total} = (100 \times 200) / (100 + 200) = 20000/300 = 66.66$ Ohms. For resistors in series the formula is $R_{total} = R_1 + R_2 + R_3 + \dots + R_n$. So we simply sum the resistances of the individual resistors to get $R_{total} = 100 + 200 = 300$ Ohms.

- 2) What is the half-power bandwidth of a parallel resonant circuit that has a resonant frequency of 1.8 MHz and a Q of 95?

The formula relating these quantities is: $W = f_r / Q$ where W is the bandwidth, f_r is the resonant frequency, and Q is the quality factor. So, substituting, we get $W = 1.8 \times 10^6 \text{ Hz} / 95 = 18.9 \times 10^3 \text{ Hz} = 18.9 \text{ kHz}$.

- 3) What type of modulation is used in the most common method for sending Morse code? This was covered in my last presentation to the club. Remember that turning a carrier on and off to send Morse is the same as mixing a carrier wave with a low frequency square wave which is the same as AM modulating the carrier by the square wave. The answer is 100% AM modulation.

Freeing Government Spectrum Could Take 10 Years

Submitted by Scott , N6LEM

WASHINGTON: It could take more than 10 years to transfer government-held spectrum for commercial use, the head of the National Telecommunications and Information Administration told a House panel.

At a spectrum hearing held Wednesday by the Subcommittee on Communications and Technology, NTIA chief Lawrence Strickling said re-allocating a single band can be a "complex and time-consuming challenge" that can "take anywhere from a few years to more than 10 years."

Federal agencies are working to "improve efficiency" of the broadcast bands allocated to them "by sharing spectrum with each other" based on geography and time restrictions, Strickling said. In addition, NTIA limits some agencies' use of spectrum by designating the times and locations in which needed frequencies are used, said Strickling, who added, "Commercial spectrum is rarely used in a similar manner."

The federal government often operates a variety of systems within a specific band that may have little in common from a technological perspective, and could include operations as diverse and technologically unrelated as high powered radars; unmanned aerial vehicles; electronic surveillance by law enforcement; and satellite communication that requires ground stations, he said. Sharing those frequencies with "any type of commercial facility" is not a viable option, he added.

In addition, because as long as a satellite is operational--satellites typically have working lives in excess of 20 years--it requires a ground station, Strickling said. Therefore, the federal government might have to maintain spectrum exclusively for satellites by establishing "geographic exclusion zones" that that are longer than 10 years, he said.

However, auctioning government-held spectrum is not new, said Subcommittee Chairman Greg Walden, R-Ore. The spectrum in the AWS-1 band was government spectrum as recently as 2007, but which is now used by T-Mobile and others to provide high-speed wireless broadband services. Reallocating that spectrum raised \$13 billion for the federal government, he said.

In addition, among the many bands the NTIA is reviewing for reallocation, "perhaps the most anticipated is the spectrum from 1,755-1,780 MHz," Walden said, adding that

business has "targeted" that spectrum "for its potential as a commercial band."

Strickling said, the re-allocation of parts of the spectrum from 1,755 to 1,850 is being studied, and the NTIA "will make a recommendation on that band at the end of September of this year." If the recommendation is to reallocate a portion of that band, it could take 10 years depending on the band.

Strickling added that the while industry has indicated a particular interest in the 25 MHz between 1,755 and 1,780, the NTIA is looking at the 94 MHz between 1,755 and 1,850. "Because the problems this country is facing is going to be bigger than what 25 megahertz will solve, we're looking at the whole band to see what portion, if any, can be re-allocated," he said.

-- J.J. Smith, *Government Video*

- See more at: <http://www.tvtechnology.com/news/0110/freeing-government-spectrum-could-take--years/209582#sthash.pzaurIP6.dpuf>

Two Free Amateur Radio Courses

FCC "**Technician**" course (entry level)
FCC "**General**" course (2nd level)

Each course is 2 sessions

The sessions are on 20 & 27 September 2014

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 04 October 2014

The Palos Verdes Amateur Radio Club will give a 30 minute presentation at 9:30 AM at the start of the 20 September 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.

Everyone who obtains their first ham radio license through a PVARC VE session, regardless of age, will receive a free membership in the Palos Verdes Amateur Radio Club for the remainder of the current calendar year.

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

Review Baofeng UV-82

Submitted by Steve, KJ6VWN

After some initial problems and a busy weekend I finally got around to finishing the review of this new radio. If you hate lengthy reviews: this is mainly a Baofeng UV-5R in disguise. If this is all you wanted to know you can leave now.



Still here? Some things changed for the better, some for the worse, but most things (including notorious UV-5R flaws) didn't change at all. Below are my findings in a nutshell. I didn't make many pictures yet, but will add a few later.

UV-5R vs UV-82: differences:

- One thing you can't miss is the size of the radio. In my experience this is one of the strong points of the radio. The UV-82 feels much more comfortable in your hands, the keys are larger and RX audio sounds slightly better, probably as a result of better acoustics.
- Instead of one dual-color LED at the front of the radio the UV-82 has two separate LEDs located on top.
- The flashlight now includes a strobe function.
- The VFO/MR key disappeared. Holding Menu while turning on the radio switches from VFO to memory and vice versa.
- The Band key disappeared. Band can be selected in the menu.
- TX audio is improved when compared to some UV-5R versions (mine never had such problems BTW)
- The battery is bigger and shaped differently.
- Longer antenna, supposedly suitable for use up to 520 MHz.
- Dual PTT keys. Press the upper one to transmit on VFO A, press the lower one to transmit on VFO B.
- RX roger beep (see menu 40)
- Higher power output, but harmonic suppression suffered

Improved manual, but content can still be confusing at times.

UV-5R vs UV-82: similarities

- Programming memories still awkward
- Still no option to add alpha tags without using software
- 'Rounding Down' bug still there when entering frequencies by hand
- Sensitivity unchanged (was excellent anyway)
- Front end quality unchanged (still poor)
- Squelch levels don't mean much, if anything at all
- S-meter still isn't one (on/off effect, full deflection when Monitor button is pressed on a quiet frequency)
- Regardless of what's printed on the label, the battery capacity is still 1800mAh.
- Both radios use the same .dat format for programming.

Power Output

VHF (145 MHz)

Low: 2.5 Watts

High: 5.3 Watts

UHF (435 MHz)

Low: 1.4 Watts

High: 3.9 Watts

On average there's a gain of 1 Watt when compared to the UV-5R. Contrary to popular belief this won't translate into a better range. Only antenna quality and antenna height can make a difference, and so does the lack of obstacles (buildings, trees, hills).

Harmonic Suppression

All UV-5R models I own perform quite good. This radio behaves a bit differently, possibly due to the higher power output. There are more visible peaks in the spectrum and overall suppression suffered a bit. I had to make an extra screenshot to show a 4th harmonic on VHF. Interestingly, it's stronger than the second.

Conclusion

If you're looking for a Baofeng UV-5R in a bigger package delivering more RF power, this radio might be just for you. There are some changes I don't like, such as the disappearance of the VFO/MR button. Switching the radio off and on to switch back and forth? Come on, give me a break!

The dual PTT system as a replacement for the 'preferred TX VFO' option looks nice, but proved to be confusing at times. If you don't pay attention you'll press the wrong button more often than not. **(Continued on page 7; top right column)**

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

1. **Attendance drawing:** Yes we had a winner at our April 17th meeting. Chuck-K6CSH was the lucky one and collected the 20 dollar kitty for the month of April. Our May meeting drawing will be again for \$ 20.00. You must be a member in good standing and be present to win this.

2. **New members:** Christopher Miller has joined us after having attended the April 12th VE session and passed his Tech license. His call is now KK6LNN, Tech class. Congratulation Christopher and we certainly look forward to working with you. His radio interest are: HF, vhf, UHF, Oscar, Computers, Antenna's/Propagation and club repeater. Club activities for participation are W6SBA Field Day, Contest, HF/VHF, Technical discussion as an participant, Club meetings, Social activities and antenna parties. So please welcome Christopher and provide any and all information he will need in setting up his own station and further our hobby. Congratulations.

We also have Lowell Joynt-W6QH, Extra class licensee join the SBARC. Thank you so much and welcome to the SBARC family we look forward to working with you. Lowell's interest are: HF, VHF, UHF, Packet, CW, DX self/contest, Computers, DCS/RACES/ARES and club repeater. Activities Lowell looks forward to is W6SBA Field Day, 220 Repeater net, Club meetings and Social activities. His list of equipment includes 6 meters (we can use that during FD). Great Lowell, we really look forward to working with you during FD. Thanks again for joining us.

Both of your e mail addresses will be entered into our data base for notices and the like. Thank you.

3. **Members in good standing update:** We sure are very happy to report that we have pretty well maintained our membership number for 2014. Please welcome the following members in good standing with their attendance drawing number: Ray WG6V 551784 Jim W6JBN 551785 Ken K6HRN 551786 John AC6MG 551787 Shirley KF6EXI 551788 Melody KI6SPA 551789 Richard KJ6CBA 551790 Meredith K6QEC 551791 KathleenKG6RPM 551792 Chuck KG6RP 551793 Ken KM6KEN 551794 Matt KM6ATT 551795 Glendee KJ6EBS 551796 Greg WQ9P 551797 Lowell W6QH 551798 Chris KK6LNN 551799 Robert N6QA 551800 Ed KN6JN 551801 Thank you for your continued support and we look forward to working with you in our many projects the club provide for all our members. Thank you.

4. **Thank you:** Tom-KI6RC provided us with an excellent presentation on "How to make satellite contacts". This I'll have you know this included from Oscar to our present satellites available for our use. Actually only one has just FM capability accessible to us. He also showed his antenna design making it all possible. Furthermore Tom with assistance from Jerry-KJ6JJ showed us how it worked for a complete setup with a tracking unit for those satellite passes using a servo motor on a tripod. Every aspect of satellites was touched upon and was absolutely fantastic. Thank you Tom for this great presentation.

5. **Antenna project:** Tom-KI6RC has graciously offered to allow you to build your own hand held Satellite antenna. All you have to do pay him up front for parts and he'll be happy to help you put it together. Please let him know if you would want to take part of this, the cost will be around 25 dollars. Please see Tom-KI6RC with your order and we will schedule a location, time and material to do this as an club project.

6. **FD Antenna set up project:** Saturday May 3rd saw a group of us assemble on top of the "West" parking structure and apply some of the methods we are planning to use next month to set up our antenna. Safer and new ways to set up our tri band antenna's and also our VHF and UHF antenna set ups. This was fantastic and we need to thank Tom-KI6RC for setting this up. We assembled one of our A3S yagi antenna's and put it on a mounted mast and managed to make an Utah contact using an 2.5w radio Bruce KK6BJ loaned us for that. A lot of thanks need to go to Tom for taking the time to show our members how to put the tri band antenna together and Joe-WB6MYD showing the safe way to set up a mast on nothing but concrete. The mechanical update to mount our pushup's to the riser is going to help us a whole lot to make it safe and so much easier. A special thanks to Bill-KQ6Z for manufacturing brackets to make all this possible. We thank the following members joining us as well: Alex-KD6LPA, James-KI6UPL, Joe-WB6MYD, Tom-KI6RC, Ray-WA6OWM, Bruce-KK6BJ, Bill-KQ6Z, Patrick-K6PDG, Jerry-KJ6JJ, Daryll-W6JII, Ed-KN6JN. (I hope I did not forget anyone). Special thanks to Joe also having once again provided the transportation of all material and all preparations to make this a great project for all. The objective being to make this a safer and more enjoyable event for all concerned was certainly achieved with the cooperation of all members. Thank you.

7. **Armed Forces parade:** If you want a front line view of the "Torrance Armed Forces Parade" on May 17th be sure to see Tome-KI6RC for your assignment. As most of you know we provide assistance in the assembly area of the down town Torrance area staging area. Depending on the number of Divisions in this year's parade we would need a minimum of 9 members to step up and help with this project. The usual start is around 10:00 am on Saturday May 17th with an operational meeting at the net control station 2 blocks East of Crenshaw Blvd. While an 220 HT is used to report on the lineup of units, none radio members can and do help as well. Please let Tom know as soon as possible.

8. **Question of the Month:** Should we continue with our monthly Attendance drawing YES or NO? Your thoughts on this are appreciated. Objective is not on saving money but may be to provide another incentive for members to attend the meetings. Please be prepared to discuss this at our upcoming May 15th meeting. Or as always, please let us know via e mail to Joe at: jlanphen@ca.rr.com

9. **Club services:** The club can provide you with a lot of things, mainly Elmering is on the top of our list. We can also provide you with your SBARC Name badge, cost \$ 10.00. ARRL Membership application as well as renewal of present memberships. The ARRL membership is the same for you but if the club does it the treasury gets to keep a commission. Just think about this, this is a good way to support your club as well. Any questions you might have regarding the SBARC can be asked as well. Joe is the longest member in the club and has all its history to share with you, just ask him. Any record on the club may also be asked on Joe as well as Constitution and Bylaw questions, financial records etc.

Q&A Column

One of our members asked about the **pros and cons of the different digital modes**. Ray, WA6OWM, was kind enough to write the following answer. Please send your questions and comments to Alan, KG6ZPL, at thermic72@sbcglobal.net. Thanks PRO's and CON's of the Digital Modes

You will find all the Information is provided on the Worldwide Web simply use your search engine to find more details

Pro's

- Well suited for low power (qrp) applications
- Works great on simple antennas, (like dipoles, verticals)
- Works well during the low part of the sun spot cycle
- Narrow signal bandwidth allowing use of sharper filters
- Lots of good software for Windows 98 and Windows XP systems
- Several programs support Vista, Windows 7 and Windows 8
- Simple interface connects the computer Soundcard and PTT to the radio set
- Positive PTT control is more reliable

Con's

- Computer MUST have an accurate Clock, must be with-in +/- 2-seconds
- Programs are available to Time Sync your computer. REQUIRES an Internet or GPS connection
- Soundcard setup varies by brand, may take a number of changes to load the best options
- You may need to RFI prove your computer and interface



Thursday Night Net

Every **Thursday night at 7:30 p.m.** (except on the 3rd Thursday due to regular club meeting). Please join us on W6SBA 224.38 minus offset and the PLat 198.2 hz you can share your experiences or just say hello to everyone. We all need to do our share and keep our bands by occupying them as well so please check in. Thanks!

Review Baofeng UV-82 Continued

It's probably just a matter of getting used to. improvements I really hoped to see (better front end like the UV-B5, no rounding down bug, user-friendly programming, alpha tagging from the keyboard) didn't materialize. Improvements blind ham radio operators would love to see (hear!) aren't there either. Menus still are announced in such a way that it is of no use to them. Go to the parameter menus for example and you won't hear anything at all. How can they find out which CTCSS tone is displayed in the screen? As far as they're concerned, the voice prompt is pretty much useless.

The S-meter still isn't one, and squelch levels still don't mean much. The RX roger beep is silly, and so is the strobe function on the flashlight. Then there is the drop-in charger, which is constructed in such a way that it will be the first thing to fail prematurely. Dear Baofeng, we know you can do better. We will gladly pay you a few bucks more.

So, is the Baofeng UV-82 a bad radio? No, not at only \$50. There's just not enough progression to warrant dumping your UV-5Rs and replace them by this one.

It's ALL About the Food!



Field Day Food: Our lunch, dinner and breakfast will once again be prepared for our enjoyment. Rob-KB6KMX will do tri tip for us with James supplying the salad and Jane Grace providing the beans. All the other trimmings will be taken care of such as drinks and coffee are being supplied by the club. Breakfast will once again be provided for by Ed-KN6JN. His eggs, pancakes and bacon are the very best. Lunch will be sandwiches by Subway. All 3 meals are 25 dollars, Dinner alone is \$10, breakfast by itself is also \$10 and luncheon is \$10 by itself as well.

CALENDAR

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

Club Meeting - 3rd Thursday of the month
May 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,
May 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

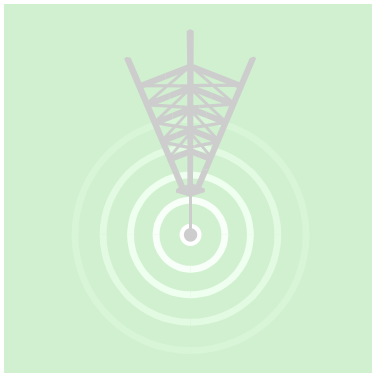
Awards Manager (HF/VHF)	Cliff - K6LH
Health & Welfare	Joe - WB6MYD
Swap Meet Chair	Joe - WB6MYD
VE Test Liaison	Joe - WB6MYD
VE Test Sessions	Joe - WB6MYD
Webmaster	Alex - KD6LPA
Editor	Glenda - KF6QFE
Proofreader	Alex - KD6LPA

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

South Bay Amateur Radio Club
P.O. Box 536
Torrance, CA 90508
W6SBA@arrl.net
Website: <http://www.w6sba.org>

TO:



Address Correction Requested

A COMMUNITY SERVICE ORGANIZATION

W6SBA

South Bay Amateur Radio Club
Post Office Box 536
Torrance, CA 90508-0536

