



October 2015

# ARCOver

A Community Service Organization Dedicated to Amateur Radio Since 1970

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## Come Support It!

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



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

Hi everyone:

We recently completed one of this year's major challenges, Hamcon. As you know, our club had the responsibility for the W1AW/6 station at the convention. We rented a camper and put up a push-up outside it. We put the HF station inside and the VHF/UHF station outside. A big assist was given to us this year by the Hughes Amateur Radio Club who provided the tower on which we hung all of our antennas. This helped us get more than 450 QSOs during the event. While many of our club members and Hughes members helped make this year's event a smashing success, special thanks go to two of our club members for their hard work which went above and beyond what we normally expect. These are Jerry, KJ6JJ, who was in charge of the project and Joe, WB6MYD, who put all of the equipment together for us. I'd like to offer my personal thanks to all of the club members who helped make this event the success that it was.

Those of you who were able to attend the convention had a great time. Between the extensive displays of equipment, the interesting talks, and the banquets it was a very nice event. Also, several of our members had success at the prize drawings including one member who won prizes for three out his four tickets.

Our next club challenge is JOTA, the Boy Scouts' Jamboree on the Air. We will put up several stations at the Cabrillo Youth Center in San Pedro. The intent is to provide the boys with one ten minute QSO which satisfies the Radio merit Badge requirement. The event is on October 17th. You have already received e-mails asking for your help. We intend to operate from 11:00 Am until 8:00 PM or as late as 10 or 11 if staffing is available. This is important for both the Boy Scouts and for us. It's a chance for us to get interest in amateur radio from the next generation of potential operators. Also, as a Public Service Club, we need to continue our long tradition of contributing to public events. So, I am asking for your help. Please contact Chuck, K6CSH, at 310-324-9561 to sign up for the event. Chuck is in charge of the event. You can also call Joe, WB6MYD, at 310-328-0817, or any of the other Council members to sign up. This is an important event and we need your help. It seems like, at most of our events, the same small group of people do most of the work. We are all getting older folks and we need more help so please sign up!!!

Elections are coming up soon. We need more help on the Council so, if you are available, please consider running for office. We particularly need a few more Council members at large. We will be talking to you at the October meeting as we will be presenting the slates for 2016 then. This club does not run itself so please consider giving us a hand. We need it.

Thanks and 73, Alan—KK6BJ

## **CLUB OFFICERS FOR 2015**

### **President**

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

### **Secretary/Treasurer**

**Joe Lanphen** - WB6MYD  
jmlanphen@gmail.com or w6sba@arrl.net  
310-328-0817

### **Events Council Member**

**Chuck Hohn** -K6SCH  
chohn@socal.rr.com - 310-324-9561

### **Vice-President**

**Bruce Jackson** - KK6BJ  
bjackson@ucla.edu - 310-502-0071

### **Activities Council Member**

**Jerry Cook** - KJ6JJ  
jcookggca@aol.com - 714-898-3983

### **Past President**

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



**October 15th - 7:30 p.m.**

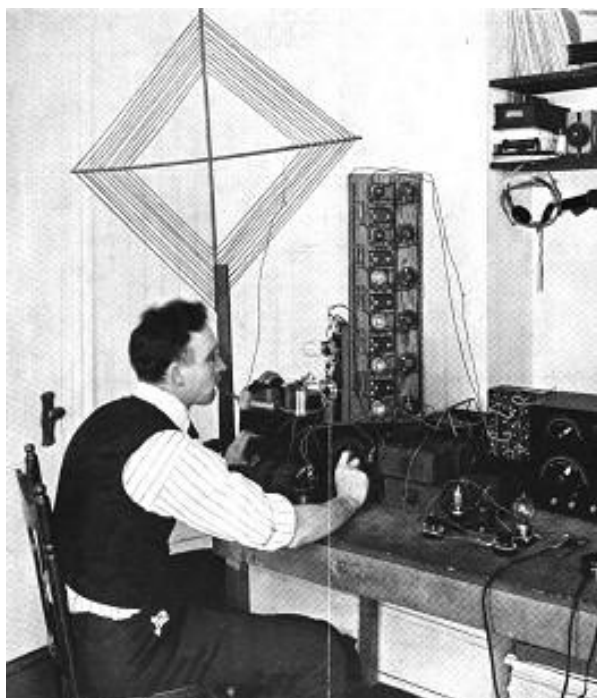
**Torrance Memorial Med Center  
West Tower, 2nd Floor, Room A**

Alan Parks recently retired after a fifty year career in academia and aero-space management and research. He has been a ham for ten years and holds an amateur extra class license. He is currently president of the South Bay Amateur Radio Club. Besides radio, his interests include reading, music (both listening and playing), astronomy, microscopy, and modelling of various kinds including aircraft, ships, vehicles, and live steam.

On Thursday, October 15, 2015 at 7:30 PM in room and he had the second floor West hour of Torrance Memorial Medical Center. He will present a talk that will concentrate on the various specifications reported in receiver reviews.

He will explain what these specifications are, why they are important, and how they are tested.

As part of his talk, he will describe the development of the superheterodyne receiver (pictured below), how it works, and why it became the dominant receiver design of the twentieth century.



- 1) Four states have their highest point below 1000 feet. What are they?
- 2) Four states have their lowest point above 100 feet. What are they?
- 3) What state's name ends with its own postal abbreviation?
- 4) Which state's name is a geographical mistake?

**Answers to September's Quiz**

- 1) Many people were tested for throwing accuracy and 100 were found to be accurate throwers. Of these, 30 could throw accurately with their left hand and 10 could throw well with either hand. How many could throw well with their right hand? ***If 30 could throw well with their left hand and 20 could throw well with either hand, then only 20 out of the 100 could throw well with only their left hand. So the rest of the 100 could throw well with their right hand and  $100 - 20 = 80$ .***
- 2) Several of the fifty US states share a letter with all of the states' names. Of these, which has the shortest name? ***Maine***
- 3) What English word contains all of the vowels in alphabetical order? ***The word I was looking for is facetious. Bruce, KK6BJ, added two more: abstemious and caseious.***
- 4) Tom and Bruce both have some transistors. If Tom gives one of his to Bruce, they will have the same number but if Bruce gives one of his to Tom, Tom will have twice as many as Bruce. How many did they each start with? ***Tom has 7 and Bruce has 5. If Tom gives one to Bruce, they both have 6 but if Bruce gives one to Tom, Tom has 8 and Bruce has 4.***

***Please send answers, questions, and comments to Alan at [thermic72@sbcglobal.net](mailto:thermic72@sbcglobal.net)***

## Jamboree-on-the-Air

The Jamboree-on-the-Air, or JOTA, is an annual Scouting event that uses amateur radio to link Scouts around the world, around the nation, and in your own community. Held on the third full weekend of October each year, this worldwide jamboree requires no travel, other than to a nearby radio amateur's ham shack. Many times the hams will come to you by setting up at a Scout camporee, or perhaps they already have a ham shack at your council's camp. There are many ways to get your Scouts involved in JOTA.



### Tell Me More

Scouts of any age can participate, from Cub Scouts to Boy Scouts and Venturers. Once at the ham radio station, the communication typically requires speaking into a microphone and listening on the station speakers. However, many forms of specialized communication can also take place, such as video communication, digital communication using typed words on the computer screen transmitted by radio, communication through a satellite relay or an earth-based relay (called a repeater), and many others. The exchanges include such information as name, location (called QTH in ham speak), Scout rank, age, and hobbies. The stations you'll be communicating with can be other Scouts across town, across the country, or even around the world! The World Scout Bureau reported that the 2014 JOTA had more than 1 million Scout participants from more than 11,500 stations, nearly 20,000 amateur radio operators, and reached 157 countries.

### When Is It?

Jamboree-on-the-Air is held the third weekend in October. This year it's on October 17th. There are no official hours, so you have the whole weekend to make JOTA contacts. The event officially starts Friday evening and runs through Sunday evening. Contact Joe to participate in this important event on Saturday, October 17th.

## A trip to the U.S.S. Midway's Radio Room

Last July I was able to visit the U.S.S. Midway in San Diego. The Midway, the first carrier in its class and the first to be completed after



WWII, was active from 1946 through Desert Storm. It is now a museum ship much as is the Iowa. The Midway however gets many more visitors and is therefore able to put a lot more money into the ship and its exhibits. I highly recommend a visit to the ship. While there, I had the privilege to visit NI6IW, the ham station on the Midway. They operate on the first Saturday of each month. The station has three Elecraft K-3s which I was told were given by a very gracious benefactor. They operate on phone, CW, and digital modes. When I got there I saw them behind a rope blocking visitors from the passageway. I called out to them and gave them my call and was told "those are the magic words" and they let me in. I was given a complete tour of their station which fills two compartments on the ship. They are not allowed to put up any antennas on the ship and so are forced to use the ship's own antenna systems. These are not however compatible with many of the ham bands so their situation is less than optimal. If you are able to visit the Midway, do try to do it when they are operating or try to work them on the first Saturday of the month. They were very welcoming and asked if I wanted to operate. The amateur station is located adjacent to the Midway's radio station and is easy to find. I have included two pictures of the NI6IW setup and one picture of part of the Midway's radio room. A few of the receivers on the ship are shown. There are many more!

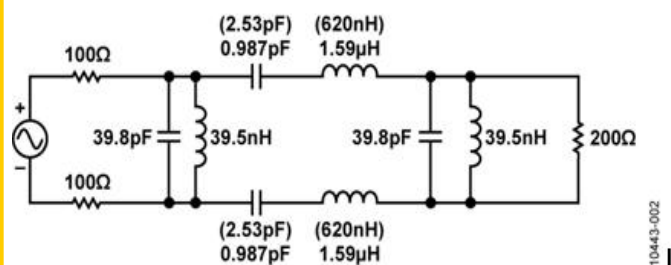
Bruce, KK6BJ



## RF FILTERS, PART 8

Last month I left you with this schematic and asked the following questions: *Why is it a band pass filter and what is the center frequency of the pass band?*

First, using the equation: Resonant fre-



quency is  $f = 1/\sqrt{L \times C}$ . When .987pF and 1.59 uH are plugged into this we get  $f = 127$  MHz. Similarly, if we plug in 39.8 pF and 39.5 nH we also get 127 MHz. So the pass band is centered at 127 MHz. Now, remember two important facts from last month's article: (for that matter, 253 pF and 620 nH also yield the same resonant frequency)

- 1) A series LC circuit has its minimum impedance when at the resonant frequency;
- 2) A parallel LC circuit has its maximum impedance at the resonant frequency.

So, at its resonant frequency, a series LC circuit passes frequencies near its resonant frequency and impedes those away from resonance; a parallel LC impedes frequencies near its resonant frequency and passes those frequencies away from the resonant frequency.

With this in mind, look at the schematic: The series LC circuits are passing frequencies near 127 MHz to the 200 Ω load and obstructing frequencies away from 127 MHz. The parallel LC circuits are passing frequencies near 127 MHz to ground and obstructing frequencies away from 127MHz.

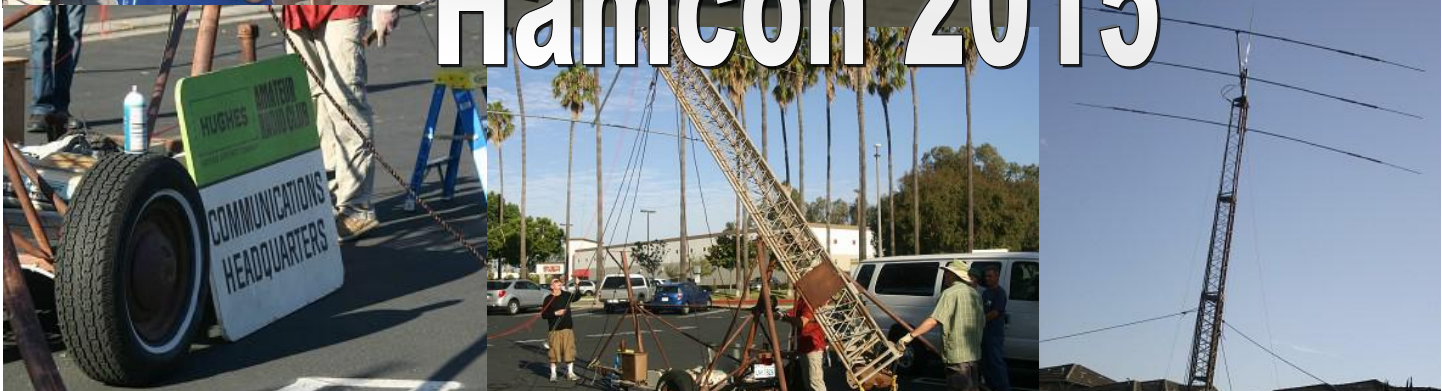
Can we calculate the bandwidth of this filter from the information given? The answer is no because we don't know the pure resistance of the inductors in the circuit. Remember that bandwidth is dependent on the Q of the circuit which is  $X/R$  where X is either the capacitive or the inductive impedance of the circuit and R is the series resistance. In, for instance, the parallel LC circuits shown above, the majority of the series resistance is due to the inductor and we don't know what it is.

If we did know the Q of the circuit, then bandwidth is easy. It is  $BW = f_c/Q$  where  $f_c$  is the resonant frequency of the filter. Almost any low-pass filter or high pass filter can be turned into a bandpass filter. First pick the center frequency of your filter. Then, for each inductor and capacitor in the circuit, calculate the value of the capacitor or inductor needed to give the desired resonant frequency. Then add parallel LC circuits to the filter's shunt elements and series LC circuits to its non-shunt elements. Note that if you want to design filters, more knowledge of filter design parameters and knowledge of the individual characteristics of the capacitors and filters involved in the circuit must be known. For example, some capacitors have poor characteristics at certain frequencies due to series inductance likely to be present. Similarly, inductors can have objectionable parasitic capacitance at some frequencies. If you want to design a filter, it is best to use some of the available filter design software. One example is *Elsie* which is on the disk included with the ARRL Handbook. This concludes what I have planned to present regarding RF filters. Next month I may look at audio filters a bit. I am open to suggestions for other topics that I might present in a similar way to this. Please let me know if you have any ideas.

Please send questions and comments to Alan at [thermic72@sbcglobal.net](mailto:thermic72@sbcglobal.net).



# Hamcon 2015





1. **Attendance Drawing:** Another SBARC longtime member name was drawn at the September 17th meeting. Unfortunately Craig-WD6AKX was not present and so our kitty will go to \$ 35.00 for our October meeting. Do we here to look forward to a large increase in our attendance with that much at stake? Something to think about folks and I am sure you agree an interesting thought.

2. **Thank you:** We wish to thank Doug-K6JEY for his interesting presentation on "Sidewalk EME". This is one project we could all be proud of if one were to accomplish that feat to bounce your signal off the moon. The intricacies involved are really mind boggling, yet can be done with experience and knowledge. Doug has offered to show this to some interested enough to attempt this, experience and knowledge makes this truly amazing. Thank you Doug.

3. **JOTA:** You know that we have been asked again to support JOTA from the Cabrillo Youth Center in San Pedro as we've done in the last couple of years. This is a truly an fun event and worthy of your participation. So please let Chuck know how you want to help us make this another success story. Our intention is, while scaling things down a little, to once again use Echo link to connect with other scouts on echo link domestically as well maybe worldwide. We did connect with scouts in Australia and the Philippines last year and this year we will try to expand that a little. The BSA is setting up several links to be used for that purpose. We can also use IRLP made available by the WALLA system. So if you've used that mode before please show us how that works as well. VHF we will use some of the local repeaters and look for other troops to connect. So please let Chuck-K6CSH know your availability.

4. **Donations:** We are so lucky to have so many members in our group that are great contributors to us all. Both Kostek-K6MNA and Chuck-KN6H have contributed not just one time but often. Kostek goes out of his way to provide us with some many of our door prizes time and time again. Chuck of course has also provided us with so many donations but also especially with items for the swap meet.. Gentlemen thank you so much. Your support in this way is greatly appreciated.

5. **Elections:** The elections while in November requires the Nominating committee to have an preliminary slate to be presented at the October meeting. I would like to ask each and every one of our members to see if you could and would give your expertise to the Council by providing Bruce-KK6BJ with your name to be added on this slate. It would be so great to shall we say have some new blood on the Council. We while happy with our Council right now can and should as always look for new people to provide the leadership needed to continue this progress we've made these past years. There is nothing like a new drive to improve and or adopt new ways for growth with your expertise and motivation. So please let Bruce or any other officer know your wish to be added to this slate for the 2016 SBARC Council.

6. **Echo link:** Jerry-KJ6JJ, Chuck-K6CSH and myself WB6MYD tested for a new link up to use Echo Link during the JOTA event. Thanks to Jerry willing to go the extra length to set up the link allowing us to talk from the Cabrillo JOTA station location to his computer interface on Saturday October 17th. We have come up with good set up allowing us to look for other JOTA Echo Link stations using this set up. Yes there are other JOTA station using this mode as we saw last year and we hope to expand on this a little more if we can. This is really fascinating since we can have the boys scouts talk using an microphone to talk directly to other boy scouts anywhere in the world. So thank you Jerry for going that extra step in providing your expertise to make this possible. Chuck and Joe of course also thanks for taking the time out of your busy schedule to check this out and have it ready to be used on October 17th.

7. **Holiday party:** Yes it is that time again and so plans are under way to have our annual Holiday party again on December 17th. This is as you know a pot luck event and I would like to ask all of you to please let us know if you have thing you would like us to add, change or eliminate. We are wide open because remember this is your annual party and is the social event in which we invite you and yours to join us. We will look for donations of poinsettia's as in the past to be delivered to the hospital for distribution at nurses stations in the hospital after our enjoyment at this dinner. More to follow.

*Joe*

## CALENDAR

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

**Club Meeting** - 3rd Thursday of the month  
**October 15, 2015 - 7:30 p.m.**  
Torrance Memorial Med Center  
West Tower, 2nd Floor, 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,  
**October 31, 2015 , 7-11 a.m.**

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

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

## CLUB SERVICES

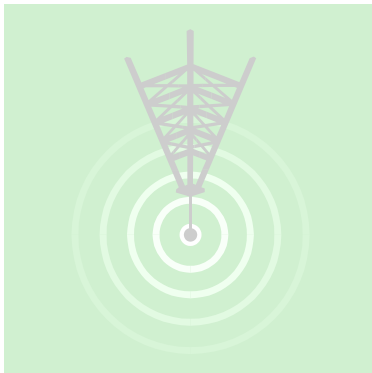
Awards Manager (HF/VHF)	Cliff - K6LH
Health & Welfare	Joe - WB6MYD
Swap Meet Chair	Joe - WB6MYD
VE Test Liaison	Joe - WB6MYD
VE Test Sessions	Joe - WB6MYD
Webmaster	Scott - N6LEM
Editor	Glenda - KF6QFE Glenda.simpson@hotmail.com
Proofreader	Alan - KG6ZPL

**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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