

# The Short Circuit

<http://www.avarc.av.org>



The official publication of the Antelope Valley Amateur Radio Club

November 2004

## President's Corner

### Rich Stocking N7OP

Daylight savings time is over and the nights start much sooner. As winter starts to deepen the low bands 160, 80, and 40 are starting to really open. Remember the ARRL 160 Meter contest is the first weekend in December. It will be a great time to work a few more states, sections and DX on the Top Band. Winter time is also a great time to remember the origins of our hobby. Straight Key Night is a different way to bring in the New Year. Dig out the old straight key or old-fashioned bug and pound some brass! SKN 2005 begins at 4:00 p.m. PST December 31 and runs for 24 hours through 4:00 p.m. PST January 1 (0000 --2400 UTC January 1, 2005).

Elections are over, both in the national arena and in the AVARC. Congratulations to the new officers and to the re-elected incumbents. (Check the minutes of the last meeting to ensure you weren't elected in your absence...just kidding)

This last weekend I and many other adult scout leaders spent the weekend camping in Joshua Tree National Park. For training we discussed the emergency procedures we might follow if one of our scouts had an accident. We were in a remote area, far from cellular coverage and a good few hours of walking (running) back to the trailhead where our vehicles were parked. From the trailhead, it was approximately another hour's drive over rough roads to the highway. We determined it could take several hours just to summon help.

I used the opportunity to offer an alternative and then demonstrated the use of the 2 meter repeater located high atop the Palm Springs Tram. After a communications check with a local ham I explained how many remote wilderness areas in the American West were within

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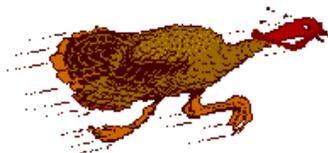


## UNITED WE STAND

### Meeting Notice

Thursday, November 18, is the next meeting of the AVARC at the Emergency Operations Center (EOC) at Lancaster City Hall, 44933 N. Fern Ave. in Lancaster. Talk-in is available on 146.73 MHz. if you need directions. This month's meeting will feature "Show and Tell" by our members, plus a surprise or two.

Please note that this month's meeting is a week earlier than usual, since the fourth Thursday, November 25, is Thanksgiving Day.



## From The Veep

### Chuck Turner K6ARU

This month we are having an open "Show n Tell" presentation, so if you have a ham radio project and you would like to show and tell about it, bring it to this month's meeting. Anyone is welcome to bring their ham project, and we will also have a DVD player for those who are bringing amateur radio video shows. Anywhere from ten to twenty minutes per project is OK, and there will also time for Q&A about it.

Next month is our annual Holiday Pot Luck Dinner, so bring your favorite food/dishes; I will bring sodas, punches and water. Someone needs to bring utensils, paper towels/napkins, and cups. Also, let me know who's bringing what items. (661) 945-9097 or [k6aru@cwo.com](mailto:k6aru@cwo.com).

73,

Chuck K6ARU



## From The Secretary's Desk

Minutes of the AVARC General Membership Meeting

Date: October 28, 2004

Location: EOC, City Hall, 44933 N. Fern Ave., Lancaster, CA 93534

The President called the meeting to order at 7:30 p.m. with 22 members present, constituting a quorum of at least 10% of the total eligible voting membership. After the Pledge of Allegiance, it was moved and seconded that the Secretary's Minutes of the last General Membership meeting and the last Board of Director's meeting be accepted as printed in the last issue of the Short Circuit (newsletter). Motion carried. No Treasurer's report was presented but Rich, N7OP, announced the checking account balance was \$1,235.19 less \$204.46 paid for newsletter publication expenses.

1. Vern, KØLVS, moved that the Club pay \$65.00 for the annual (12 issue) notice in World Radio of our meeting time and location. Motion carried.

2. The President and Master at Arms conducted nominations and election of new officers and directors for 2005. The nominees were:

President: Rich, N7OP  
 Vice President: Dan, KG6PQA  
 Secretary: Bob, KG6DHQ  
 Treasurer, Don, WA6KPP  
 Master at Arms: Gary, WA6WFC  
 Board Member: Harold, K6HAB  
 Board Member: Dan, N6SLH

No additional nominations were made. The nominees above were then elected for 2005. Congratulations to each one and thank you for your service to the Club and to amateur radio.

3. Adrienne, WA6YEO, announced the next VE test session would be held on November 1, 2004, Monday, at 7 pm at the Kumon Center in

Lancaster. It will be a GLAARG session.

Program: Randy, KR6DR, presented a program on paint ball aerodynamics, chemistry, and devices of his own design, including paint grenades. A fascinating sport and action event. Thank you Randy.

The next General Membership meeting will be held on November 18, 2004 at this same location and time. The next meeting of the Board of Directors will be held on November 4, 2004 at 7 p.m. at Rich's, N7OP, QTH in Lancaster, CA. The meeting adjourned at 8:35 pm.

Submitted by Claude A. Brown, K7TEN  
 Secretary, AVARC, 2004

Minutes of the AVARC Board of Directors Meeting

Date: November 4, 2004

Location: Rich's, N7OP, QTH, Lancaster, CA

Members Present: Rich Stocking, N7OP,  
 President: Chuck Turner, K6ARU, Vice  
 President: Claude Brown, K7TEN, Secretary: Gary Mork, WA6WFC, Master at Arms: Vern Eubanks, KØLVS, Past President: Harold Bragg, K6HAB, Board Member: Keith Hoyt, K6GXO, Trustee  
 Members Absent: Dave Alpert, KX6Z,  
 Treasurer: Elizabeth Alpert, KG6JDH,  
 Board Member  
 Others Present: Dan, KD6PQA, Vice President elect: Dale, KØBGL: Dolores, KG6VPS

The President opened the meeting at 7:35 p.m. with at least five Board Members being present to constitute a quorum.

1. Chuck, K6ARU, is looking for program ideas. Various sources were explored and discussed. A notice of program will be pre-

pared by Chuck for the November Short Circuit.  
 2. Vern, KØLVS, discussed the possibility of the Club making a contribution to the ARRL spectrum preservation fund and to Amateur Radio Newsline as we have in the past. Also he noted ways to raise money including the rebate now being offered by the ARRL to clubs for each new and renewed membership. Vern will obtain more details from the ARRL and bring this information to the next Board meeting.  
 3. Preparations for the Christmas dinner meeting were discussed. Remember, it is the annual pot luck dinner. Bring something good to eat.  
 4. The post office box rental is due soon and it was suggested that it be paid prior to receiving the renewal notice to avoid any possibility of being late and forfeiting the box number.  
 5. Harold discussed the need for an increase in the annual Club dues, an agenda item tabled from the last Board meeting. A discussion of the annual recurring expenses identified several including insurance, trailer and antenna repairs, Field Day expenses, and monthly costs of preparing and mailing the newsletter, as well as others. Vern moved that the Board set the annual dues for full members for 2005 at \$20.00 with an increase for other membership classes in accordance with the by-laws. The motion was seconded by Harold. Motion carried. The President will ask the membership to approve the increase at the November general membership meeting and to affirm the increase at the January 2005 general membership meeting in accordance with the by-laws. It is noted that the dues have not increased in several years and Club costs and expenses have increased.

6. Dan, KG6PQA, asked the Board to submit ideas for programs in 2005 and distributed a list of potential programs.  
 7. Gary, V announced that a list of program ideas had been submitted.



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**President's Corner...**

*(Continued from page 1)*

the reach of mountain top repeaters. The demonstration received a pretty good response from the group. Actually I think it just matches the Scout motto "Be Prepared." Amazing what a couple of AA batteries and an HT can do.

On a sadder note on the way out we found the shredded tent and backpack from a backpacker who had gone missing in the area many months ago. The GPS spot and materials were turned over to the Rangers on our departure.

The next AVARC meeting will be on the 18<sup>th</sup>, and December's meeting will be on the 16<sup>th</sup> reflecting our observance of the holidays.

Looking forward to seeing everyone at the next meeting,

73,

Rich N70P

**SWAP SHOP**

**ANTELNNAS FOR SALE**

- 1.) HF Antenna Hustler 4 BTV- \$10.00 - OBO
- 2.) VHF Antenna Cushcraft A147-11 element Yagi - \$15.00 - OBO
- 3.) VHF Antenna Cushcraft Ringo-Ranger ARX-2 - \$15.00 - OBO
- 4.) Coaxial Cable RG 213/U 120 ft. - \$5.00 - OBO

Len WB6FWH 942-6909

**RADIOS FOR SALE**

- Yaesu 757 GX with P/S
- Kenwood All-Mode quad band
- Linda Riley KQ6RM



**TriviaTronics**

By Vern Eubanks KØLVS

**A Concise Discussion of SSB**

The US Navy demonstrated a crude form of SSB in 1914-1915, proving that the upper and lower sidebands in an AM signal contained equivalent voice information, and that the carrier itself contained no information. We now know that about 90% of the power in an AM signal is wasted from an information point of view. If your intent was to transmit "Calling All Amateurs, this is K6OX", your 10 watt SSB transmitter

would reach the same number of amateurs as a 100 watt AM transmitter. In addition, a SSB station takes up only half the frequency bandwidth as an AM station; that is, if 15 AM stations could operate simultaneously on the 20 meter band from 14.2 to 14.3 MHz without interference, then 30 SSB stations could operate without interference.

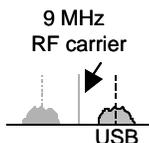


Figure 1 – 9 MHz USB Spectrum

Figure 1 illustrates a USB voice signal at a carrier frequency of 9 MHz. The suppressed carrier and LSB spectral elements are added as faded areas to show their relationship with the desired USB spectrum.

**Two Bands for the Price of One** – Why hams use LSB on 80 meters (and 40 & 160).

Figure 2 illustrates how the RF output from a 9 MHz SSB generator is mixed with a 5-5.35 MHz VFO to generate 2 new SSB signals ranging as follows:

The *sum* SSB signal:

$$\begin{array}{r} 9.000 \text{ MHz} \\ + 5 \text{ to } 5.35 \text{ MHz} \\ \hline 14.000 \text{ to } 14.350 \text{ MHz USB} \\ \text{(20 meter band)} \end{array}$$

The *difference* SSB signal

$$\begin{array}{r} 9.000 \text{ MHz} \\ - 5 \text{ to } 5.35 \text{ MHz} \\ \hline 4.0 \text{ to } 3.650 \text{ MHz LSB} \\ \text{(75 meter band)} \end{array}$$

The desired output is determined by a buffer/amplifier, which amplifies the desired band of operation, and attenuates the undesired band. An inverted sideband (LSB) and backward tuning on 75 meters was a minor price to pay for frugal hams experimenting with SSB in the late 1940s and early 1950s. Hence, they would get "two bands for the price of one" The tradition of LSB on the lower frequencies stays on to this day, even though there is no longer a practical reason to retain it. While the 5 channels in the new 60 meter band are essentially "lower frequency", the FCC only permits the **USB** mode on those channels.

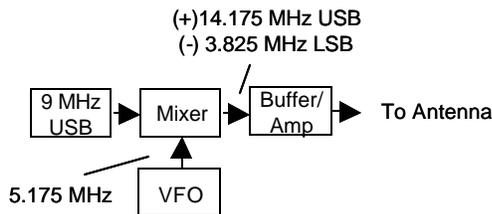


Figure 2 – "2 for Price of 1" SSB Transmitter



### Antelope Valley Amateur Radio Club 2004 Officers



<b>President</b>	Rich Stocking	N7OP	949-1039
<b>Vice President</b>	Chuck Turner	K6ARU	945-9097
<b>Secretary</b>	Claude Brown	K7TEN	948-2672
<b>Treasurer</b>	Dave Alpert	KX6Z	267-0338
<b>Master-At-Arms</b>	Gary Mork	WA6WFC	948-8317
<b>Board Member</b>	Elizabeth Alpert	KG6JDH	267-0338
<b>Board Member</b>	Harold Bragg	K6HAB	256-7465
<b>Board Member</b>	Bruce Mowers	N6SFV	942-5986
<b>Trustee</b>	Keith Hoyt	K6GXO	533-4025
<b>Ex Officio</b>	Vern Eubanks	KØLVS	822-8772

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**To ARS:**