

# The Short Circuit

<http://www.avarc.club>



The official publication of the Antelope Valley Amateur Radio Club

April 2016

## President's Corner

**Carol Humpherys AF6OV**

I've been studying basic Greek recently. Since I was a child, I've wanted to read the New Testament in its original Greek. My father, who started life as a Protestant minister, had Greek tomes lying around the house, which sparked my interest. Today, as I grew tired pondering the different pronunciations of Greek letters, my thoughts turned instead to Morse code, the elite language of amateur radio operators.

In 1936 Samuel Morse (an artist), Joseph Henry (a physicist) and Alfred Vail (a machinist) developed an electrical telegraph system, which used pulses of current transmitted along wires. For the system to transmit language, a code was needed using only the electrical pulses and the silence between them.

Morse had initially planned to transmit just numbers in code, and to use a codebook to look up each word according to the number that had been sent. This system was soon expanded and enhanced by Vail who modified it for letters. Vail estimated the usage frequency of letters in the English language by counting the movable type he found in cases at the local newspaper office.

Morse's telegraph used a mechanical clockwork device to move a paper tape. When an electrical current was received, a stylus was pushed into the moving tape, making an indentation. When the current was interrupted, a spring retracted the stylus leaving that section of the tape blank. Morse code allowed operators to translate the 'indentations', the visual 'dots' and 'dashes', into text messages. The most commonly used letters were assigned the shorter sequences of dots and dashes.

The telegraph device made a clicking noise as the stylus moved in and out of position. Telegraph operators soon learned that they could translate the clicks directly into dots

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## Meeting Notice

**Thursday, April 28**, is the next meeting of the AVARC at Antelope Valley First Christian Church, 1702 East Avenue J, in Lancaster. This is the same location where the monthly VE sessions are held. Talk-in is available on the Hauser Repeater (146.73 MHz. PL 100) if you need directions. Eyeball QSO starts at 7 pm, and the meeting starts at 7:30.

The new phone number for the club is **(661) 265-6131**.

At this month meeting **John Melville KF6FQC** will address the history, design, and flight test of modern aircraft communication systems. John experience with communications ranges from constructing a homemade Yagi antenna to receive the first NFL Super Bowl broadcast in 1967 to teaching a course in Satellite Communications. For the past 20 years he has designed and tested communication systems for fighter aircraft working as chief engineer for the Communication and Navigation systems for the F-22 and F-35 fighters. He is currently assigned to F-35 flight test at Edwards Air Force base.



**John Melville KF6FQC**

## From The Veep

**Eugene Humpherys KG6SLC**

As a young lad I would marvel whenever my father or other adult would discuss the many changes they had observed over the course of his or her lifetime. It would amaze me that things common to me at that age at one time did not exist.

Not that many years ago radios and communication equipment were designed around vacuum tubes. They were power hungry, bulky, had to warm up and in some cases circuits had to be "tuned" prior to being used. My brother-in-law was a ham. I recall my early visits to his "shack" when he would talk to far off places using an AM transmitter almost as tall as I was. (He loved his powerful BC-610-E transmitters.) When he completed his military service, he was able to procure a significant amount of equipment including several items that over the years were still "brand-new" in the box. Shortly after my brother-in-laws' equipment acquisition, AM was no longer "king" and his equipment had become obsolete. Nonetheless, these items were used as enticement for me to get my license

I remember learning Morse code using a bulky machine that would create dashes and dots in my headphones as a paper "tape" traveled across a set of contacts at a speed that I could vary. At the time I had no concept of how technology moved on and thought that what was then would continue to always be.

The speed at which many components were capable of operating was such that only what we now consider "lower bands" could be taken advantage of. As better components became available the higher frequency bands, or HF as we have come to know them, could be increasingly utilized. Now of course the HF

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## From the Secretary's Desk



### AVARC General Meeting March 24, 2016

AVARC General meeting  
March 24, 2016

Opening: Carol Humpherys AF6OV  
President

7:30 pm call to order followed by  
flag salute and introductions.

Minutes from last meeting: Taken by  
Dan Sherwood W6DAS. Corrections? 2  
Motion to approve with corrections made by Margie  
KG6TBR, seconded by Jim NB6V.  
Approved? Yes

Treasurer's Report: Gary Barr  
WA6TWT: Balance \$5,396.61 (Inc  
cash \$184.00)

Membership Report: Gary Barr  
WA6TWT: Members 83, ARRL  
members 84.7%,

Members present tonight 45.

Old Business:

New meeting location – Starting in  
April, AVARC meetings will be  
held at Antelope Valley First Christian  
Church, 1702 East Ave J. Same  
location as the test sessions. Maps  
were made available.

Vice President report: Eugene  
Humpherys KG6SLC – April  
speaker will be John Melville, topic  
radios NAV/COM for aircraft.

Field Day Prep: Please see Paul  
L'Heureux's article in the March  
Short Circuit. Discuss in detail next  
month.

New business:

Web Site: The AVARC web site is  
outdated! Brian Hoffman has volun-  
teered to do an upgrade and redesi-  
gn. Dan W6DAS has offered to col-  
laborate on the changes. We're very  
grateful to both of them. The project  
is still in its infancy stages – more to  
come.

Club Patches: We are working on  
creating patches with the club logo.

Also perhaps shirts, hats, car stickers,  
and magnets.

Brian N6CVO talked about the status of  
the Acton Tech class. Dates 4/16/16, &  
4/23/16 VE test. VE's needed. VE test-  
ing will be 12:30 pm on 4/23. Location  
will be the Acton library.

April 16-17: CERT will be present at the  
Poppy Festival in Lancaster. See Pat  
Okawa for details.

April 17: DX Convention in Visalia.

Keith K6GXO is having trouble with his  
CW call being misunderstood. Needs  
some kind of automatic keyer to put his  
call out.

Six visitors attended from the Tehachapi  
Club. The Tehachapi Club will be oper-  
ating from Cesar Chavez National  
Monument April 9 -10, and from the  
Manzinar Monument on May 14 -15.  
We are welcome to join them!

Carol: Our three-fold Club vision and  
goals for this year:

1. Provide enriching amateur radio ac-  
tivities, experiences and opportunities.
2. Be an AVARC ambassador to other  
clubs and the community.
3. Increase meeting and net participa-  
tion.

Break

Club Program: Lt Col Chris Abramson  
spoke on electronic warfare. Eugene  
presented the speaker with a certificate  
of appreciation.

Announcements:

Next VE session is on Saturday April 9,  
AV First Christian Church, 1702 E. Ave  
J. Test fee \$5.00. GLAARG session.

Next Board Meeting scheduled for  
Thursday April 7, at the Texas Cattle  
Company. The meeting begins at 7:00  
pm and should end by 8:30 pm. The  
meeting is open to all AVARC mem-  
bers.

Reminder: Adrienne Sherwood  
WA6YEO needs the next Short Circuit  
articles or any other submissions by  
Sunday night, April 10. Please submit

them directly to Adrienne at  
[wa6yeo@sbcglobal.net](mailto:wa6yeo@sbcglobal.net)

50/50 drawing won by Larry KI6BKP  
for \$19.00

Meeting adjourned at 8:58 PM.

Minutes submitted by Carol Humph-  
erys and Paul L'Heureux. Transcribed  
by Dan W6DAS, (not present for  
business meeting).

### AVARC Board Meeting April 7, 2016

Board Meeting – Agenda – Thursday,  
April 7, 2016

Opening:

Call to order by Carol Humpherys  
AF6OV at 6:50 pm

Minutes from last board meeting: Sec-  
retary Dan Sherwood W6DAS. Any  
corrections?

Motion to approve as printed in Short  
Circuit Made by: Keith, Seconded:  
Margie Approved? Yes

Discuss process to correct meeting  
minutes. Reviewed and edited.

Treasurer's report: Gary Barr  
WA6TWT - Checking, \$5,357.61  
cash \$114.00 & total \$,471.61. New  
expenses to be submitted: \$150.00

check or rental of AV First Christian  
Church for Q2, 2016. Eugene men-  
tioned the club should purchase an  
HDMI to VGA converter to support  
speakers with newer computers that  
need our projector. Moved: Matt,  
Second Gary Barr – Approved. Price  
about \$35.00. Eugene also needs  
frames for certificates, around \$30.00.

Membership Report: Gary Barr  
WA6TWT Membership 90 members  
after purge, including 5 non-hams.  
The topic of associate members came  
up. Margie read the bylaws on this to  
determine Associate members cannot  
vote. (Defined – non-ham members  
interested in the Club).

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Treasurer's audit status: Matt: Revenue from 50/50 drawings should be recorded as a donation to the club. Purchases for holiday party should be expensed against this. Also refreshment purchases should be expensed against this. Better recordkeeping of the cash transactions and petty cash donations is needed. Vote: 4 – 2 to create a ledger for the cash receipt and deposit.

Non-profit status: Matt – Will arrange a conference call with Gary, and the IRS concerning establishing a process for reinstatement of non-profit status.

Members present tonight: Carol Humpherys AF6OV, Eugene Humpherys KG6SLC, Gary Barr WA6TWT, Gary Mork WA6WFC, Adrienne Sherwood WA6YEO, Matt Stewart K6MES, Keith Hoyt K6GXO, Margie Hoffman KG6TBR, Paul L'Heureux KD6SMC,

Discussed Goals/Vision:

Provide enriching amateur radio activities, experiences and opportunities.

Be an AVARC ambassador to other clubs and the community.

Increase meeting and net participation.

Old Business:

Meeting venue change: Payment: Q2 rent check will be cut – see above. Maps distributed at the March club meeting. Change will be printed in the Short Circuit. Mentioned on the Net. Any other communication needed?

VP report: Eugene Humpherys KG6SLC. March Electronic Warfare presentation was excellent. Attendance up. Future program schedule. April speaker John Melville, topic will be radio navigation his-

## Secretary's Desk...



tory on military aircraft. He may also discuss MARS and other topics.

T-hunts were mentioned. Paul discussed options.

X-band – “Propagation using the X-band”. Very interesting visualization of radio waves by scaling things down to microwave wavelengths. Speaker – Steve Noll WA6EJO. His travel expenses will need to be paid from the Ventura area.

Club contact cards: Eugene distributed. Any changes needed? Font on email address, also needs the name of the Church where the meeting is.

Council of Clubs report: Margie Hoffman KG6TBR – LACARC meeting was recently held. The pool of convention hosts has shrunk so ARRL wants HAMCON to be hosted by LACARC in 2017. Very Short notice. Venue selection will be needed soon. Considered, LA County Fair, (issues there), or Burbank Marriott, which looks promising. Proposed dates 9/17 – 9/19 2017.

Weekly Club Net: Margie. Participation metrics?

Field Day report: Paul. Field day flyer available. Girl Scout flyer.

Web site update: Dan /Margie – Needs modernization.

Club logo patches : Paul/Eugene – Paul needs copy print of the logo.

Acton class & test session: Margie – Volunteers needed at 11:30 AM to prepare for a 12:30 test sitting. Date Saturday April 23.

Jackalope Award – tabled for now.

New Business:

Donated equipment: Recent phone call. Caller to send equipment list to W6DAS.

Thoughts to increase attendance at meetings & on the net

Other? Web site, calendar, new venue. Email reminders.

Announcements:

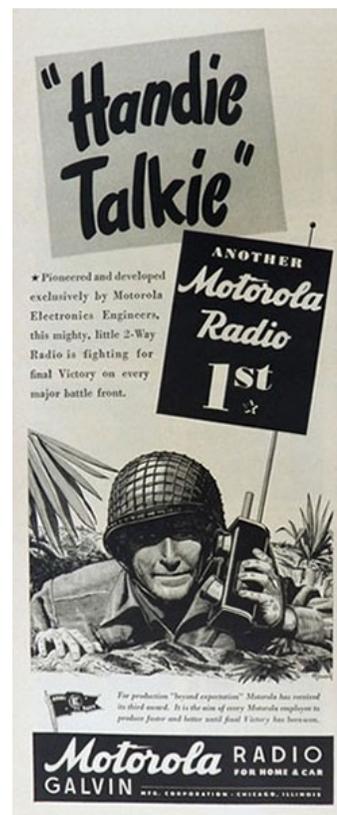
Next VE Session date Sat., April 9 at 9:00AM. First Christian Church. Address 1702 E. Ave J – Across from Wal-Mart. Session is GLAARG with a \$5.00 fee.

Next Club Meeting: Thursday, April 28<sup>th</sup> at the First Christian Church. Address 1702 E. Ave J – Across from Wal-Mart.

Next Board Meeting, Thursday, May 5<sup>th</sup>. Location Carol and Eugene's QTH. Arrive at 6 pm for dinner. The meeting begins at 7:00 pm and should end by 8:30 pm. The meeting is open to all AVARC members.

Short Circuit Articles Due Sunday, April 10. (Other articles welcome!!) Adjourned: 8:32PM.

Respectfully Submitted,  
Dan Sherwood W6DAS  
AVARC Secretary 2016



## President's Corner... From the VEEP...

*(Continued from page 1)*

and dashes and write them down by hand, thus making the paper tape unnecessary. When Morse code was adapted to radio communication, the dots and dashes were sent as short and long pulses.

To reflect the sounds of Morse code, operators began to vocalize a dot as 'dit', and a dash as 'dah'. Dots that were not the final element of a character became vocalized as 'di'. For example, the letter 'c' is vocalized as 'dah-di-dah-dit', thus the rhythm of the language. It was found that people became more proficient at receiving Morse code when it was taught as a language that is heard, instead of one read from a page.

Today two Morse code teaching methods are commonly used – the Farnsworth method and the Koch method. The Farnsworth method, originated by Donald Farnsworth, W6TTB, teaches by sending characters at a specific speed, but with long pauses in-between. As the listener grows more proficient, the pauses are shortened. The Koch method, named after Ludwig Koch a German psychologist, uses the full target speed from the start, but begins with just two characters. Once strings containing those two characters can be copied with a high degree of accuracy, additional characters are added until all the characters are mastered.

When learning Morse code, it can be helpful to make word associations with the letters. As mentioned above, the letter 'c' is 'dah-di-dah-dit' (long short long short). This has the rhythm of the word 'catastrophic', which has an emphasis on

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bands aren't really high frequency at all, but the term has remained and gained common currency in our language.

Over time better technology became more accessible and commonplace. Transistors replaced tubes, TTL integrated circuits replaced single transistors and now most circuits are miniaturized. Communication equipment is becoming physically smaller and more capable with each generation of design. We have hand held radios that are "wide receive" with many offering a gamut of listening options... and they are compact. Many of us have some type of radio installed in our vehicle because technology progression over the years has allowed this equipment to be much smaller and consume considerably less power.

Over our lifetime many of us have seen technologies come and go. Although not ham related, an example that readily comes to mind is that of the Video Cassette Recorder (VCR). At the time it was introduced we were thrilled at the options it provided us. Today, only a few years later, we use different technology to deliver much higher quality images with considerably smaller hardware. Remember when every office had at least one typewriter and if you had an electric one you were really modern? How did we ever survive without having a microwave oven? Remember when Teletype could be heard in the background of the news intro?

It has been said that we live in the information age. Computers are everywhere including amateur radio. Software Defined Radios are essentially computers. We can press a button in our vehicles and get a host of useful and/or diagnostic information. We have "smart" TV's, phones, tablets, computers and other "advanced" devices. Today all vehicles have some form of computer integrated into their workings and some cars on the road are now capable of going from point A to point B without driver intervention. We all know what "There's an APP for that" means. Want to know what the weather is in another city or who invented CDMA technology? With only a couple of spoken words or swipes



with our finger, that information is readily available to us in a device that fits easily in our hand and if we choose will give the information verbally. We can even talk to different countries using a handheld.

PSK, APRS, D-STAR, ASK, as well as many digital modes are examples that did not exist only a few years ago. Hmmmm. I wonder what tomorrow has in store for amateur radio.

73,  
Eugene KG6SLC

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## President's Corner...

*(Continued from page 4)*

the first and third syllables. The distinctive beginning of Beethoven's Symphony No. 5 is short-short-short-long, or 'dit-dit-dit-dah', which is the letter 'V', and the Roman numeral for '5'. During WW2, BBC broadcasters used this four-note melody to start off its radio broadcasts because of its association with the word 'victory'.

Morse code has been in use for over 170 years. Do you know Morse code? If so, what process did you use to learn it? Are you keeping its legacy alive?

73,  
Carl AF60V

## Swap Shop

### FOR SALE

ICOM IC-2720H (dual band) - New in Box \$300.00

MX-72D Duplexer - New in Box \$45.00

Contact Frank Fedor N6SRZ 661-733-0789

Swap Shop ads are run free of charge to AVARC members and other interested amateurs. Items should be of interest to ham operators, and should include prices and contact information. For more information, contact Short Circuit editor Adrienne WA6YEO.

# VE TESTING SCHEDULE 2016

5/2/2016	Monday	7pm.	GLAARG
6/4/2016	Saturday	9am.	ARRL
7/11/2016	Monday	7pm.	GLAARG
8/6/2016	Saturday	9am.	GLAARG
9/12/2016	Monday	7pm.	ARRL
10/1/2016	Saturday	9am.	GLAARG
11/7/2016	Monday	7pm.	GLAARG
12/3/2016	Saturday	9am.	ARRL

The regular exam location is the First Christian Church of the Antelope Valley.

1702 East Ave. J., Lancaster, CA (Across the street from the Eastside Wall Mart).

Please enter parking lot off the end of the cul-de-sac 17th Street East, enter the classroom annex, and look for the "FCC Exams" sign outside the correct classroom. Monday Nights: Please do not disturb the A.A. group or other groups that may be using the facilities.

Dates/times may be subject to change.



### Antelope Valley Amateur Radio Club 2016 Officers

<b>President</b>	Carol Humpherys	AF6OV	722-4616
<b>Vice President</b>	Eugene Humpherys	KG6SLC	722-4616
<b>Secretary</b>	Dan Sherwood	W6DAS	264-1863
<b>Treasurer</b>	Gary Barr	WA6TWT	946-2717
<b>Master-At-Arms</b>	Gary Mork	WA6WFC	948-8317
<b>Board Member</b>	Matt Stewart	K6MES	264-4629
<b>Board Member</b>	Dick Miller	KJ6W	285-3333
<b>Trustee</b>	Keith Hoyt	K6GXO	533-4025
<b>Ex Officio</b>	Margie Hoffman	KG6TBR	297-6567



AVARC board meetings are held on the first Thursday of each month. All members are welcome to attend, although they should let the president or another officer know that they are planning to attend, as the meetings usually include a pot-luck dinner at the home of one of the officers.

The club net is on Wednesdays at 8:00, on the Hauser repeater (146.73 MHz PL 100). The net includes Amateur Radio Newslines, and all members and guests are invited to check in.

The Antelope Valley Amateur Radio Club K6OX  
 Post Office Box 1011  
 Lancaster, CA 93584-1011

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