



P.O. Box 6421 Auburn, CA 95604

August 2018

<http://w6ek.org> [info@w6ek.org](mailto:info@w6ek.org)

**At The Key of SFARC:**

**PRESIDENT**

Orion Endres, AI6JB  
ojendres@outlook.com

**VICE PRESIDENT**

Michael Perry, KK6GLP  
mrpry2@gmail.com

**SECRETARY**

Bruce Anderson, K6BAA  
anderson51@wavecable.com

**TREASURER**

Sharron Griffith, KK6RGV  
sharron@suddenlinkmail.com

**DIRECTORS**

Greg Dolkas, KO6TH  
Mark Graybill, W8BIT  
Brian Gohl, AI6US

**FIELD DAY CHAIRMAN**

Gary Frerking, KC3PO

**REPORTERS**

Satellites: Greg, KO6TH  
Sunshine: Richard, WA6RWS

**GROUPS io**

Dennis Gregory, WU6X

**PIO**

Carl Schultz, WF6J

**REPEATERS**

145.430 (-0.6 MHz/PL 162.2)  
440.575 (+5.0 MHz/PL 162.2)  
223.860 (-1.6 MHz/PL 110.9)

**CLUB NET**

Thursdays, 7:30PM, W6EK/R  
145.430

**CLUB MEETINGS**

Second Friday of the month,  
7:30PM at the Auburn City Hall,  
1215 Lincoln Way, Auburn CA

**CLUB BREAKFAST**

Last Sat of the month at Mel's Diner  
1730 Grass Valley Hwy, Auburn 7:30AM

**NET CONTROL OPS**

Dave Jenkins, WB6RBE  
Casey McPartland, W7IB  
Bob Brodovsky, K6UDA  
Al Martin, NI2U

**NEWSLETTER EDITOR**

Barbara Anderson, W6EVA  
anderson51@wavecable.com

**WEBMASTER:**

Herb Garcia, KM6JBI

**VOLUNTEER EXAMINER**

Al Martin, NI2U

**Calendar of Events**

August 10<sup>th</sup>:  
*Club Meeting*

August 25<sup>th</sup>:  
*Club Breakfast*

October 7<sup>th</sup>:  
*Cystic Fibrosis  
Cycle for Life*

October 20<sup>th</sup>:  
*JOTA*

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- *President's Message*
- *A Field Guide to Simple HF Dipoles*
- *Board Minutes*
- *General Minutes*



**We encourage members to receive Sierra Signals via email to save the Club the cost of reproduction and mailing**

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## President's Message

*By Orion Endres – AI6JB,  
President*

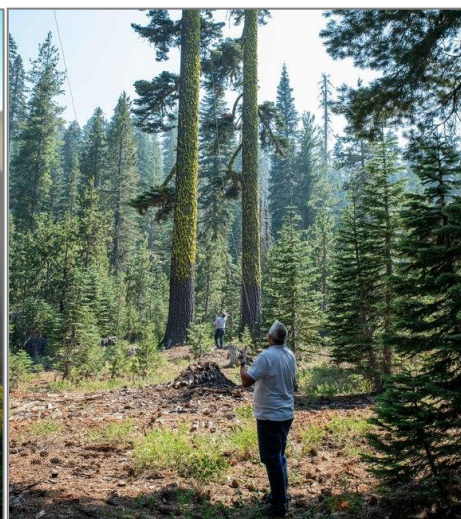
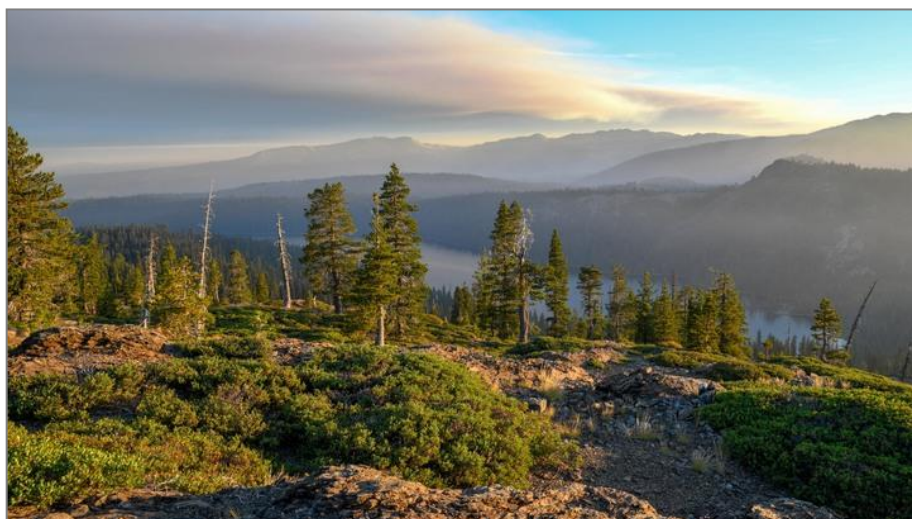
### ***Zero Noise Expedition***

Last weekend Brian, AI6US, Birton, N6UG, Alan, W6LAN, and I headed to the hills for a weekend of Ham radio. What we found were spectacular views, plenty of radio, and an epic time with friends. Birton posted videos and pictures to the W6EK Facebook page. Be sure to check them out. You will be impressed and wondering how you can be a part of this.

Our site was at about 6,800 feet elevation south east of Lake Valley Reservoir on Monumental Ridge off I-80 and Yuba Gap. The site was only about an hour from Auburn. There were plenty of tall trees to get an 80 meter doublet, an 80 meter end-fed and 40 meter OCF dipole at least 50 feet high. We took along Brian's Hex Beam which gave us 20, 17, 15, and 10 m bands. I actually made my first 17 meter contact Sunday morning.

If you haven't, operating portable is truly the best of two worlds. You get to enjoy camping in our great outdoors and enjoy our favorite hobby, all at the same time. When you add friends to the mix, you are in store for a memorable experience. It was Field Day 2018, Part 2!

Thank you to Brian for being the cheerleader and Sani-Hut hauler. Thank you to Birton for being our event photographer/videographer, despite the exhaustive drone operation disclaimer. And, Thank you to Alan for bringing his Nespresso machine and making some of the best coffee I have tasted.



**California QSO Party (CQP)**

Each year the Northern California Contest Club (NCCC) hosts the California QSO Party. It is perhaps the most popular State QSO Party: with about a 1,000 logs submitted and 300,000 contacts. Each year, many of our members participate. Last year Brian and I traveled to Monitor Pass in Alpine County and had an absolute blast. If you would like to learn more about the CQP go to [www.cqp.org](http://www.cqp.org) for results, rules, power point presentations, records, and stats from past contests. Check out the results tab. You will find several SFARC members listed in prominent spots. Dennis, WU6X, is the 2017 Siskiyou County champion with 19,440 pts. Bob, K6UDA was second in Placer County with 22,860 pts. And yours truly set the Alpine County record for highest score in the low power Single Operator Assisted category with 14,505 pts.

Several folks have expressed an interest in joining us, so this year we thought we would try something different: Run Multi-Operator/Multi-Station. Richard, WA6RWS, our club callsign trustee, has given us permission to use W6EK for the contest. We have found a site very near to our site last weekend with plenty of space to spread out and plenty of very tall trees, +120 feet. The plan is to setup two stations on Friday, Oct. 5<sup>th</sup>, and run them for the full 30 hour contest period on Sat. & Sun., Oct. 6-7. We thought we would run it very similar to Field Day, i.e. 2 stations, with a logger and operator each.

Everyone is invited. No contesting experience required. Heck, no General/Extra License required, we'll make sure you have a control operator. All you need is a willingness to have some fun. I can guarantee you it will be fun!! Please let me know.

**Jamboree On The Air (JOTA)**

The biggest Ham Radio event of the year is coming up on October 20<sup>th</sup>, 2018. It is Jamboree On The Air (JOTA), always the third weekend of October. JOTA is sponsored by the world organization of Scouting. The event had over 1.4 million scouts, in 152 countries, participate last year. SFARC hosted a JOTA site last year at the Roseville Fairgrounds. We ran 7 stations: 40m CW (Al, NI2U), 40m SSB (Jef, N5JEF), 20m SSB (Mike, KK6PVS), 15 m FT-8 (Bruce, K6BAA), IRLP on VHF (Brian, AI6US), DSTAR on UHF (Bob, N6EMS), PS 31 Digital (Mike, KK6GLP), Greg, KO6TH, brought his Tesla sportster and demonstrated APRS. In the end, he had 72 scouts and 15 hams participate.

This year, JOTA will be part of the Scout Expo event happening at Beale Air Force Base between Marysville and Wheatland. The expected attendance is over 5,000 scouts for all over northern California!

The plan is to setup several stations and operate from Beale from 09:00 to 18:00 on Saturday, Oct. 20<sup>th</sup>. Planning meetings will start on Tues., August 21<sup>st</sup>, at 19:00 in the Denny's in Newcastle. Everyone is invited. If you are interested in being a part of this world wide event, please let me know.

Hope to hear you on the air!

73,

**Orion Endres, AI6JB**

President

[AI6JB@arrl.net](mailto:AI6JB@arrl.net)

# Get your free copy of *A Field Guide to Simple HF Dipoles*

By Dan Romanchik, KB6NU

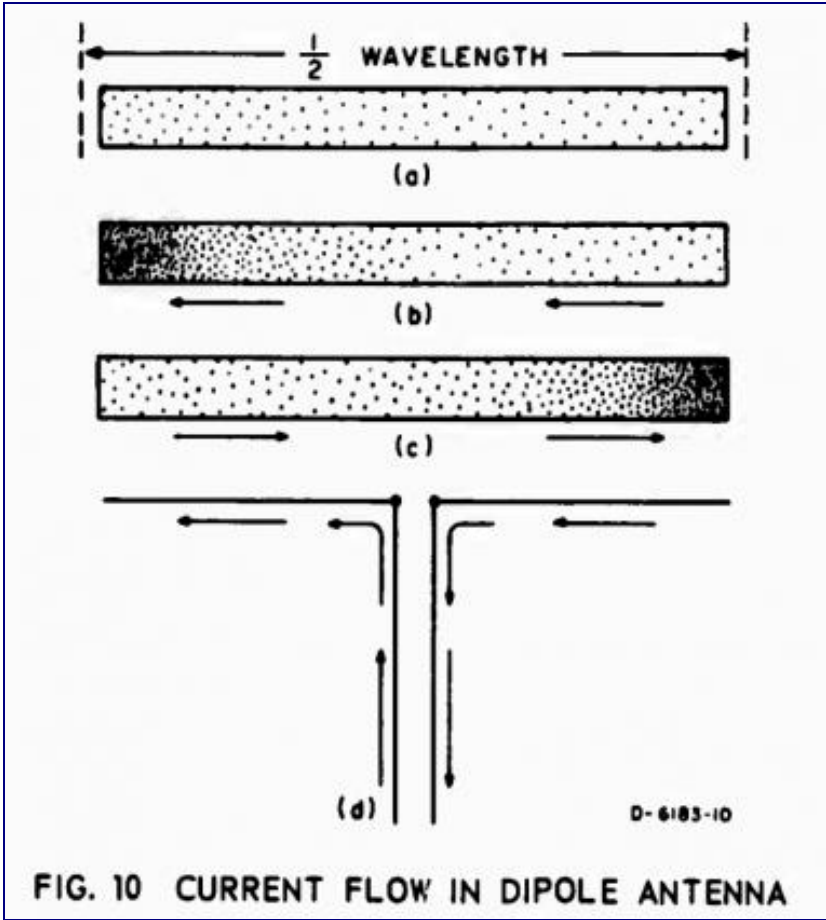
A link to *A Field Guide to Simple HF Dipoles* (<http://www.dtic.mil/dtic/tr/fulltext/u2/684938.pdf>) was posted to reddit recently, and I liked this document so much that I thought I would share it with you. It was originally written for the military, but is now available for free from the Defense Technical Information Center.

The preface to this document reads:

“Under project Agile, Stanford Research Institute has supplied several teams to assist operating personnel in improving the performance of field radio networks. In this work, it has been observed that U.S. military and civilian antenna manuals often contain misleading information regarding the operation of field antennas and tend to be overly complex. Consequently, this guide has been prepared to assist in training personnel concerned with the construction of simple HF antennas in the field.”

I must say that *A Field Guide to Simple HF Dipoles* does this very well. It not only explains how dipole antennas work, it also does a very good job of describing the basics of radio waves and propagation. And it does this without getting overly technical.

For example, below is Figure 10. It’s used to describe current flow in a dipole antenna.



The *Field Guide* reads:

“Electric current in a conductor consists of the flow of small particles called electrons. Figure 10(a) represents a dipole with electrons in it. When the transmitter is turned off, the electrons distribute themselves evenly throughout the dipole, as shown. All electrons repel each other and try to get as far from each other as possible; that is how they achieve the uniform distribution shown in Figure 10(a). When the transmitter is turned on, the electrons flow back and forth from end to end as shown in Figures 10(b) and 10(c). First the electrons flow to the left and crowded at one end as shown in Figure 10(b). Second, since the electrons repel each other, they push off to the right and get crowded together at the other end, as in Figure 10(c).”

It then uses this description to talk about voltage and current distribution along a dipole antenna:

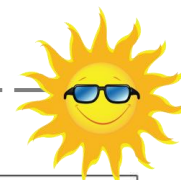
“The difference between voltage (volts) and current (amperes) in a dipole is also illustrated by Figs. 10(b) and 10(c). You can see that the maximum flow of current is going to be in the middle of the dipole. An observer at the center of the dipole would see the electrons rush past, first one way and then the other. The center is the maximum current point. Very little current flows near the end of the dipole; in fact, at the extreme ends there is no current at all for there is no place for it to go. However, at the ends of the dipole, there is a great change of voltage; when the electrons are densely packed, this represents a negative voltage, and when there is a scarcity of electrons, it represents a positive voltage. Thus you can see that the voltage at each end swings alternately positive and negative. An end of the dipole is a maximum voltage point.”

A Field Guide to Simple HF Dipoles is packed with all kinds of goodies like this.

Download it (<http://www.dtic.mil/dtic/tr/fulltext/u2/684938.pdf>) right now.

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*When he's not building dipoles or teaching ham radio classes, Dan blogs about amateur radio, writes exam study guides ([www.kb6nu.com/study-guides](http://www.kb6nu.com/study-guides)), and operates CW on the HF bands. Look for him on 30m, 40m, and 80m. You can email him about your experiences with simple HF dipoles at [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com).*



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## BOARD OF DIRECTORS MEETING MINUTES

### July 13, 2018

The SFARC Board meeting for July commenced at 1800 hours at the Mel's Diner restaurant in Auburn.

**Roll Call:** All officers and Directors were present. Guests included Richard-WA6RWS, Al- NI2U, Toni-KK6JPJ and Scotty (no call).

#### REPORTS and DISCUSSIONS

**President's Report:** Orion-AI6JB submitted the agenda and asked for officer, board and committee chair reports.

**VP Report:** Mike-KK6GLP had nothing to report.

**Secretary's Report:** Bruce-K6BAA advised nothing has been heard from the school district after the formal submission of the club repeater site lease extension. A follow up telephone call and letter have not been returned. Orion advised we will continue to monitor the situation.

**Treasury Report:** Sharron-KK6RGV submitted her financial report to the board which was examined and discussed by several board members. Orion and Mike-KK6GLP advised they will be auditing the repeater fund.

#### OTHER DISCUSSIONS

**Repeater:** Richard-WA6RWS is getting the system ready for the Tevis and is addressing long distance phone patch issues. Greg-KO6TH asked using about voice over IP (VOIP). Richard will consult with Birton-N6UG regarding VOIP.

**Membership:** Richard-WA6RWS advised membership now stands at 111.

**Social Media:** Mark-W8BIT advised Facebook is very active with two club FB's linked, one, an older page.

**VE:** Al-NI2U advised there were 14 candidates resulting in 5 technicians and 8 Generals. Al advised he printed new welcome letters for distribution to the candidates. Brian-AI6US advised he received suggestions from Alan-W6LAN for new members.

**Events:** Mike-KK6GLP advised the Tevis Cup is taking place on July 28<sup>th</sup> and Cystic Fibrosis Cycle for Life on October 7<sup>th</sup>. Mike will have a sign-up list for the Cycle for Life at the general meeting.

**WEB:** Herb-KM6JBI is working on a web based membership application.

**JOTA:** to take place at Beale AFB October 20/21. The last day to sign up is September 4<sup>th</sup>.

**Club Picnic:** September 22<sup>nd</sup>, 10-2PM at Applegate park.

**Christmas Party:** Chip-KM6MDF's wife Pam will chair the Christmas party and will be assisted by Barbara-W6EVA.

### **New Business**

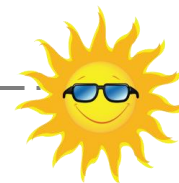
Dennis-WU6X reported the 160 meter filter used at field day is missing and needs to be replaced. Orion suggested everyone recheck their field day equipment to see if it got mistakenly packed.

Brian-AI6US advised Orion-AI6JB's vehicle window was broken by a weed wacker at field day and suggested paying for the windows replacement. Replacement was \$550. Brian made the motion to pay \$250 to reimburse Orion. Mark-W8BIT seconded, passed unanimously.

A new order for club business cards is needed. Greg-KO6TH made the motion to purchase, Mark-W8BIT seconded, passed unanimously.

Orion-AI6US updated the board on the Amazon Smile Program. Members can now join and list SFARC as the beneficiary,

Meeting adjourned at 1900. Submitted by *Bruce Anderson, SFARC Secretary*




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## **GENERAL MEETING MINUTES**

### **July 13, 2018**



The SFARC General meeting for July commenced at 1930 hours at the Auburn City Hall Rose Room, President Orion-AI6JB presiding. All Officers and Directors were present. Orion led approximately 37 members and guests in a Pledge of Allegiance to the flag. An introduction of Officers, members and guests followed.

#### **REPORTS:**

**President's Report:** Orion briefly discussed the agenda and reviewed this evening's board meeting.

**Vice President's Report:** Mike-KK6GLP reviewed upcoming presentations and events to include foxhunting.

**Secretary's Report:** Bruce-K6BAA requested input for the club newsletter; advised a welcome letter was available for new members and guests, and a reminder to the membership to sign the attendance sheet.

**Treasurer's Report:** Sharron-KK6RGV reported on the club's finances.

#### **Directors**

Brian-AI6US presented to the membership, his proposal to reimburse Orion-AI6JB for his broken vehicle window. Bob-W6EC made the motion to fully reimburse Orion for the replacement, Jef-N5JEF seconded, and the motion passed unanimously.

**Repeater Report:** Richard-WA6RWS reviewed the repeaters status. Advised the Tevis will be using the repeater July 28<sup>th</sup> and for members to limit use of the repeater during the event.

**Membership:** Richard-WA6RWS advised membership now stands at 111.

**VE's Report:** Al-NI2U advised there were 14 candidates resulting in 5 technicians and 8 Generals.

**Events:** Mike-KK6GLP advised the Tevis Cup is taking place on July 28<sup>th</sup> and Cystic Fibrosis Cycle for Life on October 7<sup>h</sup>. Mike had a sign-up list for the Cycle for Life at the front desk.

**Satellite Report:** Greg-KO6TH briefed members on current satellite activity to include the ISS.

**Refreshments/Drawing:** Chip-KM6MDF handled this evening's refreshments. A refreshment chair is still needed as Chip is volunteering on an interim basis. Doug-KM6QET reviewed the evening's prizes.

**WEB:** Herb-KM6JBI is working on a web based membership application.

**Contests:** Orion-AI6JB and Brian-AI6US are planning to work the California QSO party at a location about one hour distant from Auburn.

**Social Media:** Mark-W8BIT advised Facebook is very active and encouraged members to join.

**ARES:** Carl-N6CKV updated members on ARES activities and a meeting July 28<sup>th</sup>.

**Nomination Committee:** Rich-AA6RS is accepting nominations for club officers and director for November's election. Deadline for submittal of nominations is September.

**JOTA:** Orion-AI6JB advised the event to take place at Beale AFB October 20/21. The last day to sign up is September 4<sup>th</sup>.

**Club Picnic:** September 22<sup>nd</sup>, 10-2PM at Applegate park.

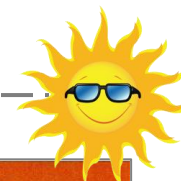
**Christmas Party:** Chip-KM6MDF's wife Pam will chair the Christmas party and will be assisted by Barbara-W6EVA.

**Tec Ten:** Gary-KC3PO reviewed field day results with a through presentation. Gary thanked Brian-AI6US for all the assistance he gave to make for a successful event.

**Presentation:** Sonja Conklin of Air Med Care reviewed with members the benefits of enrolling in Air Med Care.

**General Announcements:** The Club Net meets every Thursday at 7:30pm; Board and General Meetings occur on the 2nd Friday, Board meeting is held at **Mel's Diner** in Auburn, and General meetings at 7:30pm at **Auburn City Hall**. The Club breakfast is held on the last Saturday at **Mel's Diner** in Auburn; an Elmer Net is held the first and third Wednesday night at 7:30pm on the 2m repeater. See [www.w6ek.org](http://www.w6ek.org) for more information.

Meeting adjourned at 2135. Submitted by *Bruce Anderson, SFARC Secretary*



**SACRAMENTO RADIO EXPO**



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**SIERRA Foothills AMATEUR RADIO CLUB**

P.O. Box 6421, Auburn, CA 95604

**2018 MEMBERSHIP APPLICATION**

Name: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_\_ e-mail: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Associate Name: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_\_ email: \_\_\_\_\_

Phone: \_\_\_\_\_ Cellphone: \_\_\_\_\_ Application is New / Renewal (circle one)

ARRL member? Yes / No (circle one)

**DUES / DONATIONS:**

Membership: yearly \* \$22.00 or 20.00 X how many years \_\_\_\_\_ = \$ \_\_\_\_\_ \*\*\* see below Multi-year Discount

Associate: yearly \$7.00

Repeater Donation: \$ \_\_\_\_\_

Auto Patch Donation: \$ \_\_\_\_\_

Newsletter Booster: \$ \_\_\_\_\_

Misc. Donation: \$ \_\_\_\_\_

Christmas Donation: \$ \_\_\_\_\_

Name Badge \$10 or \$15 (circle one) \*\* see below for type of badge requested Name on Badge \_\_\_\_\_

**TOTAL: \$ \_\_\_\_\_ Please add \$1 if paying via PayPal**

\* Prorated dues for NEW Members // Associates Only

July	\$ 20 /6	October	\$ 14/3 + following year
August	\$ 18/5	November	\$ 12/2+ following year
September	\$ 16/4	December	\$ 10/1 + following year

\*\* Clip Badge = \$10; Magnetic Badge = \$15

\*\*\* Multi-year DISCOUNT membership \$20 per year for 2 or more years (New or renewal)

**OFFICE USE ONLY:**

Date: \_\_\_\_\_ Treasurer: \_\_\_\_\_ Secretary: \_\_\_\_\_ Roster: \_\_\_\_\_

Payment: \_\_\_\_\_ Check Number: \_\_\_\_\_ Cash: \_\_\_\_\_ PayPal: \_\_\_\_\_