



P.O. Box 6421 Auburn, CA 95604

April 2017

<http://w6ek.org> info@w6ek.org

At The Key of SFARC:

PRESIDENT

Orion Endres, AI6JB
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VICE PRESIDENT

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SECRETARY

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anderson51@wavecable.com

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sharron@usamedia.tv

DIRECTORS

Greg Dolkas, KO6TH
Bob Brodovsky, K6UDA
Andrew Silvester, KC6O

FIELD DAY CHAIRMAN

Al Martin, NI2U

REPORTERS

Satellites: Greg, KO6TH
Sunshine: Richard, WA6RWS

YAHOO! GROUP

Dennis Gregory, WU6X

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
Norm Medland, W6AFR
Bob Brodovsky, K6UDA
Al Martin, NI2U

NEWSLETTER EDITOR

Barbara Anderson, W6EVA
anderson51@wavecable.com

WEB/ARRL PIO:

Carl A Schultz, WF6J

VOLUNTEER EXAMINER

Al Martin, NI2U

Calendar of Events

April 1st:

April Fool's Day

April 14th:

**Club Meeting
(Good Friday)**

April 16th:

Easter



April 21st-23rd:

**International DX Convention
(Details on p.6)**

April 29th:

Club Breakfast

Inside this issue:

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- **Board & General Meeting Minutes**



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President's Message

By Orion Endres – AI6JB, President

Hamfest 2017, An Epic Success?

This year Mother Nature blessed us with perfect Hamfest weather: Not too hot, not too cold... just right. Judging by the turn-out and the smiles on people's faces they agreed too.

2017 brought in twice as many vendors, 60+, and nearly twice as many folks in total, about 500. There were reports sellers brought high quality items to sell. In speaking with them they were happy with sales and said the trip was worth it.

Support from local business was once again generous and plentiful. Dutch Bros. provided 140 cups of coffee, cups, stir sticks, real milk and cream at half price. Raley's / Bel Air donated two dozen donuts. Taylor's offered a discounted Hot Dog, Fries, and Drink meal for \$5.75. If you haven't had a Taylors dog and fries, you don't realize what you are missing? ARRL, MFJ Enterprises, and the RF Adaptor Guy donated drawing prizes. Be sure to thank them by spending you money with them.

Speaking of drawing, this year's give-away included two Grand Prizes: Yaesu FTM-3200DR, 65 watt Digital/Analog 2m mobile radios. Through the generosity of our supporters, we had enough to give away several prizes every 15 minutes! Prizes like ARRL Gift Certificates, ARRL Books, NMO Antenna Mag mount, 500' Dacron antenna rope, Anderson power pole crimp tool, and many many more. All valued well over \$800!

Of course, we couldn't have pulled it off without your support, the members!! Thank you's go out to the planning committee and team leaders: Carl, WF6J, Dennis, WU6X, Carl, N6CKV, AI, NI2U, Jeremiah, W6DLO, and family, Jim, WA8MP, Aaron, KG6TVT, Bruce, K6BAA, George, KG6LSB, and Richard, WA6RWS. Thank you to you all for your continued dedication and valuable time.

Yes, a very successful event! Shall we do it next year?

Field Day

Our next big club event is... Field Day! Always the last weekend of June. This year, that's June 24th and 25th. Save the date!

AI, NI2U, is heading up the effort. He is a Field Day veteran and we can expect a spectacular time! Get with him to see how you can get involved. He hopes to make this not only a premium operating opportunity, but a time for club members to get together and enjoy each other's company.

Hope to hear you on the air waves!



YAABA “Yet Another All Band Antenna”

Submitted by Fred, K6DGW

Dennis reviewed an “almost all band” HF antenna in a previous issue. Here's another one from what I think might be a one-ham company that uses its URL as its name ... MyAntennas.com. First the usual disclaimer: The only financial connection I have with them [or him] is the check I mailed.

We had lived on 5 acres in rural Auburn for 38 years. I had a 70 ft tower out back, room for several wire antennas, and even had a 900 ft Beverage for 160 for a couple of years. It was a great place for the kids to grow up but “The Farm” was becoming increasingly hard for us to keep up as we accumulated birthdays. The house was started as a cabin in 1925, everyone who lived there had remodeled and added on to it [including us ... twice], and by 2015, it was 2 ½ stories with a lot of stairs. Andrea was an industrial-strength gardener, I was the resident sprinklerologist and had a couple miles of white pipe buried with 34 valves, most starting to fail. Our Auburn daughter and son-in-law told us they wanted to buy it when we were ready to leave. We knew we were going to eventually move to the Reno-Sparks area where youngest son and family had lived for 18 years, so within 30 days, we had placed an offer on a 1-story, 2-year old home. We moved in the summer of 2015, acquired a mortgage, and became members of The Vineyards Homeowners' Association who, it turned out, frowned on 70 ft towers in backyards.

I am a member of the crew at W7RN, the “Comstock Memorial Station” [w7rn.com], which I can operate remotely via the Internet and my Elecraft K3, but I also wanted something at home. I was going to get a flagpole anyway, my very loose plan was to put it in back with an insulated base and remote my KAT500 ATU to it. Winter came, the flagpole plans slowly developed, and by spring of 2016, its cost was climbing north of \$2K with installation, enclosing the ATU, and installation of a buried conduit for the cables. While contemplating whether I really wanted to spend that much, I ran across MyAntennas.com and figured, “For \$150, what's to lose?”



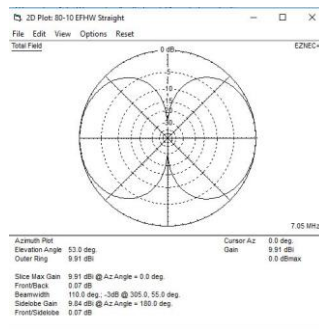
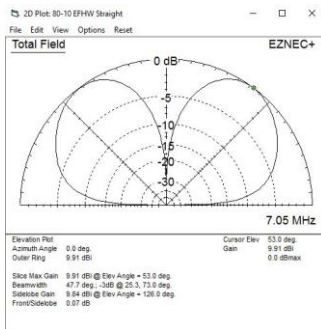
The antenna itself is a 136 ft length of what appears to be #12 THHN electrical wire, a strain-relief insulator at the end, a 6-turn inductor wound on a 1" PVC fitting, and a sealed, rectangular 5" x 7" box about 2" thick with an SO-239 coax connector. It is rated at 1 KW ICAS. It seems to be fairly substantially constructed, and the box is moderately heavy. On the principle that “If you get power into a conductor, it will radiate,” my plan was to install the box on the wood fence directly opposite

the shack window, and run the wire along the top the fence on electric fence insulators. About 1/3 would be running at about 210°, where it would then turn southeast-ish at about 120° across the back fence. Pretty much HOA-proof.

I initially wondered if there might be a swamping resistor in the box similar to the 200 Ω resistor on the B&W “all-frequency” folded dipoles ubiquitous over National Guard armories. Once up, I put the analyzer on it and found that the SWR in the ham bands from 80 to 10 was around 1.2:1 as advertised. The SWR elsewhere was essentially infinite, ruling out the resistor theory. I'm pretty sure the box contains a 6:1 or 9:1 autotransformer, but it doesn't matter, it works.

On 80, at about 6 ft elevation, a half-wave dipole will have maximum radiation straight up, and be

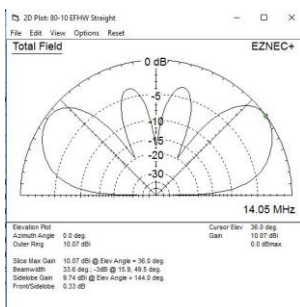
essentially omnidirectional in azimuth. I was pleasantly surprised that the folks in the NorCal Net on 3533 Khz in the evening were way over S-9, and the noise was about S-2 to S-3.



On 40, it's a full-wave and the pattern starts to become more complex. The elevation angle also lowers to around 50° which was heartening, and indeed, I found I could easily work out to the Front Range of the Rockies, and actually a bit farther if conditions were good.

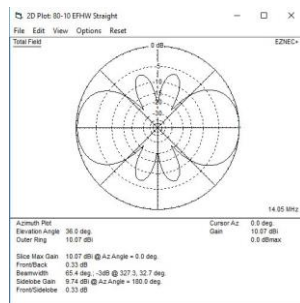
The end of a $N \cdot 0.5 \lambda$ wire is a voltage node and there is very little current and very high impedance. This means the return current is also

very low, and a counterpoise is not needed. In practice, it helps to have a return path and in this antenna, the outside surface of the coax shield serves that purpose.



At 20, the antenna is 2λ long, the main lobe lowers still more and minor lobes begin appearing. Likewise, the azimuth pattern complicates further, the main lobes narrow, and minor lobes appear.

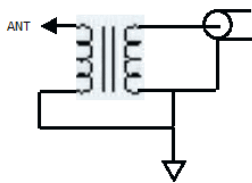
Operationally on 20, I've made QSO's in the NAQP contests and the CWT tests on Wednesdays over the continent, Caribbean, and South America. Even managed a few JA's, VK's, ZL's, and one UA0 all with 100 W. Going further up the bands, the minor lobes become more prominent. I've managed a few Q's on 17 and 15, however right now, the MUF rarely rises that high so they're pretty dead. I can also get it on 160 with the K3's ATU and I made a few QSO's in the NAQP CW with it.



Our lot is pretty small, and the transformer on the fence is about 20 ft from the house. In back, the wire is perhaps 25-30 ft from the house and master bedroom where we have two touch-operated lamps and I'd sometimes find one or both on after working 80 or 160 in the evening. We were beginning to think we had a ghost in the house until Andrea was in there one evening and saw them blinking Morse code. I can run 500 W on the W7RN remote [or 1,500 W if I go up to the station], I didn't really want to nuke the neighbor's

dog who patrols the other side of the fence, so I sold my KPA500 amp and KAT500 ATU and installed a regular flagpole in the front yard.

One could homebrew this antenna fairly easily. There is a 6-turn inductor about 75" from the transformer wound on a 1" PVC coupling. The antenna wire goes through a hole from the inside, wraps the coupling, through another hole and continues out.



I don't know what's inside my feed box, but the circuit at the left will work just fine. I'd make it a 9:1 [turns ratio] which will give an 81:1 impedance transformation. The impedance at the end of the wire will be in the 3-4K Ω range, and 9:1 will get you close to 50 Ω . The core should be a ferrite toroid #43 mix and the winding should be bifilar [two parallel wires wound together through the toroid]. 3 times through the hole for the primary, and 25-27 times

for the secondary wire. Size of core will depend on your intended power, but at least 2.5" would be minimum. You might want to stack two cores if you're running more than about 100 W, saturating the ferrite core will create a huge wideband RF racket. The ground connection is only for static protection,

it has no function at RF.

This antenna was reviewed on QST a few months ago where the far end was up in a tree and it was run as a sloper. His on-air results tracked pretty close to mine. MyAntennas.com has expanded their line and they list the one I have for \$145. I may get another one and take it to Battle Mountain for the 7QP contest to put Lander County on the air.

Dennis' antenna [Buckmaster] didn't do 15 but it did do 6. This one does 15, and the ATU in my K3 will get 1.3:1 on 6. Of course, I haven't worked anyone on 6 ... yet.

73,

Fred K6DGW

International DX Convention

This year's IDXC 2017 will be the 68th annual International DX Convention. (Sponsored by the Northern California DX Club and held at the beautiful Visalia Conference Center). DXers from around the world will gather once again to meet their fellow DXers, attend interesting and informative programs, see the latest in new products from the top vendors - and have a chance to win some great raffle prizes! Friday April 21 will be a full day of training, presentations and vendor exhibits this year.

Full details of IDXC 2017 are at the website: [International DX Convention](#)





BOARD OF DIRECTORS MEETING MINUTES

March 10, 2017

The SFARC Board meeting for March commenced at 1800 hours at the Sizzler restaurant in Auburn.

Roll Call: All officers and Directors were present with the exception of Bob-K6UDA. Guests included Al-NI2U, Mark-W8BIT and Toni-KK6JPJ.

REPORTS and DISCUSSIONS

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

VP Report: Mike-KK6GLP reviewed club presentations. He advised there is a need for presenters of the Ten-Tech for upcoming meetings. Orion added the Air Med/Cal Star presentation is pending. Mike also updated the board on club branding, advising there will be no stickers and a field day t-shirt will suffice.

Secretary's Report: Bruce-K6BAA had nothing to report.

Treasurer's Report: Sharron-KK6RGV presented the budget to board members and advised she is coordinating with Richard-WA6RWS on the club audit.

Directors:

Greg-KO6TH sought feedback on the videos of club presentations. Greg also wanted members to remember the proper station/call sign identification requirements per FCC 97 during nets.

Andrew-KC6O is working on nominations and is waiting for the final draft of the bi-laws.

OTHER DISCUSSIONS

Membership: 112, 66 paid and 46 unpaid. Orion and Mike will be contacting members who need to renew. Those members who fail to renew will lose club privileges.

VE: Al-NI2U reported there were 10 candidates, 20 elements given resulting in 5 technicians, 3 generals and 2 prior licensees gaining their privileges back. One of the generals then took and passed the extra examination.

Refreshments: Sharron-KK6RGV advised contributions for refreshments has fallen off and reminded everyone needs to contribute.

Field Day: Al-NI2U, Chairman; needs volunteers to assist with this year's field day.

Ham Fest: Orion-AI6JB reviewed the preparations.

Vacant Committees: Orion-AI6JB advised volunteers are needed for the club picnic and Christmas party.

PA System: Orion-AI6JP and Mike-KK6GLP will research a PA system purchase for club activities.

Meeting adjourned at 1851. Submitted by *Bruce Anderson, SFARC Secretary*

GENERAL MEETING MINUTES

March 10, 2017



The SFARC General meeting for March commenced at 1930 hours at the Auburn City Hall Rose Room, President Orion-AI6JB presiding. All Officers and Directors were present with the exception of Bob-K6UDA. Orion led approximately 47 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 updated members on presentations and his proposal for a hands on antenna building presentation for a future club meeting.

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.

Repeater Report: Richard-WA6RWS reviewed the repeaters status and advised members he had W6EK repeater operation cards printed and available for members.

VE's Report: Al-NI2U advised there were 10 candidates, 20 elements given resulting in 5 technicians, 3 generals and 2 prior licensees gaining their privileges back. One of the generals then took and passed the extra examination.

Activities: George-KG6LSB reviewed upcoming events and announced the Tour de Cure has been cancelled.

Satellite Report: Greg-KO6TH briefed members on current satellite activity.

Refreshments/Drawing Aaron-KG6TVT reviewed items planned for the drawing. Sharron-KK6RGV reported on refreshments for the break and asked for contributions.

Club Picnic: Chair needed. Event will be held again at Applegate Park in August. Date TBD.

Christmas Party: Chair needed to volunteer.

Field Day: Al-NI2U, Chairman; needs volunteers to assist with this year's field day.

Nominations: Andrew-KC6O reminded members to volunteer for club office.

Yahoo: Dennis-WU6X advised the membership on the Yahoo group status which is at over 100 subscribers.

Facebook: Mark-W8BIT updated members on the club Facebook page.

Tech-Ten: Jim-WA8MPA gave an informative presentation on sampling scope software.

Presentation: Orion-AI6JP gave the membership a briefing on the Hamfest preparations.

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 **Sizzler Restaurant** 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 for more information.

The meeting adjourned at 2130. Submitted by Bruce-K6BAA, Club Secretary



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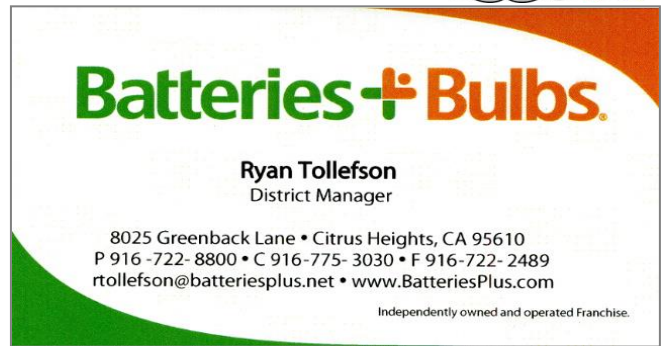

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SIERRA FOOTHILLS AMATEUR RADIO CLUB
P.O. Box 6421, Auburn, CA 95604

2017 MEMBERSHIP APPLICATION

SIERRA FOOTHILLS AMATEUR RADIO CLUB
P.O. Box 6421, Auburn, CA 95604

Name: _____ Call: _____ Class: _____ e-mail: _____

Address: _____ City: _____ State: _____ Zip: _____

Associate Name: _____ Call: _____ Class: _____ email: _____

Phone: _____ Cellphone: _____ Application is: (New / Renewal)

Dues / Donations:

Membership: yearly*	\$22.00or 20x__	Name Badge:	\$ 10.00/15.00	Yes (special name)_____
Associate: yearly*	\$ 7.00	Repeater Donation:	\$ _____	
Auto Patch Donation:	\$ _____	Newsletter Booster:	\$ _____	
Misc. Donation:	\$ _____	Christmas Donation:	\$ _____	ARRL member? (Yes/No/Life) _____

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

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

OFFICE USE ONLY:

DO NOT WRITE BELOW THIS LINE

Date: _____ Treasurer: _____ Secretary: _____ Roster: _____

Payment: _____ Check Number: _____ Cash: _____ PayPal: _____