

Simi Settlers' Amateur Radio Club

Short Circuit

May 2018

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General Meeting Time: 7:00pm Location: Simi Valley Senior Center 3900 Avenida Simi Simi Valley, CA 93063 May 2, 2018

May Program

Thursday, May 10 7:00 PM

Kevin Zanjani from Bioenno Power will be providing an overview about LiFePO4 batteries for use in ham radio applications. This exciting presentation will discuss typical applications and have an exciting show-and-tell of the various products! Bioenno Power has attended various hamfests and hamventions including the Palm Springs Hamfest, DX Convention, Visalia Davton Hamvention, Nevada State Convention, PacificCon among others, and the products have been featured HamNation along with articles written in CQ Magazine QST Magazine, Ham Radio 360 Podcast, 100 Watts and a Wire Podcast. In other markets, such as the marine markets, the batteries have been featured at the Fred Hall Show in Long Beach, International Sportsmen Expo in Sacramento, L.A. Boat Show with coverage coming up in Kayak Angler Magazine. Kevin Zanjani is the National Sales Manager at Bioenno Power, and holds BSEE, MSECE, and MBA degrees.

June 14 - Eric Oberg / ke6mlf

Dinner with the Speaker

Where? TGI Friday's When? 5:30 pm Join your club board members and Kevin Zanjani for dinner before the club meeting.

Static & Sparks

Mike Hasenfratz - WA6FXT

Puerto Rico should remind us that, we can find ourselves without power, at anytime and for numerous reasons. Puerto Rico has trouble with their power-grid, everyday.

We are lucky that, here in Southern California, power-grid failures are somewhat rare. That being said, are you ready for a power-grid failure from high winds, earthquakes, power-pole vs vehicle, etc? What about a "Scheduled" power-grid shutdown for maintenance? We had, a scheduled eight (8) hour shutdown a couple of weeks ago, on our block.

We were ready! The generator was setup and ran our two (2) refrigerators and a freezer, while the shack was on my battery backed-up system.

This month, Kevin from Bioenno Power (The LiFePO4 battery people) will be our guest speaker. I would recommend all of our hams come to his presentation.

Bill Wood is planning to bring his Go-Box and I hope to bring my battery power system, also.

Bring your questions and ideas (Field-Day is almost upon us).

73's de Mike WA6FXT

For Sale: Astron RS20A power supply. It is clean and in excellent working order. Just don't need it anymore. Make me an offer!

Orv W6BI orv.beach@gmail.com

Nets of Interest

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
LSB Net	Condor	LSB Net	Channel	LSB Net	-	SSARC SSB
8pm 3.908 MHz	Connection	8pm 3.908 MHz	Islands chapter	8pm 3.908 MHz		HF Net
	7pm		10-10			8:30am
SSARC 2 Meter	(Plays	ACS Area 1	International			7.240 (+ or -
Net*	Newsline)	Simi Valley	28.34 MHz			QRM/N) 40
8:30 pm	Frazier	SMRA-ERN	at 10AM and			meter
SMRA-ERN	Mountain	7:05pm Repeater	6PM			
Repeater	224.720-1.6	146.805 -0.6MHz				CW-QRP
146.805 -	MHz PL156.7	PL100.0 or				9am 7.032 MHz
0.6MHz		445.580 -5.0MHz				
PL100.0 or		PL100.0				Quad Squad
445.580 -						net
5.0MHz		ATN-CA Net				1PM on 21.365
PL100.0		7:30pm				MHz's
		http://atn-				
Mesh Net		tv.org/netnight.htm				
8pm 2.4/5.8						
GHz Mesh						

Additional information on local nets can be found on the CVARC web site at: http://www.cvarc.org

Sunday Night Net Control Operators

Thanks to our fine Net Control Operators: Steve, KE6WEZ; Rick, W6DQE; Ray, KI6LKD; Jay, AG6JF and Dante, KK6JCQ.

ACS/ARES Corner

We are always looking for ACS members that would like to become Net Controllers. You will receive hands on training at the Simi Valley PD (where we normally conduct the Weekly Net). It is both fun and at times challenging. You will gain valuable experience in running a controlled Net as well as becoming more than just familiar with the equipment in the Radio Room at the PD. If you would like to volunteer for this, let me know - ke6wez@gmail.com

If anyone is interested in how to setup your own packet station, RMS Winlink station, or a Mesh Node, let me know and we can get you started in the proper direction.

NOTE: Please be advised that we hold the Tue. countywide net at 19:30 (7:30PM) on the Sulphur Mountain WD6EBY repeater 145.200, minus 600 KHz offset, CTCSS of 127.3. Until further notice, this will be our standard frequency for countywide communications.

- Steve King KE6WEZ (ke6wez@gmail.com)

Upcoming ACS/ARES Events:

- 1. Monday 7 May 2018 District Meeting At the Red Cross in Camarillo at 1900.
- 2. Saturday 12 May 2018 Simi Valley Expo A show and tell event. Couild use help either all day or part day.
 a. Set up at about 0630 or so and tear down at about 1700 or so.
 - b. Contact Steve King at ke6wez@gmail.com if you can help out.
- 3. Wednesday, 23 Mayl: Senior Citizens' Health Expo. Still need 2 Hand-held radio operators. From 7-11am. Contact Steve
- 4. Saturday 19 May 2018 Ride for the Red Bike Ride. Contact Stewart Stone at kg6bov@arrl.net if you can help.
- 5. Sunday 27 May 2018 Mountain to the Beach marathon. Still need some volunteers. Contact Rob Hanson at w6rh@arrl.net if you can help.
- 6. Saturday/Sunday 23/24 June 2018 Field Day. Check our local area to find out where it will be held.

Events

Thursday, May 3, 2018, 6:00pm SSARC Pizza Night

Round Table Pizza, 2345 Erringer Road, Ste. 100, Simi Valley

Thursday, May 10, 2018, 7:00pm SSARC General Meeting Simi Valley Senior Center, 3900 Avenida Simi, Simi Valley, CA 93063

Thursday, May 24, 2018, 7:00pm SSARC Board Meeting Simi Valley Senior Center, 3900 Avenida Simi, Simi Valley, CA 93063

Saturday/Sunday, June 23/24, 2018. Field Day at the Regan Library



Raffle Prize!



The grand prize for the raffle will be: Solar Cynergy 40 Watt 12 Volt Solar Panel

Solar Cynergy photovoltaic modules are designed for commercial and domestic applications and suitable for both grid-tied and off grid systems. Solar Cynergy offers both high performance and reliability. The silicon solar cells, held by heavy duty anodized aluminum frames, are laminated with TPT & EVA for longer working life and high efficiency output. An ideal power supply for boats, traffic signs, lights, pumps, vehicles, RVs, homes, camping and caravans.

https://www.solarblvd.com/products/solar-cynergy-40-watt-12-volt-solar-panel-2/

Solar Panel Pick-up and Delivery Offer from Bill, AB6BW

I recently purchased a 40 watt solar panel from Solar Blvd to pair with my Bioenno battery. The system works well and the price is only \$0.85 per watt. Shipping is \$20 per panel. I am planning to make a run down to Norco for two more 40 watt panels **next Wednesday**. *I am willing pick up additional panels for club members*.

They have panels ranging from 10 watts per panel to 180 watts for 12 Volt systems and from 240 watts to 340 watts for 24 volt systems. Check out their website:

They also have 24V panels.

In their online catalog, if a panel has a "Add To Cart" button it generally means it's in stock. If it has a "Read More" button it is generally NOT in stock.

My panel came with a covered connection box that has two nut and bolt contacts. I connected a Power Pole pigtail that I can connect to my charge controller using an appropriate Power Pole equipped extension cord.

If you would like me to pick up panels next Wednesday)5/9/18) BY TUESDAY (5/8/18):

- 1. **Reply** to my prior email with your selected panel(s). Space is limited to my Chevy Colorado pick-up bed, so no pallets, and it's first come first serve.
- 2. Order and PAY online but check the "local pickup" bullet.
- 3. **Contact** SolarBlvd and authorize me to pick up your panels.

Simi Settlers Amateur Radio Club

General Membership Meeting, April 12, 2018

Call to Order: President, Mike Hasenfratz, WA6FXT, called the meeting to order at 7:01pm. Mike

welcomed everyone to the meeting, held at the Simi Valley Senior Center. There was a recitation of The Pledge of Allegiance. 9 Officers and Board Members/Advisors were present. The total attendance was 25, with 4 visitors. Our guests were: Dan Moore, W6DPM, Vern Potter, W6NCT, Frank Boardman, K1FMB, and Andy Jensen, KJ6CBP.

<u>Introductions:</u> There was a round of introductions for members and guests.

<u>Treasurer's Report</u>: Treasurer Glenn Daly, W6GNB, reported the Club's current account balance and said that

the Club's insurance premium has been paid.

Field Day: VCARS member, Vern Potter, W6NCT, spoke about our preparations for Field Day as a

joint activity of the Simi Settlers and VCARS. Field Day weekend will be June 23 and 24, with setup activity on Friday June 22. Vern said the arrangements with the Reagan Presidential Library have been made, with the same limitations as last year for parking during the event. Vern had a sign-up sheet for station operators and logging helpers. Help will also be needed for the Friday setup and for take-down on Sunday. Vern said we

still need to find a meal coordinator for Saturday evening.

<u>Program</u>: President Mike introduced himself as our program speaker tonight, about SDR (Software

Defined Radio) and his home system, the Flex Radio that he got in 2013. Mike described how the operation of SDR radios differs from traditional HF radios. He explained that early SDR radios applied DSP to analog signal inputs. Newer SDR radios perform A to D conversion on the RF input and then use software to filter and select desired signals. He said there have been 30 to 40 software updates that have evolved and expanded the Flex radio operating capabilities and features. Mike's rig, a 100 Watt, all-mode is "knobless", with no self-contained display. A computer and mouse was the user interface. Flex has now introduced a unit called "Maestro", a display and control console. Mike wanted to give a demonstration of the "SmartSDR" program linked to his home Flex Radio equipment. Mike had connection difficulties trying to link with his home computer

interfaces. He suggested we take our break while he worked on the problem.

Member Drawing: While Mike Hasenfratz tried to resolve the problem, the progressive Membership drawing

was held. The winning name drawn was Chuck Benson, WA6FGK, who was not present to win the \$10 prize. The prize amount will therefore increase to \$20 for our next meeting on Thursday, May 10, 2018. Members must be present to win, and the prize grows by

\$10 each month it is unclaimed.

Break: At 7:45pm, a 15-minute break was taken with refreshments provided by Bill Everett,

KI6KSV.

<u>Program</u>, continued: Mike apologized for not being able to give the SmartSDR demonstration with

projection onto the big screen. Mike said he will give the demo in the future when he has it all working and pre-tested. Stu Sheldon, AG6AG, recommended the low-cost RTL SDR unit for members wanting to get started with SDR radio. He said a unit is available on-

line for about \$20-\$25.

<u>Prize Raffle</u>: After the regular prize raffle drawing, the Grand Prize winner of a 12VDC Air Compressor

was John Percival, WI6O.

Future Meetings: Our upcoming speaker for the May 10 meeting will be Kevin Zanjani, KI6DHQ, of Bioenno

Power, to talk about LiFePO4 batteries.

Adjournment: The meeting was adjourned at 8:45pm.

Submitted by: Secretary, John Percival, WI6O

Letter From The Editor

Please submit articles, pictures, etc. on things of interest to our SSARC community for publication to me at ab6bw1@gmail.com. Such items may discuss your recent antenna project, shack modifications, new operating modes, anecdotes from portable field operations, and so forth. A picture with a caption works. A few sentences strung together works. A few paragraphs, a few pages with detailed illustrations.... It's all good. I look forward (with a wee bit of trepidation) to your submissions. Submission Deadline is Sunday night before 1st Thursday!

73, Bill (AB6BW)

Simi Settlers' Amateur Radio Club Web Page: http://www.simisettlers.org/index.htm Simi Settlers' ARC Yahoo Group: http://groups.yahoo.com/group/SimiSettlersARC

Mail: P.O. Box 2125 Simi Valley, CA 93062-2125

Simi Settlers' Leadership							
President	Mike Hasenfratz	WA6FXT	(805) 405-8696	mikeh@tothe.net			
Vice President	Jim Veronica	WA6NXK	(818) 389-3453	fun4all8@earthlink.net			
Secretary	John Percival	WI6O		percivaljohns@cs.com			
Treasurer	Glenn Daly	WA6GNB		gnb.2112@yahoo.com			
Committee Chairpersons							
Webmaster	Jim Parker	KJ6LXJ	(805) 368-6745 cell	kj6lxj@gmail.com			
Newsletter	Bill Woods	AB6BW	(818) 694-9019 cell	ab6bw1@gmail.com			
Membership	Jim Parker	KJ6LXJ	(805) 368-6745 cell	kj6lxj@gmail.com			
PIO	Linda Parker		(805) 558-1731 cell	kj6lxj@gmail.com			
Raffle Prizes	Rick Galbraith	W6DQE	(805) 433-4513 cell	rick@keymaterial.com			
Youth Coordinator	Dante Smith	W6JCQ		danterusso1999@gmail.com			
Historian	Mike Tweedy	KV6I		mtweedy@roadrunner.com			
Net Coordinator	Ray Campbell	KI6LKD	(805) 404-3246	ki6lkd@yahoo.com			
Net Coordinator	Steve King	KE6WEZ		ke6wez@gmail.com			
Food Services	Bill Everett	KI6KSV		ki6ksv@gmail.com			
Room Coordinator	Linda Parker		(805) 558-1731 cell	kj6lxj@gmail.com			
Elmers and Members at Large							
Past-President	Frank Valdez	KI6OQ	(805) 404-0394	frankki6oq@gmail.com			
Past-Treasurer	Norbert Rehaut	W9YPM(SK)					
Elmer	VACANT						
Advisor	Bill Everett	KI6KSV		wildpoky45@earthlink.net			
Advisor	Jim Hutchinson	KI6MZ		jhutch17@adelphia.net			
Advisor	Brad Rife	KI6KSY		speedy@earthlink.net			

State of the Mesh!

Orv Beach - W6BI

There's a lot going on to upgrade our digital mesh network. Here's a edited email from Paul Strauss WD6EBY outlining what's been done and what's happening in the near future (plus some additions by me).

Sulphur Mountain

- On Sunday March 22nd, a PTZ camera was installed at Sulphur Mountain. It's temporarily mounted about halfway up the tower and will be moved to the top when antenna work is done later this summer.
- We brought the Sulphur Mountain weather station online. For now it can be viewed through Weather Underground at https://www.wunderground.com/personal-weather-station/dashboard?ID=KCASANTA372. Soon it should be viewable through the mesh network.

Other system improvement projects scheduled for this year:

Reeves Road (Ojai)

- Reinstall the fire damaged mesh equipment, now repaired.
- Install a second solar panel
- Double battery capacity
- Install a PTZ camera
- Install a weather station
- Install a 5GHz MESH access point
- Add a 5GHz MESH link to the Ojai Black Mountain site
- An SDR receiver.

Camarillo Hills (Camarillo)

- Install the new enclosure for the HF remote controlled radio and install the 18AVQ antenna,
- Formalize the Echolink/Allstar connection, through Allstar configure and make available the autopatch to the system,
- Install a 5GHz MESH access point

Chatsworth Peak (Simi Valley)

- Install new network switch, run 12 new shielded CAT5 lines from the tower to the building,
- install site telemetry.
- install battery backup system,
- install a weather station,
- replace the fixed focus camera with a PTZ camera

SimiNorth (Simi Valley)

Via the Gofundme account set up by Ben Al6YR after the Thomas fire, funds were made available and
we acquired two large batteries for the SimiNorth site. There's a considerable amount of work to do
to rework the power distribution, but when installed the 7 Amp-Hours of battery power there now will
be upgraded to 130 AH! The 7 A-H there now yields about two hours of run-time, so 130 will be a
considerable improvement.

Rasnow Peak - (Thousand Oaks)

- Install a NEW 5GHz MESH system,
- Install NEW UHF linked repeater, and via the mesh system, an on-demand link to the BOZO system to support the CVARC Newbie net, telemetry system.

In non-mesh news -

Paul has formalized an RF interconnect to the DARN Network. (www.darn.org) This interconnect to their Verdugo Peak site will provide repeater access from Santa Barbara County down to San Diego County and inland.

It will be used much like an autopatch, used on a 'as required' basis and NOT intended as a full time connection.

Should the need arise, the DARN system can provided a valuable connection to most of Southern California. Note that the DARN system is a closed repeater system that supports many disaster organizations such as ARES, Races and Red Cross.

Non member access to the DARN Network is always available during any emergency, disaster or in time of need.

My (1st) Go Box - Bill Woods - AB6BW

I decided I needed a Go Box! That's the way things generally start. You wake up at 3:07 AM and make a decision. Once that happens, it seems there's no turning back. I'm not even sure exactly what dark morning I actually decided that I needed a Go Box, but I'm sure it must have happened that way. And after all, you simply can't have too much of a good thing. Right?! Of course not. And a Go Box is HAM GEAR! and HAM GEAR is GOOD. Right?! So it begins.



After moving to Simi and joining the Settlers and getting a very modest 40' tubular tower erected I decided (at 3:07 AM some dark morning) that it would be a good thing to join the local emergency communications group. Inquiries eventually led me to Steve King - KE6WEZ - who promptly glommed onto me like a dog on a bone. I soon thereafter volunteered to work the Share the Ride bicycle event. In preparation, in order to be "ready for anything", I bought a 20 AHr LiFePo Bioenno battery and made sure I had powerpole jumpers to connect a spare VHF/UHF radio for field work. Boy, was I ready! I was paired with KI6OQ at rest stop 6. I arrived early and began wondering how I should set up, Frank rolls in with a complete portable station including pop-up cover, table, chair, antenna mast and funny looking antenna, generator, and a go box stuffed with radios. My "ready for anything emergency station" stayed on the passenger seat of my truck. Not to worry - we had a great time.

I encountered Frank's KI6OQ GO BOX on several more occasions and found myself imagining up my own box. But built around that 20 AHr battery instead of generator. I looked into using a variety of ammo boxes. There are numerous You Tube videos with good ideas. But as I worked towards my own set of requirements, the ammo box solutions were just too tight or too limited in one way or another. The specter of Frank's KI6OQ GO BOX kept haunting me.

So, what were my requirements?

- 1. Independent of vehicle. It didn't have to be light enough or small enough to pack into a remote site. driving to the site is good, but I didn't want to depend on the vehicle for power or antennas, etc.
- 2. Solar power. I've always been interested. I had just never done anything about it. It's clean, silent, renewable as long as the sun continues to shine. And then it's time to get dinner and go to bed.
- 3. Decent base station style gain antenna for VHF/UHF repeater work in somewhat challenging locations.
- 4. At least 50 watts on VHF/UHF and cross-band repeat to allow walking around the area with an HT and still be able to communicate with the event network.
- 5. Packet radio capability. Why not? Digital data gets through without muddy accents, poor mic skills, and local background noise. So a TNC and a computer.
- 6. Ability to add/reconfigure. Maybe add a small HF rig some day. Maybe mesh. Maybe ...

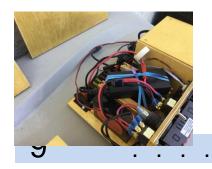
7. A decent front facing speaker. The tiny top or bottom mounted speakers in most mobile radios are not ideal if you really need to understand the voice on the other end of the radio.

Of course, the list of requirements evolved over a period of time. I tend to design stuff in my head while walking Franky (not ki6oq frank but my little walking buddy). So, it was while walking with Franky that I began to see a wood box take shape - similar to Frank's KI6OQ GO BOX, but designed around my lown distinct requirements. The 12 Volt (actually 13.8 Volt) power system was a major part of the overall system both in volume and weight. I began to gather the functional components

- 1. Battery.
- 2. TNC. I had an old KPC-3 from my early ham years in the nineties. I found the manual and discovered that the latest version is the same form factor.
- 3. Radios. plural. Voice and packet. The Kenwood TS- V71A was on a good sale at HRO and had the features I wanted including cross-band repeater. The packet radio was wide open. I finally decided on an Alinco DR-135T 2M only radio (decent price, good reviews, data connector).
- 4. Solar My search took me to SolarBlvd which has numerous Made in the USA 12 Volt system panels at under \$1.00 per watt. The GB would not be designed to carry the panel(s) but I still wanted something convenient to haul around. The 40 Watt at < \$35.00 and 2' x 2' was just the ticket.
- 5. Speaker a 4.5 inch full range speaker for about \$40.00 that would fit in a plywood enclosure roughly 6" x 6" x 6" fit the bill.
- 6. DC distribution a less than a Rig Runner priced 9 port fused PowerPole compatible strip came from Amazon.
- 7. A dual panel voltmeter for revealing which of two charging sources had higher potential, a DPDT switch, a cheap panel amp meter and a DPST main power switch also came via Amazon. Just a click away and it arrives day after tomorrow.
- 8. The AC charger that came from Bioenno with the battery.
- 9. A refurbished HP laptop running Windows 7. Another one click and here it comes.

Most mobile radios are similar in size and mounting requirements. I found that I could mount up to four such radios on a single 12" x 8" shelf with two radios hanging down and two standing above. or substitute the TNC for one radio and leave an opening for a future addition. All of the power components plus the speaker enclosure would fit on a shelf 13.75" wide by 11.75 " deep, The laptop and a thin notebook (key reference information and padding for notebook) would fit a 2" high space blow the power shelf.

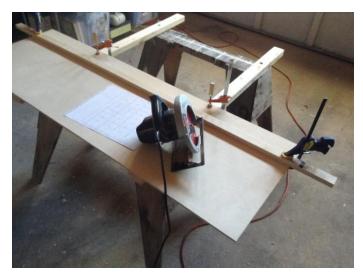








For building the box, I found a 5' x 5' sheet of 9mm (3/8") Baltic birch plywood at Northridge Lumber. I made a cutting layout to , set up a cutting bench using two saw horses and a couple of straight 2 x 3 s and went to work. first dividing the big sheet and then cutting the individual pieces using a clamped on straight edge and a Skill saw.





I used my old Shopsmith set up as an overhead router to rout the sliding panel grooves and rabbits for joining the pieces. After gluing in multiple stages with trial fittings and adjustments along the way, sanding, finishing (coat after coat ...) and final assembly of the functional components on their respective shelves, I have my AB6BW GO BOX.



I first deployed the system on April 3 for the ACS/ARES ORT drill to the Simi Valley Lowes parking lot.

Antenna: Diamond X-50A

2m/70cm

Stand: MFJ-1919 Vehicle: Wife's SUV Chair: comfortable.

When operating in full sunlight, I get 1.7 to 2 amps



from the solar panel to the battery. The two radios togather

draw about 1.7 amps on receive. I carry an extra battery for the laptop but can charge it from 13.8 volts using a dc to dc charging adapter. the dc/dc converter does interfere with the 2m band so I'll be exploring alternate solutions. I also plan to add two more 40 watt panels to provide some charging margin.

Thanks Frank for the inspiration from the KI6OQ GO BOX.

Simi Settlers Amateur Radio Club

P.O. Box 2125 Simi Valley, Ca 93062-2125 --- (www.simisettlers.org)

Membership Application

Type of Applicatio	on: Type of Membership:	Simi Valley, Ca.
New Member □ Renewal □	Individual (\$18/yr) □ Family (\$20/yr) □	Wesvs Wesvs
Name:		Day & Month of Birth:
Call:	Class:	(Omit year) ARRL: Yes □ No □
Address:	City:	State: Zip:
Phone: ()	Alt. Phone: ()
E-Mail Address:		
Additional Family M	lembers:	
Name:		
Call:	Class:	(Omit year) ARRL: Yes □ No □
Name:		Day & Month of Birth:
Call:	Class:	(Omit year) ARRL: Yes □ No □
Name:		Day & Month of Birth:
Call:	Class:	(Omit year) ARRL: Yes □ No □
Badges requested:	Yes □ No □ How many?	X \$18.00 = \$
Name (s) Call(s): _		
Shirts requested: Y	′es □ No □ How many?	X \$35.00 = \$
Name (s) Call(s) Siz	ze(s) (Sm, Med, L, XL, etc):	
Jackets Requested	: Yes □ No □ How many?	X \$88.00 = \$
Name (s) Call(s) Siz	ze(s) (Sm, Med, L, XL, etc):	
	OFFICE USE ONLY	,
	lew □ Renewal □ Membership t	type: Individual □ Family □
Date Received:	Amount Received:	Database completed:
Badges and Shirts	ordered:	
4.4		