Simi Settlers' Amateur Radio Club

Short Circuit

The next Simi Settlers club meeting is **Thursday July 14** at 7:00 PM
Simi Senior Center (Enter by the Southwest door).
3900 Avenida Simi, Simi Valley.

The next Simi Settlers Pizza Night is at
Toppers Pizza, 2408 Erringer Road, Simi Valley.
Thursday July 7 at 6:00 PM.

Assorted:

Note: The Senior Center has a touch computer screen at the entrance. Keyfob or not, be sure to tap a few times on the screen to find our meeting and say you attended.

Dues are due July 1st. See the form at the end of this newsletter for details to renew.

The July and August **presentation** is all about how to enter a schematic, layout a printed circuit board, AND program an Arduino single board computer **Three for One !**. A simple project, a RF field strength meter was chosen to show LOTs of skills to get YOU started on making your own designs in printed circuit boards and Arduino.

July 2022

Elections were held at the June meeting. The same cast of characters will continue as club leadership. From left to right, Mike K6VI Historian , Eric KE6MLF Newsletter, Ron K6RIN Secretary, Linda PIO, Jim JK6LJX Membership , Glen WA6GNB Treasurer. Sitting in the middle, looking quite somber, is President Brian KM6MIN.

Nets of Interest

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
LSB Net 8pm 3.908 MHz **SSARC 2 Meter Net*** 8:30 pm SMRA-ERN Repeater 146.805 -0.6MHz PL100.0 or 445.580 -5.0MHz PL100.0 The Newbie net 7 pm, Bozo Repeater 147.885 (– 127.3)	**Condor Connection** 7pm (Plays Newsline) Frazier Mountain 224.720-1.6 MHz PL156.7	**LSB Net** 8pm 3.908 MHz **ACS Area 1** Simi Valley SMRA-ERN 7:05pm Repeater 146.805 -0.6MHz PL100.0 or 445.580 -5.0MHz PL100.0 **ATN-CA Net** 7:30pm http://atn-tv.org/netnight.htm **ACS Area 1** Simplex net, 6:45 PM on 145.510MHz	**Channel Islands chapter 10-10 International** 28.34 MHz at 10AM and 6PM **Mesh VOIP Net*** 8pm 2.4/5.8 GHz Mesh	**LSB Net** 8pm 3.908 MHz		**SSARC SSB HF Net** 8:30am **7.240** (+ or - QRM/N) 40 meter **CW-QRP** 9am 7.032 MHz **Quad Squad net** 1PM on 21.365 MHz's

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

* For more information, see http://www.pvarc.club/mesh/mesh-applications/

Sunday Night Net Control Operators:

June	5	Kevin KD6UTC
	12	Barry K6ZA
	19	Ron K6RIN
	26	Matt KN6SEC

ACS/ARES Corner

Frank Valdez KI6OQ is the Area 1 Emergency Coordinator

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, just message Frank Valdez at **frankki6oq@gmail.com.**

Be sure to check www.vccomm.org for the latest !

If anyone is interested in how to set up your own packet station, RMS Winlink station, or a Mesh Node, contact Frank, he will point you in the right direction.

Barry K6ZA wants to remind everybody that they have options to check in with something other than a 2 meter handheld. The **80 meter net is Tuesday nights at 18:30 (6:30 PM) on 3.987 MHz.**

The **Area 1** (Simi Valley) net occurs Tuesdays. Generally it is just a brief check in, but usually some news about upcoming events is passed on.

The simplex net is on 145.510 at 6:45 PM. The regular net is on the 146.805 (-, PL100) repeater at 7:00 PM. **Stop buy and say Hi.** You do not have to do anything other than check to test out your simplex or repeater connection.

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.

Upcoming ACS events: Go see https://vc-acs.groups.io/g/main/calendar for the latest updates.

This radio could be yours!

The radio is a cherry ICOM IC-718. It's about a year old, and was treated with great care by Seymour K6PWP. He has donated it to the Settlers. It's in the original box with the microphone, manual, and power cable.

After field day, it will be put up for auction, with a reserve of $300. If it does not meet the reserve, it will be kept for use at field day and other club operations.

Send your sealed bid to Glen Daily, WA6GNB via email at **gnb.2112@yahoo.com** or a letter to:

Simi Settlers Amateur Radio Club
P.O. Box 2125 Simi Valley, Ca 93062-2125

Results will be announced at the July meeting.

July 2022

Member Updates

The July and August presentation is going to be a whopper!

From the March 2019 issue of QST “An Arduino Powered RF Detector”. The actual product may not be so important, but the process of creating your own printed circuit board may be of great value. This process will use KiCAD, a freely available electronic design tool.

This presentation will cover a LOT of ground, and will take at least two meetings. Rest assured, we will continue as required to get through it all. During this presentation, we will:

- Enter a circuit schematic
- Layout a printed circuit board
- Order the printed circuit board
- Order parts
- Program an Arduino single board microcontroller
- Stuff the board and see the blinking LEDs!

We can turn this into a “build it yourself at home or with a friend project”. As we progress with the entry and layout, we will discuss who wants to get in on a group buy of the PCB and components.

I will have handouts of the original article and project notes.

An Arduino-Powered RF Detector

Teri Bloom, AC5YL

A string of LEDs and a microcontroller become a wearable field strength meter.

One delight of hanging around my neighbor Glen Popiel, KW5GP, is the constant exposure to all things Arduino — a community based around open-source hardware and software projects involving microcontrollers. Glen has authored two books on the subject — *Arduino for Ham Radio*[1] and *More Arduino Projects for Ham Radio*[2] — and I helped him with some of the project ideas. But you still have to build a project to really understand how Arduino works.

While at Hamvention, as I watched everyone communicating with handheld radios, I wondered how much RF was really there. That's when I was inspired with the idea for a wearable RF detector built into a backpack. To begin, I adapted the project "RF Probe with LED Bar Graph" from Glen's *Arduino for Ham Radio*.

This Arduino project idea was going to be my first scratch build, and it turned out I learned more than I ever did from previous kits. I used Glen's in-home lab, many of his components, and his mentoring. My RF radiation monitor includes the Arduino Nano, 11 standard LEDs, and a 19-inch wire antenna optimized for the 2-meter band, all combined into a wearable, usable, functional, and eye-catching electronics package.

Construction

I arranged the LEDs in the shape of a tower on a rectangle of copper-clad perfboard using a template made of heavy paper. Figure 1 shows my placement of the green, yellow, and red LEDs. Using the template,

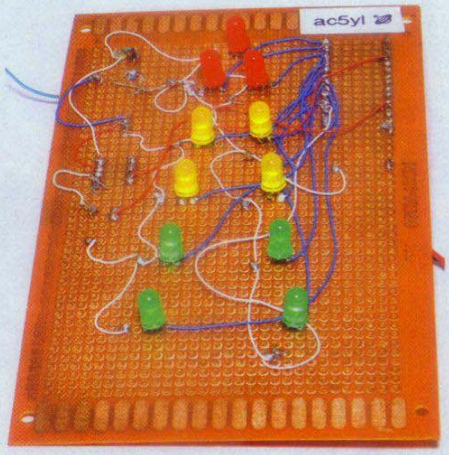


Figure 1 — The front side of the perfboard shows the LED arrangement.

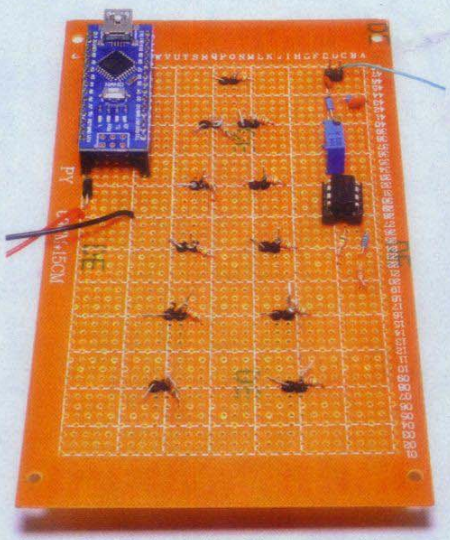


Figure 2 — The back side of the perfboard shows the Arduino Nano in the upper left corner.

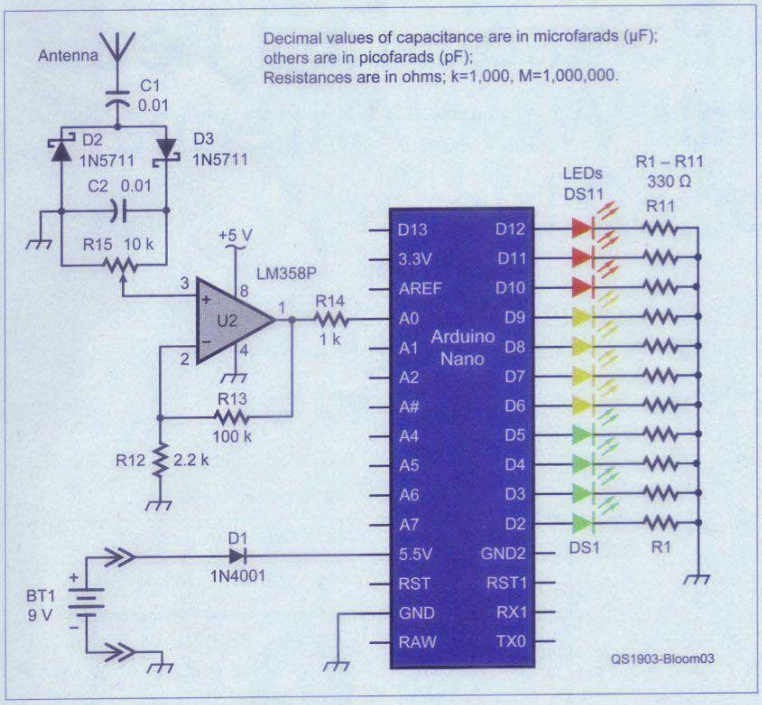


Figure 3 — Schematic diagram of the project.

BT1 — 9 V battery
C1, C2 — capacitor, 0.01 μF
D1 — diode, 1N4001
D2, D3 — diode, 1N5711
DS1 – DS4 — green LED
DS5 – DS8 — yellow LED
DS9 – DS11 — red LED
R1 – R11 — resistor, 330 Ω
R12 — resistor, 2.2 kΩ
R13 — resistor, 100 kΩ
R14 — resistor, 1 kΩ
R15 — potentiometer, 10 kΩ
U1 — Arduino Nano
U2 — IC, LM358P op amp

I marked those LED locations on the perfboard and then soldered the LEDs, leaving space underneath for wires.

The current-limiting resistors are on the back side of the perfboard (see Figure 2) with the Arduino Nano in a corner of the board. This design allows the LEDs to be close to the material of the backpack while the rest of the components are safely out of the way. The schematic is in Figure 3. I used a standard Powerpole connector for the antenna so I could remove the project from the backpack as needed.

I snagged the sketch [A sketch is an Arduino program — *Ed.*] for the RF Probe project from Glen's book and adapted it to use standard LEDs, and to light the green LEDs first by twos, then the yellow LEDs, and, finally, the red LEDs all based on the strength of the detected RF signal. I hadn't done any programming in quite a while and had never written anything in Arduino's C++ style language, so this was a fun challenge. My Arduino sketch is on the **www.arrl.org/qst-in-depth** web page. Thank you, Glen, for your mentoring!

The Backpack

After testing everything, I grabbed my backpack and mounted the project into an exterior zippered compartment. I used the template and a soldering iron to make the holes in the fabric for the LEDs. I also placed Styrofoam™ behind the board to hold it in place once it was inside the zippered compartment. The battery is held to the board and Styrofoam by a rubber band, to prevent its weight from breaking the wires at the solder joints. I made one more hole near the top of the zippered compartment for the antenna. Then I brought the antenna wire through the hole, bent it near the top of the backpack's seam, and hand-stitched it in place.

> *"You have to build a project to really understand how Arduino works."*

Now as I walk the aisles of hamfests, my RF Radiation Exposure Monitor lights up from green to yellow to red and back down again, depending on the strength of and distance from RF sources. It gets a lot of attention!

Notes

[1]Glen Popiel, KW5GP, *Arduino for Ham Radio*, ARRL Bookstore Item no. 0161. Available from your ARRL dealer, or from the ARRL Store, **www.arrl.org/shop/**; **pubsales@arrl.org**.

[2]Glen Popiel, KW5GP, *More Arduino Projects for Ham Radio*, ARRL Bookstore Item no. 0703. Available from your ARRL dealer, or from the ARRL Store, **www.arrl.org/shop**; **pubsales@arrl.org**.

Teri Bloom, AC5YL, became a ham in December 2009, upgraded to Amateur Extra class in 2010, and became a Volunteer Examiner. She has since retired to Mississippi where she attends a number of hamfests, meets many hams, and is as active as she can be. You can reach Teri at **ac5yl@amsat.org**.

For updates to this article, see the *QST* Feedback page at www.arrl.org/feedback.

2022 Mountain to Beach Marathon by Eric KE6MLF

This race was much like the marathon held in March. Started in Ojai, and ended in Ventura. Beyond that, things kind of went **downhill.**

There was a **20 minute delay** at the startline. No reason was given, no obvious issues. The 6 hour time limit was not adjusted, causing support to be curtailed early for the tail end runners. I was a tail end chase bicycle, and my runner had to **dodge** trucks pulling up traffic cones.
The race was led the **wrong way around** at the loop East of Ojai. Much unhappiness from the runners.
Sag stops **ran out** of supplies.
Several runners were allowed to start 20 minutes **after** the official start.
Race management was **nowhere** to be seen along the course.

Other than the big hiccups with the race, our amateur radio community provided lots of support. We were swamped with **SAG** requests for rides back to the start line. The status of runners and supplies at the water stops was constantly flowing. The race could not have been held without the hundreds of volunteers. As usual, the many volunteers at road crossings and water stops were champs!

Lots of lessons learned and to be applied at the next event. I for one, actually read the manual for my **APRS** radio, and set the keyboard lock to **include** the channel knob. I also need to work on a bicycle friendly headset with microphone, PTT, and volume control.

Here we are hanging out in downtown Ojai, ready for the race start. That is the 1,300 runners behind me fidgeting over the 20 minute delay.

July 2022

Here is Victor W2AYZ at the start line. His trailer has a small nuclear reactor that powers a 50 watt radio!

Scoping out a new repeater site - Orv W6BI

The city of Simi Valley has a volunteer group of "Disaster Service Workers" who report to the Emergency Services Coordinator. You may or may not know that along with the SMRA repeaters at the Mellow Lane radio site, the city operates a ham radio repeater there for the use of those DSW volunteers. They all have ham radio licenses but aren't active in ham radio except during city exercises.

The DSW repeater at Mellow Lane (W6GRG, 146.940 MHz, 127.3 PL) works well, but due to its location has poor coverage of the southeast quadrant of Simi Valley. The city has always wanted a second repeater farther east in the valley to aid DSW workers operating in that area.

On June 21st I participated in a coverage test from the city's "Stow site" which is where the water tanks are located north of the McDonald's on Yosemite. (It may be called the Stow Site because early on access may have been via the north end of Stow St.; access to the site is now via Yosemite).

July 2022

I manned a radio up on the site while three of the volunteers drove around and contacted me from selected locations with known poor coverage by the existing DSW repeater. I used a ground plane antenna on a 15 foot tripod to approximately simulate a low-power repeater there.

Once started the exercise took about an hour, while the volunteers tested from sites in the eastern third of the city. I reported their signal strength and they recorded it for each location. It proved that a low-power repeater located at that site will provide the desired coverage. The city was fortunate enough to receive some federal grant money so has decided to move forward with this project. When the repeater is installed it will be on the same channel pair as the current repeater, but with a different PL tone. There's no ETA for completion at this time.

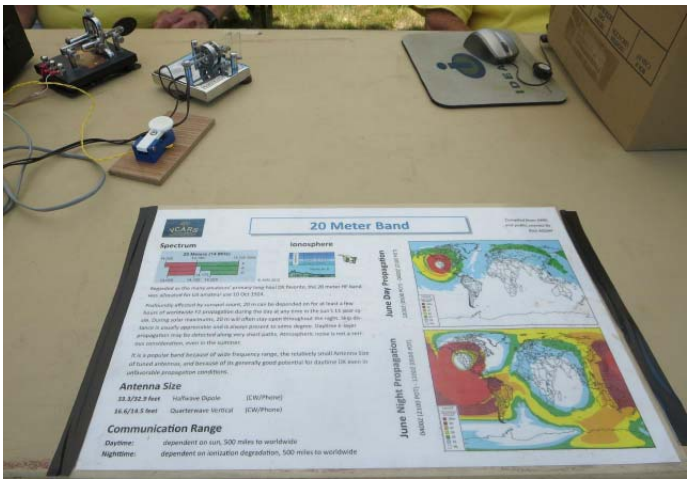
Participating in the test:

Corinne Bridges, Emergency Services Coordinator for Simi Valley
Daryl - KI6YVA
Phil - KM6HHA
Ed - KM6ECG
Orv - W6BI

2022 Field Day at The Reagan Presidential Library

Photos by Mike K6VI

July 2022


20 Meter Band
Spectrum
Ionosphere
June Day Propagation
June Night Propagation
Antenna Size
Communication Range
Daytime:
Nighttime:

July 2022


Ventura County Amateur Ra Societ
Annu
Field Day vent
Emergen Drill
Informatio Booth


FIELD DAY

July 2022

July 2022

July 2022

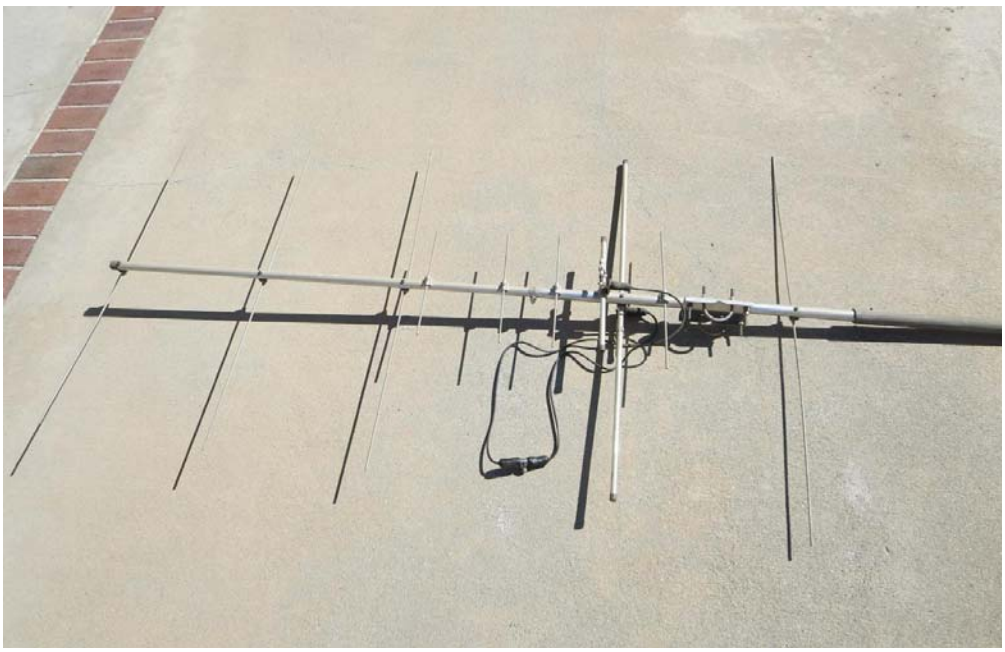
July 2022

And our own Mike Tweedy, KV6I, is keeping the ball rolling on a permanent sales column. Not a requirement, but if you sell something, feel free to donate any portion of the proceeds to the club.

SSARC Marketplace

This section of the newsletter is for Simi Settler club members to post various used or previously owned items for sale that they may no longer have a need or use of. Please submit a brief description of the sale items (along with a photo if possible) and suggested price to Eric Oberg KE6MLF, the newsletter editor, at least a week before newsletter publication. It is suggested that a portion of each sale be donated to the SSARC treasury to help support the club's several activities. The term "OBO" means "Or Best Offer" and serves only as a starting point in negotiating a fair price. Any items not sold will NOT be carried over to the following month's newsletter unless specifically resubmitted by the seller.

CUSHCRAFT A270-10S VHF/UHF ANTENNA



-

This antenna, still being produced by Cushcraft that retails for $210 new, offers a combined VHF/UHF antenna in one package. Both the VHF and UHF sections individually feature 5 element Yagis for each band. The T-coupler shown can be connected to a transceiver that outputs both a VHF and UHF signal on the same antenna port, or, alternately, separate coaxes can be connected to each antenna separately. The antenna is perfect for Field Day operations with an antenna rotator.

Condition: Excellent Price: $25 OBO. Please contact Mike Tweedy KV6I (805-231-9683)

KLM 2-METER YAGI / LOG PERIODIC ANTENNA

July 2022

This antenna is an unusual 2-meter antenna in that it has both a Yagi high-gain portion of the antenna combined with a Log Periodic portion of the antenna for wide bandwidth. The antenna is perfect for Field Day operations with an antenna rotator.

Condition: Fair/Good Price: $10 OBO. Please contact Mike Tweedy KV6I (805-231-9683)

ANTENNA ROTATOR

The antenna rotator and two control boxes and cable shown are perfect for rotating small Yagi-type or Log-Periodic antennas for 2m or 440 MHz operation for operations such as Field Day or at your home QTH.
.

Condition: Excellent Price: $15 OBO. Please contact Mike Tweedy KV6I (805-231-9683)

MFJ-1662 MANUAL SCREWDRIVER ANTENNA

July 2022

This MFJ-1662 manual screwdriver antenna operates from 6 to 40 meters. It has a continuously adjustable loading coil along with two telescopic whip antennas provided, a 4.5 foot for mobile operation and a 10 foot length for portable operation at a fixed location. The antenna has a standard 3/8-24 threaded end for vehicle mounting or for attachment to a tripod (not supplied) for fixed-base operation. This antenna is manually tuned by sliding the cylindrical housing up or down to vary the contact point along the internal loading coil thereby changing its resonant frequency. Tuning is easily accomplished with the help of an antenna analyzer or a low-cost nano-VNA and then locking the tapped position in place with the supplied wing nut. This item is still being produced by MFJ and has a current list price of $189.95.

Condition: Lightly Used Price: $20 OBO. Please contact Mike Tweedy KV6I (805-231-9683)

MFJ-931 ARTIFICIAL GROUND, 1.8 MHz TO 30 MHz

This unit is designed to be used for occasions where a true RF ground cannot be obtained due to a remote location such as a second story or higher location of your ham shack. Not being able to connect to an earth ground directly can lead to issues of RF interference or "hot spots" when transmitting on HF bands. This unit effectively tunes out any reactance when used in conjunction with a random length counterpoise wire to effectively achieve an artificial ground. This item can handle up to 300 watts of power and is still being produced by MFJ for $149.95 new.

Condition: Very Good Price: **FREE!** Please contact Mike Tweedy KV6I (805-231-9683)

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	Brian Hernandez	KM6MIN	(805) 813-7595	km6min_bh@yahoo.com
Vice President	VACANT			
Secretary	Ron Nelson	K6RIN		rnelson759@sbcglobal.net
Treasurer	Glenn Daly	WA6GNB		gnb.2112@yahoo.com
Committee Chairpersons				
Webmaster	Jim Parker	KJ6LXJ	(805) 368-6745 cell	kj6lxj@gmail.com
Newsletter	Eric Oberg	KE6MLF	(805) 791-0745 cell	ericoberg1@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	VACANT			
Historian	Mike Tweedy	KV6I	(805) 231-9683 cell	mtweedy@roadrunner.com
Net Coordinator	Brian Hernandez	KM6MIN	(805) 813-7595	km6min_bh@yahoo.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	Bill Woods	AB6BW	(818) 694-9019 cell	AB6BW1@gmail.com
Advisor	Bill Everett	KI6KSV		wildpoky45@earthlink.net
Advisor	Jim Hutchinson	KI6MZ		jhutch17@adelphia.net

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

Membership Application

Type of Application: **Type of Membership:**

New Member ☐ Individual ($18/yr) ☐
Renewal ☐ Family ($20/yr) ☐

Name: _____ Day & Month of Birth: _____ (Omit year)

Call: _____ Class: _____ ARRL: Yes ☐ No ☐

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

Phone: (____) _____ Alt. Phone: (____) _____

E-Mail Address: _____

Additional Family Members:

Name: _____ Day & Month of Birth: _____ (Omit year)

Call: _____ Class: _____ ARRL: Yes ☐ No ☐

Name: _____ Day & Month of Birth: _____ (Omit year)

Call: _____ Class: _____ ARRL: Yes ☐ No ☐

Name: _____ Day & Month of Birth: _____ (Omit year)

Call: _____ Class: _____ ARRL: Yes ☐ No ☐

Badges requested: Yes ☐ No ☐ How many? _____ X $18.00 = $ _____

Name (s) Call(s): _____

Shirts requested: Yes ☐ No ☐ How many? _____ X $35.00 = $ _____

Name (s) Call(s) Size(s) (Sm, Med, L, XL, etc):_____

Jackets Requested: Yes ☐ No ☐ How many? _____ X $88.00 = $ _____

Name (s) Call(s) Size(s) (Sm, Med, L, XL, etc):_____

OFFICE USE ONLY

Application type: New ☐ Renewal ☐ Membership type: Individual ☐ Family ☐

Date Received: _____ Amount Received: _____ Database completed: _____

Badges and Shirts ordered: _____

July 2022