



P.O. Box 1005, Newcastle, CA 95658

August 2012

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

At The Key of SFARC:

PRESIDENT

Bob Brodovsky, K6UDA
bob@whpmotorsports.com

VICE PRESIDENT

Al Martin, NI2U
amartin4@wavecable.com

SECRETARY

Dennis Gregory, WU6X
wu6x@hotmail.com

TREASURER

Richard Kuepper, WA6RWS
rkuepper@ymail.com

DIRECTORS

Charles Baker, AE6LR
Gary Martinez, N6UWQ
Jim Griffith, K16AZH

FIELD DAY CHAIRMAN

Al Martin, NI2U

REPORTERS

Satellites: Greg, KO6TH
History: Gary, KQ6RT
Misc Radio: Fred, K6DGW
Sunshine: Richard, WA6RWS
rkuepper@ymail.com

REPEATERS

145.430 (-0.6 MHz/PL 162.2)
440.575 (+5.0 MHz/PL 94.8)
223.860 (-1.6 MHz/PL 100.0)

CLUB NET

Thursdays, 7:30PM, W6EK/R
145.430

CLUB MEETINGS

Second Friday of the month,
7:30PM at the Library, 350
Nevada St, Auburn CA

CLUB BREAKFAST

Last Sat of the month at Susie's Café
Cirby at Riverside, Roseville – 8:00 AM

NET CONTROL OPS

Dave Jenkins, WB6RBE
Gary Cunningham, KQ6RT
Norm Medland, W6AFR
Casey McPartland, W7IB

NEWSLETTER EDITOR

Barbara Anderson, W6EVA
916.624.1343
anderson51@starstream.net

WEBMASTER:

Carl A Schultz, WF6J



Calendar:

Fri 10 August: Regular Meeting

Sat 11 August: SFARC picnic

Sat 25 August: Club Breakfast

Sat 20 Oct: Cystic Fibrosis bike ride-
Newcastle vicinity

Inside this issue:

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- ***From Carl, WF6J***
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- ***General Meeting Minutes***
- ***Live, via Satellite***

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 Report

15 Minute Drill

In the not so recent past, our area was on fire and residents (including some SFARC members) were either evacuated or placed "on standby" for evacuation. It really makes you think about what's important to you. Obviously, important family treasures, valuables, and photographs are things you would try to grab. NOW is a good time to plan for an emergency evacuation.

What's on your 15 minute list? This is the list of things you're going to grab in the event your friendly deputy sheriff knocks on your door and tells you it's time to leave - NOW. In addition to the items I mentioned above, do you have a radio go bag? Do you even care? These were some of the subjects we covered on our last Prepper Net. Even if you live by the seat of your pants, your area's most "participatory net" could have something of interest for you.

*And now,
Some random notes written on a cocktail napkin...*

Now that we have more summer behind us than in front of us, the big question is, "does my air conditioner work good enough to get me through a marathon DX session in 100 degree heat?"

I very recently spent a day and a half building and putting up a new antenna. I slipped on wet wood, screwed up my knee, and fell into a rose bush. If the "fairness fairy" were at work, I should be able to contact china on HF; sadly, it must have been her day off.

Thanks to everyone on the mid-morning net on W6EK for feeding me information on my recent Motorhome antenna project. Who would have thought that 11 inches of height is worth 12db loss.

SFARC picnic day is approaching (Saturday August 11). This year we're doing it at the Brodovsky antenna ranch. We'll be grilling up some sort of meat on the BBQ, and be looking to the membership for side dishes and desserts. I'd still like to do a field day style theme with a few operating stations set up for members to use. I've got an HF vertical dipole, and a few VHF antennas ready for use. However, I need some volunteers to man stations and setup. Al, N12U, has put together a really fun sounding 5 watt 40 meter contest.

Judging from the recent weather of heat, rain, and fire, we could use a couple of popup tents. Don't forget to bring your favorite chair too.

See ya then,

Bob - K6UDA

From Carl, WF6J...

Website/Yahoo Group - We are almost reached 50 members in the W6EK yahoo Group, so tell your friends and fellow members to join up! The website has had its usual monthly updates; still some activity for "Elmer Help", but not much else.



Dave's Technician course seems to be going well. Our "click" activity keeps going upwards, so there are people (hundreds of them) looking at us. As always, send me an email with what you want to see on the website! It's your resource, and I'm just the "code" guy (and I like CW too).

Around the town - WPARC is holding their Hamswap in Lincoln on September 8th. Please go to the link for a flyer! RCARCS - besides their magnetic loop antenna project, things are going well for Carol and the club. NHRC - Randy, K7AGE, was the speaker and he showed us all his videos of the Sea-Pac convention held recently in Oregon. If you want to see what Randy presented, go to our video channel or Links pages and click on Randy's link. NHRC is putting in their new Kenwood Repeater and new power amp. That should bring up the signal and provide continued reliable operation.

SFARC stuff - Working on Bob, WA6ULL/sk's Ham Gear sale. Follow the link on the homepage or go to www.wf6j.com to view photos and download the pdf with the list of equipment and pricing. As items are sold off, the pdf will be updated. Should anything be left over, those items will go to the White Elephant Sale (Meeting) in October. Please help support Linda and buy some gear!

Have fun on the bands, wishing you sunspots and good DXing

de WF6J

Sunshine report:

Jim, KI6AZH, recently underwent heart bypass surgery and is recovering at home. He can be reached at W6EK or 146.52

Wishing you a speedy recovery Jim!



BOARD OF DIRECTORS MEETING MINUTES

July 13, 2012

The SFARC Board meeting for July commenced at 1800 hours at Elm Avenue Round Table Pizza in Auburn.

Officers present: President Bob Brodovsky-K6UDA; Vice President Al Martin-NI2U; Secretary Dennis Gregory-WU6X and Treasurer Richard Kuepper-WA6RWS; Directors Chuck Baker-AE6LR, Gary Martinez-N6UWQ and Jim Griffith-KI6AZH were absent. Also present were Webmaster/PIO Carl Schultz-WF6J, VE Examiner Dave Albright-NO6NO and guest Jim Carman-K6ARR.

REPORTS and DISCUSSIONS

President's Report: Bob and the Board reviewed the programs planned for the general meeting..

Secretary's Report: Dennis to give a report on Field Day-2012 results under Old Business at the General meeting.

VP's Report: no report

Treasurer's Report: Richard reported a beginning balance as of June 1st was \$3,362.06. Expenses in June totaled \$184.52. Deposits included membership renewals, badges and donations totaling \$118.00. Net cash on hand at end of June is \$3,295.54.

Repeater Reports: Repeater to be used as a backup on Saturday for a Tahoe/Sierra group activity.

VE's Report: 4 candidates, all passed; 2 passing Tech and 2 upgrades.

Property Officer: Richard reported analyzer is still out; discussion was held regarding lending the Icom HF rig out to licensed operators, General class and supervised, no decision; interest in Hallicrafters SX-28 from club members, discussion on how much to ask. Two silent keys, equipment for sale; one as an email from Siva Dawn to the club asking for assistance/interest; the other through WF6J.com where WA6ULL's equipment is posted for viewing.

Web/PIO Report: Carl read the submissions to the photo caption contest to the Board's delight. The Board decided to read them to the Membership and vote a winner at the General meeting.

Other Discussions: The Board discussed Field Day public relations again, more suggestions but no decisions. A possible "ham swap" by our Club was discussed, along with all the potentials and options for facilitating one; a decision was made in favor of bringing the idea to the membership for discussion. Bob suggested Loomis as a venue and volunteered to approach the City of Loomis for their interest.

Meeting adjourned at 1840 hours. Submitted by *Dennis Gregory-WU6X, SFARC Club Secretary*

GENERAL MEETING MINUTES

July 13, 2012



The SFARC General meeting for June commenced at 1930 hours at the Placer County Library in Auburn. Present were Officers Bob Brodovsky-K6UDA, President; Al Martin-NI2U, VP; Dennis Gregory-WU6X, Secretary and Richard Kuepper-WA6RWS, Treasurer. Directors Chuck Baker-AE6LR; Gary Martinez-N6UWQ and Jim Griffith-KI6AZH were absent. Also present were Carl Schultz-WF6J, PIO/Webmaster and Dave Albright-NO6NO, VE Examiner. President Bob-K6UDA led the membership in a Pledge of Allegiance to the flag. Officers and approximately 29 members and guests were introduced.

REPORTS:

Past minutes – The June General meeting minutes, as published in the Newsletter, were unanimously approved.

VP's Report – No report

Treasurer's Report – Richard reported a beginning balance as of June 1st was \$3,362.06. Expenses in June totaled \$184.52. Deposits included membership renewals, badges and donations totaling \$118.00. Net cash on hand at end of June is \$3,295.54.

Secretary's Report – New members were invited to receive a "Welcome" letter with information on the Club during the break.

Repeater Report – Richard-WA6RWS reported that the repeater will be used by a Tahoe/Sierra run this Saturday (7/14), as a backup only, so we may not hear any activity.

Satellite Report – Greg-KO6TH reported on the 50-year anniversary of Telstar-1 communications satellite, the first satellite used to broadcast television signals from New York to Europe. Also, on July 22nd at approximately 10am PST, the International Space Station will be contacting a school in Europe on 145.800 Mhz, and Greg thought it might be fun to listen to that event.

VE Report – Dave-NO6NO reported 4 tests were given, all participants passing, two new Techs and two upgrades.

Sunshine Report – Richard-WA6RWS reported that Jim-KI6AZH is in the hospital undergoing a 5-way heart bypass. Frank-W6DHN is now home from the hospital.

Raffle and Refreshments – Gene-KG6NYH and Robert-W6RBL reviewed raffle and refreshment options, respectively.

OLD BUSINESS:

Field Day-2012 – Dennis-WU6X gave a report on the final submission to ARRL for the event. We estimate approximately 500 to 700 more points this year due to attentiveness to PR activities and digital mode (2 points per contact x 64).

Photo Caption Contest – Carl-WF6J read the contest entries to the membership. A vote was held and Donna, XYL of WE6C was the winner, with, "They don't call me greeter dude for nothing".

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NEW BUSINESS:

Ham Swap – Bob-K6UDA floated the idea of a Club swap meet to the club for discussion. A good discussion followed, ending with a motion to launch a committee to investigate options (by AI-NI2U, 2nd by Dave-NO6NO). The motion was passed unanimously to launch a committee charged with reporting back to the membership at the September meeting, an estimated cost and options available to our Club. Carl-WF6J volunteered to Chair the committee, with Bob-WE6C, Dick-WB6EDR and Bob-WB6VYH serving. Bob also suggested using the historic train station in Loomis and will check with the City for use options.

Tech-Ten – AI-NI2U gave an excellent presentation on HF tuners with a demo of how to “tune for the noise” using an HF rig and Heathkit tuner.

Presentation –Carl-WF6J gave a presentation on 2m SSB, “Sidewinders on 2”. The presentation included antenna samples, definitions, pictures of successful 2m communications, as well as audio samples of real QSO’s.

General Announcements – Club net on Thursday’s at 7:30; Board meeting at 6pm on general meeting nights at Round Table Pizza; the General meeting schedule; Club breakfasts (last Saturday at Susie’s Café); the “Prepper Net” every other Wednesday on the 2m repeater at 7:30pm; see the Club website (W6EK.org) for more information or changing dates.

Other Announcements – North Hills is putting on a “What is Amateur Radio” event which includes examples of all aspects of amateur radio, August 21st, at 7:00am, at the North Corporate Yard (old SMUD building), North on Elkhorn exit. Richard announced equipment for sale and to see him after the meeting for more details.

The meeting adjourned at 2135 hours. Submitted by, Dennis – WU6X, Secretary



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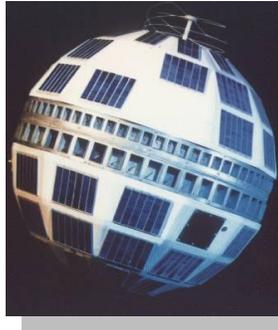
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Instructor/Technician

Email: WU6X@hotmail.com
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"Live, via Satellite"

By Greg, KO6TH



Via what?

It was 50 years ago last month that what is now a common phrase (and a dated one at that) was uttered for the first time. "Live, via Satellite" referred to the historic transmission of a live full-motion video between continental Europe and the USA. Never before had it been possible for Americans to see and hear what was going on, as it was happening, "across the pond".

That was the state of the art in July, 1962. The modern Internet was still over three decades away, and computers were big machines that were put in buildings, not on desks, in your lap, or in your shirt pocket. The oceans had been spanned by cables a century before, but they only worked for sending telegraph signals (Morse code). The first voice-capable cable didn't come until 1956, and by 1962 there were still only a couple of active cables between the continents. One could, in theory, hook up a computer on one continent to a console terminal in another, though I have found no record of this occurring. Such a hookup would be with modems (remember them?) at maybe 300 bits per second if one was lucky. At that speed, one can just about keep up reading written text as it scrolls across the screen. A single full frame of black & white video in this no-compression era (digital video compression was also still over three decades away) would take over an hour to send, assuming you could figure out a way to get the picture into the computer. For anything live, it was an analog world. Slow Scan TV, which was first demonstrated 5 years earlier in 1957, took several seconds to send a single 120x120 pixel image over a voice-grade link. Played back to back, that's almost fast enough for watching a thrilling game of, um, Chess. Regular broadcast TV required a 6 mhz-wide channel (20 times more bandwidth) and only RF signals at VHF and above had enough bandwidth to send such a thing around.

There were certainly high bandwidth microwave links in existence in 1962, but microwaves cannot cross an ocean. It's not the distance that's the problem, it's the planet. Earth is round, and microwaves go in straight lines, so if you want to go from New York, to say, Paris, you'd either need a lot of microwave link sites bobbing around in the ocean, or one really tall tower about halfway in between (about 600 miles tall). That puts the top of the tower in outer space, literally. So that's what they did.

On July 10, 1962, Telstar-1 was launched into orbit. This satellite was a sphere, some 3 feet in diameter, and weighing 170 pounds. It was covered with a set of solar panels for power, generating a total of only about 14 watts, with which they had to run the entire spacecraft. It received signals from the ground on 6 ghz (6,000 mhz), and re-transmitted them back to Earth on 4 ghz, both through omni-directional antennas. These frequencies required higher power electronics, so with the limited power budget, and the already feeble signals being sprayed out in all directions, successful communication

(Continued on page 8)

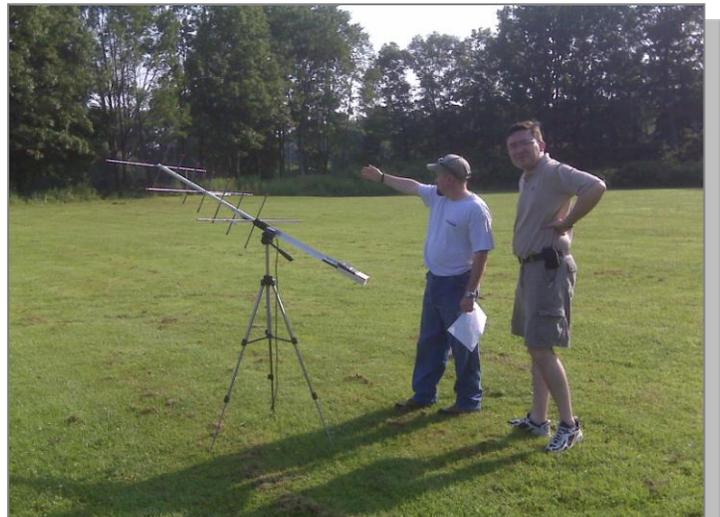
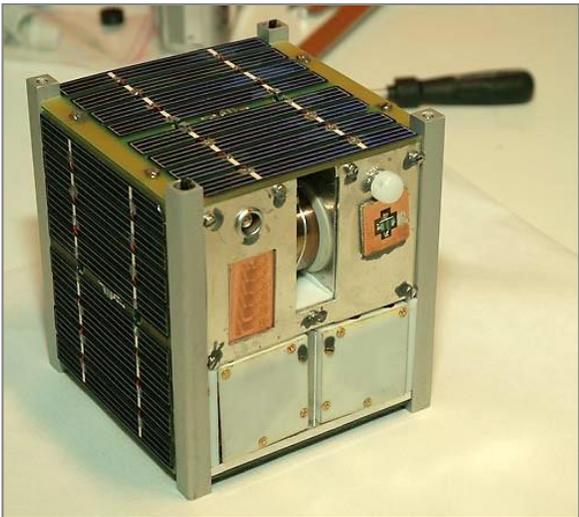
required a massive ground station. The antennas on Earth were large horn antennas, capable of being aimed to within a fraction of a degree in azimuth and elevation, to hit the speeding satellite as it passed over the ocean. The whole assembly weighed in at just under 400 tons. But it worked, and ushered in a new era of communications with the first live video seen by the public on July 23, 1962, featuring a short segment of a baseball game between the Phillies and the Cubs, followed by some remarks by President Kennedy.

Unfortunately, the satellite's 600 x 3,800 mile elliptical orbit carried it directly through the Van Allen radiation belts that circle the Earth, stressing the spacecraft's sensitive electronics. The already dangerous regions had been artificially reinforced by both US and Soviet high altitude nuclear bomb tests, and scarcely 4 months after launch the satellite had died. Spacecraft engineers managed to restart it in January of 1963, but it failed again a month later, this time permanently.

Today, satellite communication is common place. Commercial satellite communications is provided by geostationary satellites that are accessible 24 hrs per day, 7 days per week, for years on end, in stark contrast to the fleeting 20 minutes every 2.5 hours, when Telstar passed over the mid-Atlantic ocean. Ham Radio has its share of satellite access, with spacecraft built by Amateurs, and using antennas that can be held in one hand. The satellites themselves have shrunk to where a very useful scientific and communications satellite has been built into a cube 4 inches on a side.

So, you too can relive the excitement that was 1962's Telstar triumph, communicating "live, via satellite" with other Hams in faraway places. The currently active Ham Radio satellites include AO-7, AO-27, FO-29, SO-50, VO-52, and occasionally even the International Space Station.

Give it a try, even just to listen in.



SIERRA FOOTHILLS AMATEUR RADIO CLUB
P.O. Box 1005, Newcastle, CA 95658

2012 MEMBERSHIP APPLICATION

Name: _____ Call: _____ Class: ____ e-mail: _____
Address: _____ City: _____ State: _____ Zip: _____
Associate Name: _____ Call: _____ Class: ____ email: _____
Phone: _____ Cellphone: _____ Application is: (Circle) New Renewal

Dues / Donations:

Membership: yearly*	\$22.00	Name Badge:	\$7.00	Yes (special name)_____
Associate: yearly*	\$ 7.00	Repeater Donation:	\$ _____	
Auto Patch Donation:	\$ _____	Newsletter Booster:	\$ _____	
Misc. Donation:	\$ _____	Christmas Donation:	\$ _____	ARRL member? (circle) Yes No
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

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