



Squelch Tales

A Publication of The San Diego Repeater Association, Inc.

May/June 2012

Note: This is the May 2012 edition of *Squelch Tales* which experienced a production delay. As a result some of the material had to be updated to be relevant to the August/September time frame in which it is being delivered. The staff of *Squelch Tales* apologizes for the delivery delay and promises to work toward preventing future delays.

Ahead in *Squelch Tales* we present the March 2012 membership meeting. The March meeting featured Rich Beisigl (N6NKJ) and Eric Crosser (N6SUB) presenting the Red Flag Patrol fire prevention program. Red Flag is part of Cal Fires's Volunteers in Prevention (VIP) fire prevention program that uses volunteers to patrol rural areas during times of high fire danger.

Squelch Tales has presented a series of profiles on SANDRA repeaters. The final repeater of this series is the 442.320 machine located at Solar in Kearney Mesa. *SQ* thanks Duane Naugle KO6BT, Don Bain N6CEO, Tom Caudle KC6NXZ and Bob Boehme W2IRI for input to this article. This completes the series except for corrections and updates which will surely be supplied by the readers.

The usual features of meeting announcements, Board of Director minutes and Errata are also included.

made by Roxanne Provaznik at Cal Fire.

Red Flag Patrol

The March membership meeting featured Rich Beisigl (N6NKJ) and Eric Crosser (N6SUB) presenting the Red Flag Patrol fire prevention program. Red Flag is part of Cal Fires's Volunteers in Prevention (VIP) fire prevention program that uses volunteers to patrol rural areas during times of high fire danger. Red Flag Patrol participants drive predetermined routes, reporting current ambient weather conditions at specific location, smoke and other fire indications and potential fire hazards (particularly of human origin) back to the Monte Vista Dispatch Center in East San Diego County, using the local amateur radio repeater infrastructure. There are ten routes in eastern San Diego County and another 4-5 routes in the Fallbrook area. Each route is approximately 150 miles in length. The Red Flag Patrol is usually run during the fourth of July weekend and Labor day weekends when celebration and revelry is likely to lead to an increase in the number of man started fires, particularly in lightly populated rural areas of San Diego County. However, a Red Flag Patrol can be called at any time fire danger is extremely high due to the combination of wind, temperature and dew point or during an emergency. The decision to call a Red Flag Patrol is



Eric Crosser N6SUB and Rich Beisigl (N6NKJ) presenting to SANDRA.

Red Flag Patrols are performed in private vehicles with a pair of volunteers to a vehicle, one of which is an amateur radio operator. The preferred arrangement is for the non-ham volunteer to drive while the ham volunteer operates the radio. Safety is a prime concern during patrols and all volunteers are to obey

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Repeater Profile – Solar

Scquelch Tales has been profiling the repeaters that make up the SANDRA network. In each profile we try to give the underlying story of the repeater implementation and the changes that were made to it over the years. The final SANDRA repeater to be profiled is located at Solar in Kearney Mesa.

installation.

Solar Repeater WB6WLV:

| | |
|-------------------|------------------------------------|
| Input frequency: | 442.320 MHz |
| Output frequency: | 447.320 MHz |
| Power Output: | 25 watts |
| PL | 107.2 |
| Location: | Solar Manufacturing, Kearney Mesa. |
| Features: | Emergency Power |
| Coverage: | Kearney Mesa |
| Trustee: | Dave Jorde N9XT |

Because this repeater was originally installed and operated by the Convair Amateur Radio Club and was passed to SANDRA when the Convair club ceased operations, much of the history is lost. Many of the former members the Convair club have moved away or become silent keys. The repeater was installed in the General Dynamics Space Systems Division recreational building for many years. The original installation was probably done during the early 1980's. The club president at the time was Nick Callas, K6DBJ, (SK) and he was likely the driver behind the installation. The equipment is an Icom RP 4020 connected to a homemade collinear antenna through a WACOM WP-678-R2 four cavity duplexer. Instead of the built in Icom controller, a CAT 500 (Computer Automation Technology) was adapted to the repeater by Bob Boehme (W2IRI) which included autopatch capability. The autopatch was used while the repeater was installed at GD but not re-connected when it was moved to the Solar location. Other than routine maintenance and repairs, the repeater has remained unmodified since



After the fall of the Iron Curtain in 1989, there was a dramatic reduction in defense spending in the US and even hope of a “Defense Dividend.” The reduction cause an industry wide reorganization that was reflected as a wholesale reorganization at General Dynamics with the selling off of many of it's divisions between the years of 1991 and 1993. Included in the divestiture was General Dynamics Space Systems resulting in the closure of the Kearney Mesa facilities in 1993. The 440 repeater that had been housed in the Kearney Mesa plant recreation center was offered to SANDRA if they would maintain it on Kearney Mesa. Dave Jorde, N9XT, and Tom Caudle, KC6NXXZ, arranged to have the repeater located in the maintenance

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Red Flag Patrol Continued

all laws, not drive off-road and practice basic good defensive driving skills. Each pair is supplied with a set of binoculars for observing smoke and fire risks, a Kestrel Weather Meter to record ambient conditions, a first aid kit for emergencies, an ice chest containing cold water, a compass to accurately gage smoke direction from fixed reporting points and forms to record ambient conditions and information required by fire crews. It is important to note that Red Flag volunteers are not first responders, their duty is to observe and report, not intercede. Trained first responders will be dispatched to address situations as required. Over the years the Red Flag Patrol observed an F14 crash east of Highway 67 and was able to quickly communicate the situation and have observed and reported high fire risk situations that could be ameliorated. The use of amateur repeaters is a communications advantage to Red Flag because the transmission can be monitored by all listening to the repeater, a situation that is not present when communication is done over a private channel such as cell phone communication, which then has to be re-communicated to all others with a need for the information. The Monte Vista Dispatch Center has installed radio equipment for 2 meters, 440 MHz, 6 meters and 10 meters but currently only has antennas for 2 meters and 440 MHz. The primary repeater is the RACES repeater with SANDRA's 146.265 Lyon's peak repeater as backup.

The Red Flag Patrol was started in 1976 a few years after the Laguna fire. Then Battalion Chief Doug Allen asked then ARRL Section Manager Art Smith (W6INI – SK) to assist in forming Red Flag Patrols. A pilot program was formed which later became the model for a statewide volunteer program. Doug Allen and Art Smith also initiated a rescue program to save domestic animals from wildfire which also later evolved into a statewide program. Red Flag was later incorporated into the Volunteers in Prevention program that was launched state wide in 1980.

The Volunteers in Prevention program was first implemented in July of 1980 to utilize volunteers and public services groups to reduce man-caused

fires in 11 predominately sparsely populated or mountainous California counties. The volunteers perform a great many tasks other than Red Flag Patrols, including educational activities in schools and to homeowners, teaching how to recognize and correct fire dangers. Fires caused by young children have dropped by 50% in the areas served by the program since its inception. Today there are more than 2,500 volunteers contributing approximately 60,000 volunteer hours to the program. Volunteers also provide specialized communications during emergencies (amateur operators) as well as providing information to the media and public.



Red Flag is currently in need of volunteers, as the economic downturn has dramatically reduced its ranks. Interested amateur volunteers may contact Rich Beisigl at 619-444-5465 (rbeisigl@csst.net) or Eric Crosser at 619-579-6225 (n6sub@arrl.net) for service in the east county. For service in Fallbrook please contact Steve Brooks at 760-731-0855 (ke6gxp@prodigy.net) . {SQ}

Solar Profile – continued



Sandra Needs Net Control Operators

Would you like to be a net control?

There is an immediate opening for a Sunday Night Net Control Operator.

Sign up at <http://www.wb6wlv.com/involvement/index.html>

--or--

Send email to: wb6wlv@wb6wlv.com

September Membership Meeting

Gene Swiech WB9COY

Antenna Design

Gene is an antenna designer by both vocation and avocation. He has presented on antenna design at past SANDRA meetings and this year adds to what he has presented in the past. This is a great meeting for anyone that designs and builds antennas for Amateur Service.

County Department of Education

6401 Linda Vista Road

San Diego - Room 306



Top Solar Antenna installation, bottom duplexer

building at Solar's Kearney Mesa facility. The maintenance building was also the tallest building at the site. Subsequent operational considerations at Solar caused the repeater to be moved to building 7 where it is currently housed. {SQ}

SANDRA Board Meeting

February 2, 2012

The meeting was called to order at 7:05 pm by President John Austin, K6RLV.

Minutes: President K6RLV stated the published Jan 5, 2012 minutes are approved.

Treasurer's Report: The published Treasurer's Report of Jan. 2012 is approved.

Treasurer Ken WA6OSB received correspondence from the County Assessor. He will forward it to Jason, KF6E.

SANDARC: John will send a letter to SANDARC stating Bob W6IRI and Chuck WD6APP are SANDRA's representatives.

Chuck stated that SANDARC wants to ask which clubs will participate in their booth at the San Diego County Fair. SANDRA will not be participating. Should members wish to volunteer contact SANDARC.

SANDARC tri-fold pamphlet will be available at the VEC testing sites.

SANDRA & all member clubs tri-fold pamphlets may also be available at the test centers.

Lakeside Amateur Radio Club requested SANDARC use \$800 – 900 to buy radio equipment for the EOC Building at the Lakeside Fire Headquarters. The equipment will belong to SANDARC with the Lakeside ARC maintaining the equipment & facility. SANDRA Board voted YES on this request.

Membership: There are 235 members.

Technical Committee: The equipment for Mt. Otay is ready to go up. A trip will be planned in the near future.

Old Business: None

New Business: W2IRI made a new donation to the Club.

Motion 120202-1 to adjourn was made by Bob W2IRI. Bayard K6GAO seconded it. Motion 12-2-2-1 was passed unanimously.

Meeting was adjourned at 7:30 pm.

Respectfully submitted,

Barbie Flinn – WA6URS

SANDRA Secretary

SANDRA Board Meeting

April 4, 2012

The meeting was called to order at 7:00 pm by President John Austin, K6RLV.

Minutes: Bob, W2IRI made motion **120405-01** to approve the minutes submitted.

Stogie, AJ6AX seconded the motion. The motion **120405-01** was passed unanimously.

Treasurer's Report: Treasurer Ken, WA6OSB read the Treasurer's Report. Barbie, WA6URS made

motion **120405-02** to approve the treasurer's report. Bob, W2IRI seconded the motion. Motion **120405-02** carried.

The SANDRA board would like to thank for their assistance on the Mt. Otay project with John K6RLV. Eric, W7EMW let us use his generator and jack-hammer. He donated materials as well! Gary, N6LRV donated the 4" conduit, caps and eye-bolts, Alex, WB6DTR donated more materials, and Mark KJ6MWZ contributed much manual labor.

SANDARC: Bob, W2IRI, reported on the Convention 2014 will be at the 4 Points Sheraton. The convention committee has the theme of Service the Community - Disaster Preparedness.

Membership: Bob, W2IRI reported we have 230 members.

New Business: John, K6RLV stated that our June 7th Membership meeting will have the presentation on San Diego T-Hunting by Joe, N6SZO.

Technical Committee Report:

Chuck, WD6APP made motion **12045-03** to donate \$100 to Sharp Hospital for use of the facility for our Autopatch 147.885. Ken, WA6OSB asked the motion be amended to include a cover letter with the club letterhead. Stogie, AJ6AX seconded the motion. **Motion 120405-03** passed unanimously.

Our June 7th meeting will be in room 306. The presentation is: VHF MOBILE & ON-FOOT TRANSMITTER HUNTING (T-HUNTS), EQUIPMENT, TECHNIQUES INSIGHTS & EXAMPLES. By: Joe N6SZO & Joe KE6PHB

Bob, W2IRI made motion **120405-04** to adjourn the meeting at 7:30pm. Barbie, WA6URS seconded the motion. Motion **1245-04** passed unanimously

Respectfully submitted,

Barbie Flinn WA6URS

Errata:

This section of *Squelch Tales* provides corrections and updates on previous articles. This section relies on feedback from the readers, so please send email your comments to squelchtales@wb6wlv.com or via post to SANDRA, Inc. P.O. Box 81103, San Diego, CA 92138.

Ham Vacationing in Montana: There were numerous comments about errors in Ken's article (most of them from Ken). There were references to 16 photographs in the text and 8 uncaptioned pictures as part of the article. Unfortunately, the version of the article that made it into *Squelch Tales* was not the final edited version. I would like to think that most of the problems had been fixed in the final edit, however, that is not important if we don't actually use the correct version. As partial recompense, following are the references and captions for the pictures that were included. The first photograph is referenced in the text as number 12 and is Donny (K7SIK) and Beth (KB7YKZ) entertaining the BBQ potluck. The small photo at the bottom of the page is photo 3 in the text showing the 6 meter and 440 MHz antennas on the tower. On page 4 are pictures of the celebration potluck/BBQ (photo 11 in the text) and text photo 8, a Saturday morning breakfast (these Anaconda ARC hams seem to be a very social bunch). Page 5 has pictures of the the 6 meter duplexer being moved into the building and installed (photo 13 and 15

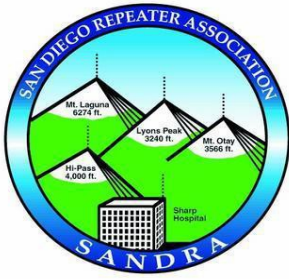
Errata - continued

in the text). Also are photos of the 6 meter repeater being moved into the building and the Phil next to the 6 meter receiver (photos 14 and 4 in the text).

LightSquared: We previously reported that a satellite company, LightSquared, was developing a nationwide wireless data network for use with mobile devices such as computers, tablets and phones. The problem that had arisen was that LightSquared planned to install 4,000 or so one kilowatt transmitters around the country operating in what is now low power satellite spectrum, immediately adjacent to the frequencies used by GPS satellites. This raised a considerable objection from the GPS community as well as from the military, the FAA and the National Telecommunications and Information Administration (NTIA), the latter of which is responsible for managing spectrum use. In testing conducted by the GPS community for the FCC, a LightSquared test transmitter negatively effected GPS accuracy for up to 13 miles from the transmitter and at closer ranges GPS became completely blocked. GPS has become part of daily life for most of us in ways that we probably have not thought about. The GPS system can be thought of as a giant very accurate clock that is used to provide many timing services. To fix a position on the earth or in space, GPS measures the time it takes for radio signals to travel from three or more satellites to the GPS receiver and calculates the location. This location service is used to guide military vehicles and military smart bombs, it is rapidly becoming the primary navigation tool for aircraft and is the primary technology in the next generation air navigation system that will replace radar control of aircraft with automatic reporting of GPS position and data linking between aircraft and ground stations. GPS timing is used for very accurate frequency measurement and control. The cell phone system uses GPS receivers to keep oscillators on frequency in cell phone towers and to keep all towers on the same timing. High quality test equipment and frequency generators use GPS to maintain signal accuracy within approximately 10^{-11} seconds. The North Koreans shut down cell phone service in Seoul South Korea by jamming GPS from north of the Korean border.

LightSquared is the eventual successor to Mobile Satellite Ventures which operated satellites in the L-band. In 2001 Mobile Satellite Ventures received a conditional waiver to develop a hybrid satellite-terrestrial system to provide a mobile data service. In 2006 they were conditionally granted a waiver for a terrestrial only system, the condition being no harmful interference to users of the low power satellite L-band. As can be imagined, there was quite a bit of consternation at the results of the LightSquared interference testing. The last time this was addressed in *SQ* the results from that study had just been made public. In the ensuing period LightSquared threatened to sue the government to allow them to use “their spectrum,” there has been a congressional investigation, many charges have been thrown back and forth between LightSquared and the GPS community. Most recently LightSquared filed for bankruptcy. The bankruptcy is far from the last of this story. LightSquared filed for bankruptcy to keep from defaulting on \$2.3 billion in debt and losing control of the company to creditors and to “give LightSquared sufficient breathing room to continue working through the regulatory process that will allow us to build our 4G wireless network.” {Ed}.

Sharp Repeater: *SQ* has been informed by the Technical Committee that the Sharp repeater (reported in the August/September 2011) has been experiencing interference on the input frequency (147.285) from an unknown source but assumed to be related to the hospital. The technical committee is working on the problem but it has to be done in conjunction with the hospital and may take some time. For those of you that are regular users, please be patient. {*SQ*}.



SANDRA, Inc.
 San Diego Repeater Association
 P.O. Box 81103
 San Diego, CA 92138

SANDRA NETS

Sunday 8:00 P.M. Mt. Otay Repeater
 Wednesday 7:30 P.M. Mt. Laguna Repeater

GUIDELINES SUMMARY

SANDRA, Inc. operates their repeaters for service in the San Diego area. The policy of the organization is that the repeaters are available for all licensed amateur radio operators to use so long as applicable rules and regulation are observed, whether members of SANDRA or not.

SQUELCH TALES

SQUELCH TALES is published bi-monthly by the San Diego Repeater Association (SANDRA, Inc.), a corporation dedicated to the promotion of amateur radio. Distribution is free to members.

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The SANDRA membership meets the first Thursday in the Months of March, June, September and December. Meetings start at 7:00 P.M. and are located at the San Diego County Education Center, 6401 Linda Vista Road, San Diego. Board meetings take place on the first Thursday of January, February, April, May, July, October and November. All SANDRA members are encouraged to attend.

| Callsign | Location | Input | Output | Callsign | Location | Input | Output |
|-----------------|-----------------|--------------|---------------|-----------------|-----------------|--------------|---------------|
| WB6WLW | Mt. Otay | 146.040 | 146.640 | WB6WLW | Mt.Laguna | 444.500 | 449.500 |
| WB6WLW | Mt. Otay | 222.460 | 224.060 | K6GAO | Ho-Pass | 144.680 | 145.280 |
| WB6WLW | Mt. Otay | 444.200 | 449.200 | W6SS | Lyon's Peak | 146.865 | 146.265 |
| WB6WLW | Mt. Otay | 1270.300 | 1282.300 | K6AIL | Sharp Hospital | 147.285 | 147.885 |
| WB6WLW | Mt. Laguna | 147.750 | 147.150 | WB6WLW | San Diego | 442.320 | 447.320 |
| WB6WLW | Mt. Laguna | 222.600 | 224.200 | | | | |

All SANDRA repeaters use PL 107.2