



# *Squelch Tales*

A Publication of The San Diego Repeater Association, Inc.

Summer 2013

## *Ahead in Squelch Tales*

This is a double issue of *Squelch Tales* to cover the summer months.

**The June membership meeting** featured Dennis Vernacchia, K6KI, giving his fascinating first hand account of operating a Vietnam MARS station while surrounded by enemy forces.

**The International Telecommunications Union** and The International Bureau of Weights and Measures (BIPM, France) are responsible for coordinating Coordinated Universal Time. The ITU is currently examining the case for eliminating the Leap Second.

**Poway hams** seek relief from Poway's strict antenna regulations. In a meeting before the Poway City Counsel, hams make a case for reducing the restrictions on ham radio antennas.

**SANDRA meeting minutes.** We attempt to catch up on Board Meeting Minutes for the year.

**SANDRA open nominations for 2014 officers.** SANDRA is seeking nominations and volunteers for for 2014 leadership positions. Nominations should be presented at or before the October Board Meeting.

## **Calling Home from the Vietnam War, Ham Radio's Role**

**Dennis Vernacchia, K6KI**

The June membership meeting featured Dennis Vernacchia, K6KI, telling his first hand account of assembling and operating a MARS station during the Vietnam war. Dennis was first licensed in June 1963 as WN2JDW at the age of fourteen. He has operated continuously without any breaks since that time, always having a radio available for his use. He received his current call in 1977 when he achieved extra class. Like most hams, he built his own rigs and antennas, skills that served him well in Vietnam. The story of Dennis' MARS career was published in the November and December 1990 issues of QST.

MARS (Military Affiliate Radio Service) organizations go back to World War II, allowing soldiers to contact home. During Vietnam, the Army did not have a MOS (Military Occupation Speciality) code for a MARS operator; the Air Force

and the Marines had MOS codes for a MARS operator but not the Army. Therefore, the Army could not assign a soldier to be a MARS operator and a MARS operator could not be requisitioned because the MOS code did not exist. That is no longer true but was during the Vietnam war.

Dennis' military career started when he decided to take a break from college in 1967. In the semester after starting his college break he won the lottery – the draft lottery. He was inducted into the Army, narrowly missing the Marines, as they were also drafting soldiers at the time. Dennis' first stop was



**Dennis Vernacchia - K6KI**

**Continued Next Page**

Fort Dix New Jersey for basic training. His entire Fort Dix platoon went to radio school - there were a lot of college kids being drafted at the time. He was offered and turned down Officers Candidate School because OCS graduates came out as 2<sup>nd</sup> Lieutenants with a very short life expectancy in Vietnam. From radio school he went to radio-teletype school at Fort Gordon Georgia. At Fort Gordon they were trained in the set-up and operation of cryptographic equipment for secure communications, the set-up of field antennas and vans, all stuff that he had already done as a ham. He was the only ham in his platoon and the only one who understood radio from the nuts and bolts perspective or that had built equipment and antennas from scratch. Out of his platoon, three were deployed overseas, one operator was sent to Italy, one operator with an Italian background and spoke Italian was sent to Germany and Dennis was sent to Vietnam.

The next thing Dennis knew he was on a World Airways flight landing with 198 other guys at Ton Son Nhut Air Base in Vietnam. He left Ton Son Nhut for a Repo Depot without orders, which meant that he could be used for anything requiring a warm body. Because his last name started with "V" he would pretty much be assigned to whatever was left over and what was leftover would not be a radio job. Dennis located the command MARS station at Long Binh, called them up and told them he was a ham operator licensed for five years, studied electronics in college for two years and asked if they needed any operators. The response was that yes they did need MARS operators but that there was a problem. The problem was that it would take at least two weeks for him to be processed in and by that time he would be shipped out. He should have let them know he was coming.

Dennis was assigned to the 101<sup>st</sup> Airborne - the legendary 101<sup>st</sup> of World War II fame. Dennis protested that he was just a radio operator and not trained for combat. He was told that he would get all the training he needed and that he was actually better off because he didn't have to unlearn stateside combat training, which might let him live longer. He further learned that he would be assigned to the 506<sup>th</sup> parachute regiment, which was considered the toughest of the 101<sup>st</sup>. These

guys all trained together and were not very accepting of outsiders. After two weeks of jungle warfare training he went to LZ Betty, surrounded by hostile forces with the nearest friendly forces 90 miles away. Dennis was mostly assigned to towers or bunkers. He would fall in each morning and either be assigned a job or spent his time filling sand bags, digging trenches or fortifying the perimeter in 90 degree temperatures and at 90% humidity. After a couple of weeks he decided that he needed to find a permanent job. He walked the entire base looking for antennas, equipment or anything else that might indicate that there was work more along the lines of his training. He came across some prefab buildings with a cubical quad on a pole which was not a military issue antenna. He went into the buildings and found Collins equipment and a phone patch. He asked what the station was and was told if he wanted to call home come back after three pm – he had found a MARS station! He asked if they had a need for operators and was told to come back and talk to specialist Pat Yonkers. It turns out that specialist Pat Yonkers only had 30 days to go and they needed a replacement operator – but there was a problem, Dennis was not in their unit. The station was under the civilian control of Jack Winning WA6WDB, who worked for a contract engineering firm. Pat and Jack went to Dennis' Command Sargent Major and got him traded to the station for 30 days in exchange for a bottle of Chevas Regal. After the 30 days it was up to Dennis to get him self assigned to the station.

At the time there were 42 MARS stations in Vietnam, eventually that number would go up to 50. Jack's station was AB8AY (all the Vietnam MARS stations had the prefix AB8) which was part of a network of stations, AB8AF in Soc Trang, AB8AI at Bac Lieu, AB8AAN at Dalat and with net control AB8AV at Vung Tau, 90 miles south. Dennis was told to be on the air 24 hours a day and he had to check in every 30 minutes, which because he was the only operator, made it difficult for him to find some time to sleep. Check-ins on the 40 meter net were difficult as propagation changed during certain parts of the day. Most of their MARS communication was done at night when skip and propagation to the US

**Continued Page 4**

### **Changes in Time**

Time is important to the Radio Amateur because it is the basis for all of our radio signals - the number of complete cycles of an electromagnetic wave in a second. Electromagnetic waves are also the basis of measuring time, the count of a fixed number of cycles of a known electromagnetic wave is the definition of a second. Since 1967 the second has been defined as 9,192,631,770 cycles of electromagnetic radiation corresponding to a transition between two energy levels of the Cesium-133 atom at zero degrees Kelvin. This definition has a precision or uncertainty of 1 part in  $10^{12}$  which is far more precise than any reference that preceded it. World time is so important that it is coordinated by the International Telecommunications Union (ITU). Since January 1, 1972 coordinated time has been based on a continuous count of atomic clock seconds where the length of each day is 86,400 seconds and this is designated as TAI (Time Atomic International). However, the earth's rotation is not as consistent as atomic clock seconds and the earth tends to wander away from the TAI day to some extent. Society has become used to time being centered at noon when the sun is at its highest in the sky. To accommodate society the ITU periodically corrects Coordinated Universal Time (civil time) by inserting an extra second, a leap second, into a day (usually in June or December) to realign Coordinated Universal Time (UTC) with the earth day. The leap makes the UTC day one second longer, allowing the earth to catch up. Since January 1, 1972 thirty-five leap seconds have been inserted to keep UTC synchronized with the earth's rotation, ten of which were inserted at the very start to align the system. UTC is equal to TAI minus LS, where LS is the total leap seconds inserted (currently 35). All leap second data can be found at <http://maia.usno.navy.mil/ser7/tai-utc.dat>.

Another time scale of importance to us is Global Positioning System (GPS) time. GPS time doesn't incorporate leap seconds. GPS works by measuring the time it takes for a radio signal from satellites in known positions to reach the user. Electromagnetic waves travel at 186,000 miles per second so if they suddenly inserted a second into the stream the user apparent position would shift

by 186,000 miles to somewhere in space. A little embarrassing for that airliner on a GPS approach to a runway and only 200 feet off the ground. GPS Time is equal to TAI-19 seconds. The reason it is fixed at 19 seconds is because the GPS epoch started on January 1, 1980 at which time LS was equal to 19 seconds and doesn't insert new leap seconds. For GPS to function properly it has to have very accurate timing systems using its own atomic clocks. Therefore, GPS has very precise timing, which it distributes via radio signal. A GPS can normally deliver one pulse per second with an uncertainty of  $10^{-11}$  seconds. Therefore, a GPS receiver can be used to discipline a crystal oscillator very precisely. Nearly every cell phone tower in the world has a GPS disciplined timing device to keep the towers on frequency and control the timing of the cell phone digital protocol. A little over a year ago, North Korea jammed GPS signals over Seoul South Korea. It wasn't long before the cell phone system stopped functioning. As amateurs we can use a GPS disciplined oscillator to improve the accuracy of our equipment or measure frequencies down to fractions of a Hertz. There are other time systems but they are not germane to this discussion.

Time coordination is done by averaging more than 300 atomic clocks at 60 time labs around the world to generate maximum stability. Because each clock is not at sea level, relativistic corrections have to be made and each clock's contribution to the average is weighted by the clocks relative stability. Time distribution is generally by computer. Computers are synchronized to UTC through Network Time Protocol (ntp) which is in turn based on an ISO standard referred to as Posix Time. Posix time is the number of elapsed atomic clock seconds since January 1, 1970. Posix and ntp don't handle leap seconds very well and as a result, each time a leap second is inserted one second is played twice. The result is that any calculated time difference that spans one or more leap seconds is off by the number of leap seconds in the period. This becomes significant in scientific studies where time is important and in communications where protocols are time based. The problem has been discussed and argued for years in ITU sub committees. **Continued on Page 5**

### **Calling Home**

was good and the US was awake. Dennis arranged for net control to check him in during sleep periods which were usually from about 3 AM after their communications to the US until 10 or 11 in the morning.

Most soldiers had to come to the MARS station to call home. The station didn't have calling booths or amenities for any kind of privacy for soldiers calling home. In addition the operator had to listen for any mention of classified information and interrupt the call if necessary. They had few opportunities to provide remote input so that soldiers in the field could call home. On occasions, when there was no military need, they were allowed to link to a microwave repeater net that was set on local mountains to allow soldiers dug into the countryside to call home. However, if there was a military need for the system, the calls would be dropped.

Dennis communicated with the same stateside stations on a daily basis. To become involved with MARS stateside, a ham had to commit to being available and on the air for eight hours every day. Many of his phone patches went through Lenore Jensen, W6NAZ, in Sherman Oaks, CA. Lenore's husband Bob was an audio engineer at ABC and set her up to be able to record phone patches. Dennis played example phone patches that spanned the range of happy to sad. New births were common and many soldiers first contact with their children was over a MARS phone patch. There were also the heartbreaking ones where family back home learned of serious injury and loss of limb. Phone patches were normally held to three minutes, but when there were children involved that often stretched to five. There was one forward observer pilot that came in every Wednesday, which was his day off, he had five kids and was allowed ten minutes each week. One week he missed coming in for his weekly call home. The next week Dennis learned that he had been shot down. Most patches were SSB on 20 and 15 meters, just beyond the band edges.

Dennis was an inveterate photographer, and showed many pictures of the station at LZ Beatty including some of his customers. He had pictures of one of the night time raids where the base came

under attack. He had pictures of other MARS stations, many MARS stations that were located in less hostile territory had air conditioning and calling booths for soldiers privacy. One station, AB8AR, was located on a naval repair ship off the coast at Vung Tao and nick named the row boat. The predominate antenna type for a Vietnam MARS station was a Log Periodic because of the combination of wide bandwidth and high gain.

LZ Betty was in the middle of a war zone, surrounded by enemy on all sides and 90 miles from friendly forces. Everything came in and went out by air – mostly helicopter. The base was attacked by the enemy at night, when many of the phone patches were held. The noise of war was frequently in the background. Portions of the base were overrun by the enemy three times while Dennis was stationed there. Dennis' station AB8AY was located next to the ammunition dump which had been hit the previous year during the TET offensive. As a result, the building was dimpled by shrapnel hits and the wooden booms of the cubical quad were so loaded with metal shrapnel that the SWR was 3:1.

AB8AY was eventually evicted from its operating location. Dennis asked Jack what they were going to do. They started to collect materials that were scattered around the base. They located a utility pole that could be used to mount the antenna. They took down the antenna and spent the time necessary to remove all of the imbedded shrapnel that was changing the impedance and consequently the SWR. They located an insulated quonset hut, probably left over from the Korean war, it just needed to be assembled. They found a pole climber that would brave the possibility of sniper rounds to mount the cubical quad on the pole. The rotator was a rope wrapped around the antenna post. They set up the station in its new location and it was actually arranged nicer than the previous station, with a counter and a card system for soldiers to register a communications request. The insulation worked to keep the station cooler in the heat.

During one night time raid they lost the antenna and supporting pole. There was no material to build another antenna and no official support for the station. Jack got mad at the total lack of

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support, and because he was a civilian contractor he didn't have to abide by the chain of command. He complained about the lack of support all the way up to the Pentagon. As a result they were given two log periodics, the only problem was that they were 100 miles away in friendly territory. Many of the helicopter pilots refused to carry the antennas because they were unauthorized and they could get busted. Finally, Dennis located one pilot that agreed to transport the antennas, one at a time one week apart. The antennas were assembled but there was no means to mount them on towers. For awhile they operated the station with the antenna ten feet off the ground. Because they overlooked the pacific, they were still able to get through to the US. Finally Dennis found another helicopter pilot who was willing to try to carry the antennas to the top of the towers. Raising antennas with a helicopter sounds like the height of folly, however, it worked perfectly and they wound up with one antenna on a thirty foot tower and the other on a sixty foot tower. When they were done AB8AY was the loudest MARS station in Vietnam.

Dennis had many other anecdotes and the meeting was a resounding success for everyone that attended. Anyone that has the opportunity to hear this presentation should take full advantage of it -  
-*{SQ}*-

### Time (Continued)

This month ITU-R WP7a will begin a discussion of whether or not the leap second should be dropped. The arguments are; 1) there are certainly ways to deal with leap seconds in computer programming but none of them would be Posix compliant because Posix doesn't address leap seconds, 2) who in civil society will notice an offset of 35 seconds in a day anyway, and 3) there are critical situations where the replayed second will cause a significant problem. On the other side of the discussion there is the general feeling that the civil day should conform to the solar day because that is what society expects and the problem is probably easily fixed in software. As with all organizations, the larger they get the more polarized the diversity of opinion becomes. Recently there have been long discussions on the internet that more and more resemble the flame

wars of the old Usenet News. How will the ITU deal with leap seconds? Only time will tell.

-*{SQ}*-

### Super Precise Atomic Time

The National Institute of Science and Technology has recently published a paper on a new atomic clock with stability of one part in  $10^{18}$  or about one second in 32 billion years. The clock is a ytterbium optical lattice clock and is so precise that it can only be measured against another clock of the same design. An optical lattice clock works by cooling a small number of atoms to a very low temperature by stopping all motion of the atom by pushing on it with laser light. Once motion has stopped and the temperature of the atom is approximately 10 micro Kelvin, the atoms are suspended in the energy valleys of an optical standing wave and interrogated with a laser for individual energy transitions. The low temperature and interrogation of multiple atoms in a line improve the signal to noise ratio and reduce many errors that occur in other atomic clock designs.

To measure stability, two clocks were built and tested against each other. Assuming the error on each is independent and random and that there is no inadvertent coupling (some spooky action at a distance) the difference between the two should be randomly distributed. The statistical measure of stability for two clocks tested against each other is the Allen Deviation which is similar to the standard deviation of routine statistics.

One might ask about the utility of a clock with a stability of one second in a length of time that is approximately twice the age of the universe. The answer is that as we measure events that are very short in duration, such as you would find in nuclear physics and even in the measurement of fractions of an electromagnetic wave, we need more precise measurement tools. -*{SQ}*-

### Nominations are open for 2014 SANDRA

**Officers.** Sandra is seeking volunteers and nominations for officer positions for the coming year. Please send your nominations to Chuck Wood, Election Committee Chair at:

**woodchuck1@cox.net**

**SANDRA Meeting Minutes**

The Following minutes have been edited for form but not content to reduce the space required for publication. Minutes may not be in chronological order to save space.

**San Diego Repeater Association, Inc.**

Board of Directors Meeting Minutes February 7, 2013 (Thursday) 7:00 PM San Diego County Office of Education 6401 Linda Vista Road San Diego, CA 92111

Director	Present	Excused
President Barbie Flinn, WA6URS	X	
Vice President Stogie Panger, AJ6AX	X	
Treasurer Ken Decker, WA6OSB	X	
Secretary Alex Groza, WB6DTR	X	
Membership Chair Bob Boehme, W2IRI		X
Meeting Chair Ben Concepcion, N6VVY		X
MAL-1 Year Tom Myrick, N6JOJ	X	
MAL-2 Year Bayard Rehkopf, K6GAO	X	
MAL-3 Year Chuck Wood, WD6APP	X	

**Call to Order:**

The meeting convened at 7:00 PM, President Barbie Flinn presiding. Quorum requirements met.

**Attendance:** 11 members

**Approval of Minutes:** Approval of Minutes from January 2013 meeting by unanimous consent.

**Board Reports / Presentations / Comments:**

**Treasurer:** January monthly report received. Discussion regarding San Diego County business property statement; to be handled by NF6E. SANDRA/Sharp Hospital telephone service has been terminated as requested. Briefed Board on status of Otay User Agreement submissions. Two agreements were incomplete.

**Secretary:** January 2013 Meeting Minutes received as approved. Application and premium for annual ARRL liability insurance has been submitted to Hayes Insurance Company (\$1,000,000.00 coverage @ \$200.00)

**Membership Chair:** Absent. Dues discussion continued to next Board meeting.

**Member At Large 2:** 2013 Meeting Room schedule distributed by K6GAO. SANDRA meeting in July moved to 2<sup>nd</sup> Thursday, July 11<sup>th</sup> due to holiday falling on first Thursday.

**Committee Reports:**

**Technical Committee:** January report submitted by K6RLV.

**SANDARC:** SANDRA 2013 Delegate and Board memos submitted to SANDARC Secretary by WD6APP. SANDARC bylaws update is continuing – slow process for approval. WD6APP to address Club Flyer issue at February 28<sup>th</sup> SANDARC meeting. SANDRA received one ARRL General Class License manual from SANDARC.

**New Business:** None

**Next Meeting Dates:** General Membership Meeting - March 7, 2013, Awaiting Room assignment.

Bruce Krypton KG6IYN ARRL San Diego Section Emergency Coordinator will be making a presentation regarding San Diego Emergency Management and amateur radio, and what SANDRA can do to assist.

**Board Meeting – April 4, 2013 Room 301**

**Adjournment:** The meeting was adjourned at 7:50 PM by Unanimous Consent.

**San Diego Repeater Association, Inc.**

General Membership Meeting Minutes March 7, 2013 (Thursday) 7:00 PM San Diego County Office of Education 6401 Linda Vista Road San Diego, CA 92111

Director	Present	Excused
President Barbie Flinn, WA6URS		X
Vice President Stogie Panger, AJ6AX	X	
Treasurer Ken Decker, WA6OSB	X	
Secretary Alex Groza, WB6DTR	X	
Membership Chair Bob Boehme, W2IRI	X	
Meeting Chair Ben Concepcion, N6VVY	X	
MAL-1 Year Tom Myrick, N6JOJ	X	
MAL-2 Year Bayard Rehkopf, K6GAO	X	
MAL-3 Year Chuck Wood, WD6APP	X	

Call to Order:

The meeting convened at 7:00 PM, Vice President Panger presiding. Quorum requirements met.

Attendance: 21 attendees

Presentation: Bruce Krypton, KG6IYN, ARRL San Diego Section Emergency Coordinator made a presentation about SD ARES and discussed ARES role and philosophy in emergency communications.

Business From the Floor: Mike Maston, N6OPH, San Diego Amateur Radio Council Chairman spoke about SANDARC and requested that SANDRA support him in the upcoming SANDARC election. Mike also discussed the 2014 convention and named H. Ward Silver as the guest speaker.

No Club business took place at this meeting.

Next Meeting Dates:

Board Meeting – April 4, 2013 Room 301

Adjournment: The meeting was adjourned at 8:10 PM by Unanimous Consent.

**San Diego Repeater Association, Inc.**

General Membership Meeting Minutes June 6, 2013 (Thursday) 7:00 PM San Diego County Office of Education 6401 Linda Vista Road San Diego, CA 92111

Director	Present	Excused
President Barbie Flinn, WA6URS	X	
Vice President Stogie Panger, AJ6AX	X	
Treasurer Ken Decker, WA6OSB	X	
Secretary Alex Groza, WB6DTR	X	
Membership Chair Bob Boehme, W2IRI	X	
Meeting Chair Ben Concepcion, N6VVY	X	
MAL-1 Year Tom Myrick, N6JOJ	X	
MAL-2 Year Bayard Rehkopf, K6GAO	X	
MAL-3 Year Chuck Wood, WD6APP	X	

Call to Order: The meeting convened at 7:00 PM, President Barbie Flinn presiding. Attendance: Attendance Roster attached. (26 sign-ins)



Announcements to Membership: July 11, 2013 - Board Meeting, August "Dark" and Sept. 5, 2013 - General Membership Meeting.

Presentation: Dennis Vernacchia, N6KI – Military Auxiliary Radio System (MARS)

Business from the Floor: Bruce Krypton, KG6IYN on behalf of ARRL / ARES thanked SANDRA for allowing their ARES to utilize SANDRA repeaters during their operations.

Final Remarks: President Flinn thanked everyone for their attendance. Adjournment: The meeting was adjourned at 8:55 PM by Unanimous Consent.

### San Diego Repeater Association, Inc.

#### Board of Directors Meeting Minutes

May 2, 2013 (Thursday) 7:00 PM San Diego County Office of Education

6401 Linda Vista Road San Diego, CA 92111

Director	Present	Excused
President Barbie Flinn, WA6URS	X	
Vice President Stogie Panger, AJ6AX	X	
Treasurer Ken Decker, WA6OSB	X	
Secretary Alex Groza, WB6DTR	X	
Membership Chair Bob Boehme, W2IRI	X	
Meeting Chair Ben Concepcion, N6VVY	X	
MAL-1 Year Tom Myrick, N6JOJ	X	
MAL-2 Year Bayard Rehkopf, K6GAO	X	
MAL-3 Year Chuck Wood, WD6APP	X	

Call to Order: The meeting convened at 7:00 PM, President Barbie Flinn presiding.

Members in attendance: Attendance Roster attached.

Approval of Minutes: Approval of Minutes from April 4, 2013 meeting by unanimous consent.

#### Board Reports / Presentations / Comments:

President: Attended Amateur Radio presentation / display at Fry's Electronics in San Marcos. Discussion about SANDARC promoting such events. Discussed having SANDRA Tech Day at Ham Radio Outlet, maybe in conjunction with their next swap meet event.

Vice President: None

Treasurer: Monthly report presented / submitted Secretary: April report submitted and approved Membership

Chair: 226 members. Flyers needed at HRO

Meeting Chair: Next month is a General Membership Meeting / Refreshments

MAL-1: None

MAL-2: Discussed Laguna Wednesday night Net

MAL-3: None

#### Committee Reports:

Tech: Written report submitted by K6RLV. Several projects pending; Laguna Site Inspection and scheduled preventative maintenance. Sharp Repeater IDer change, Otay telephone upgrade and Otay to Sharp link PL change (to 123.0), Kearny Mesa repeater antenna.

SANDARC: Report by WD6APP. Results of SANDARC election was presented.

Squelch Tales: Report by KF6ROX. Twenty Five mailings of Squelch Tales to new hams being made.

#### Unfinished Business:

WA6OSB: Policy Manual is in need of several updates. President Flinn suggested a committee made up of WA6OSB, K6RLV, WD6APP, NF6E and WB6DTR to accomplish this project.



### **Poway Hams seek Antenna Relief from City Council**

Poway has one of the most severe antenna ordinances in the San Diego area. Amateur antennas are classified with satellite antennas, requiring a permit for any antenna more than six feet above the ground. This limit applies to all antennas including wire antennas. An antenna between 6 and 35 feet above the ground requires a conditional use permit which requires the applicant to secure his/her neighbors approval and a \$721 application fee to the city. No antenna of any kind is allowed more than 35 feet above the ground. Neither provision is consistent with either California or Federal law. In 2005 Poway hams worked with the city to draft a proposed ordinance to exempt most amateur radio antenna up to 50 feet. The ordinance sparked a great deal of debate within the city and the city council chambers with more citizens speaking against the ordinance than for it. The city council reacted accordingly and sent the draft ordinance back to staff for redrafting. It has not been seen since.

Last year, Charlie Ristorcelli (NN3V) organized a group of 89 Poway hams to restart the process with the city and gain some relief for the installation of amateur antennas. They met one-on-one with council members and got the support of at least 3 of the sitting council. They had less success with the mayor Jim Wood who is opposed to larger antennas. However, during the discussions, Mayor Wood was asked why a minor conditional use permit cost \$721. Mayor Wood responded that he didn't know but would find out. Mayor Wood followed through with the inquiry and as a result there is a proposal before the city council to reduce the fee for amateur antennas from the current \$721 to \$250, welcome relief for new hams. However, to Charlie this is just the start and his group of Poway hams wants to resurrect height relief for Poway hams and get at least a 50 foot antenna height to help the local hams deal with the hills and mountains that surround Poway. -{SQ}-

**Errata, Corrections, Amplification and Shorts:** This section acknowledges errors and omissions or allows additions to previous articles. We rely on reader feedback – please write.

**SQ** has had a dearth of input over the last several months, which either means that we are generally doing things right or the membership has been on vacation. Hopefully at least a little of the former. However, one way or the other we would like to hear from the membership.

**Repeater Status** – Otay, Lyons, Hi-Pass, and Kearney Mesa all have no changes to operational status.

**LAGUNA** - The 440 antenna has been damaged in past winters and is suffering from high SWR. The duplexer for the 220 repeater will need to be retuned on our next trip to the site.

**SHARP** - Alex, WB6DTR and Tom, N6JOJ made a trip to the repeater and installed a new gel-cell back-up battery for the controller.

The repeater has been experiencing interference from an unattended dual band radio configured as a cross-band repeater. A big thanks to Chuck, WD6APP & Tom, K6VCR and Alex, WB6DTR for locating the errant radio and eliminating the problem.

<b>Callsign</b>	<b>Location</b>	<b>Input</b>	<b>Output</b>	<b>Callsign</b>	<b>Location</b>	<b>Input</b>	<b>Output</b>
WB6WLV	Mt. Otay	146.040	146.640	WB6WLV	Mt. Laguna	444.500	449.500
WB6WLV	Mt. Otay	222.460	224.060	K6GAO	Hi-Pass	144.680	145.280
WB6WLV	Mt. Otay	444.200	449.200	W6SS	Lyon's Peak	146.865	146.265
WB6WLV	Mt. Otay	1270.300	1282.300	K6AIL	Sharp Hospital	147.285	147.885
WB6WLV	Mt. Laguna	147.750	147.150	WB6WLV	San Diego	442.320	447.320
WB6WLV	Mt. Laguna	222.600	224.200				

**All SANDRA repeaters use PL 107.2**

**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**

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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.

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