

The eKilo - What

Monthly Newsletter of the San Angelo Amateur Radio Club

August 2013



PRESIDENT'S MESSAGE

Although I will be traveling the first week of September, I should return before the September meeting when I will have several things of interest to discuss.

First, Buddy Parker, KD5SBE, gave a good presentation of Field Day history for 10 years. We should use his report for planning next year.

Second, we still need a replacement for Marcus OQuin, KF5GKC. We need someone to take up the position of grounds keeper. Please call me if you can assume these duties.

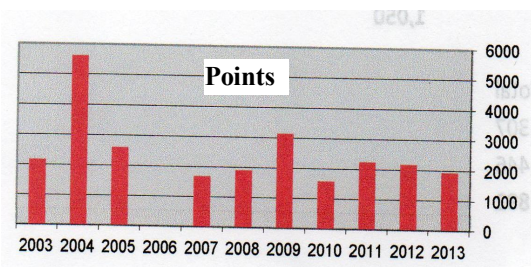
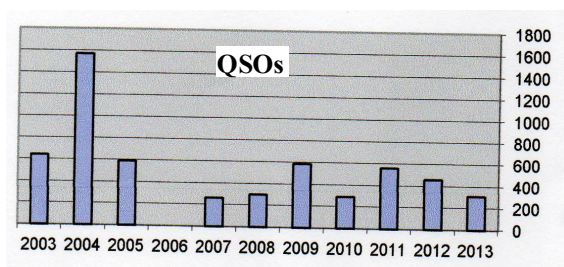
Last and perhaps the most important, is will W5UFO bring his ice cream machine to the club birthday party on the 12th of October? I spoke with Tom and he said that is a little to soon for him to give a firm commitment. He does want to be there but he has some concern that something might come up that could create a conflict. I will touch base with him again before the meeting and let you know.

I have noticed that the very heavy thunderstorm activity of June and July seems to have abated somewhat and coupled with a slightly earlier sunset, 75 and 40 meters are a lot more fun to use. I just hope that we can all remember the summer heat when it gets cold this winter.

73 for now and good DX

Tom, K4OTM

The graphics from the report by Buddy, KD5SBE, are shown below. Ed.



What? A drug user in our club? Page 8.

Club News**SAARC August 8th, 2013 Minutes**

Called to order by Tom Austin, K4OTM at 7:30 pm

Meeting opened with the Pledge and introductions of all in attendance.

Motion was made by David Behrend, KB5FNK and seconded by Matt Healy, W5MAT to accept the minutes as presented in July's Kilo-What for July's meeting; the motion carried.

The Financial Report was presented Bob Freeman, KD5PIX.

A motion was made from the floor to accept the Financial Report as presented; the motion carried.

Old Business: Buddy Parker, KD5SBE gave a great Field Day Report with a 10 year history of the Field Day results for each year.

New Business: Marcus O'Quin, KF5GKC our current grounds keeper has had to resign that position and asked that someone steps up and accept that position for the remainder of this year. Please call Tom Austin if you are able to help out in that capacity. (This notice should have been entered last month, sorry for the oversight.) The next time you see Marcus, thank him for the great job he has done over the past few years. No-one ever notices all of the work he has done until he wasn't able to continue his efforts. Thanks for all your hard work Marcus!

Bob Heiser, W7IKT won the "split the pot" and donated the proceeds back to the club. Thanks for your kindness Bob. A motion was made to adjourn the meeting at 8:07pm. The motion carried.

Minutes for Bob Freeman, KD5PIX - Secretary/Treasurer and submitted by Matt Healy, W5MAT

Ooops!

Thanks Joe/W5UI, for pointing out the omission on Page 1.

Club News

San Angelo... prohibited

8/17/13

Calendar

TODAY

- 10 a.m., 10:30 a.m. — Stories and songs for preschoolers, Stephens Central Library, 33 W. Beauregard Ave.
- 11:45 a.m. — Area Agency on Aging Caregivers United event, Concho Valley Council of Governments Training Center, 2801 W. Loop 306.
- 2 p.m. — Ice cream social, Blue tarp area west of Porter Henderson Library, 2025 Johnson St.
- 7 p.m. — Music by The Mighty Org, Sealy Flats, 208 S. Oakes St.
- 7 p.m. — Music by Bryce Jones, Blaine's Pub, 10 W. Harris Ave.
- 7:05 p.m. — San Angelo baseball: Colts vs. Fort Worth Cats, Foster Field, 1600 University Ave.

THURSDAY

- 8:15 a.m. — 10th annual West Texas Legislative Summit, C.J. Davidson Conference Center, 1910 Rosemont Drive
- 10 a.m., 10:30 a.m. — Stories and songs for preschoolers, Stephens Central Library, 33 W. Beauregard Ave.
- 3 p.m. — Art Thursdays, San Angelo Museum of Fine Arts, 1 Love St.
- 5:45 p.m. — Zumba, Station 618, 618 S. Chadbourne St.
- 6 p.m. — SBDC Seminar: "Essentials of Starting a New Business," Business Resource Center, 69 N. Chadbourne St.
- 6:30 p.m. — Socratic Method Discussion Group, Stephens Central Library, 33 W. Beauregard Ave.
- 7 p.m. — ASU Theatre: "The Fox on the Fairway," ASU Modular Theatre, Carr Education-Fine Arts Building, 2602 Dena Drive
- 7 p.m. — Music by John Carl Escue & Jonathon Matthews, Sealy Flats, 208 S. Oakes St.
- 7:05 p.m. — San Angelo baseball: Colts vs. Fort Worth Cats, Foster Field, 1600 University Ave.
- 7:30 p.m. — San Angelo Amateur Radio Club meeting, Mathis Field, 5513 Stewart Lane
- 8:30 p.m. — FiFi TV, House of FiFi DuBois, 123 S. Chadbourne St.
- 10 p.m. — Music by Josh Halverson, Blaine's Pub, 10 W. Harris Ave.

8/18/13

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This appeared the week of our last meeting in the Standard-Times and will appear in the future. oEd.

ARRL News

---West Gulf Director and Vice Director Reelected W/O Opposition---

David Woolweaver K5RAV and John Stratton N5AUS, Director and Vice Director respectively of the West Gulf Division received no opposition in the nomination phase of the upcoming West Gulf ARRL Election. They were declared winners of a new three-year term beginning January 1, 2014. Both have served the West Gulf Division in an exemplary manner and have been a tremendous asset to each of us in the West Texas Section and the West Gulf Division as a whole. Congratulations to both of you and best wishes for an equally successful new term.

Especially satisfying about the reelection is the fact that Director Woolweaver serves on the ARRL Board of Directors, the ARRL Executive Board and is Chairman of the ARRL Centennial Committee. The centennial celebration occurs in 2014. The main celebration will occur in Newington, Connecticut with a smaller version of the celebration also scheduled as a part of HamCom 2014 in Plano. An additional congratulation to Director Woolweaver and a vote of thanks from the West Texas Section!

--Silent Keys--

Word has been received that Marshall N. Pior K5ISD of Sweetwater became a silent key on or about August 17th. Marshall played a major role in the Northwest Texas Emergency Net for many years, and his participation in that net will be missed.

On behalf of the entire West Texas Section, I extend our condolences to his family and friends. Marshall will be missed by all of us.

---Section Emergency Coordinator Report---

In order to save space, the Monthly Section Emergency Report for July 2013 can be seen in its entirety by scrolling to the bottom of the West Texas Section Page. Once there, click on the link for the July SEC Report.

Signature: Howard Collier Call sign: WB5EKW
Title: West Texas Section Emergency Coordinator

Scanner Jack's Corner



THESE ARE THE MILITARY WORKING FREQUENCIES, AM MODE

121.500, 123.100, 130.650, 138.425, 139.200, 139.650, 139.775, 139.825, 139.900, 139.950, 139.975, 140.400, 140.775, 141.425, 141.550, 141.650, 141.725, 141.800, 141.975, 142.000, 142.200, 142.600, 142.700, 143.100, 143.350, 150.225, 150.300, 225.400, 225.725, 225.750, 225.975, 227.400, 228.975, 231.000, 231.300, 234.000, 236.600, 237.900, 238.350, 239.500,

239.800, 241.000, 242.400, 242.600, 243.000, 245.425, 268.200, 300.125

323.800, 327.100 NOTE ALL TRAINING FREQUENCIES CAN BE USED FOR OPERATIONS

From **SCANNER JACK ROBERTS KB5TMY**

Jack, KB5TMY, is available at (325) 651-4840.

AUSTIN SUMMERFEST 2013

Austin Summerfest -2013 Leaving San Angelo about 9:00 AM Thursday, the first stop was RICKS HOME FURNISHINGS in Brady where we saw Jim Ricks and found the Heart Of Texas Bike Ride (see *eKilo-What*, April, 2013) will not be held this coming year. Some other fund raising event is in the plan for 2014. From Brady, it was on to Mason for lunch at Willow Creek Cafe. The next stop was Blanco State Park to view the two dams on the Blanco River, the 36 foot long picnic table which will seat 75, the Pavilion, the low water bridge and other structures built by the CCC Company 854. These were all completed in 11 months without the benefit of machines or power tools. In Wimberley, we visited family.

The Crowne Plaza accommodations were great and, after savory buffet breakfast Friday morning, we proceeded to 11th and Congress to inspect the renovations made to the Texas Land Office building over the last half century. From there, it was lunch at the must see Chipotle Mexican Grill at 8th and Congress. Healthy (but high sodium) Mexican food? You be the judge. After lunch we took a tour bus to points of interest in Austin before returning to the hotel.

After registering Friday afternoon, the Grand Ballroom was the first stop to tour the tables. Leaving some money there, the Hospitality Suite was the next stop. The ladies did a wonderful job and deserve note for their efforts Friday and Saturday. The next stop was the Mesh Workshop. When the speakers spoke of the S-band, pointing dishes, link reliability and such, I smiled. When Andrews 7/8 inch coax was mentioned, I sighed.

Early Saturday was spent in the parking lot and a final tour of the indoor tables. Showing great restraint, I only left with things on my list even though the temptations were great.

We checked out and headed to San Angelo. This time we stopped for lunch at Inman's in Mason and for some turkey sausage to bring home. Of course, we had to stop in Menard for Side Oats Café & Bakery for pie.

Pete/KJ5SS



AUSTIN SUMMERFEST 2013

Matt, K5MAT, wrote:

A short 3 1/2 hour drive to Austin on Friday, August 2nd gave us an early preview of Saturday's Summerfest. Getting in a little early gave us a chance to get a quick preview of the "lay of the land" and where the classrooms were as well as just what sessions were being offered on Saturday. We were able to get registered for the ham fest when we arrived, and that gave us the chance to buy a few extra tickets for the grand prize being given away on Saturday afternoon. My wife Leslie, W5IFE, would spend Friday night studying for her General Class Test on Saturday.

While walking around Friday evening we met Pete Norris, KJ5SS and his wife Cathy as well as Bob & Carol Heiser, W7IKT and N5CBQ who were setting up a few tables to sell some of their treasures that other hams needed to enjoy. Friday evening we were even able to grab a quick bite with Bob & Carol.

There was a very good showing of hams from San Angelo to include; Joe Kent, W5UI, Gary Chaffin, W5ETJ, David Lewis W5DLL, and David Eaton, KB5EDJ.

Saturday morning came much too early. We had a quick breakfast and Leslie went back to her studying. I was able to sit in on a number of presentations; all very good. Riley Hollingsworth, K4ZDH, former counsel for the Spectrum Enforcement Division of the FCC's Enforcement Bureau gave a great presentation on the state of ham radio and where the FCC is on their enforcement efforts. The session was standing room only.

Jim Kinter, K5KTF and Glenn Currie, KD5MFW played as a tag team on two presentations: Broadband-Hamnet Forum, and a session on Microwave Forum and how that system is changing the way hams are using mess networks today. Both sessions were very interesting. They were actually demonstrating live video feed through their microwave network and just for a little added fun, they showed how they set up a digital telephone network using their system. The applications for this type of network during an emergency situation could be enormous. Setting up a HSMM-MESH network would take a little bit of time, a little bit of money and a handful of dedicated operators willing to put the system in place.

At 1 o'clock the VE's administered test for Tech, General and Extra Class Licenses. There were several dozen folks testing. The youngest was an 8 year old girl that was going for her Tech License with her two brothers; they passed and will be on the air before too long. Leslie Healy, W5IFE has now upgraded to General, and we are sure she will be on the air a little more as time goes by. Congratulations to Leslie Healy!

The grand prize drawing at 1 o'clock left all but one attendee a little disappointed but we all must remember there

73, Matt Healy, W5MAT



AUSTIN SUMMERFEST 2013



Pictures from Joe/
W5UI, Matt/
W5MAT and Pete/
KJ5SS.



TECHNICAL

A PROBLEM WITH DRUGS

One of the wonderful benefits of being licensed radio amateur operators are the many facets of life this hobby opens to us. In fact, there are more paths to follow than most of us can possibly explore. And so we find one or two or so areas we really enjoy and pursue these recognizing there are many others that our fellow hams might enjoy more than the ones we have chosen. This piece is about an application of our knowledge that is probably one of the least followed: Electronic simulation.

Obtaining a license requires to have some technical knowledge of the equipment we use down to the component level. This knowledge can be greatly extended and applied to many other fields. Even if the mathematics may not be one of our strengths, the symbols and function of the components may be intuitively understood. Such an example involving only two resistors and two capacitors follows.

As I have grown older it seems doctors have found more and more drugs for me to try. Recently, a new condition was identified requiring treatment for which no drugs have been specifically developed. Therefore, we moved in to the, "Let's try this and if this doesn't work we will try something else." And, "Oh, by the way, we will have to experiment with the dosage and how often you take the stuff." Sound familiar?

Absorption and metabolism of drugs became of interest in that one particular drug had the following characteristics: The maximum concentration in the body occurred 2 hours after ingestion and was half the peak value 3 hours after the peak. The drug was prescribed in 40 milligram tablets and the maximum consumption was 640 milligrams in 24 hours. The beneficial effects were found to increase with increased dosage to a point and then the undesirable side effects became significant. This occurred within the 640 milligram limit. The issue then was the frequency and size of the dose to maintain the most beneficial level. A constant level cannot be maintained, as will be seen.

From over 55 years ago a textbook problem came to mind. Some searching at local libraries led to a copy of M. E. Van Valkenburg's *Network Analysis* at ASU. This was a later addition and the problem no longer appeared. Certain an earlier edition was the correct text, a 1955 edition was ordered and, in Chapter 7, Problem 7-23 was found:

"Dr. L.A. Woodberry of the University of Utah School of Medicine has made use of an electrical analog in studies of convulsions. As shown in the figure, the following quantities are duals: C_1 represents the drug-containing fluid, R_1 is the "resistance" the passage of the drug from the pool to the blood stream, C_2 represents the volume of the blood stream, and R_2 is equivalent to the body's excretion mechanism (kidney, etc.) The concentration of the drug dose is represented as V_0 and the voltage $v_a(t)$. . . is the dual of the drug in the blood stream. The analog network has the advantage of that the elements may be readily changed and the effects studied (to say nothing of the saving of cats)."

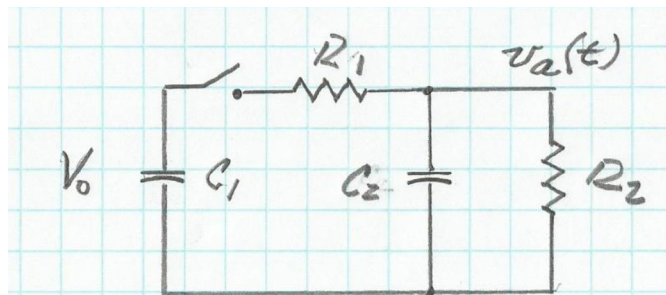


Figure 1. Electrical analog for Prob. 7-23.

TECHNICAL

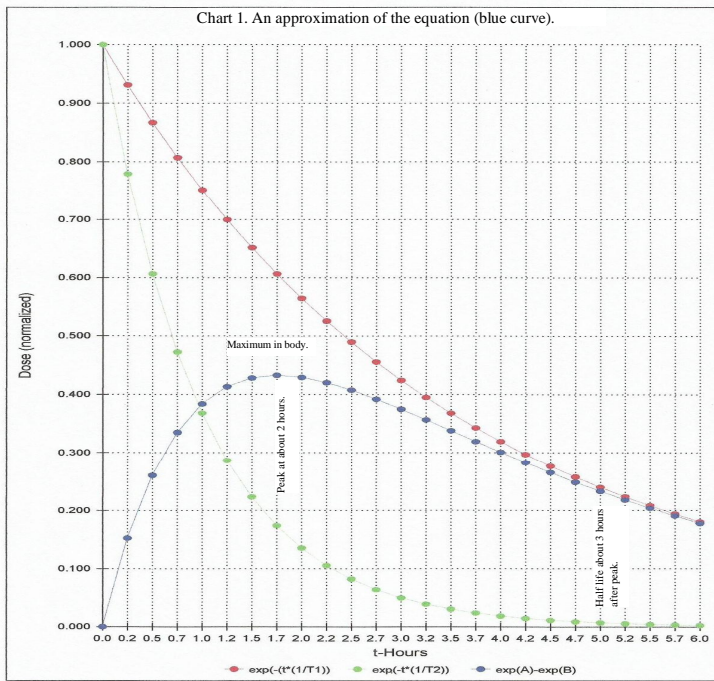
V0 is the static voltage of C1 for a charge q0 (q=CV) with the switch open. The charge on C2 is zero. When the switch is closed, V0 starts to drop, becoming an exponential function of time, v0(t), as current flows through R1 (recall t=RC). R1 current divides between C2 and R2. As charge accumulates on C2, va(t) increases from zero volts. va(t) becomes v0(t)*R2/(R1+R2) until C1 and C2 and are discharged. Mind games can be played adjusting the component magnitudes with respect to each other and visualizing the outcomes.

It seems reasonable that the same analog would apply to fast dissolving orally ingested drugs with the stomach, etc., being the pool(s). If the drug was the 'slow release' type, this delay would be included in R1. As an alternative, a third RC loop, before R1, could be included but would horribly complicate already tedious algebra. The solution to the Problem 7-27 is in the form of:

va(t) = A(e^-t/T1 - e^-t/T2)

where t is time from the instant of switch closure (t = 0+), and A is determined from the component values and V0. T1 and T2 are time constants determined from the component values.

Solving for T1 and T2 would result in expressions containing all four components (R1,R2,C1,C2). Values of those would be chosen to fit T1 and T2. To avoid more tedious algebra and solving a second order equation involving the four components, a spreadsheet solution was constructed and T1 and T2 adjusted to get the maximum at 2 hours and 1/2 the maximum at 5 hours. The results are shown in Chart 1. (Magnify to 200% to get a really good view!)



Notice the curve shape follows the intuitive analysis above. The maximum occurs at about 1.75 hours and 1/2 the maximum at about 5.25 hours. Additional tweaking could be done but since the results were close, the exercise was terminated. From these results the effect of adding a second dose at some time could be estimated.

By cutting and pasting the start of a second chart on the downhill side of a first chart, the results the effect of adding a second dose at some time can be estimated. I am sure this 'cut and paste' approach has been mathematically solved by others but I have not seen it.

The circuit shown in Figure 1 bears some resemblance to another circuit perhaps seen before. Substitute a steady voltage source for C1, a key for S1, add a transmitter as a load attached to R2, and adjust the component values. The new curve would follow the curve in Chart 1 from t = t0 to the maximum value and then remain steady. With the transmitter turning on somewhere up the curve, the circuit acts as a 'key-click' filter by reducing the rise time of the rf pulse and the amplitude of the resulting harmonics. The evaluation of the Yaesu FTDX3000 in the April issue, p. 51, of QST illustrates this point.

Questions or comments? Contact Pete/KJ5SS, 325-617-4387 or norrispeter26@gmail.com.

Free

I have the following free items for anyone interested:

- 1: diplexer set for 1090 MHz with 5 pole tuned cavity filter on transmit and 7 pole tuned cavity on receive. Tunable, should tune to 1200 MHz or 900 MHz with a screwdriver;
- 2: signal monitor probe 2 ports 30 db attenuation, about 6 n connectors appear to be silver plated for 1080 MHz;
- 3: 2 meter Yagi 100 feet long on two pieces of 200 pound nylon line. about 44 elements and 19 db gain. This antenna is really ugly but it works. I made it out of aluminum ground wire so the elements are flexible and sort of droop a lot.

James Fisher -kd6iwd@gmail.com

For Sale

NEW ITEMS



Used Yaesu G-800SA rotor and controller. Purchased from estate sale and stored for several years. Clearing shack. As is (I was told it worked before removal from tower). I replaced bolts on rotor top and put new brace on it). As is. \$300 from WB5ZAM [325-340-6102](tel:325-340-6102)

Kenwood TS 430S with matching Power Supply - \$326.00. **SOLD**

Coleman Powermate Generator, 6,250 Watt, excellent condition. Used one time for Field Day (approximately 36 hours). With wheel kit \$400.00; Kenwood 2000 \$1200.00; MFJ-4225 NV \$75.00; 2x IC-207H-\$200.00; 2x 2M-440 mobile antennas - Call; 2x 2M-440 base station antennas Call. Contact Joe Kent/W5UI at joew5ui@gmail.com or (325) 896-2038.

18HT Hy-Tower for \$150. Rohn 60 tower with winch, \$250. Both are located in Christoval. Grady, K5EP, [325-716-0450](tel:325-716-0450)

Upcoming Hamfests/Conventions

Date	Event	Location	Information
9/13/2013	Ada Hamfest	Ada, OK	http:kd5nqa@yahoo.com
10/5/2013	Belton Hamfest	Belton, TX	http://www.tarc.org/hamexpo/
10/25/2013	Texoma Hamarama	Ardmore, OK	http://texomahamarama.org
11/1/2013	Coastal Bend Hamfest	Aransas Pass, TX	//n5crp.org/
11/09/2013	NC Tech 2013	Azle, TX	http://www.wc5c.org
1/11/2014	Amateur Radio Fiesta	Schertz, TX	http://w5sc.org
1/17/2014	North Texas Section Convention (Cowtown Hamfest)	Ft. Worth, TX	http://www.cowtownhamfest.org
3/1/2014	25th Elk City Hamfest	Elk City, OK	n5neb1988@gmail.com

Hamfests are listed for all Texas, and as far into New Mexico and Oklahoma as the most distant point in Texas from San Angelo. -Ed.

RECENT PROGRAMS

<i>Feb '13</i>	Tom/K4OTM6 Flying
<i>Mar '13</i>	Tom Dufresne/WB5MTR - High Voltage Safety
<i>Apr '13</i>	Repeater Relocation Discussion
<i>May '13</i>	Field Day Planning
<i>Jun '13</i>	Field Day Planning
<i>Jul '13</i>	Field Day Planning
<i>Aug '13</i>	Buddy/KD5SBE6 Field Day 10 Year Results

HF Nets of Note de Gary Chaffin/W5ETJ

NET	DAYS	LOCAL TIMES	DIAL
Concho Valley Ragchew	M-T-W-T-F	1800 - 1900	3825
Texas Traffic Net	S-M-T-W-T-F-S	0830 - 0930	7285
7290 Traffic Net	M-T-W-T-F-S	1000 - 1200	7290
7290 Traffic Net	M-T-W-T-F	1300 - 1400	7290
Texas Traffic Net	S-M-T-W-T-F-S	1830 - 1930	3873
Central Gulf Coast Hurricane Net	S-M-T-W-T-F-S	1900 - 2000	3935
Texas ARES Net	Monday	1930 - 2000	3873
Big Bend Emergency Net	Sunday	0830 - 0930	3922
Texas Trader's Net	Sunday	0900 - 1000	7245

Emergency Communications

de Mike Dominy/KD5URW - Emergency Coordinator

Tom Green County ARES Net

Meets every Monday night at 8:30 CST (2030 hr) on the 444.350 MHz (Pl 162.2) (N5SVK). The net can also be reached by EchoLink at WB5VRM-R or Node 412402. Other frequencies are announced on the Concho Valley Net at 8:00 pm.

Next ARES meeting September 19, 2013, at 1900, at the Clubhouse.

ARES Net Report

Date	Net Ctrl	Check-ins	Time	Freq
7/1	KD5URW			444.350
7/8	KD5URW			444.350
7/15	KD5URW			444.350
7/22	KD5URW			444.350

**Concho Valley
Two Meter Net**

<u>Date</u>	<u>NCS</u>	<u>Check-ins</u>	<u>Duration</u>
8/12	KB5FNK	17	10 min
8/19	KB5FNK	11	11 min
8/26	KB5FNK	21	13 min
9/2	KB5FNK	5	9 min

This net meets every Monday night at 8 p.m. on the club's 146.94 repeater. All amateurs licensed to operate on that frequency are invited to participate.

Concho Valley Open FM Repeaters			
2 Meter		70 centimeter	
145.27-	San Angelo PL 88.5	441.750+	San Angelo PL 162.2
or PL 100.0 for local transmit		442.250+	San Angelo PL 162.2
146.72-	Eldorado PL 100.0	444.225+	Robert Lee PL 162.2
146.88-	San Angelo PL 88.5	444.350+	San Angelo PL 162.2 (Echo-Link Node)
146.94-	San Angelo PL 103.5	444.875+	Brady PL 162.2 Linked to 444.225+
147.06+	San Angelo PL 103.5		
147.34+	Robert Lee PL 88.5	147.30	San Angelo PL 88.5
146.90-	Brady PL 162.2		
147.30	Brady PL 114.8 (Echo-Link Node)		

Membership Renewal

Membership renewals are due in January 2013. Prices are as follows:

- Regular memberships: \$20
- Each additional family member: \$5
- Seniors (age 65+) and Juniors (under age 19): \$10



**P.O. Box 4002
San Angelo, TX 76902-4002**

Get all the latest club news
on the World Wide Web at www.w5qx.org

2013 SAARC Officers:

President - Tom Austin/K4OTM
 Vice President - Joe Kent/W5UI
 Secretary/Treasurer - Bob Freeman/KD5PIX
 Emergency Coordinator - Mike Dominy/KD5URW
 Activities Manager - Hughbert Robinson/KC5NPC
 Grounds Chairman - Marcus OQuin/KF5GKC
 W5QX Trustee - Charlie Campbell/KC5EZZ



Next Meeting: 9/12/2013
PROGRAM: Hughbert, KC5NPC: San Angelo Nets