The eKilo - What

Monthly Newsletter of the San Angelo Amateur Radio Club

July 2014

San Angelo Radio Club Officers

President: Tom Austin/K4OTM
Vice President: Hughbert Robinson/KC5NPC
Secretary/Treasurer: Bob Freeman//KD5PIX
Activity Director: Gary Chaffin/W5ETJ
Emergency Coordinator: Mike Dominy/KD5URW
Grounds Chairman: Open

Appointed Positions

SAARC Trustee: Charlie Campbell/KC5EZZ
Registered Agent: Charlie Campbell/KC5EZZ
Public Information Officer: Matt Healy/W5MAT

Club House Location
Mathis Field
5513 Stewart Lane

Mailing Address
P.O. Box 4002
San Angelo, TX 76902-4002

World Wide Web
www.w5qx.org

eKilo-What
norrispeter26@gmail.com

SAARC COMING EVENTS

General Membership Meeting

August 14, 7:30 PM at the Clubhouse

ARES Meeting

August 21, 7:00 PM at the Clubhouse

Other Events

September 20th - Lily Fest
with Special Events Station 9 AM - 2 PM

October 11th - SAARC Club's 90th Birthday Party

December 6th - SKYWARN Recognition Day

Technician Class

Friday, August 8th, 6:30 - 9:00 PM; Saturday, August 9th, 8:00 AM - 5 PM; Sunday, August 10th, 8:00 AM - noon

Testing: Sunday, August 10th, 2:00 PM

Meeting Minutes

Meeting Minutes for July10, 2014:

Meeting was called to order at 7:38 pm by Tom Austin, K4OTM. The meeting was opened with the Pledge Allegiance led by Hughbert Robinson, KC5NPC followed by the introduction of all present.

There were no minutes presented for June's meeting.

There was no financial report presented, Bob Freeman could not make the meeting.

Program presented after the meeting. This month was a recap of Field Day presented by Gary Chaffin, W5ETJ.

Gary also said Bill Hinds, KG5BQF, has offered to donate the trailer used at Field Day to the club.

Bob Heiser, K7IKT, made a motion to study the feasibility of acceptance of the trailer. The motion was seconded by Matt Healy, W5MAT, the motion carried. The members of this committee are: Bob Heiser, K7IKT, Gary Chaffin, W5ETJ, and Jimmy Welch, KG5BQE.

Gary Chaffin also brought up the International Lilly Fest on September 20th, 2014. After a discussion, the club decided to have a special event station operating at the club house from 9 am to 2 pm.

Gary Chaffin reminded the club of its 90th Anniversary coming up on Saturday, October 11th, 2014. The club wants to have a tail gate party and Hughbert Robinson will provide Matt Healy the needed email address to promote the event.

Buddy Parker is currently working on the final numbers for Field Day and has requested pictures of the mayor, the satellite logs on all contacts made and any other information and pictures taken during the event. Buddy's email address is: VParker6@Suddenlink.net. The preliminary count shows 866 QSOs and 1150 bonus points for a total of 2016 pts.

Mike Dominy, KD5URW, reminded everyone of the next tech class: Friday August 8th, 6:30 pm- 9:00 pm; Saturday, August 9th, 8 am - 5 pm; and Sunday, August 10th, 8 am - noon with testing at 2 pm.

Jack Roberts, KB5TMY, brought up to the club that "shelter training" could be made available to the club in the event it became necessary to set up emergency operations throughout the city. After a discussion, the club decided not to move forward with that training stating our primary function is communications.

Gary Chaffin, W5ETJ, made the motion to move Monday nights' 2 meter net back to 146.940 until the 27 repeater has better coverage. Jack Roberts, KB5TMY seconded the motion. The motion carried.

David Eaton, KD5EDB, brought us up to date on the latest with the D-STAR system in the area.

David Behrend, KB5FNK won the split the pot.

Ralph Stout, KA5ULE made the motion to adjourn, seconded by Bob Heiser, W7IKT. The motion carried and the meeting was adjourned at 8:25pm.

Minutes submitted for Bob Freeman, Secretary/Treasurer by Matt Healy

Major Oooops! Again

Regrettably, it was necessary for Glenn/AA5PK to point out that a call sign was reported incorrectly a second time. William Fullerôs call sign is: KG5BPW.

Sorry, William - *Ed.*

Field Day

Here is the Field Day Score Entry Form. We had 1160 Bonus points and 786 QSO points for a total score of 1946 points. We had 297 QSO's. A few points better than last year but a few less QSO's.

Attached is an Excel spreadsheet which shows the history of the Field Day Scores.

de KD5SBE, Buddy

ARRL Field Day Entry Form

Datestamp: 2014-07-28 08:40:43 PDT
Confirmation: 0796fb54b4c1ace5

Use the following link if you want to update your Field Day entry:
http://www.b4h.net/cabforms/fielddayupdate.php?callused=W5QX&confirmation=0796fb54b4c1ace5

Call Used: W5QX GOTA Station Call: KC5NPC ARRL/RAC Section: WTX Class: 3A

Participants: 51 Club/Group Name: San Angelo Amateur Radio Club

Power Source(s): Generator, Solar

Power Multiplier: 2X

Bonus Points:

100% Emergency power	300
Media Publicity	100
Set-up in Public Place	100
Information Booth	100
NTS message to ARRL SM/SEC	100
Formal NTS messages handled - No.=1	10
Satellite QSO completed	100
Natural power QSOs completed	100
Site Visit by invited elected official	100
Site Visit by invited served agency official	100
GOTA Bonus	0
Submitted via the Web	50
Total Bonus Points	1,160

Score Summary:

	CW	Digital	Phone	Total	
Total QSOs	0	99	195		
Total Points	0	198	195	393	Claimed Score = 786

Submitted by:
C Varren Parker Jr, KD5SBE
2802 Briargrove Lane
San Angelo, TX 76904
E-mail: vparker6@suddenlink.net

Comments:
Submitted for Club as Official Scorer
Band/Mode QSO Breakdown:

	CW		Digital		Phone	
	QSOs	Pwr(W)	QSOs	Pwr(W)	QSOs	Pwr(W)
160m						
80m						
40m	15	100	104	100		
20m	84	100	49	100		
15m						
10m						
6m						
2m						
1.25						
Other						
Satellite			17	100		
GOTA			25	100		
TOTAL	0		99		195	

GOTA Bonus: No GOTA Coach

Name/Call	QSOs	Bonus Points
David Behrend, KD5FNK	14	0
Mike Dominy, KD5URW	6	0
Bill Hinds, KG5BQF	4	0
Chad Goodman, KD5SMK	1	0

Supporting documentation for Bonus Points will be sent via mail to: Field Day, ARRL, 225 Main St., Newington, CT 06111 USA

Of Interest

---Sun City ARC K5WPH Annual Auction Scheduled for August 16th---

The Annual Sun City K5WPH Auction will be held in El Paso on August16th. The auction ranges from fun items for a few dollars to very usable and sought after ham radio transceivers and related equipment.

At HamCom and the West Gulf Division Convention in Plano last June, Sean Gardiner KD6CUB was named the Ham of the Year for the Division, and Lew Maxwell KB5HPT was named as the winner of the Excellence Award. Neither Sean or Lew were present to received their awards, and I plan to attend the auction and present those awards on behalf of West Gulf Division director David Woolweaver K5RAV.

---The Annual Balloon Fest to be held in Alpine Labor Day Weekend---

The Annual Balloon Fest in Alpine will be Labor Day Weekend August 30th-31st, and September 1st. The event will be held at the Alpine Municipal Airport on Highway 118 north of Alpine. Weather permitting, there will be balloon launches on all three days. All launches are as early as possible to take advantage of the cooler air. In years past, rains have sometime created problems, but high winds are generally the weather condition that prevents balloon launches.

Big Bend Amateur club will be providing communications for the event, with the base station activities from the BBARC Communication Van located at the airport, with mobile units ARRL West Texas Section tracking the individual balloons.

Provided by ARRL West Texas Section, Bill Roberts W5NPR, Section Manager - *Ed.*

Field Day

Gary/W5ETJ submitted the following minutes of Field Day review:

On July 10, 2014 at the regular meeting of the San Angelo Amateur Radio Club, a review of our ARRL Field Day activities was accomplished and the following comments were recorded:

Things That Went Well:

Food, fellowship, publicity (TV, Newspaper)

Things That Can Be Improved Upon:

ŏ Need additional operators for the various positions

- Designate an ñAmbassadorò to escort visitors and dignitaries around FD site
- Need to man GOTA station continuously
- Need banner for trailer (Tom/K4OTM will donate)
- Have headphones available at each station to compensate for loud conversations in the immediate vicinity

Need to cultivate/encourage CW operators

Things That Will Generate More ñBonusò Points:

- Need to pay closer attention to messages (ARRL and etc.)
- Need to copy W1AW Bulletin, conditions permitting
- Need to get more youth involved; especially in GOTA station

Need to better plan location of antennas so as to minimize interference

Additional Suggestions to Enhance FD Performance:

- More pre-planning of activities prior to FD
- Set up mock FD at location near clubhouse and test ability to operate multiple radios while minimizing interference
- Experiment with different antenna locations and configurations
- Cut grass a few days prior to FD to eliminate mesquite thorns and etc.
- Build ramps to facilitate getting trailers over high curbs at Samôs location
- Consider changing club trailers over to 2ò balls and hitches to standardize

Procure or rent a portable sign to advertise FD at proposed location

From my perspective, Field Day 2014 went pretty well as many of our objectives were met and most people that participated seemed to enjoy the event. I would like to thank all those who were involved for their hard work in the less than favorable weather conditions we always seem to encounter at the end of June. The food was great and several of our new hams pitched right in alongside the veterans to help ensure success. Some glitches could have been avoided by better pre-planning and it is my hope that the successor Activities Director will be able to glean some ñnuggetsò from these suggestions to ensure an even more successful Field Day 2015. Thanks to all who participated!

Field Day

From Dave Augustine/KE5PNQ:

KE5PNQ 2014 Field Day

The 2014 Field Day afforded me another chance to get my fix of "spinnin' & grinnin'" for another year. This year would be a little different as I would be the sole operator for our effort as the Civil Air Patrol contingent to donate our efforts to the San Angelo Amateur Radio Club (SAARC).

We arrived around 6:00 p.m. (CST) and proceeded to park and level our camper trailer. We've learned that "roughing it" isn't really our forte. We managed to navigate the curb on the fuel island side of the area and parked our camper in a mostly north-south orientation, get it leveled off, and deploy the slides. We made the determination that we would wait to erect the antenna mast and antennas until the following morning as we weren't scheduled to begin operations until 1:00 p.m. We did get the radio equipment arranged on the dining table, got supper from the nearby steak shop and enjoyed a DVD on the television.

The following morning we arose and after a cup of coffee, a quick breakfast, and a run to get more gas for the generator, we began arranging the mast and antennas for raising. We were greeted by 15-25 mph winds while trying to get the flimsy mast erected and secured with the guide ropes. After making numerous adjustments, the normally 30 minute job for two people turned into a 90 minute job for five. I'm still not sure it was all the winds fault, as some assistance with aligning the mast in a 90° position from the ground, was continuously guided from only one point of view. After changing the view to two additional angles, everything worked out (except for the bow in the middle if the mast).

With our long-wire sloping-V and BW-90 antennas firmly established and connected to our radios, we were ready to make as many QSOs as possible. Our first contact didn't take long after the official start of Field Day and we were on our way. With my limited experience in how to "get the ball rolling," it took me a while to get a pattern figured out.

Part of the experience involved a period of QRM at the upper end of the 20-meter band, primarily from a local source. At the time I didn't know we were transmitting in that band across our antenna field. After a few attempts to make a QSO at the upper end of the band, I reverted to the lower end and they started coming.

The first few hours there were plenty of stations making general calls for Field Day, but I was having trouble getting back to them for the contact. There were a lot of calls that were "deep in the grass," but I was able to get in there and successfully complete the calls. With our antenna oriented east-west, the majority of my QSOs were off the end of the beam. Stations in Florida and Arizona were easily getting good copy on me and I them, but anything to the side beam were easily copied on my end (if you want to call using both hands to hold the earphones tight against my head, and copying the RCA dog head turn), but I had a devil of a time getting my information out to them. For the most part, I felt I managed quite well.

We did get some visitors during the first "day" of the activity. The mayor of San Angelo stopped by and I had the opportunity to not only expound on the importance of HAM radio during emergencies, but also the role the Civil Air Patrol (CAP) plays in our community. Along with the mayor, we were lucky enough to have some former CAP members, and some new HAM enthusiasts stop by and inquire about our "shack."

After the sun went down, my real boss Johanna (KE5PNP) sat down at the controls and began doing her thing to locate callers and then pass them off to me to dig out the call and pass our information. We shut our system down shortly after 6:00 Zulu time for some rest as we didn't have reserve operators and I wanted to get another attempt in early on Sunday morning. At that time, we had accumulated approximately 35 QSOs.

Sunday morning saw me arising at 12:00 Zulu and cranking up the system for our push to get 50 QSOs. This number was a primary goal for myself as we only managed. The wasn't any help as much QRN was apparent and it seemed to get even worse as I got later in the morning. However, we were able to connect with a station in Quebec, Canada, which made me feel much better about our efforts.

Once again, I have made my promise to myself to get my general class license completed so I can enjoy this wonderful opportunity on a more frequent basis from my home. Who knows, perhaps I'll have completed my general class by the 2015 Field Day. Dave - KE5PNQ

Plano Ham-Com 2014

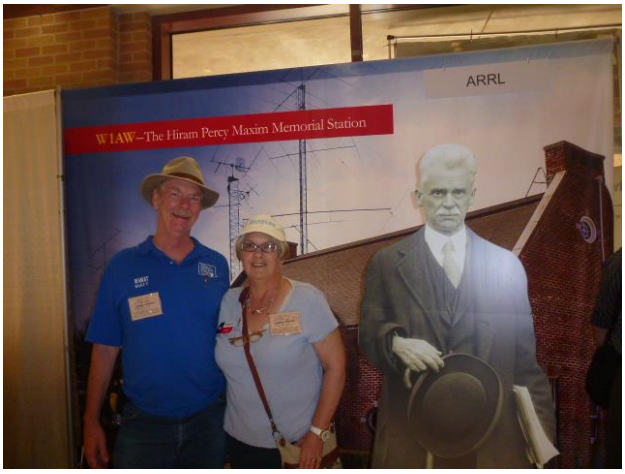
Submitted by Matt/W5MAT:

This years Plano Ham-Com has come and gone. It was held on the weekend of June 13th and 14th and is billed as the largest ham fest in Texas - and it really is!

Some times it's just worth driving in a day early simply because you can be rested and enjoy the entire fest. So Leslie (W5IFE) and I set out for Plano on Thursday and had a very leisurely trip to Plano enjoying the sights and stopping any time we saw something that would interest us. We were able to get a hotel about 5 miles from the Convention Center and that always works well when you have to have your "super grande" cup of joe to nurse throughout the morning.

No one could miss the Plano water tower at the foot of the parking area, a great landmark to let you know you're in the right place. Although we got there by 9:00 on Friday morning we had to park in the "back 40" and hike into the parking lot with the flea market. We were on the hunt for a few treasures we simply couldn't live without but surely wanted a good deal. After going through most of the market we spotted it - the tower support for my rotor and another support with the thrust bearing as part of the unit. We could have headed home at that point.

As we went up to the entrance to the Convention Center, there was a large motor home draped with the "100 Year Celebration of W100AW." Immediately to the right of the motor home was a portable, electric crank-up tower with a tri-band beam on top. It was cranked up to 65 foot with no guy lines. Quite a site. Off the tower were two di-pole antenna for working the different bands for this Special Event Station which operated throughout the entire event. After standing in line for a little while we were able to sneak inside to see their operation. The were running three different stations on three different bands. The operators were pre-scheduled for their shifts and all looked like they were having more fun that should be allowed. It was nice to see folks operating great equipment, using great radio procedures and completing each contact log as they went onto the next QSO. It was quite a site.



Inside the show all of the major manufacturers and players in the ham radio arena were there. Ham Radio Deluxe had their latest logging package/digital mode/ sat software/and radio control software on display and they were more than happy to answer questions. We actually upgraded to the new software and it works beautifully. All of the latest radio manufacturers were there just to show off their new products (they weren't selling them, that is the vendor's job). There were deals to be had throughout the entire show. We always have to take advantage of some of those great sales.

We enjoyed scouting out the entire show on Friday and went back Saturday to make sure we didn't miss anything we couldn't live without. As we were getting ready to head back to San Angelo, Gary Pittman, KE5TXL stopped us and we had a good visit. He said there were a number of folks that made it to Plano for the convention, we just missed them.

It won't be too long till next year when Plano will again be the biggest and best
ham fest in the state. Hope to see you there.

Matt Healy, W5MAT

Of Interest

Hello everyone,
I just wanted to remind you that we have a Yahoo Group set up for all ham operators in the area to use.
You may find it at https://groups.yahoo.com/neo/groups/saarg76903/info
It is a closed group, so you need to request to join.
There are 2 ways, you may email me at saarg76903-subscribe@yahoogroups.com
or send me a note at ka5ule@arrl.net.
I am the owner and Sam Morgan K5OAI is a moderator.
The group got it's start in Feb 2011 and has a lot of neat features.
We will go through these over the next few months and explain a little about them.
In the mean time, join up and poke around. You can't break it.
It has among other things, a message board, a calendar for posting events, a place to post your favorite pictures or even files and documents that
you think others may be interested in. It even has a link section for posting your links to interesting websites.
Remember, this group is moderated so every thing has to go through Sam or myself before it is posted.
Enjoy and if you have any questions, just ask!
de Ralph KA5ULE

Technical

Solar Panels III– Just a little more.

A component equivalent circuit can take many forms depending, for instance, on the surrounding circuit in which the component is imbedded. Figure 1 shows three options for a diode. In Figure 1A, the diode is modeled as a simple single pole, single pole switch. The model is binary, i.e., the switch is open or closed. Current flow is blocked or flows unimpeded. The switch closes when the voltage, V, across the diode is positive and open when V is negative. The I-V diagram for this circuit is shown in the diagram below.

This equivalent might be used if the resistance in series with the diode is high compared to the diode resistance, in which case the diode resistance can be ignored. If the diode resistance is of the same order of magnitude as the series resistance, then this equivalent might be used as in Figure 1B. This was the case in the preceding articles. As the current generator applies positive voltage to the diode cathode, the switch is always closed and was omitted. In this equivalent, the resistance was modeled as a constant fixed (linear) value. In the real world, however, a diode is a non-linear device as in Figure 1C. The value of the resistance is approximately given by:

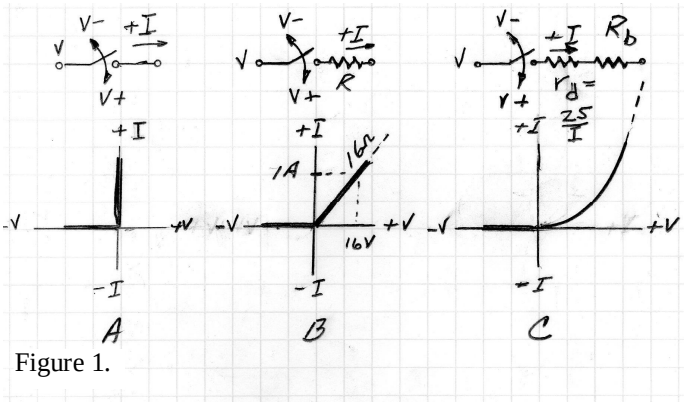


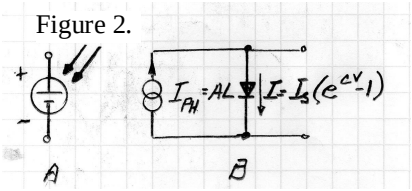
Figure 1.

$R = r_d + R_b$,

where r_d is approximately 25/I(mA), I being the current through the diode in milliamperes, and R_b is the ñbulkò resistance of the diode semiconductor material and any internal and external wiring resistance. R_b is constant and often small compared to the dynamic r_d and can often be neglected. Placing cells in series increases the output voltage and placing multiple strings in parallel increases the output current. The equivalent circuit applies to individual cells as well as a panel of cells and results in the 16 Ý in Part 1. If an ideal voltage source (0 Ý internal resistance) is connected to the diode, then maximum power transfer from the voltage source/diode combination will occur when the load is 16 Ý.

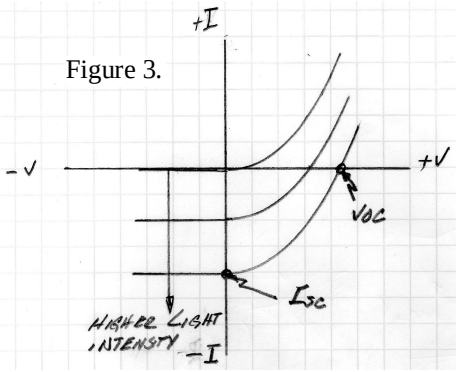
For solar cells, however, getting the maximum power from the panel is often desired, as is the in case of commercial power production. For lead-acid battery charging, however, a controlled current is desired and the voltage is in a small range, say 11.8 to 13.2 V.

Figure 2.



In Figure 2, the schematic symbol for a photovoltaic device is shown in 2A and an equivalent circuit in 2B includes a current generator and diode. The ñCò in the diode current equation is taken as a constant although it varies with temperature. Without exploring the equation further and avoiding a discussion of the physics involved, it is sufficient to say the current through a diode varies as the voltage across the diode as shown in the equation. The multiplier, I_S, is the saturation current and is used to calculate ñreverse leakageò, or ñdark currentò, is small. The I-V characteristic looks like the one shown in Figure 1C. For a solar cell, however, there is a characteristic that is optimized to produce a current when exposed to light. This represented by the current generator in Figure 2B. This current, I_{PH}, is equal to the light intensity, ñLò, times the light falling on the cell, times another constant ñAò. The result can be illustrated by the I-V characteristic in Figure 3.V_{OC} and I_{SC} have been identified on I and V axes. V_{OC} may be found from the current equation:

Figure 3.



$I = I_{PH} - I_S*(e^{BVOC} -1)$

Setting I = 0, and solving for V_{OC} results in:

$V_{OC} = B*\ln(I_{PH}/I_S)$,

Technical

where ln is the Napierian or natural logarithm of I_{PH}/I_S. This says the open circuit voltage increases as the log of the light falling on the cell and can be seen moving to the right along the V axis as the light intensity increases. This can be demonstrated as described in Part 1 in the May issue of *the eKilo-What.*

The short circuit current, I_{SC}, can be found from by setting $V_{OC} = 0$:

$I = I_{PH} - I_S*(e^{BVOC} -1) = I_{PH} - I_S*(e^0 -1) = I_{PH} - I_S*(1 -1) = I_{PH} = AL$

This can also be demonstrated as in Part 1.

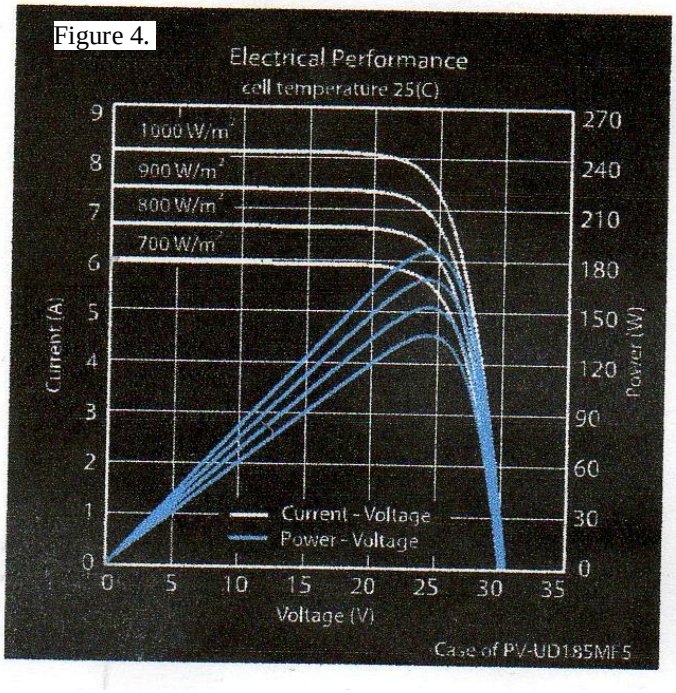
Figure 4 shows the electrical characteristics of a Mitsubishi Electric panel. Although a bit hard to read, this was the best found to illustrate the reality of using solar panels. Notice the vertical axes. The left side is marked in Amperes, A, and ranges from 0, at the bottom of the chart (the voltage axis) to 9 A at the top. The right side is labeled ñPowerò and ranges from 0 to 270 W. The voltage axis is marked 0 to 35 V. This chart is the chart of Figure 3 rotated about the voltage axis and drawn accurately with linear scales.

Notice the white lines are the I-V characteristics of the device for various light levels, 700 -1000 Watts/m^2. V_{OC} is found on the voltage axis for 0 current and is about 30 V. The short circuit current is found on the current axis at the intersection of the light level lines and is 8 A for 1000 W/m^2.

An now we come to what the chart is really about: the blue lines. These are the Power lines. Find the peak of the lowest line and read about 135 W on the right scale. Go to the top line and find about 190 W. The blue lines to the left of the peaks can be thought as source resistance lines or load lines. The top line is about 3.6 Ý (20 V/ 5.5 A) while the lower is about 5 Ý (20/4). Matching to 5 Ý would not be optimum for the 3.5 Ý condition. Using V_{OC}/I_{SC} results in 3.75 Ý, which is close to both.

The maximum power available is often specified on solar panel data sheets in terms of Maximum Power Voltage (V_{PM}) and Maximum Power Current (I_{PM}). (For this series of panels the V_{PM} ranges from 23.9 to 24.7 V while the I_{PM} ranges from 7.32 to 7.71 A for the corresponding voltages. These are often a little more than $0.8*V_{OC}$ and $0.9*I_{SC}$ so the power available is about $0.75*V_{OC}*I_{SC}$ ($0.8*0.9 \sim 0.75$), which is much greater than $0.25*V_{OC}*I_{SC}$ ($0.5*V_{OC}*0.5I_{SC}$) in Part 1. But remember, for a battery charger, it is current, not power that is important. If you are selling power to the electric utility, however, power is important. The engineering challenge is then to build a controller to deliver maximum available power from an ever changing source. (Imagine your antenna constantly changing impedance and your tuner trying to maintain a match!)

Figure 4.



To conclude, a simple analog controller, such as described in Part 1, is sufficient for battery charging. To derive maximum power from a solar panel under variable light conditions, however, require much more complicated devices, typically processor based. A variety of algorithms have been have developed to achieve maximum power point tracking (MPPT). Discussions of these devices can be found online.

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

For Sale

Below is a list of radio equipment owned by Rob Mowrer/N5OIU, now SK.

Kenwood MC-80 microphone - $70
Kenwood TM-G707 dual band mobile - $150
Kenwood TM-241A 2 meter mobile - $90
Alinco DR-110 2 meter mobile - $85
Yaesu FT-60R dual band handie-talkie w/spare battery - $175
Realistic PRO-2040 scanner - $80
Realistic HTX-202 2 meter handie-talkie- $35
Astron RS-25M power supply- $125
Astron RS-12A - power supply $45
Cushcraft Ringo Ranger II 2 meter vertical- $50
Hustler G6-270R dual-band vertical- $75

If you are interested in any, contact Gail Mowrer at 942-7599 (evenings) or e-mail her at glmowrer@aol.com.

Glenn AA5PK

Scanner Jack's Corner

THESE ARE THE VHF INTEROPERABILITY TACTICAL SIMPLEX FREQUENCIES.
155.7525 V TAC 10 CALLING
151.1375 V TAC 11
154.4525 V TAC 12
158.7375 V TAC 13
159.4725 V TAC 14
155.475 NATIONWIDE POLICE CH

FROM SCANNER JACK ROBERTS KB5TMY

Upcoming Hamfests/Conventions

Date	Event	Location	Information
8/8/2014	Rocky Mountain Division Convention	Albuquerque, NM	http:dukecityhamfest.org/
8/30/2014	Alamogordo ARC Hamfest	Alamogordo, NM	http:www.qsl.net/k5lrw/index.htm
9/13/2014	Ada Hamfest 2014	Ada, OK	kd5nqa@yahoo.com
9/27/2014	Gainsville Hamfest 2014	Gainsville, TX	http://www.gainesvillehamfest.org
10/4/2014	Ham Expo	Belton, TX	http://www.tarc.org/hamexpo/
10/24/2014	Oklahoma Section Convention (Texoma Hamarama)	Ardmore, OK	http://www.texomahamarama.org/
11/1/2014	Enid Hamfest	Enid, OK	http://www.enidarc.org/ENIDHAMFEST

Hamfests are listed for all Texas, Oklahoma, and New Mexico. *–Ed.*

Of Interest

Let's Eat!

The current Eating Schedule for TGC Hams is:

Wednesday, 8:00 AM, T-Bears Café, 2105 Knickerbocker Rd

Thursday, 9:00 AM, McDonaldôs (Wal-Mart), 5501 Sherwood Way

Saturday, 7:30 AM, T-Bears Café, 2105 Knickerbocker Rd

Saturday, 9:00 AM, McDonaldôs (Wal-Mart), 5501 Sherwood Way

HF Nets of Note de Gary Chaffin/W5ETJ

NET	DAYS	LOCAL TIMES	DIAL
Concho Valley Ragchew Net	S-M-T-W-T-F-S	0600	1900*
Concho Valley Ragchew Net	S-M-T-W-T-F-S	1700	3825**
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
Concho Valley 6 M Roundtable	Sunday	2100	50.135

* Alternate frequency: 3825. ** 7212, or close, for summer months.

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.

ARES meets the 3rd Thursday at 1900 of each month at the Clubhouse unless announced otherwise on the Monday net.

ARES Net Report

Date	Net Ctrl	Check-ins	Time	Freq
7/7	KD5URW	No report		444.350
7/14	KD5URW	No report		444.350
7/21	KD5URW	No report		444.350
7/28	KD5URW	No report		444.350

Concho Valley

Two Meter Net

Date	NCS	Check-ins	Duration
7/7	W5MAT		min
7/14	KB5FNK		min
7/21	KB5FNK		min
7/28	KB5FNK		min

This net meets every Monday night at 8 p.m. on 145.27 or 146.94 as an alternate repeater. All amateurs licensed to operate on that frequency are invited to participate.

Concho Valley Open FM Repeaters

2 Meter

145.27- San Angelo PL 88.5

146.88ï San Angelo PL 88.5

146.94ï San Angelo PL 103.5

147.06+ San Angelo No Tone

147.30+San Angelo PL 88.5

146.72- Eldorado PL 100.00

147.34+ Robert Lee PL 88.5

146.90ï Brady PL 162.2

147.36+ Brady PL 114.8 (Echo Link Node)

Echo Link: N5TBR-L Node#920069 145.7850 Simplex PL-88.5

147.39+ Eden PL 114.8

70 centimeters

441.750+ San Angelo PL 162.2

442.250+ San Angelo PL 162.2

444.225+ Robert Lee PL 162.2

444.350+ San Angelo PL 162.2

444.875+ Brady PL 162.2

6 M

53.63ï San Anglo PL 88.5 Linked to 442.25 Repeater

New Member Application/Membership Renewal

Membership renewals are due in January 2013. Regular memberships: $20, Each additional family member: $5; Seniors (age 65+) and Juniors (under age 19): $10, Renewal package deal: 5 years for $80, Associate members: $20

Dues may be paid to the secretary at any club meeting or mailed to the club's post office box.

SAN ANGELO AMATEUR RADIO CLUB

Application for Membership

Last Name: First Name: Call Sign:

License Class: Year First Licensed: Previously Held Calls:

Mailing Address:

Physical Address (if different from above):

City: State: ZIP:

Home Phone: Work Phone: Cell Phone:

E-mail address:

I hereby give permission to publish the above information in the club's membership roster which is distributed to all club members. Check here ☐ if you do not want your e-mail address linked on the club's Web site.

Signature	Date