

THE

# PROPAGATOR

The Monthly Newsletter of the South Orange Amateur Radio Association

August 2012

## IN THIS ISSUE

- SOARA Fair 1
- QST de AE6SH 1
- SOARA Picnic 2
- Tuesday Trails 2
- Saturdays 2
- T-Hunt News 3
- Propagation 3
- Membership 3
- Raffle Report 4
- Contests 4
- ARRL News 4
- Calendar 5
- Club Directory 5
- Ham Radio 101 6

## Meeting

August 20,  
2012

7:00 PM

N.P.

Murray  
Center

Veterans  
Way  
Mission Viejo

## 2nd Annual SOARA Fair

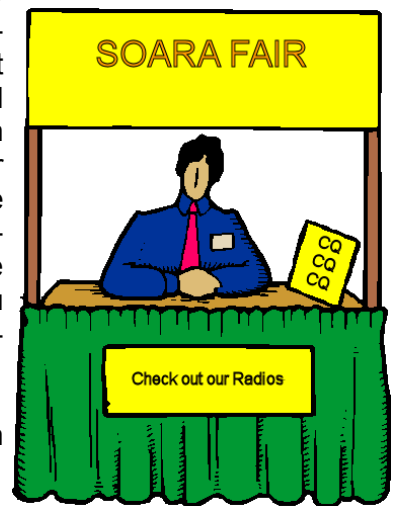
Would you like to learn about HF contesting, Kit Building, D-STAR, Echolink and APRS, etc? If so, please join us on Monday, August 20th, for the 2nd Annual SOARA fair! At the SOARA fair, you will learn tips and tricks, first-hand from your fellow members. Those wishing to participate in the show-and-tell are welcome to bring radios, etc. to demonstrate their knowledge.

This will be a career fair type set-up. Please arrive on time as we may take the meeting outside if conditions permit so we can take advantage of the waning summer sunshine.

You may enjoy collecting or restoring vintage gear, collecting awards or QSL cards, ATV, Satellites, T-Hunting, VHF Contesting,

Kit building, EMCOMM, or anything ham related. Bring us your "stuff" and let us know what you enjoy about the hobby. The format will be casual and folks can just wander about and see all of the exhibits. We don't want you to miss anything.

Come and join the fun!



## QST de AE6SH



road rally, a Ham-vention, Field Day, and a Fourth of July event and our SOARA club picnic. Plus several other smaller events, all of which involved Amateur radio and lots and lots of volunteers. It is always amazing to me how these events come together and

To say it run so smoothly. (Like a duck on the water.... Smooth on top but very busy just below the surface!) A **Very BIG** and belated Thank You to all of our members who made these events possible! We are Fortunate to have the best members in all of ham radio! If you missed Field Day or the picnic then you really missed out on a lot of fun and some great food! It was an outstanding turnout for both events, and we could not have ordered better weather if we had a catalog.

Hopefully everyone is having a wonderful summer and enjoying our nice summer weather!

73,

Tom, AE6SH



**ARRL Rookie  
Round-Up**  
August 19

**SOARA  
Saturday**  
August 25

**Mohave ARC's  
Hamfest**  
Sept. 8

**Tuesday Trails  
& Tacos**  
Sept. 11

**Tucson Ham-  
fest & Fly-In**  
Oct. 6

**Pacificon**  
Oct. 12-14

## VEC License Exams

Next session:  
(5:30pm), be-  
fore the General  
Meeting  
Contact Sean  
[AJ6B](mailto:AJ6B) for info.

Walk-ins ok.

Extra | General |  
Technician  
Exams

## SOARA Picnic

Thanks to all who joined us at the annual SOARA Picnic! Here are a few pictures of the event. The first one is Bud WB6RDO with his newly won antenna tuner. with his wife and Heiko AD6OI in the picture. The others are group shots at the picnic. On the lower right Spencer, NG6K, is busy squirrel fishing, reeling in his catch. Heiko, AD6OI



## Tuesday Trails & Tacos

We just started a new event – the Tuesday Trails & Tacos event , which is a fun little event, like the Chili Series. The July race already occurred, but the August & September races are coming up.

<http://bookthatevent.com/tuesdaytrailstacos/>

August 21 – Las Ramblas (San Juan Trails)

September 11 – O'Neill

Contact Heiko, [AD6OI@soara.org](mailto:AD6OI@soara.org) or Sean, [AJ6B@soara.org](mailto:AJ6B@soara.org), to help

## SOARA Saturdays

SOARA Saturdays returns this month and the topic will be handling communications for special events.

Areas to be covered will include:

1. What is important
2. What you should bring with you
3. Tactical calls and their usage in addition to call sign identification
4. What to do when there is an emergency
5. Using "shadows"



### From Membership

The membership total is 223 members.

Welcome to our newest members:

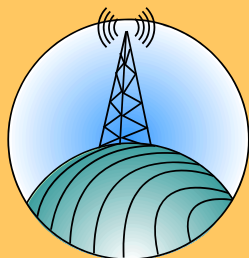
**Jess Craig, KJ6YJW,**  
an extra from Newport Coast

**Chuck Houston, KJ6UJF,**  
a technician from North Tustin

Please extend a special welcome to our newest members if you see them at the meeting or any other events.

Welcome to all!!

Horst Zitzmann, KD7JHR  
Marie Zitzmann, KD7JHS



## T-Hunt Report

Sean, AJ6B, hit the T this month (actually on 7/29). The Transmitter was located about 25 yards south east of the end of Ridge Valley Rd in Irvine, CA, next to the OC Great Park. The major intersections were Ridge Valley and Portola Pkwy. The transmit power was about 4 watts out into a 3 element horizontally polarized beam pointing southeast.

The signal was easily heard, but not all that easy to find for a few of us, who ended up circling the great park a number of times and getting caught in reflections from all the stucco houses. However, Richard, K6RBS seemed to have no difficulty and will be hiding the T next month. Richard was followed soon after by Karl & Dale (all 3 pictured).

Others wandered in when they were done chasing reflections. To their credit, the street was easily missed and it was a long time to circle the park again...

The full list of hunters, with their times, follows:

K6RBS 1:33  
KF6MDF 1:52  
W8RRV 2:03  
WA6BJY 2:32  
W6BGR 3:05  
K6MSM 3:05

Sean, AJ6B



Dale, W8RRV, Richard, K6RBS & Karl, KF6MDF wonder why it's taking the others so long. This was an easy hunt!

## Propagation de K7RA (ARLP033)

There was a big drop in solar activity over the past week, with the average daily sunspot numbers declining nearly 42 points to 77.6, and average daily solar flux down 20 points to 114.7.

Solar flux has dropped below 100, where it is expected to remain through August 22. NOAA/USAF predicted solar flux on August 16 and 17 at 100, but it was actually 98.3 on August 16. The prediction for August 18 is 95, then 90 on August 19-22, then 100, 120 and 130 on August 23-25, then 135 on August 26-29. It is expected to drop below 100 again on September 12-15. This is almost exactly the forecast that was in the ARRL Letter on Thursday, with the August 23-24 sunspot numbers dropped by five points on each day.

...

Many readers have commented that the short term view of the solar cycle has a recent peak around Fall 2011, yet predictions still focus on Spring 2013 for the peak of Cycle 24.

<http://www.arrl.org/w1aw-bulletins-archive/>



### Raffle Report

The raffle that was held July 16, 2012 yielded \$129 for SOARA. 16 \$5 tickets were sold. The tuner was sold at the picnic.

For August, we will be raffling off a [Yaesu 7900R](#) dual band mobile VHF/UHF Radio. It is your basic 2M/440MHz radio. We need to sell 72 tickets to raffle the radio.



The \$1 prizes for the August general meeting will probably be similar what was offered in the July meeting.

The prizes for the \$1 raffle for August will consist more of direct ham radio prizes. I have an older ARRL handbook, a Gordon West General [WB6WXO@SOARA.org](mailto:WB6WXO@SOARA.org)

## Upcoming (Selected) Contests

### Aug 18-19

- ARRL 10 GHz and Up Contest
- ARRL Rookie Roundup--RTTY
- North American QSO Party--Phone
- SARTG WW RTTY Contest
- Keymen's Club of Japan Contest--CW

### Aug 25-26

- Hawaii QSO Party
- SCC RTTY Championship
- Kansas QSO Party
- Ohio QSO Party
- CVA (Brazil) DX Contest--SSB

### Sept 1-2

- All Asian DX Contest--Phone
- Russian RTTY WW Contest
- Colorado QSO Party
- CWOps CW Open
- Tennessee QSO Party

### Sept 8-9

- WAE DX Contest--SSB
- Arkansas QSO Party
- ARRL Sept. VHF QSO Party
- SKCC Weekend Sprintathon
- North American Sprint--CW

## ARRL News

### The 2012 RTTY Rookie Roundup Is Here!

On Sunday, August 19, the digital modes return to the [Rookie Roundup](#). Created to give the budding operator a place to learn about contesting at an easier pace, the Rookie Roundup is a six hour contest open for all amateurs who have been licensed for three years or less; if you were licensed in 2010, 2011 or 2012, you qualify as a Rookie. The Rookie Roundup is run three times per year: SSB in April, RTTY in August and CW in December.

Old Timers have a place in the Rookie Roundup, as well. Elmering is a critical component of the Rookie Roundup, and Old Timers are encouraged to not only get on and work the Rookies, but to host a Rookie and assist them with learning how to participate. Rookies can work anybody, but non-Rookies can only work Rookies. The contest exchange is easy: just send both call signs, your first name and your location (this is either your US state, Canadian province, Mexican call area or "DX" if you're not in the US, Canada or Mexico).

Getting on RTTY has never been easier -- all you need is a PC, soundcard interface and some RTTY software to start making contacts. Veteran RTTY contester and CQ Contest Hall Of Fame member Don Hill, AA5AU, has a [website](#) geared toward the beginning RTTY op that is a wealth of info.

You can log the contest using paper forms provided on the [Rookie Roundup web page](#), or use the real-time web site at [www.inthelog.com](http://www.inthelog.com). Once the contest is over and you've calculated your score, visit the [WA7BNM Rookie Roundup page](#) to submit your score. All official entries must use this form: <http://www.b4h.net/arrlr/index.php>. But don't dally -- you only have three days to submit your score summary. All score summaries must be received by 2359 UTC Wednesday, August 22, 2012.

The 2012 ARRL RTTY Rookie Roundup runs from 1800 UTC through 2359 UTC Sunday, August 19, 2012. Complete rules and score submission information can be found at the [ARRL Rookie Roundup website](#). For more information, contact ARRL Contest Branch Manager Sean Kutzko, KX9X, via [e-mail](#).

Year 2012	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
General Meeting 7:00 PM	23	27	19	16	21	18	16	20	17	15	19	—
Program	Ham Jeopardy	T32C DXPed Report	K6IRD		Spring Auction	Field Day Prep	DIY	SOARA Fair			Fall Auction	—
VEC Testing	23	27	19	16	21	Field Day	16	20	17	15	19	—
SOARA Saturdays	28	Mar 3	24	—	26	—	—	25	22	20	24	—
SOARA T-Hunt	8	12	4	1	6	3	1	7/29	2	7	4	2
Board Meeting	30	Mar 5	26	23	28	25	23	27	24	22	26	—
Special Events	Palm Springs 28	ARRL Yuma 17-18			Dayton 18-20	Field Day	Ham Jam 21	Picnic		Pacifi- con 12-14		Holiday Party
ARRL Field Day						23-24						
SOARA Picnic								5				
Holiday Party												1

**SOARA** meets at the Mission Viejo Community Center, 26932 Veterans Way, Mission Viejo, the third Monday of every month at 7:00 PM. For the months of January and February the third Monday is a holiday and the meeting is held on the fourth Monday.

**License Exams:** Amateur License Exams are given prior to SOARA meetings. Exams are from 5:30 to 7:00 PM. Prior registration is not required and walk-in applicants are welcome. For further information, email Sean Reigle, AJ6B, at [aj6b@soara.org](mailto:aj6b@soara.org).

**Contacting SOARA:** Questions about SOARA?  
Postal mail: P.O. Box 2545, Mission Viejo, CA 92690.  
Send e-mail to: [info@soara.org](mailto:info@soara.org), or leave a message at 949-249-1373.

**Web Site:** SOARA maintains a web site with current club information.  
The URL is: <http://www.soara.org/>

**Repeaters:** The Laguna Beach, San Clemente, and Trabuco repeaters are open. The Santiago Peak repeaters are closed. For details or questions on the repeaters contact the Repeater director, KG6GI.

	2m	—	147.645	—	(110.9)	Laguna Beach
	2m	—	146.025	+	(110.9)	San Clemente
	2m	—	145.240	—	(110.9)	Trabuco
D-Star	2m	—	146.115	+	(K6SOA C)	Laguna Beach
	220	—	224.100	—	(110.9)	Laguna Beach
	220	—	224.640	—	(123.0)	Santiago Peak. (C)
D-Star	440	—	445.660	—	(K6SOA B)	Laguna Beach
	440	—	447.180	—	(131.8)	Santiago Peak. (C)
D-Star	1.2G	—	1282.600	—	(K6SOA A)	Laguna Beach

**Nets:** UHF/VHF (447.180, 147.645 & 224.640): Tuesdays 8:00 PM  
D-Star (146.115 C module): Wednesdays 8:00pm  
40 meter HF (7.200 MHz +/- for QRM), Sundays 8:00 AM.

#### SOARA OFFICERS

**President:** Tom Hobbs, AE6SH ..... 949-830-8131  
[ae6sh@soara.org](mailto:ae6sh@soara.org)  
**V.P.** Heiko Peschel, AD6OI ..... 949-859-3868  
[ad6oi@soara.org](mailto:ad6oi@soara.org)  
**Secretary:** Rick Edgmon, NU6D ..... 949-495-2979  
[nu6d@soara.org](mailto:nu6d@soara.org)  
**Treasurer:** Tom Parkes, KI6DDB ..... 714-224-2982  
[ki6ddb@soara.org](mailto:ki6ddb@soara.org)

#### SOARA DIRECTORS

**Repeater:** Howard Brown, KG6GI ..... 949-581-2634  
[kg6gi@soara.org](mailto:kg6gi@soara.org)  
**Publications:** Mike Mahan, K6MSM ..... 949-279-9936  
[k6msm@soara.org](mailto:k6msm@soara.org)  
**Membership:** Horst, KD7JHR & Marie, KD7JHS  
Zitzmann ..... 949-768-8552  
[kd7jhr@soara.org](mailto:kd7jhr@soara.org) or [kd7jhs@soara.org](mailto:kd7jhs@soara.org)  
**Education:** Sean Reigle, AJ6B ..... 714-261-1717  
[aj6b@soara.org](mailto:aj6b@soara.org)  
**Technical:** Brian Roode, NJ6N ..... 949-495-5336  
[nj6n@soara.org](mailto:nj6n@soara.org)  
**Communications:** Mikkel Hansen, NR6E. .... 949-632-5573  
[nr6e@soara.org](mailto:nr6e@soara.org)

#### SOARA COMMITTEES

**Activities:** Pierrette Rizco, K6PTR ..... 949-235-2546  
[k6ptr@soara.org](mailto:k6ptr@soara.org)  
**Testing:** Sean Reigle, AJ6B ..... 714-261-1717  
[aj6b@soara.org](mailto:aj6b@soara.org)  
**Website:** Brian Roode, NJ6N ..... 949-495-5336  
[nj6n@soara.org](mailto:nj6n@soara.org)  
**Ambassador:** Heiko Peschel, AD6OI ..... 949-859-3868  
[ad6oi@soara.org](mailto:ad6oi@soara.org)

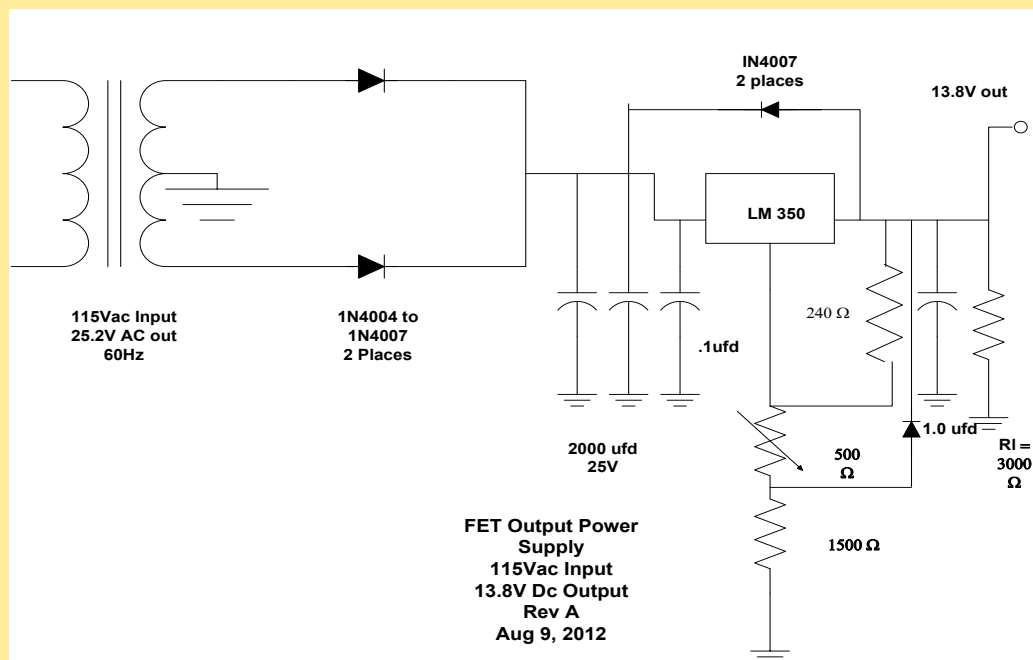
## Ham Radio 101 - Ham Radio Building Blocks

### A Simple Power Supply

By Hal Silverman, WB6WXO

I thought that I would take a step back and put together a set of simple power supplies that would power a QRP Transmitter. I know that the articles use a 13.8V 4 Amp Astron Power Supply. This is what a lot of rigs are powered from. In the past, we looked at a power supply in one of my workshops. So here we go again.

The design criteria are to keep the supply simple and adjustable over a small range. I also wanted the supply to deliver an amp and be regulated from no-load to full-load. I wanted the supply to deliver either 13.8V or 28V without a lot of circuit switching. About 95% of the parts come from things I had in my collection of parts. I chose to use an LM350K as a regulator. It is similar to a more familiar LM117 adjustable regulator but delivers the one amp I wanted. There are two 1N4007 diodes that are used as protection and a .1 and a 1.0  $\mu$ fd capacitors use to improve regulation.



**Figure 1**  
**13.8V Power Supply**

There is a 3K resistor that is used as a bleeder resistor. It provides a path when the power supply is shut off I had planned to finish the project but a case of Shingles has slowed me down. The hot weather didn't help. The design is simple and right out the handbook. There are simple schematics located on the data sheet of the device. I am willing to assist in building one of these power supplies.

Figure 1 is the schematic that I am using to build the 13.8V supply. This is

a full wave design. Only one diode conducts on each half cycle of the output of the transformer. Notice that the center-tap is grounded. The filter capacitors are charged to the peak value of the output of the transformer to about 18V peak. The regulator and it's voltage divider adjusts the output to 13.8V. This section of the power supply is almost completed and I am waiting for the temperature in the workshop to cool off.



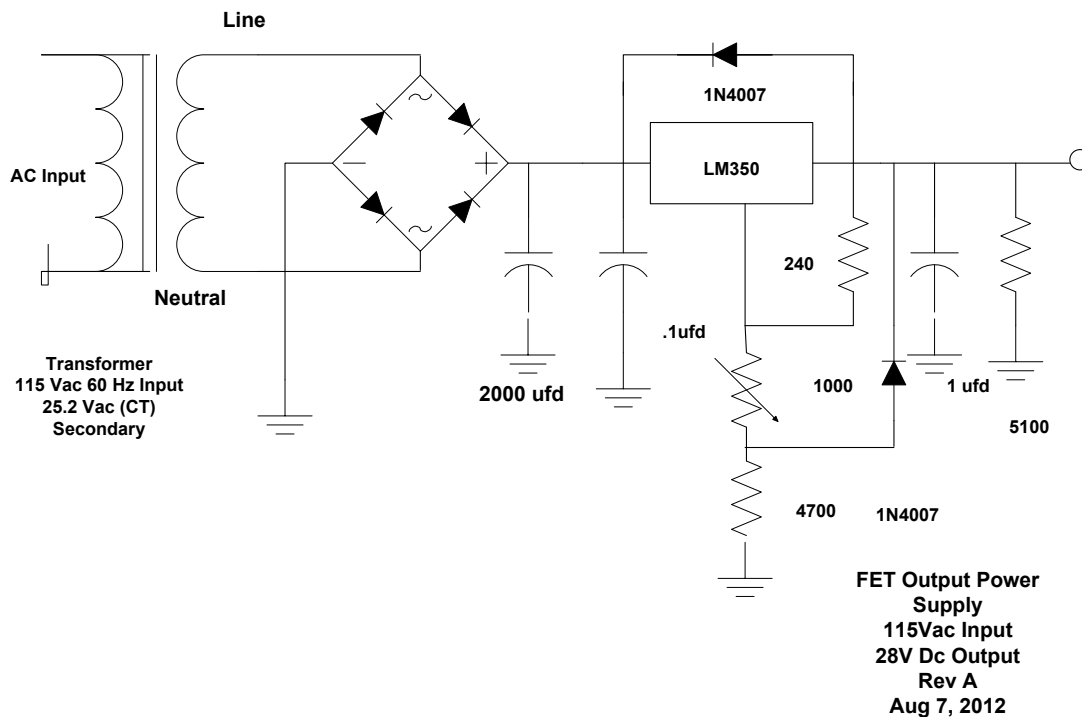
*Continued on the next page...*

## Ham Radio Building Blocks (continued)

The second part of the supply uses a separate transformer and is a full wave bridge design. This uses the whole secondary transformer voltage to be rectified by a bridge rectifier. The output of the transformer ( 25.2V ) is rectified by the bridge rectifier circuit. The filter capacitor will charge the output to the peak value (less 2 diode drops for each half cycle) of about 35V. The same LM350K is used. The voltage divider circuit is used to set the voltage to 28V. The same protection diodes, .1 & 1.0 ufd capacitors and a similar bleeder resistor are used I have not started on this section of

the supply yet. My plans for the next Propagator ( September ) will have a finished product with data that was taken.

The tasks for the September Propagator are to finish assembling both sections of the supply and the AC front end. I plan to take pictures and present data. All this is dependent upon the temperature in the work shop. The ultimate purpose of this exercise is to design and have a FET



**Figure 2**  
**28V Bridge Rectifier Power Supply**

transmitter that uses 13.8V on everything except the output stage. I have some FETs that have 90V from Drain to Source and I am anxious to try this scheme out.

If there are any comments, please contact me at [WB6WXO@SOARA.org](mailto:WB6WXO@SOARA.org)

