



The PROPAGATOR

November, 2002

The Monthly Newsletter of South Orange Amateur Radio Association

AUCTION

Yes, it is that time again. Time to dig through all of that stack of radios and other wondrous electronic goodies to see what you can do without. Bring it to SOARA's Fall Auction this coming Monday (November 18) and turn it into cash. It is hard to part with old equipment, but you know that it will have a good home!



The SOARA auctions are always fun for all. When you hear the auctioneer's description of your old

equipment you will be tempted to bid on it yourself. There will be plenty of treasures from other ham shacks to tempt you, so bring money so you can participate in the heated bidding.

The meeting starts at 7:00 PM, but if you are bringing equipment plan on arriving early to have time to set it up on the display tables. All equipment is tagged with the owners call sign and a minimum acceptable bid. Using the tags simplifies the tracking of equipment as it is sold.



Digital Voice Recorder — Want to hear yourself as others hear you? Perform a self-test using the DVR "talk-Back" feature on the 147.645 repeater. Enter AA***, then un-key and

begin a test transmission after you hear the courtesy tone. Your voice will be played back on the air when you un-key.

New Members

A hearty welcome to SOARA's newest member:

Steven Harrison N5YRJ

Annual Holiday Party

Sunday, December 1, 2002, is the date for the Annual Holiday Party. SOARA celebrates the completion of each year by getting together to share a fine meal, music, fun, and a recap of the club accomplishments and activities of the year.

You received an electronic notice via e-mail earlier. There is a flyer included in this newsletter, and if you attend the auction this month you will hear more about the event.



Those who have attended in the past years have experienced the fun. If you have not attended the parties, then you have a treat in store.



The location for this year's party is the same as last year — Peppino's Italian Family Restaurant in Laguna Niguel. The menu will be similar to last year's, and the price will be the same. Thanks to Steve, KR6CE, and Heiko, AD6OI, for making the arrangements.

A special feature of the event will be honoring Lou, KA6BJO, and Muriel Parker, KA6BJP. Both Lou and Muriel have held a variety of positions on the SOARA Board over their many years of membership. A few months ago they moved to Palm Springs and can no longer be active in the club.

Lou ran the VE license testing for SOARA for many years (many of you probably took tests at one of Lou's sessions). Lou's last test session for SOARA was at Field Day. Lou has turned the testing responsibilities over to Paul Levey, NZ1M.

Plan on bringing the family to the party. Clip the reservation form from the enclosed flyer and bring it, along with a check to the November meeting.



Conference Report

SOARA's October meeting featured an in-depth report by KO6SY on the technical papers presented at the just concluded WSWSS 85h Annual Conference. Malcolm, KO6SY, covered several of the more interesting papers from the conference. (Malcolm was the Program Chairman for the conference.)

All of the papers dealt with VHF / UHF theory and operation under extreme conditions. EME (earth - moon - earth) communications was the topic of two papers. Once the domain of those with extensive technical background and sufficient wealth and land for the equipment and large antennas, EME is a possible pursuit for the average ham.

Other papers were concerned with meteor scatter, microwaves, antenna designs, and digital techniques. The oldest of digital techniques is, of course, CW (unlike most modern digital techniques, the duration of the *ones* and *zeros* vary — still there are only two states on and off). New digital modes rely on the power of the ubiquitous home computer for their operation. Most of the required software is available free.

For more information on WSWSS (Western States Weak Signal Society) see Malcolm, KO6SY, or visit their web site at <http://www.wswss.org>.

Membership Manual

The time is drawing near to produce a new SOARA membership manual. In addition to information on the repeaters and the club constitution and bylaws, the manual has a listing of all of the members.

Please see that your dues are paid and that the membership director (Chris, KB6FYG) has the current information on you by the end of November. It takes a lot of work to write the manual and we don't want anyone left out.



The Way I See It: A Report from the Technical Committee: "I R L P"

Repeater News!

This has been a busy couple of months for our technical team. Bob Grant, W6CIC and Tom Kormanik, W5LON have joined me in a project to update the repeater configuration. Mike Mullard has volunteered to develop user information for the project.

Self Test Your Transmission - First I would like to call your attention to the DVR Talk-Back feature that is available on both our 147.645 and 145.240 repeaters. With this feature you can record a short length of transmission. After you un-key, the repeater plays back your transmission, which you can use to evaluate the signal & noise. This provides you with the ability to evaluate whether or not you are in a good area. Just key in the code "AA***", un-key, re-key and transmit you recording. When you un-key the repeater will respond with your transmission as it heard it. The procedure is explained on page 10 of your User's Guide.

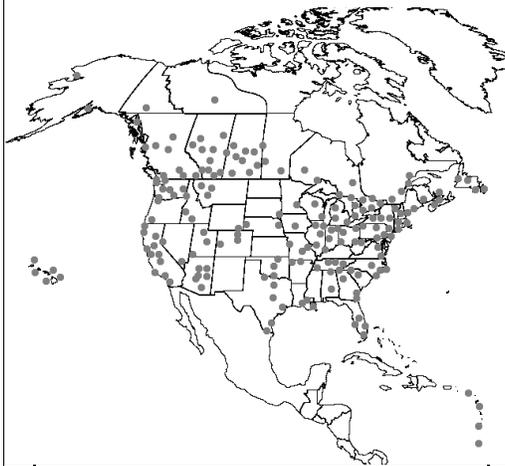
IRLP Implementation – The Board recently approved the addition of an "Internet Repeater Linking Project" (IRLP) capability to our system. IRLP is a recent addition to the hobby and allows users to connect our repeaters to selected repeaters all over the world using the Internet to provide a virtual voice path between the repeaters. There are currently 695 nodes (repeaters) registered worldwide ranging from Australia to England. There is even a node in Antarctica. When this capability is on line, you will be able to chat with hams in England just coming home from work while you are on the way in.

This is a pretty complex project as there is no Internet connection available on the site so the plan is to run a link radio to a residence and connect to Internet there. Also,

we have to modify our site controllers to accept this link port.

At this point Tom has modified a pair of Motorola Mitrek radios to provide a link and is awaiting SCRBBBA input to help determine an available frequency. An IRLP processor (which is a Linux based computer) has been built and a node number (mode 3254) secured. The computer is now connected to a broadband Internet connection. We are in the process of developing radio interfaces to the Internet processor and implement the

North American IRLP Node

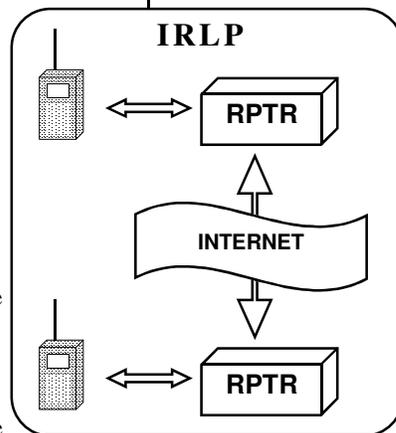


controller interfaces. The configuration will then be subject to extensive testing before connection to the radios.

New Repeater Controller – In the process of engineering the IRLP interface we discovered that several years ago SOARA had procured a full service repeater controller which was never used.

Our current Laguna Beach site has three independent repeaters, each managed by an external controller except for the 445.660 machine, which is a Hamtronics unit with an internal, minimum function controller.

On the other hand, the Link Communications RLC-3 controller is a modular controller with radio interface cards plugging into a card cage, one radio card per repeater.



The controller can accommodate up to eight radio cards with one required for auto-patch connections. Thus, the one controller can accommodate the three repeater radios (3 cards), the auto-patch (1 card) and the IRLP link radio (1 card). This leaves us with three growth slots for future links to sites such as Trabuco Canyon and Santiago Peak.

The most interesting feature of the RLC-3 is that we will be able to provide user controlled interfaces between the repeaters (and links) as all the audio signals are in one switch-able box. As an example, we could connect the 147.645 to the 445.660 radio during nets. Later, users might link the Trabuco Canyon and Laguna Beach repeaters for more reliable QSO's. How many times do you find yourself switching repeaters to maintain communications?

At this point we have updated all the software in the RLC-3 to the latest release, acquired additional radio interface and I/O cards, tested the voicing and auto-patch capability. We are currently developing a functional description for the controller, which will be the basis for the software development.

The tech team recognizes that the process of making a major upgrade will require a significant transition phase and there will be hiccups along the way. We are in the process of adding a maintenance request feature to the Web site so you will be able to communicate problems to the team. The plan is to use both the SOARA reflector and the Propagator to disseminate progress and problem information. Upon completion of the project we will update and re-publish the Repeater User's Guide and Membership Manual.

We plan to start with the 445.660 radio which will require us to take it out of service for modifications. Upon restoration, this will be the first IRLP linkable radio. The project will then continue with the 224.100 machine and finally the 147.645 radio. We have developed a plan that will allow us to revert to the current configuration in the event of an emergency.

The Board hopes you will be as excited as they are in playing with this new capability. Please bear with us as the capability is brought on line.

Howard G. Brown, KG6GI
Bob Grant, W6CIC
Tom Kormanik, W5LON
Mike Mullard, KF6HVO
And your entire Board . . .

Year 2002	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
General Meeting 7:00 PM	28	25	18	15	20	17	15	19	23	21	18 Auction	No meeting
Program				DX W6XD	T-hunt W6SQQ	pre Field Day	Show & Tell	RF Safety	LINUX	Contest Station	Auction	
VEC Testing 5:30 PM	28	—	18	—	20	22	—	—	23 Walk-ins welcome	23 Walk-ins wel	18 Walk-ins	—
Propagator Deadline										FCC testing available before club meetings.		
Board Meeting	2/4	3/4	25	22	27	24	22	26	30	28	25	
ARRL Field Day						22 - 23						
SOARA picnic								3				
Fall Auction											18	
SOARA Holiday Party												1

WR6R, S K

We regret to report the passing on November 2, of Keith Soesbe, WR6R. Keith was retired from military service and obtained his Ham license after retiring. His ham radio interests were wide ranged. Keith advanced to the Extra Class license. He took several of the ARRL Continuing Education courses in both emergency communications and in antenna design.

He was active in SOARA, the Hospital Emergency group, and several nets. He enjoyed handling traffic for the NTS (the ARRL National Traffic System). Keith made many friends within the Amateur Radio Community. He will be missed. □

To all SOARA members,

For those of you who have remitted your 2003 dues, on behalf of the Board, I'd like to say a hearty Thank You. For those of you who just haven't quite gotten around to sending in your dues, I'd like to say, "please send them in soon." As I've explained before, the vast majority of the funds needed to keep your club operating throughout the year come from the members annual dues.

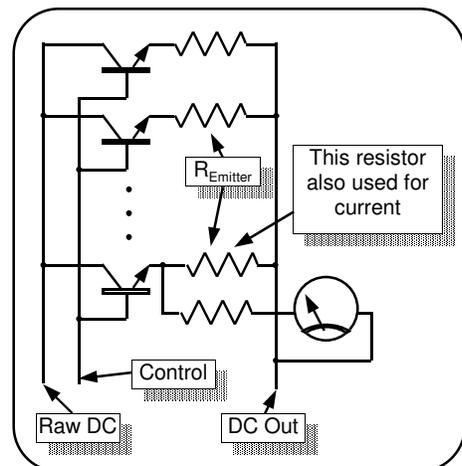
Your Board of Directors has adopted a responsible 2003 budget that will keep the club vibrant and growing, and now we need to collect the dues in a timely manner so we can put that annual plan in motion. Remember, dues can be paid in person, by mail, or even by PayPal. — please send in yours as soon as possible.

Ray, AE6H

Last Month's Puzzler A mysterious hum on the 2 meter repeater

Recently the Astron RM-60 power supply on the Laguna Beach 2 meter machine failed. It had been reading a very high current and the repeater exhibited a mysterious hum before the failure. The cause was a chain of events and the particular metering circuit used in the power supply. The pass transistor and metering circuit is shown in the accompanying figure. There are 8 pass transistors to handle the high current rating of the supply.

Each pass transistor has its own emitter resistor (to equalize the currents through the transistors). Failure of an individual transistor will not disable the supply but will require the remaining transistors to carry a heavier load. Since the meter reading is based on one transistor's share of the load, the reading is now high. As more transistors failed, the reading increased. The hum occurred when enough transistors failed that the regulator could no longer remove residual hum. Toward the end, the remaining transistors were carrying over their rated current and total failure ensued. □



The PROPAGATOR

South Orange Amateur Radio Association
P.O. Box 2545
Mission Viejo, CA 92690



Meeting: November 18, 2002 at 7:00 PM Auction

☛ **SOARA** meets at the Mission Viejo Community Center, 26932 Veterans Way, Mission Viejo, the third Monday of every month at 7:00 PM. Changes to the meeting time or place are announced in this newsletter and on the two-meter repeater.

☛ **License Exams:** Amateur License Exams are given prior to SOARA meetings every other month. Exams are from 5:30 to 7:30 PM. Walk-ins are welcome. For information call Paul Levey, NZ1M, at 949-249-0121.

☛ **Contacting SOARA:** Questions about SOARA? Send e-mail to: 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 SOARA 2-meter and 70 cm repeaters are open to all licensed hams.

SOARA 2m — 147.645 - (110.9)

SOARA 2m — 145.240 - (110.9)

SOARA 440 — 445.660 - (110.9)

The SOARA 220 and HROC 440 repeaters are shared by members of both clubs. Each machine is subject to the operating rules of its respective club. Call KG6GI for details.

SOARA 220 — 224.100 - (110.9)

SOARA 220 — 224.640 - (123.0)

HROC 440 — 447.180 - (131.8)

☛ **Nets:** SOARA 2 m repeater open net is held Tuesday 8:00 PM 40 meter HF net (7.268 MHz +/- for QRM), Sunday 7:30 AM. PSK - 31 net (28.120.15, 1000 on waterfall) Friday 7:00 PM.

SOARA OFFICERS

President: Ray Hutchinson, AE6H 949-496-8020

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SOARA DIRECTORS

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Testing: Paul Levey, NZ1M 949-249-0121

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Website: Chris Reed, KB6FYG 949-361-1438

kb6fyg@soara.org

You and your friends and family are invited to join in the fun at the SOARA holiday party.
This year we have included pizza for the kids so bring the whole family.
You can sign up by mail or at the November meeting.
The last day to sign up is November 25.

SOARA Annual Holiday Party

Date: Sunday, December 1, 2002
Time: 5:00 p.m. 'til . .
Place: Peppino's Italian Family Restaurant, Laguna Niguel

All you can eat buffet

Italian Salad
Spaghetti Meat Sauce
Eggplant Parmigiana
Lasagna
Chicken Marsala
Pizza for the kids
Soda / Coffee
Spumoni

Cost: \$16.00 per person (including Tax / Tip)

Directions

Peppino's is located at 30371 Niguel Road. Take Crown Valley Road west from the I-5. Turn left on Niguel Road and go up over the hill passing Beacon Hill Way. Turn right into the second small shopping center. Call in frequency will be 145.240 (Trabuco Canyon) if you get lost.

SOARA Holiday Party Reservation Form

All reservations must be received by Monday, November 25, 2001

Name _____ Call Sign _____

Phone _____ E-Mail _____

Number of guests (@ \$16.00 each) _____ Total enclosed \$ _____

Make checks payable to SOARA
Clip and mail to Steve Perluss, 26746 Las Ondas, Mission Viejo, 92692