



CROSSTALK

News Bulletin of the TRW Amateur Radio Club



Volume 98 Number 3

March 1998

Editor's Corner:

RENEWRENEWRENEWRENEW RENEWRENEWRENEWRENEW RENEWRENEWRENEW!

It's that time again this year to renew your club dues!!!! I have enclosed a membership application. (This time it's 2-sided!, Thanks Rich...) Please return it ASAP.....

ARTICLESARTICLESARTICLESARTICLESARTICLESARTICLESARTICLESARTICLES!

I'm amazed on how many articles that I have received this month.. Keep up the good work!!!!

STILL MISSING IN ACTION

I have been told that a 440 amplifier, and a 1.2ghz SWR/PWR meter is still missing from one of the club shacks..... If you have seen them, or know who is using them, please return them to the S Shack ASAP. The normal policy to borrow a piece of equipment is to contact the shackmasters (Dave Nelson Bldg. S, & Duane Park or Rick Ervin for Bldg. R3).

NO-CODE TRAINING CLASS

From: DeAro, Bryan

WELL THE RADIO CLASS IS ABOUT TO START. I HAVE A GRAND TOTAL OF 5 WHOLE STUDENTS. WE MAY BE LOOKING AT THE LAST CLASS FOR THIS YEAR.....KN6OW

From the office of Technical Chairman

"Power to the packet"

We now have an uninterruptible power supply, (UPS), for the packet / gateway computer. This came about due to the generosity of Mr. Barry Gott. Barry has the far Southwest corner spot, (Barryland as we now call it), at our swap meet. He donated the UPS to the club while asking only for a receipt and a note of thanks. Mr. Gott is the owner of Electronics and Computer Surplus City. His store, (actually a large warehouse), is located at 1490 W. Artesia Blvd. in Gardena. If you haven't been there, you owe it to yourself to go. Plan on spending a couple of hours or more and be prepared to be overwhelmed by the variety and quantity of items available at very low cost. To visit the store on the web, the URL is <http://www.eio.com>.

J. Cheatham / KE6OJM

TRWARC Monthly Calendar of Events

First Tuesday of each month	5:30 pm	Executive Board Meeting (All Club Members are invited)
Second Tuesday of each month	5:30 pm	Club Meeting Round Table Pizza, (Redondo Bch. & Hawthorne)
Second Tuesday of each month	12:00 noon	Emergency Communications Team Meeting R3 Emergency Operations Center
Last Saturday of each month	7:00 am	TRW/ARC Swap Meet Marine and Aviation (Northeast Corner)
After the Swapmeet	12:00 noon	T-Hunt Swap Meet Parking Lot - 144.72 MHz

Reoccurring Events:

Every Monday Night (Except the 1st & Holidays)	7:30 pm	Disaster Communication Systems (DCS) Net DCS Members: Check in on 2 Meter Repeater
Every Wednesday	12:00 noon	ECT Net on 2 meter Repeater All Amateurs Welcome
Every Thursday Night (Schedule permitting)	6:30 pm	TRW Amateur Radio Club Net The Bob and ? Show - Check In on 2 Meter Repeater
Every Friday Morning	7:30 am	TRW Amateur Radio Club Breakfast Building S Cafeteria - Everyone is invited Talk-in on 2 Meters

Other Events

Computer Fair (previously The Computer Marketplace Computer Shows) **Hours: 10:00 to 17:00**

POMONA \$8 admission

Live Broadcasts: KFI-Jeff Levy "On Computers", KZLA, Y-107FM

March 21 & 22 (Sat. & Sun.)

Fairplex Exposition Complex Exit Highway 10 at Fairplex Drive.

Go north to McKinley Avenue, turn right. Turn left on White Avenue to Gate 14.

RESEDA \$3 admission

March 7 (Sat.)

Sherman Square Entertainment Center From the 101 Freeway take the Reseda offramp,

go north to Sherman Way and turn right. Go one block to Canby Street. 18430 Sherman Way.

BUENA PARK \$5 admission

March 8 (Sun.)

April 5 (Sun.)

Sequoia Conference Center Take the Beach Blvd. exit off the 91 Freeway.

Go one block north to 7530 Orangethorpe.

All Shows Open to the Public 10:00 a.m. to 5:00 p.m.

Call for more information (408) 778-5200 or 800-800-5600 Fax# (408) 779-1374

Other Ham Swap meets:

Inland Empire ARC - 2nd Sat. ea. mo. @ A.B. Miller High School, Walnut & Olenander in **Fontana**

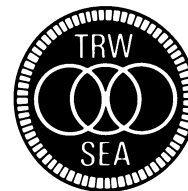
Talk-in 145.480 (-600 pl=77.0hz)

El Cajon ARC - 1st Sat. ea. mo. @ Santee Drive-in Theater, Woodside Ave. @ Hwy 67 in **Santee**



MEMBERSHIP APPLICATION

COMPLETE BOTH SIDES!



Name: _____ Date: _____

Amateur Call Sign: _____ License Class: _____

Student under age 18? _____ ARRL Member? _____

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CURRENT TRW SPACE PARK EMPLOYEES ONLY:

Badge Number: _____ CCC: _____ Phone: _____

Mail Station: Building: _____ Room: _____

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ALL APPLICANTS:

Home Address: _____

City: _____ State: _____ Zip: _____

Home Phone Number: (____) _____-_____

Please provide ways to contact you or to send club bulletins, e.g. email address (home and/or work), fax no. cell phone, pager, or other:

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FAMILY MEMBERS OF TRW SPACE PARK EMPLOYEES AND RETIREES *

Name: _____ Call: _____ Class: _____

 * Family members of Non-TRW Space Park Employees are not eligible for family memberships. Submit a separate application.

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DUES

TRW/ARC CLUB BADGE ORDER:

TRW Employee (\$5.00)	\$ _____
TRW Retiree (\$6.00) **	\$ _____
Non-TRW (\$10.00)	\$ _____
TRW Family Members (\$6.00)	\$ _____
Club Badge (\$5.00)	\$ _____

 CALL

TOTAL AMOUNT DUE: \$ _____

 FIRST NAME

=====

** Retirees - List TRW Badge No. _____

CONTINUED ON BACK ----->

PLEASE INDICATE THE CLUB ACTIVITIES YOU WOULD LIKE TO PARTICIPATE IN DURING THE COMING YEAR:

<input type="checkbox"/> W6TRW Field Day	<input type="checkbox"/> Monthly Club Meetings
<input type="checkbox"/> Contest (HF and VHF)	<input type="checkbox"/> Club Breakfasts
<input type="checkbox"/> Emergency Communications	<input type="checkbox"/> Using the Club Shack
<input type="checkbox"/> Picnics	<input type="checkbox"/> Club Library
<input type="checkbox"/> TRW/ARC Swapmeet	<input type="checkbox"/> Antenna Parties
<input type="checkbox"/> Technical Challenges	<input type="checkbox"/> Repeaters
<input type="checkbox"/> Training	<input type="checkbox"/> Other: _____

PLEASE INDICATE YOUR INTERESTS IN AMATEUR RADIO:

<input type="checkbox"/> HF	<input type="checkbox"/> SSTV
<input type="checkbox"/> VHF	<input type="checkbox"/> AMTOR
<input type="checkbox"/> UHF	<input type="checkbox"/> CW
<input type="checkbox"/> Microwave	<input type="checkbox"/> DX
<input type="checkbox"/> Packet	<input type="checkbox"/> Computers
<input type="checkbox"/> OSCAR	<input type="checkbox"/> DCS/RACES/ARES
<input type="checkbox"/> RTTY	<input type="checkbox"/> QRP
<input type="checkbox"/> ATV	<input type="checkbox"/> Other: _____

What do you like best about the TRW ARC?

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FULL RELEASE OF ALL CLAIMS

In consideration of my participation in the TRW/SEA Amateur Radio Club and any and all of its events, I, the undersigned, intending to be legally bound, for myself, my heirs, executors and administrators, do hereby fully and finally waive, release and hold harmless the TRW/SEA Amateur Radio Club, TRW Space Park Employees Association, TRW, Inc., and Ohio corporation, and their respective directors, officers, employees, members, agents and assignees from any and all responsibility, liability, claims, causes of action, injuries, judgments or other damages of any nature whatsoever, including, but not limited to, any personal injuries I might suffer, directly or indirectly resulting from my participation in, or travel to and from the aforesaid activity.

I acknowledge that I am engaging in the aforesaid activity, and knowingly executing this Release, at my insistence and request and that I voluntarily do so without any coercion whatsoever.

Signature: _____ **Date:** _____

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The membership year runs from February 1st to January 31st. Dues are payable in January and are prorated on a quarterly basis thereafter. Please make checks payable to **TRW AMATEUR RADIO CLUB** and send to:

TRW AMATEUR RADIO CLUB
Membership Chairman, S/1156
One Space Park Drive
Redondo Beach, CA 90278

050198

From The Office of the President...

Rich Sauer, N6CIZ, President, TRW Amateur Radio Club

A Roof Over Our Heads

Just in time for the arrival of El Niño, an intrepid team of builders led by Mel Parker, AC6CV, spent a couple of Saturdays putting a roof over the club's three Connex storage boxes. The three storage containers are used to store the club's Field Day supplies, emergency equipment, and assortment of junkie-too-good-to-throw-away.

Over the past several years, these metal boxes have started to succumb to the elements and rust away - starting with the roof. For the past two years, "rain" has meant "flood" as far as these boxes were concerned. Weeks after a rain, you'd open the door and three inches of water would flow out, washing the dust off your sneakers!

For some items like antennas and towers, a little water doesn't matter too much. But the metal storage cabinets, cardboard boxes, and electronic equipment don't mix too well with rain water. Last year, the club's 5KW generator had to be overhauled after getting soaked. Besides, it's kinda dumb to have to put tarps over items that are stored *inside*.

So plans were made to put a new roof on the boxes. After an estimate or two from a "professional," Mel decided that a bunch of us "amateurs" could tackle the job and save money by investing a little sweat equity. With supplies purchased from Home Depot and tools supplied by the crew, we ended up building a roof that will outlast the boxes themselves!

I'd like to thank the crew who labored so hard to make sure that the club's equipment is protected for many years to come: Mel "The Crew Chief" Parker, AC6CV; Jan "Where's Your Eye Protection" Parker, KD6AKD; Ray "Let's Install Some Lights" Enriquez, KD6IGI; Steve "Check Out My New Framing Hammer" Lambert, KF6KIC; Jason "Measure Once Cut Twice" Fujino; and Rich "That's Almost a Straight Cut" Sauer, N6CIZ. We had a lot of fun and beat El Niño to the punch.

Help Wanted

In trying to sort out things like what radio is in what shack, who borrowed what, and where that thingamajig we used last Field Day went, the club has decided that we need a Toymaster. Dave Nelson, AB6DU, coined that phrase and it adequately describes the job. We're looking for someone interested in keeping track of the club's toys - who has what, and where it is. In case you don't know, we've got lots of goodies (like radios, test equipment, GPS receivers) that can be borrowed by the club members. The Toymaster will hang on to the toys and keep track of who borrows what. They'll also maintain a master inventory with model numbers and serial numbers of all the club's assets. Anybody out there interested? And, oh yeah, the pay is fantastic! So give me a call.

The biggest moneymaker for the club is the monthly swap meet. To keep things running smoothly, volunteers are needed to help out at every swapper. For getting up early and coming to the meet (which you probably do anyway...) you'll receive a gift certificate from Jun's, HRO, or Best Buy (your choice). Work a few Saturdays and you can buy yourself a new radio using no cash! The YL (or OM) can't complain that your hobby is costing too much. Just a few hours of your time. To schedule yourself to work a swap meet, contact Greg Martens, N6RRY, who coordinates the volunteers.

Speaking of Money

The club's Executive Board spent a couple of hours putting together a budget for this year. This is always a fun thing to do and we look forward to it every year! Yessir, it's very entertaining! The yelling, the screaming, the name-calling, the blood flowing, as everyone tries to get more money for their pet projects. We should videotape it and sell it on the internet!

Actually, it's *nothing* like that. I'm happy (and surprised!) to report that the Board quickly hammered out a budget for 1998 which is very fair to everyone. It provides support to the ECT and Communications Van, the VHF'ers, the HF'ers, the Swap Meet, packet and internet gateways, repeaters, and so on. In fact, every interest shown by our members is budgeted for. I wish to thank the Board members for working together in the best interests of all our members.

If all the projects we talked about financing this year happen, it will be a fun, busy, and productive year for the club. We'll continue to improve the shack by adding more capability on almost every band and mode. We'll keep upgrading the Emergency Communications Van. We'll continue to have meetings, picnics, and a wonderful banquet. We're truly blessed to have the resources (money and people) to do so much.

Join the Fun

Don't forget to fill out a membership application and send it in with your dues. Duane "Gee the Membership App CAN Be Printed on One Sheet" Park, WA6EIK, assures me that the application in this *Crosstalk* will be printed on consecutive pages this month. Of course it doesn't take as much creativity to fill it out when it's printed that way, but we thought we'd try it for a change! No matter how you do it, don't forget that you must send in your application now!

73 de N6CIZ.

160 Meters From a Small Lot

Bill Shanney, W6QR

I have spent a fair amount of time analyzing and testing antennas for the low HF bands on my small (i.e.: 70'x70') city lot. There are two reasons for my efforts:

1. The challenge of getting good performance from relatively small antennas.
2. The pleasure of operating on uncrowded bands (80 & 160 meters) where the quality of each QSO is high.

I started about 6 years ago with a Butternut vertical for 40, 80 and 160 meters on my roof (up ~20'). I used two coax radials per band in as symmetrical a configuration as possible. I worked the East coast, Japan and South America on 160 with this setup. The short vertical was very narrow band on 160, BW~25 kHz, and had a hard to match low impedance off resonance. I took this antenna down for this reason and to reduce clutter on my roof. I used a 100' center fed inverted-V with an apex at only 40' for a while but this was only good for local contacts. Several friends were using inverted-L antennas on the low bands with good results so I decided to give it a try.

An inverted-L is a short vertical that uses a horizontal wire off the top to bring it to resonance. I didn't have room for a full size L on 160 so I made mine resonant on 80 and used a tuner on top band. I

160 Meters From a Small Lot (cont.)

fashioned a 25' vertical section from some old antenna tubing sections. I used a fiberglass insulating section from an old vertical at the base. I mounted it up about 6' next to a 40' long chain link fence in my

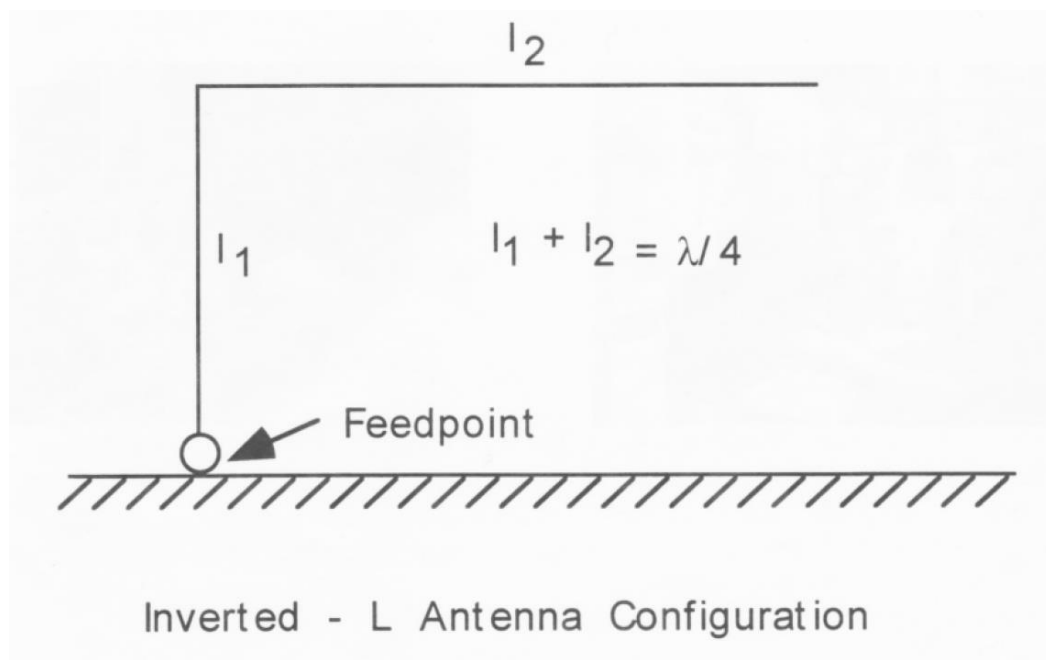
side yard. I used a 40' length of #13 braided antenna wire for the horizontal top section. I used my tower as a center support so it is more of an inverted V section than horizontal but that does not affect the performance.

The chain link fence works great as a ground plane. I also use 2 coax radials for each band to make sure the ground impedance is low at the antenna feedpoint. The best place to put a matching network is at the base of the antenna. I chose a SGC-230 Smart Tuner based on some positive remarks by Chris Wachs, WA2KDL. This weatherproof remote tuner will work with antennas as short as 23' on 160 meters. The tuning is automatic, simply key down and a few seconds later the VSWR is less than 2:1 (typically <1.5:1 in my setup). For those who can't afford a remote tuner, a simple tapped loading coil at the base of the inverted-L would work fine in conjunction with a tuner in the shack. This would require changing the coil length and tap position to switch bands if that is desired.

The performance of the inverted-L is at least as good as my vertical was and it appears that the QRN is a bit lower. This type antenna can be made inconspicuous and is very insensitive to configuration. I've worked the East coast and Japan with 100 watts and had no trouble making contact with every station heard in the recent CQ 160 meter contest.

Both 80 and 160 meters have CW and SSB activity. Late evening in the winter, when atmospheric noise is lowest, is the best time to operate these bands. They do stay open until sunrise so early morning is also a good time, especially for Japan and the Pacific. Operating these bands can be fun and challenging, give them a try, I'm sure you will keep coming back.

73 de W6QR.



Submitted by Bill Dews via Dave Nelson

CW Forever and Ever



You must have at times,
Thought into the past,
Where some things go out
While others last
What comes to my mind is
The old Morse code,
That has weathered the storms
>From any abode.
To talk with ones fingers
Is surely an art,
Of any info you
Care to impart,
In most conditions
The signals get through,
While the same about phone
Is simply not true.
Those dits and dahs
Cut through the trash,
Of near by noise or
Lightning's crash.
To the sensitive ears
Of the hams receiver,
Who records this data
With ardent fever.
He knows he's doing
Something unique,

(in such poor conditions,
That's quite a feat)
To roger the message
That came off the air,
These brass pounders
Sure do have that flair.
They say Morse ops
Are a dying breed,
But don't despair,
There's always that need,
That when conditions get rough
for the new automation,
Be rest assured,
There'll be need for your station.
CW is dying?
Believe it never,
This mode will be 'round
Forever and ever.
But one thing is sure ,
What we really need,
Is to relay our knowledge
To the younger breed.
To carry the torch,
Long after we're gone,
To send Morse code
Through the air like a song.
When at last,
Silent keys pull that lever,
We can rest in peace,
It's CW forever

Jim Hatherley, WA1TBY 7/4/85



New Roof for the Connex Boxes by Steve Lambert

El Niño may be here to give California its wettest winter in years, but our connex box storage facilities will be clean and dry. The roofs on the existing connex boxes had succumbed to previous rainy winters and had begun to rust through. A new roof was needed to seal out the weather and prevent damage to our equipment.

After receiving bids for a new roof, Jan, KD6AKD, and Mel, AC6CV, Parker offered to lead a club effort to build a new roof. Mel provided all the pneumatic nailers and power tools that could possibly be needed, and Jan recruited radio club members for the labor. On two successive Saturdays, January 17 and January 24, and after several trips to Home Depot, they got the job done.

Thanks go to all clubs members who helped. Thanks to Jan and Mel for leading the effort. Thanks to Ray Enriquez, KD6IGI, for hauling all the supplies from Home Depot helping with the roof framing. Thanks also to all the laborers who hauled, cut, hammered or roofed: Jason Fujino, KD6ELS, Steve Lambert, KF6KIC, Wayne Hogancamp, KI6GM, and Rich Sauer, N6CIZ.

A new shed roof was framed over the existing connex metal roofs. This was then covered with plywood sheathing, roofing felt, and finally a rolled asphalt roof. The end results was a roof that should provide years of service. Still on the schedule is a new paint job to protect the new wood and the outside of the connex boxes.



Mel, AC6CV, and Jason, KD6ELS, on the new connex box roof.



Jan, KD6AKD, and Rich, N6CIZ, measuring twice and cutting once.

TRW AMATEUR RADIO CLUB

ELECTED OFFICERS

President	Rich Sauer	N6CIZ	R9 / 1869	(310) 813-5869
Vice President	Elizabeth Kunkee	KS4IS	D1 / 1024	(310) 813-0524
Secretary	Pat Anderson	KB6YPI	R7A / 1265	(310) 813-6874
Treasurer	Steve Lambert	KF6KIC	R6 / 2529	(310) 812-5019

APPOINTED STAFF

447 Repeater Autopatch	Pat Anderson	KB6YPI	R7A / 1265	(310) 813-6874
Activities Chair/Asst Swapmt	Greg Martens	N6RRY	M1 / 1275	(310) 813-4049
Crosstalk Editor	Duane Park	WA6EIK	M2N / 1368B	(310) 813-4219
Emer. Comm. Coordinator	Rick Ervin	KD6OZD	R3 / 1098	(310) 812-2039
Librarian/Asst. Postmaster	Steve Papa	KO6VF	M5 / 1263	(310) 812-5305
Membership Chairperson	Dave Nelson	AB6DU	R8 / 2144	(310) 813-9775
Past President	Bob Briggs	KD6WYQ	M7 / 2439	(310) 813-2622
Publicity Chairperson	Dave Nelson	AB6DU	R8 / 2144	(310) 813-9775
QSL Manager	Bryan DeAro	KN6OW	120 / 1020B	(310) 812-4789
S.P. Packet/Internet Sysop	Chris Wachs	WA2KDL	R7A / 2100	(310) 813-1506
SEA Representative	Nina Whiddon	KN6FL	01 / 1020	(310) 813-9391
Swap Meet Manager	Rich Sauer	N6CIZ	R9 / 1869	(310) 813-5869
Technical Chairperson	John Cheatham	KE6OJM	R9 / 2838	(310) 813-5903
Training Chairperson	Bryan DeAro	KN6OW	120 / 1020B	(310) 812-4789
Trustee of W6TRW License	Elizabeth Kunkee	KS4IS	D1 / 1024	(310) 813-0524

TRW/ARC Hotline (Club Answering Machine)	(310) 813-8569
W6TRW 2 Meter Repeater (Open Repeater)	145.32 (-600) PL 114.8Hz
W6TRW UHF Repeater (Open Repeater / Closed Autopatch)	447.00 (-5 MHz) PL 100 Hz
W6TRW-3 Packet Radio Internet Gateway and BBS (1200 Baud Port)	146.745 (-600)
W6TRW Internet Home Page	http://w6trw.sp.trw.com/w6trw/

TRW Amateur Radio Club
 One Space Park
 S/1156
 Redondo Beach, CA 90278

FIRST CLASS

Deliver To:

